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PLATO GOLD CORP

ASSESSMENT REPORT on the 2018 DIAMOND DRILLING PROGRAM
on the
GOOD HOPE NIOBIUM PROPERTY
Thunder Bay Mining District, NW Ontario, NTS 42E02

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PLATO GOLD CORP - GOOD HOPE NIBOIUM PROPERTY

ASSESSMENT REPORT ON THE 2018 DIAMOND DRILLING PROGRAM

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1.0 INTRODUCTION

In 2017, Plato entered into an agreement with prospector Rudy Wahl of Marathon Ontario by which Plato has the option to acquire a 100% interest in the Good Hope Property. The Good Hope Property is located approximately 45km northwest of the town Marathon within the Killala Lake, Cairngorm Lake, and Foxtrap Lake Areas of northwestern Ontario. The Property is an early stage exploration property hosting several known sites of niobium, phosphorus and rare earth mineralization hosted by carbonatite and carbonatite-syenite breccias.

Plato Gold Corp completed a 5016m diamond drilling program on the Good Hope Niobium Property between March and June of 2018. Drilling followed up on a mapping and prospecting program conducted by Plato the previous summer.

The 2018 drilling was completed in the northwest quadrant of the Property (Site 28 area), focusing on an area of previous pitting and trenching. The area also corresponds to a radiometric anomaly defined by both a 2011 ground radiometric survey and a 2016 heliborne radiometric survey. Holes targeted known surface mineralization at depth, the radiometric anomaly, and the swampy region which curves around the west half of the radiometric anomaly. In 2010, prospector Rudy Wahl had collected a sample from the area assaying 1.63% Nb₂O₅.

All holes intersected zones of massive carbonatite within a brecciated system consisting of variably fenitized alkalic rocks (syenite to alkali feldspar granite) intruded by carbonatite dykes and crosscutting carbonatite veins. The drilling encompassed an area of approximately 500m by 500m with all holes drilled in a northwesterly direction. The nine completed drill holes ranged in length from 372 to 672 metres, testing the area to a vertical depth of between 285 and 580m.

Assays from the drilling program peaked at 0.950% niobium (Nb₂O₅) with 6.20% phosphorus (P₂O₅) over 1.1m in a sample of massive carbonatite (PGH-18-06, 382.94-384.04m). Two significant intersections from the drilling program were 0.190% Nb₂O₅ and 2.04% P₂O₅ over 93.08m (drill hole PGH-18-06; 354.18-447.26m) and 0.175% Nb₂O₅ and 2.03% P₂O₅ over 89.24m (drill hole PGH-18-10A; 345.0-434.24m).

The total expenditures for the drilling program reported herein were \$916,655 CDN.

A NAD 83 (zone 16) datum can be assumed for all UTM coordinates references within the report, maps and appendices.

2.0 PROPERTY LOCATION, ACCESS AND OWNERSHIP

2.1. Property Location and Access

The Good Hope Property ('the Property') is situated within the Killala Lake, Cairngorm Lake, and Foxtrap Lake Areas of northwestern Ontario, approximately 45 km northwest of Marathon and 28 km north of the Trans-Canada Highway (Hwy 17) (Figure 1). The Property is located within the Thunder Bay Mining Division, NTS sheet 42E02. The Discovery Site Pit #1 (Site 28 area) is located at UTM 519637m E, 5432636m N (NAD83 zone 16).

The property is accessed from Hwy 17 via Deadhorse Road, a well-maintained logging road which crosses the southwestern portion of the property. The location of the 2018 diamond drilling program is accessed via logging trails off Deadhorse Road near the 30km marker.

The Good Hope Property claims surrounds Nuinsco Resources Limited's Prairie Lake Carbonatite Complex. The main trail into the site of the drilling crosses Nuinsco Resources Limited's mining claims.

The Property is situated within the Pic River Ojibway Forest within the traditional territory of the Biigtigong Nishnaabeg - Ojibways of the Pic River First Nation. The forest, which is subject to intermittent logging activities, is a typical example of Boreal Forest and is dominated by coniferous trees (Black and White Spruce with less common Tamarack, Jack Pine and Balsam Fir). Deciduous (White Birch and Poplar) species are often intermixed with the coniferous species. Black bears and moose are common to the forest.

The topography of the region consists mainly of low terrain, including swamps separated by hills that rise as much as 100-200 m above the swamps. The property partially covers both Ruffle Lake (at the north end of the property) and Prairie Lake (at the south end).

2.2. Property Ownership and Mining Claim Conversion

Plato Gold Corp optioned the Good Hope Property from Rudolf Wahl of Marathon, Ontario and associates as two different claim groups, KL226 and KL37, through two option agreements dated May 31, 2017. Rudolf Wahl is the registered owner (100%) of the claims and holds the mining rights to the Property. The surface rights on the Property are owned by the crown. The option agreements give Plato access and the right and perform exploration work on the Property in order to earn an interest in the Property.

In April 2018, all mining claims in Ontario were subject to a conversion (modification in shape, size, and assignment of a new identification number) to accommodate the change to a map cell-based staking system in the province.

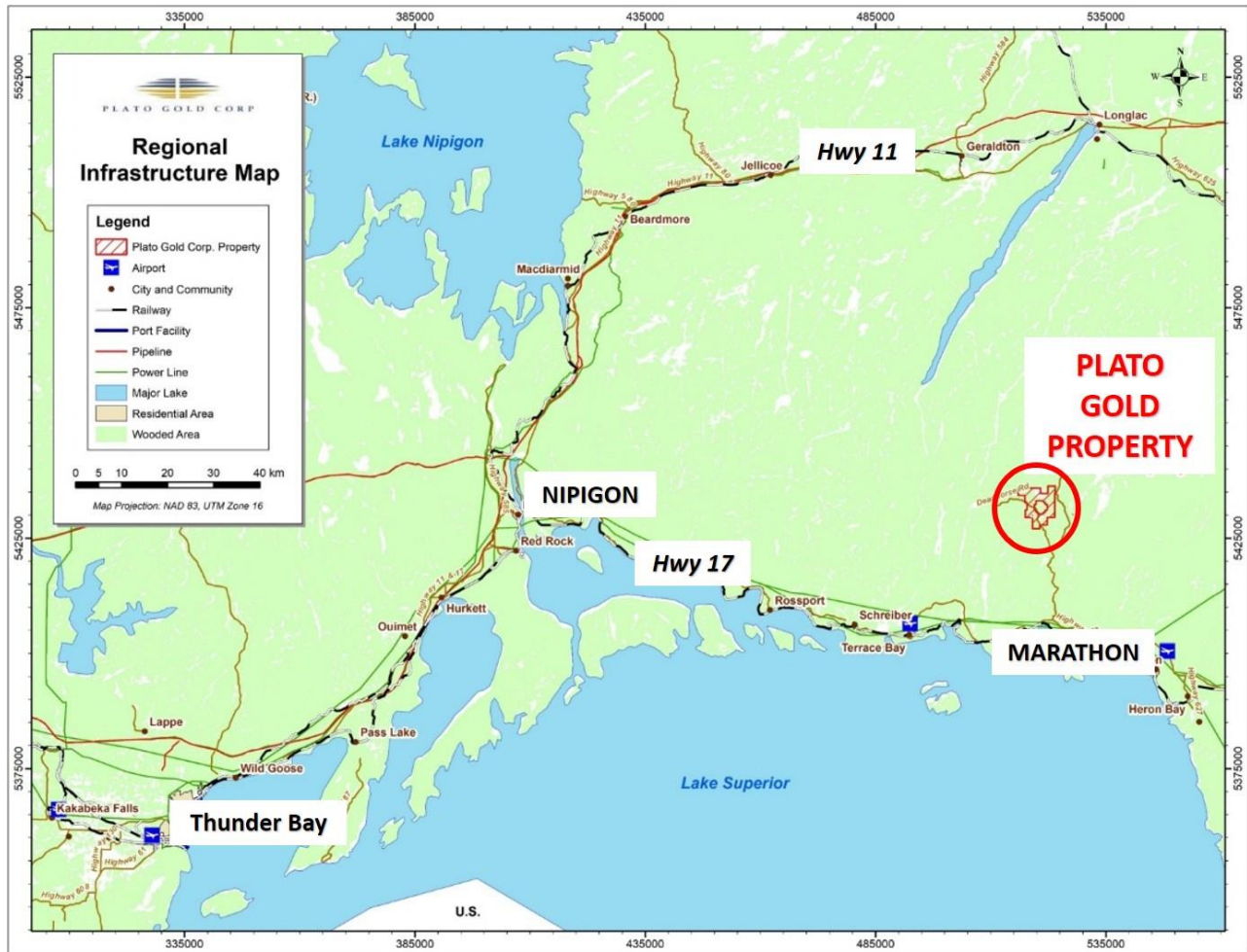


Figure 1. Property Location

Prior to conversion, the Good Hope Property consisted of a total of 19 mining claims (263 units) and covered an area of 4208 hectares. Post conversion the Property consists of 254 mining claims and covers an area of approximately 5100 hectares. Of the 254 converted claims, 227 are classified as Single Cell Mining Claims (SCMC) meaning that the claim holder holds the entirety of the mining cell. The remaining 27 converted claims are classified as Boundary Cell Mining Claims (BCMC), meaning that it is a partial claim and the mining cell is shared with another property owner.

The boundary between the KL226 and KL37 option agreements was not registered with the Ministry prior to conversion. As a result, boundary claims were not created to keep the two properties separate and there are now 11 claims (9 SCMC, 2 BCMC) that are common to both agreements. This may cause an issue if Plato elects to only earn in to one of the two Option agreements. In that case an amendment to the agreements would have to be reached to accommodate the other property holders.

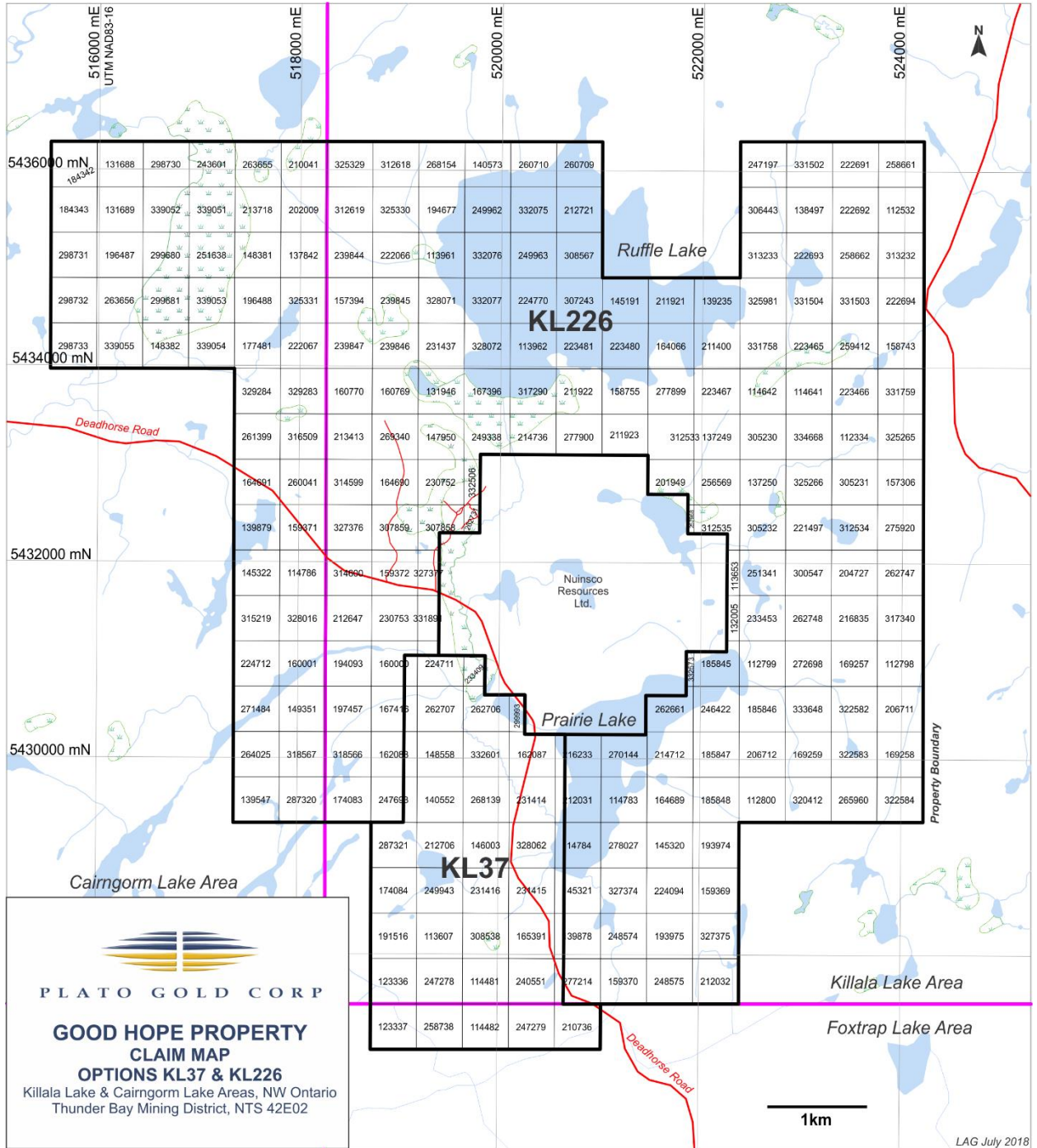


Figure 2. Good Hope Property Claim Map

KL226 Option Agreement

The KL226 Option Agreement included sixteen pre-conversion mining claims: 4261156, 4261157, 4241158, 4243473, 4256252, 4256251, 4256256, 4256257, 4256259, 4256258, 4261165, 4261166, 4256253, 4246258, 4246260 and 4261198. Post-conversion, the KL226 option includes 222 Single Cell Mining Claims, 21 Boundary Cell Mining Claims, and 9 partial Single Cell Mining Claims and 2 partial Boundary Cell Mining Claims (shared with KL37 option). See table 1 for a list of claims.

The Optionors are Rudolf Wahl (45%), Mike Dorval (45%), Roger H. Mitchell (10%). Plato, as the Optionee, will earn a 100% interest in the KL226 claims upon completion of the following:

- I) Total cash payment of \$106,600 as follows:
 - i. \$10,000 to Optionors within 7 days of signing of agreement
 - ii. \$1,600 to Rudolf Wahl for costs of staking within 7 days of signing of agreement
 - iii. \$15,000 to Optionors within 60 days of TSXV approval of both the KL226 Option Agreement and KL37 Option Agreement
 - iv. \$20,000 to Optionors on or before the 1st, 2nd, 3rd and 4th anniversary of the TSX-V approval of both the KL226 Option Agreement and KL37 Option Agreement
- II) Total payment of 7,500,000 common shares:
 - i. 3,500,000 common shares to Optionors within 15 days of TSXV approval of both the KL226 Option Agreement and KL37 Option Agreement
 - ii. 1,000,000 common shares to Optionors on or before the 1st, 2nd, 3rd and 4th anniversary of the TSXV approval of both the KL226 Option Agreement and KL37 Option Agreement
- III) Combined exploration expenditures of \$400,000 on either or both the KL226 and KL37 properties:
 - i. \$100,000 on or before the 1st anniversary of the TSXV approval of both the KL226 Option Agreement and KL37 Option Agreement
 - ii. \$300,000 on or before the 4th anniversary of the TSXV approval of both the KL226 Option Agreement and KL37 Option Agreement.

KL37 Option Agreement

KL37 Option Agreement included three pre-conversion mining claims: 4246255, 4246269 and 4246270. Post-conversion, the KL37 option includes 27 Single Cell Mining Claims, 4 Boundary Cell Mining Claims, and 9 partial Single Cell Mining Claims and 2 partial Boundary Cell Mining Claims (shared with KL226 option). See table 1 for list of claims.

The Optionors are Rudolf Wahl (85%), Leonard Windover (5%), Darren Hutchinson (5%), Ryan Harasym (5%). Plato, as the Optionee, will earn a 100% interest in the KL37 claims upon completion of the following:

- I) Total cash payment of \$2,000 as follows:
 - i. \$2,000 to Optionors within 7 days of signing of agreement
- II) Total payment of 1,600,000 common shares:
 - i. 1,000,000 common shares to Optionors within 15 days of TSXV approval of both the KL37 Option Agreement and KL226 Option Agreement

- ii. 150,000 common shares to Optionors on or before the 1st, 2nd, 3rd and 4th anniversary of the TSXV approval of both the KL37 and KL226 Option Agreement
- III) Combined exploration expenditures of \$400,000 on either or both the KL226 and KL37 properties:
 - i. \$100,000 on or before the 1st anniversary of the TSXV approval both the KL37 and KL226 Option Agreement
 - ii. \$300,000 on or before the 4th anniversary of the TSXV approval of both the KL37 Option Agreement and KL226 Option Agreement

For both the KL226 and KL37 Option Agreements:

- I) A 3% Net Smelter Return Royalty to Optionors with first right of refusal for 50% buy back for \$1,500,000.
- II) A 3% Gross Overriding Royalty from the production of diamonds only to Optionors, with first right of refusal for 50% buy back for \$1,500,000.
- III) Performance Shares of 1,000,000 common shares to Optionors if a NI 43-101 compliant resource exceeding 100 million tonnes of Nb205/P205. An additional 2,000,000 common shares to Optionors upon a positive bankable feasibility study.
- IV) 10% of the sale price or option price in cash or shares to Optionors if the KL226 or KL37 claims are sold or optioned to a third party.

Table 1. List of Converted Mining Claims

| Tenure Number | Option | Title Type* | Anniversary Date** | Work Required (\$) | Conversion Reserve (\$) | Legacy Claims |
|---------------|--------|-------------|--------------------|--------------------|-------------------------|---------------------------|
| 112334 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4261166 |
| 112532 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 112798 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4256257, 4261198 |
| 112799 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4256257, 4261198 |
| 112800 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 113653 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256257 |
| 113961 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 113962 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256258, 4261158 |
| 114641 | KL226 | SCMC | 28-Jan-19 | 400 | 95 | 4261166 |
| 114642 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 114783 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246258, 4246260 |
| 114786 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 131688 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 131689 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 131946 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258 |
| 132005 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256257 |
| 137249 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4261165, 4261166 |
| 137250 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256 |
| 137842 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |

| | | | | | | |
|--------|-------|------|-----------|-----|------|---------------------------|
| 138497 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 139235 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165, 4261166 |
| 139547 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253, 4256254 |
| 139879 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 140573 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 145191 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165 |
| 145320 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 145322 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 147950 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256251, 4256258 |
| 148381 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156, 4261157 |
| 148382 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 149351 | KL226 | SCMC | 14-Apr-19 | 400 | 2228 | 4256253 |
| 157306 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256 |
| 157394 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 158743 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 158755 | KL226 | SCMC | 28-Jan-19 | 400 | 95 | 4261165 |
| 159369 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 159370 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 159371 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 159372 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 160001 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256253 |
| 160769 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258, 4256259 |
| 160770 | KL226 | SCMC | 12-Nov-19 | 400 | 0 | 4256259 |
| 164066 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165 |
| 164689 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246258, 4246260 |
| 164690 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256252, 4256258, 4256259 |
| 164691 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256259 |
| 167396 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258 |
| 169257 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4256257, 4261198 |
| 169258 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 169259 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 174083 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253, 4256254 |
| 177481 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256259, 4261156, 4261157 |
| 184342 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 184343 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 185845 | KL226 | BCMC | 27-Apr-19 | 200 | 0 | 4246258, 4256257, 4261198 |
| 185846 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 185847 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4246258, 4261198 |
| 185848 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4246258, 4246260, 4261198 |
| 193974 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 193975 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 194093 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256253 |
| 194677 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |

| | | | | | | |
|--------|-------|------|-----------|-----|------|---------------------------|
| 196487 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 196488 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156, 4261157 |
| 197457 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253 |
| 201949 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256256 |
| 202009 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 204727 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 206711 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 206712 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 210041 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 211400 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165, 4261166 |
| 211921 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165 |
| 211922 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258, 4261165 |
| 211923 | KL226 | BCMC | 28-Jan-19 | 200 | 0 | 4261165 |
| 212032 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 212647 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 212721 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 213413 | KL226 | SCMC | 12-Nov-19 | 400 | 0 | 4256259 |
| 213718 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156, 4261157 |
| 214712 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246258 |
| 214736 | KL226 | BCMC | 15-Jun-19 | 200 | 0 | 4256258 |
| 216835 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 221497 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4256257 |
| 222066 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157, 4261158 |
| 222067 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256259, 4261157 |
| 222691 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 222692 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 222693 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 222694 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4261166, 4263473 |
| 223465 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 223466 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 223467 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165, 4261166 |
| 223480 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165 |
| 223481 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256258, 4261158, 4261165 |
| 224094 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 224712 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256253 |
| 224770 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 230752 | KL226 | SCMC | 15-Jun-19 | 400 | 9466 | 4256251, 4256252, 4256258 |
| 230753 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 231437 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256258, 4261158 |
| 233453 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 238571 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256256 |
| 239844 | KL226 | SCMC | 8-Sep-19 | 400 | 94 | 4261157 |
| 239845 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157, 4261158 |

| | | | | | | |
|--------|-------|------|-----------|-----|-----|------------------------------------|
| 239846 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256258, 4256259, 4261157, 4261158 |
| 239847 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256259, 4261157 |
| 243601 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 246422 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4246258, 4261198 |
| 247197 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 248574 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 248575 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 249338 | KL226 | BCMC | 15-Jun-19 | 200 | 782 | 4256251, 4256258 |
| 249962 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 249963 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 251341 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 251638 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 256569 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256 |
| 257968 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256256 |
| 258661 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 258662 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 259412 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 260041 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256259 |
| 260709 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 260710 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 261399 | KL226 | SCMC | 12-Nov-19 | 200 | 0 | 4209031 |
| 262661 | KL226 | BCMC | 25-Jan-19 | 200 | 0 | 4246258 |
| 262731 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256251 |
| 262747 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 262748 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 263655 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156, 4261157 |
| 263656 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 264025 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253 |
| 265960 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 268154 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 269340 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258, 4256259 |
| 270144 | KL226 | BCMC | 25-Jan-19 | 200 | 0 | 4246258 |
| 271484 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253 |
| 272698 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4256257, 4261198 |
| 275920 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4256257 |
| 277899 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261165 |
| 277900 | KL226 | BCMC | 15-Jun-19 | 200 | 0 | 4256258, 4261165 |
| 278027 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 287320 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253, 4256254 |
| 298730 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 298731 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 298732 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 298733 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |

| | | | | | | |
|--------|-------|------|-----------|-----|------|------------------|
| 299680 | KL226 | SCMC | 8-Sep-19 | 400 | 94 | 4261156 |
| 299681 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 300547 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 305230 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4261166 |
| 305231 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256 |
| 305232 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4256257 |
| 306443 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 307243 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158, 4261165 |
| 307858 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256251, 4256252 |
| 307859 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 308567 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 312533 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256256, 4261165 |
| 312534 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4256257 |
| 312535 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256256, 4256257 |
| 312618 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157, 4261158 |
| 312619 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 313232 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 313233 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 314599 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252, 4256259 |
| 314600 | KL226 | SCMC | 14-Apr-19 | 400 | 7233 | 4256252 |
| 315219 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 316509 | KL226 | SCMC | 12-Nov-19 | 400 | 1819 | 4256259 |
| 317273 | KL226 | BCMC | 25-Jan-19 | 200 | 0 | 4246258 |
| 317290 | KL226 | SCMC | 15-Jun-19 | 400 | 0 | 4256258 |
| 317340 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256257 |
| 318566 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253 |
| 318567 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256253 |
| 320412 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 322582 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 322583 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 322584 | KL226 | SCMC | 27-Apr-19 | 400 | 0 | 4261198 |
| 325265 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4261166 |
| 325266 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256 |
| 325329 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 325330 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157, 4261158 |
| 325331 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261157 |
| 325981 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4261166, 4263473 |
| 327374 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 327375 | KL226 | SCMC | 25-Jan-19 | 400 | 0 | 4246260 |
| 327376 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 327377 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256252 |
| 328016 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256252 |
| 328071 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |

| | | | | | | |
|--------|-------|------|-----------|-----|-------|------------------------------------|
| 328072 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4256258, 4261158 |
| 329283 | KL226 | SCMC | 12-Nov-19 | 400 | 0 | 4256259 |
| 329284 | KL226 | SCMC | 12-Nov-19 | 400 | 0 | 4256259 |
| 331502 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4263473 |
| 331503 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4261166, 4263473 |
| 331504 | KL226 | SCMC | 29-May-19 | 400 | 0 | 4261166, 4263473 |
| 331758 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 331759 | KL226 | SCMC | 28-Jan-19 | 400 | 0 | 4261166 |
| 331891 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256252 |
| 332075 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 332076 | KL226 | SCMC | 8-Sep-19 | 400 | 95 | 4261158 |
| 332077 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261158 |
| 332506 | KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4256251 |
| 332573 | KL226 | BCMC | 25-Jan-19 | 200 | 0 | 4246258 |
| 333648 | KL226 | SCMC | 27-Apr-19 | 400 | 95 | 4261198 |
| 334668 | KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4256256, 4261166 |
| 339051 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 339052 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 339053 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 339054 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 339055 | KL226 | SCMC | 8-Sep-19 | 400 | 0 | 4261156 |
| 113607 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 114481 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269, 4246270 |
| 114482 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246270 |
| 123336 | KL37 | SCMC | 14-Apr-19 | 400 | 0 | 4246269, 4246270, 4256254, 4256255 |
| 123337 | KL37 | SCMC | 14-Apr-19 | 400 | 0 | 4246270, 4256255 |
| 140552 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255, 4246269 |
| 146003 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 148558 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255 |
| 162087 | KL37 | BCMC | 18-Feb-19 | 200 | 0 | 4246255 |
| 165391 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 174084 | KL37 | SCMC | 14-Apr-19 | 400 | 0 | 4246269, 4256254 |
| 191516 | KL37 | SCMC | 14-Apr-19 | 400 | 0 | 4246269, 4256254 |
| 210736 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246270 |
| 212706 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 231414 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255, 4246269 |
| 231415 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 231416 | KL37 | SCMC | 18-Feb-19 | 400 | 25307 | 4246269 |
| 233409 | KL37 | BCMC | 18-Feb-19 | 200 | 0 | 4246255 |
| 240551 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269, 4246270 |
| 247278 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269, 4246270 |
| 247279 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246270 |
| 249943 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |

| | | | | | | |
|--------|------------|------|-----------|-----|------|------------------------------------|
| 258738 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246270 |
| 262706 | KL37 | BCMC | 18-Feb-19 | 200 | 8563 | 4246255 |
| 262707 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255 |
| 268139 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255, 4246269 |
| 287321 | KL37 | SCMC | 14-Apr-19 | 400 | 0 | 4246269, 4256254 |
| 299993 | KL37 | BCMC | 18-Feb-19 | 200 | 0 | 4246255 |
| 308538 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 328062 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246269 |
| 332601 | KL37 | SCMC | 18-Feb-19 | 400 | 0 | 4246255 |
| 114784 | KL37/KL226 | SCMC | 18-Feb-19 | 400 | 0 | 4246260, 4246269 |
| 139878 | KL37/KL226 | SCMC | 18-Feb-19 | 400 | 0 | 4246260, 4246269 |
| 145321 | KL37/KL226 | SCMC | 18-Feb-19 | 400 | 0 | 4246260, 4246269 |
| 160000 | KL37/KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4246255, 4256252, 4256253 |
| 162088 | KL37/KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4246255, 4256253 |
| 167416 | KL37/KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4246255, 4256253 |
| 212031 | KL37/KL226 | SCMC | 18-Feb-19 | 400 | 0 | 4246255, 4246258, 4246260, 4246269 |
| 216233 | KL37/KL226 | BCMC | 18-Feb-19 | 200 | 0 | 4246255, 4246258 |
| 224711 | KL37/KL226 | BCMC | 14-Apr-19 | 200 | 0 | 4246255, 4256252 |
| 247693 | KL37/KL226 | SCMC | 14-Apr-19 | 400 | 0 | 4246255, 4246269, 4256253, 4256254 |
| 277214 | KL37/KL226 | SCMC | 18-Feb-19 | 400 | 0 | 4246260, 4246269, 4246270 |

*SCMC = Single Cell Mining Claim; BCMC = Boundary Cell Mining Claim

**All claims issued April 10th, 2018

2.3. Permitting and Annual Work Requirements

The Property is comprised of a combination of Single Cell and Boundary Cell Mining Claims (where the property abuts another claim holder). In Ontario, to retain a mining claim, companies must submit an assessment report and supporting documents to the Ministry of Energy, Northern Development and Mines' (MNDM) Geoscience Assessment Office showing that they have spent a minimum of \$400/year per Single Cell Mining Claim and \$200/year per Boundary Cell Mining Claim on exploration activities. The current total annual work requirement for the Good Hope Property is \$96,000 per year.

The Property is covered by Exploration Permit PR-17-11038-A issued to property owner Rudy Wahl (the Permittee) on May 18th, 2017 and expiring May 17th, 2020. A single pre-conversion claim, TB 4261198, which was staked after the permit application was submitted, is not covered by the Permit. A new Permit will be required when and if the ownership of the claims is transferred to Plato Gold Corp. In the meantime, work has been completed under the supervision of the Permittee.

The Exploration Permit covers Early Exploration activities including:

- Mechanized Drilling (assembled drill weight >150 kg)
- Mechanized Stripping (>100m² in a 200m radius)
- Pitting and Trenching (>3m³ in a 200m radius).

- Line cutting (>1.5m width)

The Permittee is required to provide advanced written notice of their intent to mobilize or demobilize personnel and equipment to the Property and file an annual work plan.

3. PREVIOUS EXPLORATION

Most of the historic exploration in the area has focused on Nuinsco Resources Limited's Prairie Lake Carbonatite Complex (see Giroux, 2012 for a detailed history of that property).

In 2010, prospector Rudy Wahl (the property owner) collected a sample from Discovery Site Pit #1 on the Good Hope Property assaying 1.63% Nb₂O₅ (Wahl, 2015).

In December 2010, the Property was optioned to Canadian International Minerals Inc (CIM) based in Vancouver, BC. From May to July 2011, CIM completed a program of prospecting, rock and soil sampling, trenching, channel sampling, and radiometric surveying (Quist, 2011). Unfortunately, CIM's work was focused on rare earth elements and they did not analyze their samples for niobium.

CIM excavated 12 trenches, two of which were in the immediate vicinity of Plato's 2018 diamond drilling (TR-PL-11-010 and TR-PL-11-011). The remaining trenching (TR-PL-11-001 through -009, and -012) were excavated approximately 1km to the southwest along Deadhorse Road.

CIM also completed a ground radiometric survey over part of the Property using hand-held gamma ray spectrometers capable of discriminating potassium (K), uranium (U) and thorium (Th) from total counts per second. The survey included Site #28, the area of the 2018 drilling program, where it outlined U and Th anomalies coincidental to a weak K anomaly.

In 2014, Rudy Wahl undertook a program of prospecting, hand stripping, geology mapping, and rock sampling to follow up on his 2010 discovery at Pit #1 (Site 28). The overburden was hand stripped from the area of Pit #1 and 5 additional pits were dug (Pits 2, 3, 4, 5 & 2-1). 17 samples were collected which assayed up to 1.466% Nb₂O₅ and 11.52% P₂O₅ (Wahl, 2015).

In 2014, Dr. Roger Mitchell at Lakehead University studied samples from Pit #1 (Site 28). Dr. Mitchell identified two main types of pyrochlore: a fluorine (F)-free, strontium (Sr)-poor type with relatively high Fe and Nb, and a F-Na-Sr bearing type with relatively low Fe and Nb. All pyrochlores sampled were free of thorium and had very low uranium contents. The pyrochlores were up to 1mm in size and observed to often occur as aggregates in clast-like masses of prismatic apatite.

In February 2015, the property was optioned to MDN Inc of Montreal, Quebec. In June and July 2015, MDN Inc completed a program of prospecting, rock sampling, spectrometer radiometric surveying, trenching and channel sampling on the Property (Gauthier, et al., 2016). Seven sites were trenched (TR-01-PL15 through TR-07-PL15) in the Site 28 area. A total of 64 channel samples were collected.

Trench TR-01-PL15 uncovered a sub-vertical rock face where the carbonatite is seen intruding syenite. The exposed carbonatite is at least 5 metres thick by 15 metres in length and appears to extend underneath the swamp. The best assay from the channel sampling of the trench was 1.205% Nb₂O₅ over 1.1m.

Trench TR-04-PL15 was excavated ~150m north of trench TR-01-PL15. Trench 4 revealed a contact between an ijolite breccia (to the south) and syenite breccia (to the north) – both with a carbonatite matrix. The best channel sample for trench 4 was 0.437% Nb₂O₅ over 0.6m.

An additional 102 grab samples were collected from the area of which 71 were from outcrop, 28 from boulders/float, and 3 from trenches. Seven grab samples returned values greater than 0.1% Nb₂O₅, with the highest assay being 2.11% Nb₂O₅ (grab sample of ferro-carbonatite from trench TR-01-PL15).

MDN Inc commissioned a Scanning Electron Microscope (SEM) study at the University of Quebec in Montreal (UQAM) to examine pyrochlores from the ferro-carbonatite samples from trench 1 (TR-01-PL15). The pyrochlores were found to occur almost always in association with apatite and to be a low uranium variety containing inclusions of fluoro-carbonates and other related minerals.

In February 2016, MDN Inc terminated their option agreement with Rudy Wahl.

In August 2016, Rudy Wahl had Propsectair Geosurveys fly a small heliborne magnetic and radiometric survey (400x800m) covering the Site 28 area/claim 4256251 (pre-conversion). The survey outlined a gamma-ray total count anomaly which correlates moderately well with the anomaly defined by the hand-held radiometric survey done by CIM in 2011.

In September 2016, Wahl contracted Richards Exploration based in Terrace Bay, Ontario to drill two diamond drill holes (BTW core size) totalling 280.7m in length. The drill holes were drilled near the centre of the 2016 total count radiometric anomaly.

The assay highlights for the first drill hole PL-01 were 0.45% Nb₂O₅ with 1.85 % P₂O₅ over 1.0 m (from 51.0-52.0m) and 6.25% P₂O₅ with 0.098% Nb₂O₅ over 1.0m (58.55-59.55m). The second drill hole PL-02 intersected 0.34 % Nb₂O₅ with 2.61 % P₂O₅ over 1.0 m (from 107.5-108.5m) and 5.81% P₂O₅ with 0.039% Nb₂O₅ over 1.0m (55.5-56.5m). The niobium mineralization was associated with carbonatite and syenite-carbonatite breccia rock types.

In April 2017, Amy Cleaver completed an Honours Bachelor of Science thesis on the mineralogy and petrology of the Good Hope carbonatite occurrence. Pyrochlore crystals were studied in eight polished thin sections prepared from samples collected from the Property (Cleaver, 2017).

In May 2017, Plato Gold Corp based in Toronto, Ontario optioned the Good Hope Property. The following month Plato commenced a mapping, prospecting, and due diligence program on the Property focusing on both the Site 28 and Site 21A areas. Resampling of Discovery Pit #1 returned 1.055% Nb₂O₅ and 9.25% P₂O₅. Resampling of trench TR-01-PL15 returned assays up to 1.053% Nb₂O₅ and 6.73% P₂O₅ (Selway, 2017).

At Site 21A, which is south of the Prairie Lake Carbonatite Complex and approximately 3.5-4km south of Site 28, geologists mapped and sampled a 700m long northeast trending alkali granite breccia with a carbonatite matrix as well as a 1.8km long northwest trending ijolite characterized by a magnetic high anomaly.

In 2017, geologists contracted by Plato also relogged and photographed drill hole PL-01 but did not take any additional samples. They noted that rock types seen in the drill core correlated well with the rock types seen at surface in trench TR-01-PL15. Several generations of carbonatite were noted in the drill core with patches rich in pyrochlore. Apatite was identified under mid-wave ultraviolet light and noted in association with the carbonatite and the pyrochlore mineralization.

4. REGIONAL AND PROPERTY GEOLOGY

4.1 Regional Geology

The Good Hope Property is situated within Archean age rocks of the Superior Province at/near the boundary between the Wawa and Quetico Subprovinces. The Wawa Subprovince is composed of metavolcanic and metasedimentary rock sequences intruded by granitoid plutons. The Quetico Subprovince is dominated by schists and gneisses produced by the intense metamorphism of greywackes and other sedimentary rocks.

A significant geological feature in the region is the Midcontinent Rift System (MRS), which extends from central Kansas up through Lake Superior and then to the east through the Upper Peninsula of Michigan (see Figure 3). The MRS is thought to represent a failed rift (triple junction) resulting from an upwelling mantle plume 1.1 billion years ago during Mesoproterozoic time (Burke & Dewey, 1973).

The Trans-Superior Tectonic Zone (TSTZ) is a north-northeast trending fault system which extends for over 600km northwards from Michigan, through and to the north of the Lake Superior basin (Sage, 1987). Proterozoic alkalic and carbonate magmatism within the TSTZ (dated at between ~1000 and 1200 Ma) is responsible for the emplacement of the Prairie Lake Complex, the Port Coldwell Complex, the Killalla Lake Alkalic Complex, and the Chipman Lake fenites and carbonatite dykes (Figure 3). Both the Coldwell and Killalla Lake complexes do not contain carbonatites, whereas Chipman Lake and Prairie Lake do contain

carbonatites. The alkalic and carbonatite intrusions were emplaced into fractured & faulted continental shield within the TSTZ. Mariano (1979) inferred that the age and spatial relationships between the alkalic intrusions located within the TSTZ indicates emplacement from a common but differentiated magma that travelled separate paths.

Lineaments can be traced between the various alkalic intrusions within the TSTZ. Williams (1989) identified a lineament-deformation zone several kilometres in width which can be traced from the Prairie Lake Complex northeast to the Killala Lake Complex. This zone, termed the Killala Lake deformation zone, defines the boundary between the Wawa and Quetico subprovinces at that location.

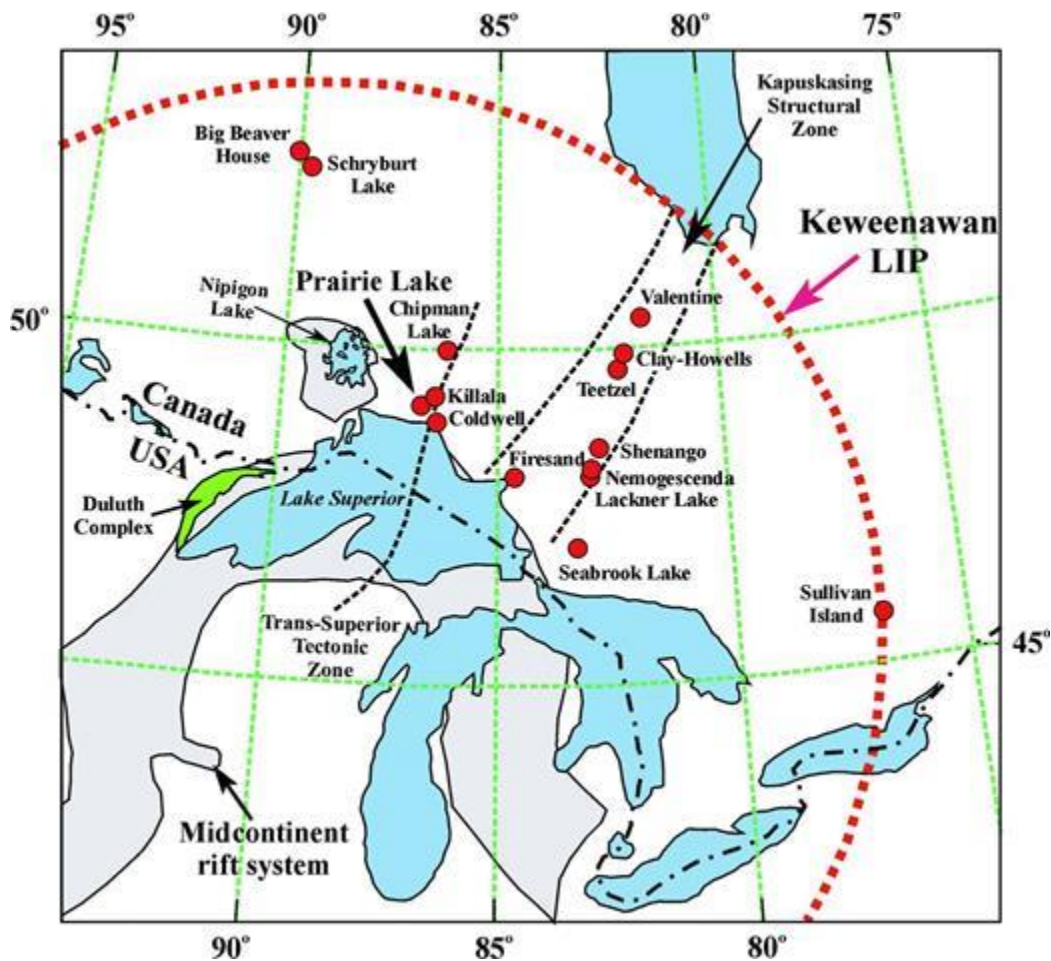


Figure 3. Distribution of alkaline and carbonatite complexes within the Midcontinent Rift (Wu et al., 2016)

4.2. Property Geology

The Good Hope Property surrounds the Prairie Lake Complex (PLC), which is owned by Nuinsco Resources Limited. The Prairie Lake Complex is an example of a carbonatite-alkalic intrusion. It covers an area of approximately 2.8 square kilometres and has a pronounced circular topographic expression. The Complex corresponds with a strong circular magnetic anomaly.

The bedrock surrounding the Prairie Lake Complex has historically been mapped as metasedimentary rocks and related gneisses. Mapping by MDN in 2015 (Gauthier et al, 2016) and Plato Gold in 2017 (Selway, 2017) identified syenite, alkali feldspar granite, carbonatite-syenite breccias, and carbonatite and ijolite dykes within the area previously mapped as metasediment.

MDN interpreted a somewhat circular zone of alkalic rocks extending 1-2 kilometres outwards from the boundary of the Prairie Lake Complex and truncated to the southeast by migmatized supracrustal rocks. They interpreted that the rocks represented an extension of the Prairie Lake Complex (Gauthier et al, 2016).

The shape of the alkalic intrusion (see Figure 4) was further refined by the 2017 mapping program by Plato Gold which identified outcrops of metasediment and paragneiss in the southwest portion of the property. Though very little outcrop information is available for the eastern part of the Good Hope Property, the author has further truncated the interpreted shape of the intrusion based on a known occurrence of metasediments directly to the east of the PLC (Giroux, 2012). Further mapping of the area is needed.

4.3. Lithologies and Mineralization

The main rock types encountered in the drilling on the Good Hope Property were alkali-feldspar rich rocks ranging from syenite (<5% quartz) to quartz-syenite (5-20% quartz) to alkali feldspar granite (>20% quartz) in composition. The alkalic rocks exhibited variable degrees of fenitization. Carbonatite-alkalic complexes are commonly surrounded by a zone of alkali (Na/K) metasomatism termed fenitization. Fenitization is produced through a reaction of the country rocks with peralkaline fluids released from the complex (Morogan, 1994).

Fenitization is characterized by: the pervasive alteration/replacement by alkali feldspars, sodic pyroxenes and amphiboles; the recrystallization of quartz and feldspar; and the partial recrystallization and assimilation of country rocks (Gomes et al., 1990).

The fenitization of the Good Hope rocks is characterized by the presence of blue sodic (Na)-amphiboles and secondary alkali feldspars often deep orange-pink in colour. Radiating acicular masses of the blue Na-amphiboles were frequently observed filling fractures within the granitic/syenitic rocks and as patches and wispy bands within the matrix of the carbonatite rocks.

Within the syenite-carbonatite breccias, syenitic clasts were often rimmed by thick reaction rims of either blue Na-amphibole or a fine-grained mix of brownish-black amphiboles and mica. Biotite-rich (glimmerite) and paler pistachio green epidote +/- chlorite alteration were also noted locally within the granitic/syenitic rocks.

Carbonatite dykes and veins intrude the alkali-feldspar rich rocks at Good Hope acting as the matrix of the breccia. The carbonatite is the host of the niobium mineralization. Carbonatites associated with carbonatite-alkalic intrusions are typically emplaced in several phases:

C1 (sovitite): The earliest and dominant phase. Usually emplaced into an envelope of explosively brecciated rocks. The C1 stage typically takes the form of a coarser-grained stock-like intrusion comprised of calcite with minor apatite, pyrochlore, magnetite, biotite, aegirine-augite.

C2 (alvikite): The second phase. A heterogeneous fine to medium grained carbonate which usually exhibits well-defined flow banding. C2 carbonatites contain greater apatite, mica, olivine and magnetite than the C1 carbonatites along with accessory Na-Ca-pyrochlore, U-Ta-bearing pyrochlore, Pb-pyrochlore, niobian zirconalite, perovskite-latrappite-loparite solid solution, baddeleyite and pyrite (Wu et al., 2016). These are the dominant carbonatites seen in the western and southern part of the Prairie Lake Complex.

C3 (ferrocarbonatite): Defined by the presence of iron-bearing carbonate minerals, rare-earth and radioactive minerals. Both the C2 and C3 phases typically take the form of cone sheets or dykes.

C4 (late-stage alvikites): A last phase of typically barren carbonate.

Niobium mineralization at Good Hope is hosted by the mineral pyrochlore. Pyrochlore is a sodium (Na)- and calcium (Ca)- bearing niobium (Nb) oxide with the simplified composition of $(\text{NaCa})\text{Nb}_2\text{O}_7$. The majority of the Good Hope pyrochlores are typically of relatively uniform composition and contain on average about 70 wt.% Nb_2O_5 . Pyrochlore commonly occurs in association with the phosphorus (P) bearing mineral apatite $\text{Ca}_5(\text{PO}_4)_3(\text{OH},\text{F},\text{Cl})$.

Petrographic studies have identified both pyrochlore-rich and pyrochlore-poor varieties of carbonatite at Good Hope (Cleaver, 2017). The pyrochlore-poor phase is thought to represent a later stage of crystallization, while the pyrochlore-rich carbonatite contains early crystallized cumulates of apatite and Na-Ca pyrochlore with interstitial carbonate minerals (Cleaver, 2017).

Ijolite is a nepheline-pyroxenite rock which dominates the Prairie Lake Complex. Ijolite is a mineralogically gradational series ranging from leucocratic-ijolite (>70% nepheline) to melano-ijolite (<30% nepheline). Silicocarbonatite is a carbonate-rich ijolitic rock containing up to 50% carbonate and less than 30% nepheline. It is characterized by an abundance of biotite and commonly has a 'salt & pepper' texture in drill core. Some of the units logged as 'mafic' dykes may be fine grained ijolites.

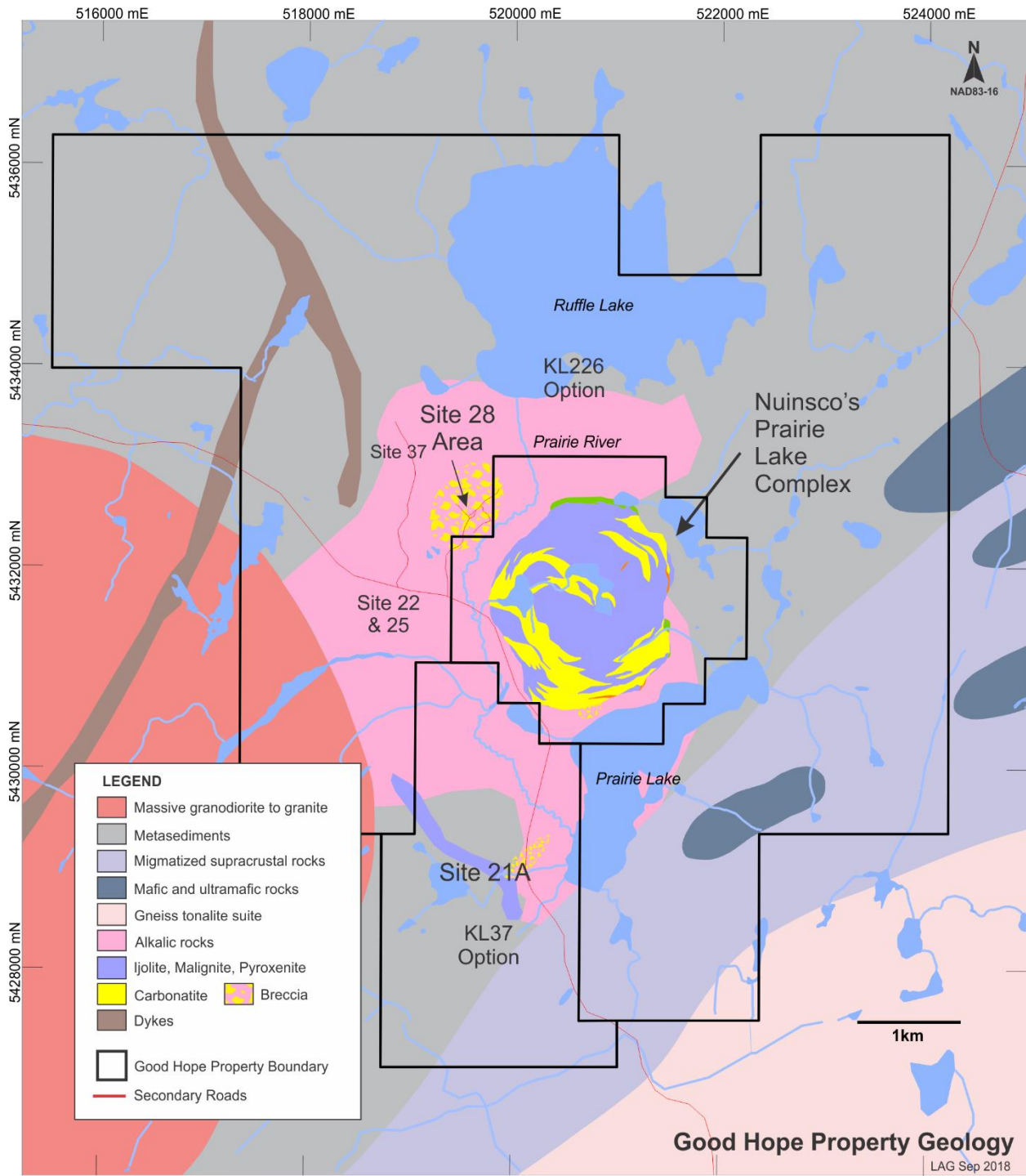


Figure 4. Good Hope Area Geology Map
 (Modified after MRD 126-REV1, Sage, 1987; Giroux, 2012; Gauthier et al, 2016; Selway, 2017)

5. 2018 DIAMOND DRILLING PROGRAM

Chibougamau Diamond Drilling based in Chibougamau, Quebec were contracted by Plato Gold Corp to drill a minimum of 5000m on the Good Hope Property starting in March 2018. A total of 5016m of HQ (63.5mm) diameter drilling was completed. The locations of the drill collars and other pertinent information are provided in Table 2. A sketch map showing the locations of the drill holes is provided as Figure 5.

Table 2. 2018 Drill Hole Collar Information (NAD 83 zone 16)

| Drill Hole | Easting | Northing | Elev (m) | Az (°) | Dip (°) | Length (m) | Start Date | Completion Date | Claims (post-Conversion) |
|------------------|---------|----------|----------|--------|---------|------------|------------|-----------------|--------------------------|
| PGH-18-01 | 519527 | 5432369 | 313 | 338 | -50 | 501 | 2018-03-13 | 2018-03-21 | 307858, 230752 |
| PGH-18-02 | 519437 | 5432594 | 310 | 338 | -50 | 372 | 2018-03-21 | 2018-03-25 | 230752 |
| PGH-18-03* | 519435 | 5432302 | 308 | 338 | -50 | 78 | 2018-03-27 | 2018-03-28 | 307858 |
| PGH-18-03B | 519527 | 5432369 | 313 | 290 | -50 | 480 | 2018-03-28 | 2018-04-04 | 307858 |
| PGH-18-04 | 519729 | 5432428 | 311 | 337 | -60 | 672 | 2018-04-04 | 2018-04-17 | 262731, 332506, 230752 |
| PGH-18-05/5B** | 519618 | 5432342 | 308 | 337 | -60 | 60/72 | 2018-04-17 | 2018-04-19 | 307858 |
| PGH-18-06 | 519644 | 5432360 | 311 | 338 | -60 | 633 | 2018-04-19 | 2018-04-30 | 262731, 307858, 230752 |
| PGH-18-07 | 519787 | 5432542 | 315 | 344 | -60 | 669 | 2018-04-30 | 2018-05-08 | 262731, 332506 |
| PGH-18-08 | 519731 | 5432724 | 318 | 344 | -50 | 498 | 2018-05-08 | 2018-05-14 | 332506 |
| PGH-18-09 | 519664 | 5432567 | 316 | 337 | -50 | 510 | 2018-05-14 | 2018-05-20 | 262731, 332506, 230752 |
| PGH-18-10/10A*** | 519604 | 5432445 | 319 | 341 | -60 | 36/435 | 2018-05-20 | 2018-05-25 | 307858, 230752 |

* Failed to reach bedrock

**Abandoned due to issues with azimuth

***Restarted due to issues with azimuth

On February 1st, the author met with Anthony Cohen (President and CEO of Plato Gold), Rudy Wahl (Prospector, Property Owner), Dr. R.H. Mitchell (Consultant Petrologist), and Dr. Thomas Chudy (Consultant) in Thunder Bay to plan the drill program.

Drill holes PGH-18-01 and PGH-18-02 were spotted on February 27th, 2018 with the help of property owners Rudy Wahl and Mike Dorval. Drilling commenced on March 13th and was completed on May 25th, 2018. A total of 9 holes were completed.

The author was on site (including travel days) from February 26-28th, March 9th to March 28th, April 22nd to May 2nd, and May 27th to June 7th to supervise the program and help with the core logging.

Geologist Brent Clark, BSc was contracted through Clark Exploration Consulting Inc based in Thunder Bay to help with the drill program and did most of the core logging. Brent was on site from March 21st to April 5th, April 7th to April 23rd, May 3rd to June 1st, and June 4th to June 8th.

Student geologist Amy Cleaver, BSc, who had done her bachelor's degree thesis on the Good Hope Property, was in Marathon from March 12th to March 20th to help with the start-up of the program. She helped with the logging of drill hole PGH-18-01.

Marathon residents Frederick (Bob) Lowndes and Michael Wesley were contracted as core technicians for the duration of the program. Both also helped with flagging of access trails prior to the start of the program. Their duties included the measuring of core, labelling of drill boxes, extrapolation of core orientation marks down the core runs, moving of drill core, and the marking of drill sites after the drill was removed.

Michael Mitchell of Marathon acted as core cutter for the first part of the program. In early May he was replaced by Leonard Windover.

Rudy Wahl helped with logistics and drill planning throughout the course of the program.

Accommodations for the geologists were obtained in the town of Marathon and changed several times based on availability throughout the program.

The former Entourage core shack in Marathon was rented from Florek Consulting for the duration of the program. The rental included the use of the logging facilities, core saw and offices.

All holes were drilled in the northwest quadrant of the property (Site 28 area) near the boundary between Plato and Nuinsco's Properties (Figure 5). The drilling focused on the area of the previous pitting and trenching – an area which corresponds well to the radiometric anomaly from the 2016 Prospectair survey. Holes targeted the known surface occurrences at depth as well as the swampy region which curves around the west half of the area (Figure 5). The swamp was thought to be a likely target for carbonatite as it is known to weather easily. Drill hole locations and orientation were determined in part by the limited availability of water during the winter.

The drilling covering an area of approximately 500m by 500m (projected to surface). The 9 completed drill holes ranged in length from 372m to 672m.

The orientation (azimuth and dip) of the drill holes was surveyed approximately every 50 metres by the drill contractor using a Reflex instrument. The core was also oriented using a Reflex instrument with the bottom of the core being marked at the end of each run. The orientation marks were extended along the length of the core runs later by the core technicians. Any alpha and beta angle measurements taken are included in the drill logs.

Photographs were taken of all core both wet and dry using a camera set up with a wide-angle lens. Logging was done with the aid of a mid-wave SuperBright 3 handheld UV lamp from UV Systems Inc which can be used to identify apatite as well distinguish between different carbonates. Lithologies and mineralization were described in detail.

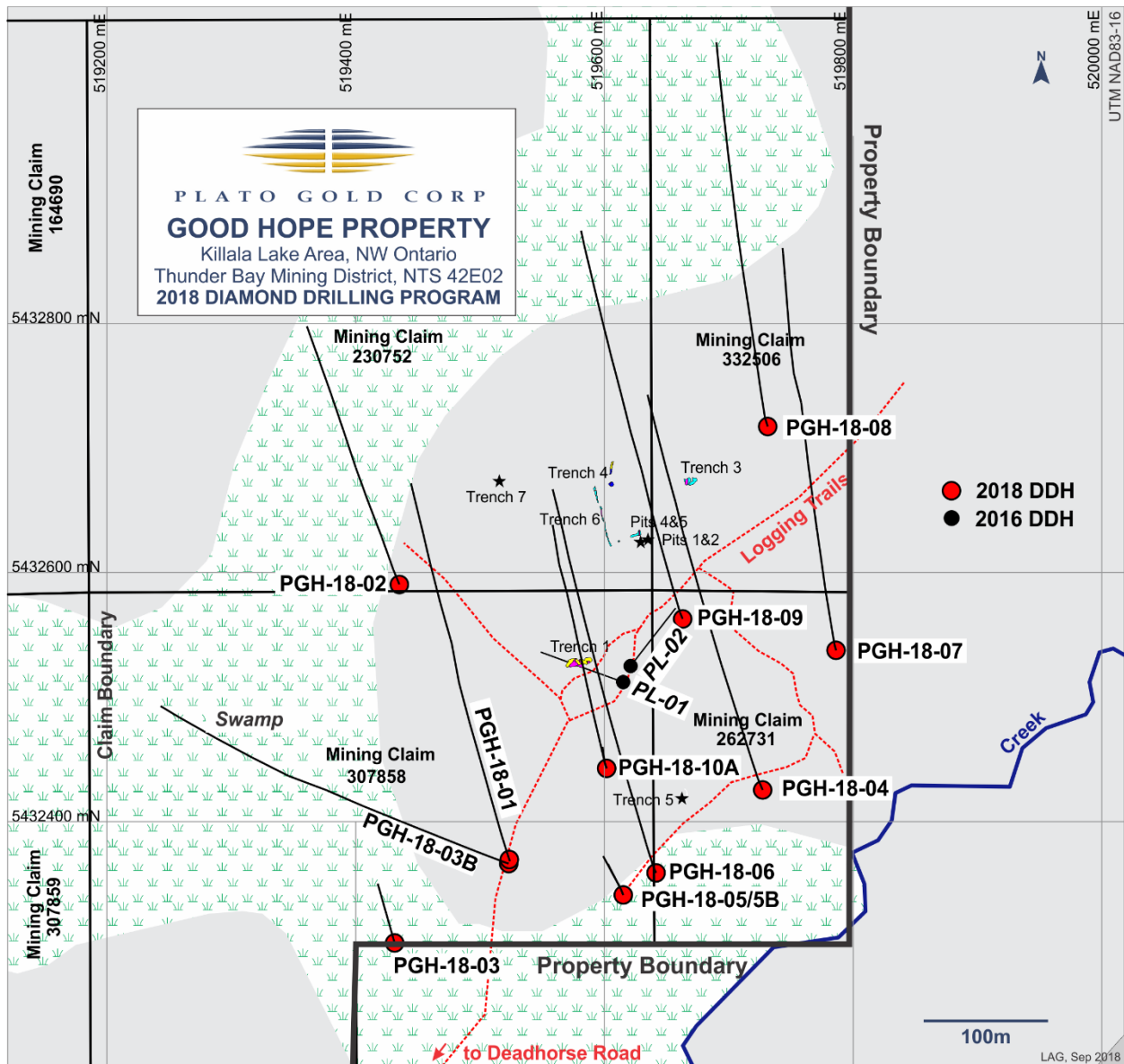


Figure 5. Sketch Drill Hole Location Map

A total of 2249 samples were analyzed, including 2081 drill core sample and 168 Quality Control Quality Assurance (QAQC) samples. The sampling procedure is described in detail in the following section. More than 50 samples were also collected for petrographic study by Dr. Roger Mitchell at Lakehead University.

During the program the core was kept at the Entourage core shack in Marathon. After completion of the program the core was shipped to Gorham Ontario near Thunder Bay for permanent storage on a private property.

6. SAMPLING AND RESULTS

6.1 Sampling, Analytical Methods, QAQC

Approximately 2150 metres or 40% of the drill core was sampled. A total of 2249 samples were submitted for analyses including 2081 drill core samples and 168 QAQC samples (blanks, standards and duplicates). Core samples averaged 1.0m in length, ranging from 0.17m to 1.61m in length.

All samples from the program were submitted to Activation Laboratories (ActLabs) in Thunder Bay, Ontario and analyzed for niobium using ActLab's Code 8 fusion XRF method. Samples from holes PGH-18-01 through PGH-18-03 were also analyzed for the 4 Litho whole rock and trace element ICP analytical package. Samples from holes PGH-18-04 onwards were submitted for the Code 8 XRF package designed for coltan deposits which includes Ta, Nb, U, Th, Zr, Fe, P, Sn, Y, and W oxides.

An internal QAQC program was implemented with 168 QAQC samples including blanks, reference standards, and duplicates being inserted into the sample sequence. The sequence of insertion of the blanks and standards was random and established beforehand using Excel. The blank material used was clean white marble pebbles meant for landscaping which were available from a local hardware store. The standard reference material (standard) used was OKA-1 which was obtained from CANMET's Canadian Certified Reference Materials Project (CCRMP). OKA-1 is carbonatite ore from Oka, Quebec and is certified at a grade of 0.37% Nb with a $\pm 0.01\%$ 95% Confidence Interval. Duplicates were inserted at the geologists' discretion based on observed mineralization. For the duplicates the core was quartered, and the two quarters were submitted as sequential samples.

The QAQC samples (except duplicates) were prepared by the geologists in advance. The core technicians made certain that the QAQC samples were packaged in sequence with the core samples in the rice bags to be sent to the lab. Samples were delivered directly to the laboratory in Thunder Bay by either the geologists or core technicians.

The QAQC results were quickly reviewed as the analytical results were received from the lab but a detailed study of the QAQC data has not been completed. Of the 93 blank samples only two returned values that were above the lower detection limit for niobium of $<0.003\%$ Nb₂O₅. The two samples were still low enough to not be of concern as both were less than three times the lower detection limit.

A total of 59 standards were analyzed. An acceptable range (2-sigma limits) for the OKA-1 standard was determined in previous work involving the author to be between 4720ppm and 5865ppm Nb₂O₅ (3300-4100ppm Nb). All but one of the samples fell within the acceptable range. Sample 590726 assayed at 0.02% Nb₂O₅, which does not match with the sample either being a standard or blank. The author has not yet had a chance to review the drill core to determine the cause of the error.

Sixteen duplicates were analyzed and the relative percent difference between the original and the duplicate ranged from 0% to 80% for niobium. The median difference was 15.7%. The variability between the originals and duplicates is likely due to the cumulate and banded nature of the mineralization.

6.2 Analytical Results

A total of 2249 samples were analyzed, including 2081 drill core sample and 168 QAQC samples. Niobium analyses of the core samples ranged from below detection limit (<0.003 Nb₂O₅) to 0.950% Nb₂O₅. Phosphorus values ranged from below detection limit (<0.01%) to 11.23% P₂O₅. Statistics for the niobium and phosphorus analyses are provided in tables 3a and 3b respectively. The weighted average of all core samples from the 2018 drilling program was 0.096% Nb₂O₅ and 1.79% P₂O₅.

Table 3a. Statistics for Niobium Analyses

| 2018 DDH Data | | | Niobium (Nb ₂ O ₅) % | | | |
|------------------|-------------|--------------------------|---|--------------|--------------|-----------------|
| DDH | No. Samples | Total Length Sampled (m) | Minimum | Median | Maximum | Mean (weighted) |
| PGH-18-01 | 292 | 274.89 | <0.003 | 0.063 | 0.852 | 0.113 |
| PGH-18-02 | 148 | 123.33 | <0.003 | 0.054 | 0.572 | 0.099 |
| PGH-18-03B | 134 | 134.17 | <0.003 | 0.067 | 0.807 | 0.116 |
| PGH-18-04 | 255 | 279.11 | 0.004 | 0.053 | 0.847 | 0.099 |
| PGH-18-05 | 40 | 48.37 | <0.003 | 0.031 | 0.482 | 0.062 |
| PGH-18-06 | 280 | 314.65 | <0.003 | 0.054 | 0.950 | 0.108 |
| PGH-18-07 | 248 | 264.98 | <0.003 | 0.046 | 0.888 | 0.082 |
| PGH-18-08 | 211 | 236.93 | <0.003 | 0.051 | 0.692 | 0.072 |
| PGH-18-09 | 215 | 211.59 | <0.003 | 0.051 | 0.867 | 0.079 |
| PGH-18-10A | 258 | 260.35 | <0.003 | 0.053 | 0.759 | 0.106 |
| ALL HOLES | 2081 | 2148.37 | <0.003 | 0.053 | 0.950 | 0.096 |

Table 3b. Statistics for Phosphorus Analyses

| 2018 DDH Data | | | Phosphorus (P ₂ O ₅) % | | | |
|------------------|-------------|--------------------------|---|-------------|--------------|-----------------|
| DDH | No. Samples | Total Length Sampled (m) | Minimum | Median | Maximum | Mean (weighted) |
| PGH-18-01 | 292 | 274.89 | 0.02 | 1.52 | 8.09 | 1.82 |
| PGH-18-02 | 148 | 123.33 | 0.02 | 1.45 | 10.63 | 2.08 |
| PGH-18-03B | 134 | 134.17 | <0.01 | 1.68 | 6.85 | 2.06 |
| PGH-18-04 | 255 | 279.11 | 0.03 | 1.25 | 8.40 | 1.90 |
| PGH-18-05 | 40 | 48.37 | 0.03 | 0.83 | 4.28 | 1.21 |
| PGH-18-06 | 280 | 314.65 | 0.04 | 1.45 | 6.81 | 1.74 |
| PGH-18-07 | 248 | 264.98 | 0.05 | 1.5 | 7.78 | 1.94 |
| PGH-18-08 | 211 | 236.93 | 0.02 | 1.16 | 10.47 | 1.64 |
| PGH-18-09 | 215 | 211.59 | 0.02 | 1.19 | 7.58 | 1.69 |
| PGH-18-10A | 258 | 260.35 | 0.01 | 1.17 | 11.23 | 1.60 |
| ALL HOLES | 2081 | 2148.37 | <0.01 | 1.34 | 11.23 | 1.79 |

Rare earth analyses were only performed on the first four batches of samples submitted (holes PGH-18-01, PGH-18-02 and PGH-18-03B). Two samples had Total Rare Earth Element (TREE) contents greater than 1% (TREE = \sum La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Y):

PGH-18-01 from 145.24-145.84m: **1.01% TREE** over 0.6m (with 2.0% P₂O₅, 0.048% Nb₂O₅) in carbonatite.

PGH-18-01 from 266.76-267.23m: **1.17% TREE** over 0.47m (with 0.02% P₂O₅, <0.003% Nb₂O₅) in carbonatite with fluorite.

In both cases the Light Rare Earth Elements (LREE) were dominant (LREE => La, Ce, Pr, Nd).

Weighted averages for the 2018 drill program are presented in Table 4. Complete tabulated analytical results are provided with the drill logs in Appendix A. Analytical certificates are provided in Appendix B.

Table 4. 2018 Drilling - Weighted Averages

| Drill Hole | From (m) | To (m) | Width* (m) | Nb ₂ O ₅ (%) | P ₂ O ₅ (%) | Description |
|-----------------------|----------|--------|------------|------------------------------------|-----------------------------------|-------------------------|
| PGH-18-01 | 15.64 | 19.75 | 4.11 | 0.174 | 2.71 | CRBT>SYE CLASTS |
| PGH-18-01 | 65.93 | 81.25 | 15.32 | 0.131 | 2.84 | CRBT |
| <i>including</i> | 74.88 | 78 | 3.12 | 0.224 | 3.59 | |
| PGH-18-01 | 170.4 | 171.36 | 0.96 | 0.356 | 3.4 | CRBT |
| PGH-18-01 | 198 | 212.72 | 14.72 | 0.126 | 2.22 | MIX CRBT & BX |
| <i>including</i> | 199 | 200.01 | 1.01 | 0.543 | 4.61 | CRBT |
| PGH-18-01 | 227.18 | 278.3 | 51.12 | 0.123 | 1.81 | MIX CRBT & BX |
| <i>including</i> | 242.5 | 247.3 | 4.8 | 0.264 | 3.99 | CRBT>SYE CLASTS |
| <i>which includes</i> | 243.49 | 244.44 | 0.95 | 0.531 | 6.27 | CRBT |
| <i>and</i> | 273.92 | 278.3 | 4.38 | 0.365 | 4.70 | CRBT |
| <i>which includes</i> | 277.15 | 278.3 | 1.15 | 0.665 | 3.2 | |
| PGH-18-01 | 295.9 | 298.44 | 2.54 | 0.400 | 2.71 | MIX CRBT & BX |
| <i>including</i> | 295.9 | 296.7 | 0.8 | 0.637 | 4.5 | |
| PGH-18-01 | 308.2 | 374.02 | 65.82 | 0.170 | 2.11 | MIXED CRBT & BX |
| <i>including</i> | 309.35 | 355.05 | 45.7 | 0.198 | 2.57 | CRBT from 313.49-340.9m |
| <i>which includes</i> | 351.13 | 354.57 | 3.44 | 0.424 | 3.48 | |
| <i>which includes</i> | 351.13 | 352.09 | 0.96 | 0.852 | 6.11 | BX w/ 40% CRBT VEINING |
| <i>and</i> | 362.8 | 366.58 | 3.78 | 0.392 | 3.05 | BX |
| <i>which includes</i> | 362.8 | 364.77 | 1.97 | 0.662 | 4.60 | |
| | | | | | | |
| PGH-18-02 | 29.5 | 30.7 | 1.2 | 0.534 | 2.15 | CRBT |
| PGH-18-02 | 38.75 | 48.25 | 9.5 | 0.238 | 2.06 | BX |

| | | | | | | |
|-----------------------|--------|--------|--------|-------|------|--------------------------|
| <i>including</i> | 39.25 | 42 | 2.75 | 0.404 | 2.35 | BX |
| <i>which includes</i> | 41 | 42 | 1.0 | 0.572 | 2.05 | CRBT-BX |
| PGH-18-02 | 89.15 | 89.8 | 0.65 | 0.351 | 6.93 | CRBT |
| PGH-18-02 | 146 | 150.2 | 4.2 | 0.210 | 4.80 | CRBT/SYE-BX |
| PGH-18-02 | 155.45 | 157.3 | 1.85 | 0.390 | 1.96 | CRBT/BX |
| <i>including</i> | 156.35 | 157.3 | 0.95 | 0.512 | 3.06 | CRBT |
| PGH-18-02 | 202.68 | 203.43 | 0.75 | 0.362 | 2.4 | |
| PGH-18-02 | 257.8 | 270.77 | 12.97 | 0.093 | 4.11 | CRBT |
| | | | | | | |
| PGH-18-03B | 22 | 23.8 | 1.8 | 0.246 | 2.32 | CRBT |
| PGH-18-03B | 52.45 | 62.08 | 9.63 | 0.117 | 2.38 | CRBT |
| PGH-18-03B | 187.24 | 196 | 8.76 | 0.219 | 1.91 | CRBT |
| PGH-18-03B | 218.86 | 223.3 | 4.44 | 0.381 | 2.74 | CRBT w/ BX at end |
| <i>including</i> | 221 | 222 | 1.00 | 0.807 | 5.28 | CRBT |
| PGH-18-03B | 381.49 | 382.12 | 0.63 | 0.597 | 2.66 | CRBT/BX |
| PGH-18-03B | 411 | 418.5 | 7.5 | 0.229 | 2.75 | CRBT |
| PGH-18-03B | 470.75 | 477.04 | 6.29 | 0.095 | 0.54 | CRBT |
| | | | | | | |
| PGH-18-04 | 435 | 436 | 1.00 | 0.682 | 3.86 | CRBT-BX |
| PGH-18-04 | 489.34 | 621.7 | 132.36 | 0.119 | 1.71 | MIXED |
| <i>including</i> | 493.18 | 508.4 | 15.22 | 0.236 | 3.18 | CRBT/SYE-BX |
| <i>and</i> | 537.75 | 555.19 | 17.44 | 0.308 | 3.20 | CRBT |
| <i>which includes</i> | 537.75 | 540.75 | 3.00 | 0.769 | 5.87 | CRBT |
| <i>and includes</i> | 548.25 | 549.75 | 1.50 | 0.678 | 7.27 | CRBT |
| <i>and</i> | 563.85 | 564.86 | 1.01 | 0.538 | 5.92 | CRBT |
| | | | | | | |
| PGH-18-05 | 38.8 | 40.3 | 1.5 | 0.482 | 4.28 | CRBT |
| | | | | | | |
| PGH-18-06 | 25.9 | 30.1 | 4.2 | 0.145 | 2.61 | CRBT |
| PGH-18-06 | 344.54 | 345.98 | 1.44 | 0.434 | 3.04 | SYE-BX |
| PGH-18-06 | 354.18 | 447.26 | 93.08 | 0.190 | 2.04 | CRBT w/ minor SYE & DIAB |
| <i>including</i> | 355.22 | 357.09 | 1.87 | 0.529 | 3.75 | CRBT |
| <i>and</i> | 382.94 | 402.67 | 19.73 | 0.365 | 2.86 | CRBT |
| <i>which includes</i> | 382.94 | 384.04 | 1.1 | 0.950 | 6.20 | CRBT |
| <i>and</i> | 414.38 | 441.14 | 26.76 | 0.259 | 2.94 | CRBT |
| <i>which includes</i> | 435.66 | 437.78 | 2.12 | 0.846 | 4.71 | CRBT |
| | | | | | | |
| PGH-18-07 | 202.22 | 203.61 | 1.39 | 0.700 | 3.94 | CRBT BX |
| PGH-18-07 | 226 | 232.7 | 6.7 | 0.104 | 2.96 | CRBT/SYE-BX |
| PGH-18-07 | 265.95 | 289 | 23.05 | 0.111 | 2.67 | CRBT/SYE-BX |

| | | | | | | |
|-----------------------|--------|--------|-------|-------|------|-------------|
| <i>including</i> | 275.8 | 280.3 | 4.5 | 0.258 | 1.20 | CRBT-BX |
| PGH-18-07 | 468.15 | 474.37 | 6.22 | 0.103 | 1.70 | CRBT |
| PGH-18-07 | 573.14 | 586.42 | 13.28 | 0.300 | 2.75 | CBRT/SYE-BX |
| <i>including</i> | 580.72 | 584.95 | 4.23 | 0.483 | 2.72 | SYE-BX |
| <i>which includes</i> | 583.46 | 584.95 | 1.49 | 0.885 | 4.59 | SYE-BX |
| PGH-18-07 | 608 | 653.02 | 45.02 | 0.093 | 2.01 | CRBT/SYE-BX |
| <i>including</i> | 646 | 648.57 | 2.57 | 0.583 | 4.67 | CRBT/SYE-BX |
| <i>which includes</i> | 646 | 647.3 | 1.3 | 0.888 | 6.14 | CRBT |
| | | | | | | |
| PGH-18-08 | 60 | 72 | 12 | 0.097 | 1.29 | SYE-BX |
| PGH-18-08 | 89.67 | 99.57 | 9.9 | 0.118 | 2.04 | CRBT/SYE |
| PGH-18-08 | 174 | 183 | 9 | 0.124 | 3.23 | CRBT |
| PGH-18-08 | 290.76 | 338 | 47.24 | 0.094 | 1.62 | CRBT/SYE-BX |
| <i>including</i> | 328 | 335 | 7 | 0.238 | 2.81 | CRBT |
| <i>which includes</i> | 328 | 329 | 1 | 0.692 | 5.39 | CRBT |
| PGH-18-08 | 346.56 | 347.09 | 0.53 | 0.614 | 4.95 | CRBT |
| PGH-18-08 | 376 | 380.24 | 4.24 | 0.201 | 2.02 | CRBT/SYE-BX |
| | | | | | | |
| PGH-18-09 | 141 | 145.9 | 4.9 | 0.143 | 3.43 | CRBT-BX |
| PGH-18-09 | 159.48 | 186 | 26.52 | 0.095 | 1.45 | CRBT/SYE-BX |
| <i>including</i> | 159.48 | 160.38 | 0.9 | 0.398 | 0.54 | CRBT |
| <i>and</i> | 169.72 | 171.63 | 1.91 | 0.289 | 6.09 | CRBT/SYE-BX |
| PGH-18-09 | 201.08 | 204 | 2.92 | 0.113 | 1.89 | MD |
| PGH-18-09 | 216.5 | 217.08 | 0.58 | 0.579 | 6.39 | CRBT-BX |
| PGH-18-09 | 223.63 | 224.03 | 0.40 | 0.867 | 3.34 | CRBT |
| PGH-18-09 | 249.4 | 254 | 4.6 | 0.148 | 3.19 | CRBT-BX |
| PGH-18-09 | 292.81 | 297.35 | 4.54 | 0.171 | 2.08 | CRBT |
| <i>including</i> | 294.95 | 295.45 | 0.5 | 0.485 | 4.16 | CRBT |
| PGH-18-09 | 314.52 | 323.83 | 9.31 | 0.087 | 0.85 | CRBT/SYE-BX |
| PGH-18-09 | 368.55 | 371.94 | 3.39 | 0.176 | 3.08 | CRBT/SYE-BX |
| PGH-18-09 | 375.36 | 378.2 | 2.84 | 0.137 | 1.93 | CRBT |
| PGH-18-09 | 434.5 | 437.4 | 2.9 | 0.159 | 2.47 | CRBT |
| PGH-18-09 | 446.17 | 459.65 | 13.48 | 0.165 | 2.81 | CRBT |
| PGH-18-09 | 488 | 492.96 | 4.96 | 0.180 | 3.15 | CRBT |
| | | | | | | |
| PGH-18-10A | 161.87 | 162.48 | 0.61 | 0.414 | 4.86 | CRBT |
| PGH-18-10A | 168.72 | 168.94 | 0.22 | 0.401 | 2.18 | CRBT |
| PGH-18-10A | 177.5 | 178.91 | 1.41 | 0.183 | 0.84 | CRBT/SYE-BX |
| PGH-18-10A | 252 | 254.13 | 2.13 | 0.319 | 3.26 | CRBT/SYE-BX |
| PGH-18-10A | 265.95 | 269.55 | 3.6 | 0.345 | 0.82 | SYE-BX |
| <i>including</i> | 267 | 268.08 | 1.08 | 0.759 | 0.76 | SYE-BX |
| PGH-18-10A | 275.85 | 283.43 | 7.58 | 0.122 | 1.73 | SYE-BX |
| PGH-18-10A | 296.23 | 301 | 4.77 | 0.113 | 1.84 | CRBT |

| | | | | | | |
|-----------------------|--------|--------|-------|-------|------|-------------|
| PGH-18-10A | 321.77 | 337.85 | 16.08 | 0.115 | 1.34 | CRBT/MD |
| <i>Including</i> | 321.77 | 322.9 | 1.13 | 0.523 | 4.37 | CRBT/MD |
| PGH-18-10A | 345 | 434.24 | 89.24 | 0.175 | 2.03 | CRBT/SYE-BX |
| <i>Including</i> | 358.82 | 360.08 | 1.26 | 0.428 | 4.76 | SYE-BX |
| <i>And</i> | 364.24 | 377.3 | 13.06 | 0.392 | 3.43 | CRBT |
| <i>And</i> | 387 | 391.92 | 4.92 | 0.405 | 2.96 | CRBT |
| <i>which includes</i> | 387 | 387.71 | 0.71 | 0.747 | 5.51 | CRBT |
| <i>And</i> | 394.63 | 395.51 | 0.88 | 0.618 | 4.11 | CRBT |
| <i>And</i> | 403.59 | 406.91 | 3.32 | 0.319 | 4.45 | CRBT |
| <i>And</i> | 432.43 | 433.24 | 0.81 | 0.402 | 4.12 | SYE-BX |

*True widths not determined due to brecciated nature of mineralized units;

**CRBT = Massive carbonatite; SYE = Un-brecciated syenite/quartz-syenite; CRBT/SYE-BX = Mix of massive carbonatite and breccia (syenitic clasts in carbonatite matrix); CRBT-BX = Breccia where carbonatite content greater than syenite; DIAB = Diabase dyke.

7. DISCUSSION AND RECOMMENDATIONS

The 2018 drilling focused on outcropping mineralization at 'Site 28' in the northwestern part of the property and encompassed an area of approximately 500m by 500m. All holes were drilled in a northwesterly direction due to availability of water. The nine completed drill holes ranged in length from 372 to 672 metres, testing the area to a vertical depth of between 285 and 580 metres.

All holes intersected zones (up to 27m wide) of massive carbonatite within a brecciated system consisting of variably fenitized alkalic rocks intruded by carbonatite dykes and crosscutting carbonatite veins. Alkalic rocks ranged from syenite to alkali feldspar granite in composition. Quartz content, which ranged from 0% to >30%, appeared to increase with distance from the carbonatite zone.

The brecciated nature of the host rocks makes any orientation or trend of mineralization difficult to determine. Orientation data collected during the drilling program has not yet been plotted. The data may help define an overall pattern for the orientation of carbonatites but will not be useful for determining the trend of individual carbonatite zone because of brecciated nature in which the carbonatite was intruded. The orientation data may help to trace the orientation of any mafic dykes.

Initially the swampy area shown in Figure 5 was thought to be a good target for finding larger carbonatite bodies as carbonatite is known to weather readily. No observable difference was noted in logging of the holes (PGH-18-02, PGH-18-03B, and PGH-18-08) which extended a significant distance under the swamp.

The swamp follows the course of the Prairie River then wraps around the slight topographic high on which the drilling was centred. The high corresponds to the Prospectair potassium and total count radiometric anomalies. The alkalic metasomatism of the rocks in this area appears to have made the rocks here more resistive to weathering.

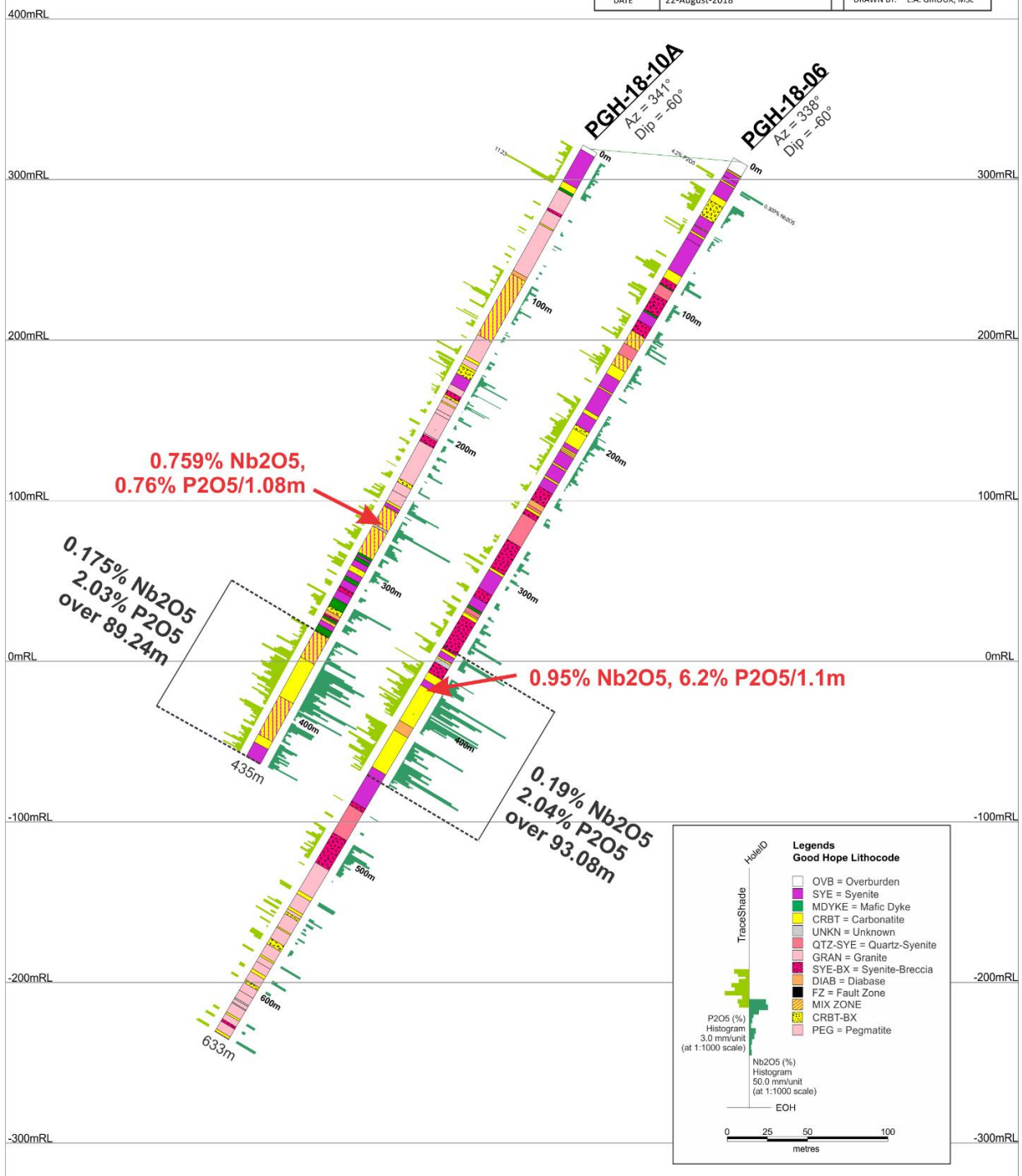


Figure 6. Sketch Drill Section – PGH-18-06 and PGH-18-10A

Assays from the drilling program peaked at 0.950% niobium (Nb_2O_5) with 6.20% phosphorus (P_2O_5) over 1.1m in a sample of massive carbonatite (PGH-18-06, 382.94-384.04m).

The niobium mineralization is heterogeneous, generally being spotty and discontinuous. The two longest continuous intersections of niobium mineralization from the drilling program were 0.190% Nb_2O_5 and 2.04% P_2O_5 over 93.08m (drill hole PGH-18-06; 354.18-447.26m) and 0.175% Nb_2O_5 and 2.03% P_2O_5 over 89.24m (drill hole PGH-18-10A; 345.0-434.24m). These two zones can be seen in the sketch drill section in Figure 6.

Occasionally coarser grained pyrochlore crystals were observed in the drill core. An example of some of these coarser grained pyrochlores associated with apatite is shown in Figure 7. The pictures show the broken end of drill core from hole PGH-18-10A under both fluorescent and UV light.

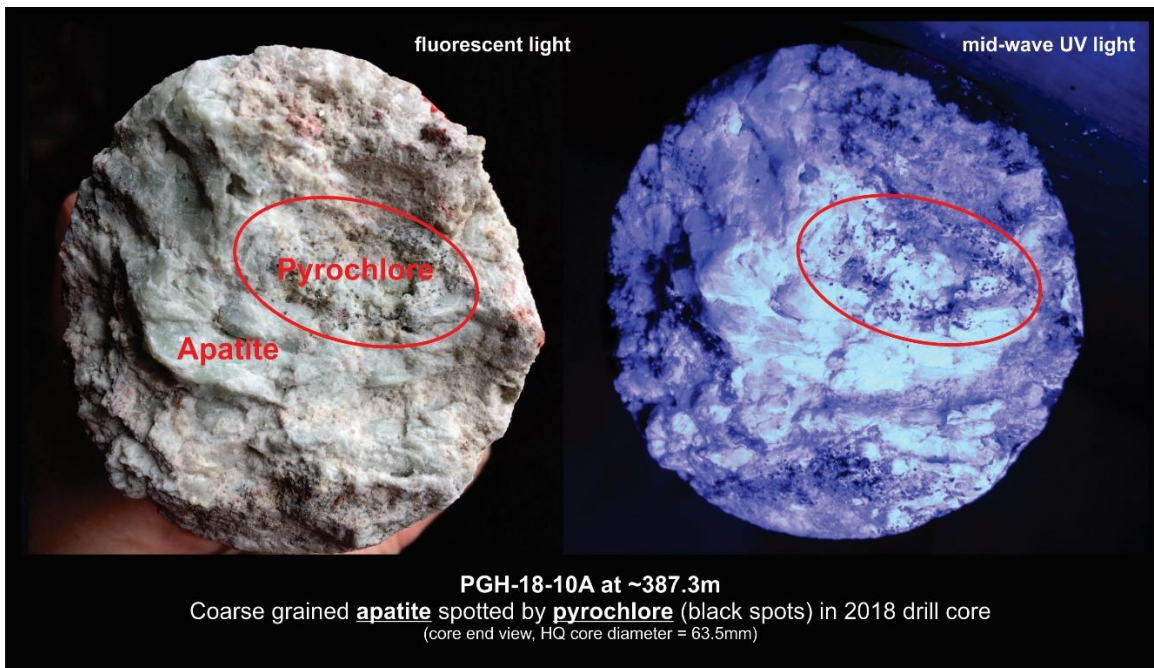


Figure 7. Fluorescent (left) and mid-wave UV light (right) photos showing coarser grained pyrochlores in apatite at ~387.3m in hole PGH-18-10A.

The extent of the breccia zone which hosts the niobium mineralization at Good Hope is unknown. An occurrence of a similar breccia at the southern contact of the Prairie Lake Complex was recognized during a 2008 drilling program by Nuinsco Resources Ltd (Giroux, 2009). This suggests that the breccia may wrap around the western and southern periphery of the Prairie Lake Complex (see Figure 4).

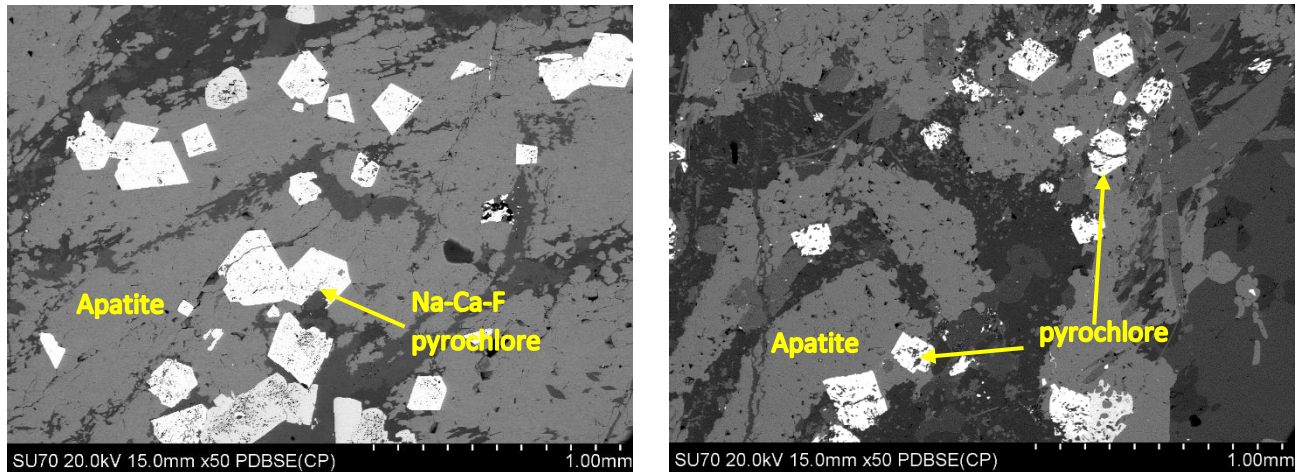


Figure 8. Back-scattered electron images showing coarse grained pyrochlore crystals (white) in apatite at 384.8m in drill hole PGH-18-06 (left) and 335m in hole PGH-18-01 (right).

Dr. Roger Mitchell of Lakehead University is undertaking a petrographic study of more than 50 core samples collected from the recent drill program. Preliminary results of the study (as reported in Plato Gold's press release dated 17 September 2018) show that the pyrochlores "exhibit a very wide range in size, mainly from 100 microns to 1 mm, with some crystals being up to 5 mm in maximum dimension. The majority are euhedral, not resorbed and of relatively uniform composition. Inclusions when present are of apatite, and/or diverse carbonates." Figure 8 shows an example of coarser grained pyrochlores in association with apatite in two of the samples studied by Dr. Mitchell.

Dr. Mitchell also noted that "the majority of the Good Hope pyrochlores are typically of relatively uniform composition and contain on average about 70 wt.% Nb_2O_5 with 1-2 wt.% strontium oxide (SrO) and barium oxide (BaO). Minor variations in composition range from these dominant "normal" Na-Ca-pyrochlores to Na- and Ca-poor (1-4 wt.% Na_2O) varieties also with 70 wt.% Nb_2O_5 . Replacement of both types of pyrochlores by trace amounts of Sr-rich varieties with 4-6 wt.% SrO, 1-8 wt.% BaO, less than 1 wt.% UO_3 , and no detectable ThO_2 are also present. Some pyrochlores have been replaced in part by fersmite [CaNb_2O_6 with approximately 58 wt.% Nb_2O_5] or ferrocolumbite [FeNb_2O_6 with c. 79 wt.% Nb_2O_5]."

Final results of Dr. Mitchell's study will be reported on at a later date as the study is ongoing.

Plato has contracted an independent mining and geological consulting firm to review the data from the recent program and help with planning of the next phase of drilling to help move the project forward.

The next phase of the program may include infill drilling and sampling, extension of the drilling pattern to the west and north and drilling of other target areas such as site 21.

A follow-up program of 5000m of drilling would cost approximately \$1,000,000. The use of NQ sized drill core (unoriented) would be adequate based on the mineralization observed in the first round of drilling. The required work crew would consist of 1 full time technician, 1 core cutter, and 2 geologists.

A property wide radiometric survey might also be considered to help identify additional targets similar to the Site 28 area, which is a well-defined radiometric anomaly.

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Certificate of Author

I, Laura A. Giroux, M.Sc., P.Geo., do hereby certify that:

-I am a professional geologist registered in the Province of Ontario in good standing with the Association of Professional Geoscientists of Ontario, registration number 2017.

-I currently reside in the City of Ottawa, in the Province of Ontario

-I graduated with a Master of Science degree in Earth Sciences from the University of Ottawa in 2005.

-I have worked in the Junior Mining/Mineral Exploration industry continuously since graduation in 2005.

-I am currently a part time employee of Nuinsco Resources Limited.

-I worked as a consultant to Plato Gold Corp, independent of my employer, for the purpose of the drilling program described within this report.

-I have worked on Nuinsco Resources Limited's adjacent Prairie Lake Carbonatite Complex Property since 2006.

-I am the sole author of the report entitled "Assessment Report on the 2018 Diamond Drilling Program on the Good Hope Niobium Property".

-This assessment report is not a 43-101 compliant technical report and should not be represented as being such.

Signed October 1st, 2018



APPENDIX A
Drill Logs

CODES / SHORT FORM USED IN LOGGING

LITHOLOGY

| <u>Code</u> | <u>Description</u> |
|-------------|---|
| GRAN | Granite |
| SYE | Syenite |
| SYE-BX | Syenite-Breccia (Sye clasts in lesser CRBT matrix) (note also used where clasts more qtz-rich/granitic in composition) |
| CRBT | Carbonatite |
| CRBT-BX | Carbonatite-Breccia (CRBT matrix>>SYE clasts) |
| FEN | Fenite |
| MDYKE | Mafic Dyke |
| DIAB | Diabase |
| UNKN | Unknown Rock Type |
| FZ | Fault Zone |

ORIENTED STRUCTURES

| <u>Code</u> | <u>Description</u> |
|-------------|--------------------|
| CT | Contact |
| VN | Vein |
| FZ | Fault Zone |
| BND | Banding |
| UC | Upper Contact |
| LC | Lower Contact |
| FRAC | Fracture |

LOGGING

| <u>Code</u> | <u>Description</u> |
|-------------|----------------------|
| alt'd | altered |
| alt'n | alteration |
| amph | amphibole |
| ap/apt | apatite |
| bt/biot | biotite |
| bx | breccia |
| bx'td | brecciated |
| bx'tn | brecciation |
| carb | carbonate |
| cg | coarse grained |
| chl | chlorite |
| cps or c/s | counts per second |
| crbt | carbonatite |
| dol | dolomite |
| dtca | degrees to core axis |
| ep | epidote |
| fe | iron |
| fg | fine grained |
| fract | fracture |
| fspar/fsp | feldspar |
| gran | granite |
| H | hardness |
| hem | hematite |
| kspar | potassium feldspar |
| LC/LCT | lower contact |
| mag | magnetic |
| mg | medium grained |
| mt | magnetite |

| <u>Code</u> | <u>Description</u> |
|-------------|---------------------|
| Nb | niobium |
| neph | nepheline |
| peg | pegmatite |
| plag | plagioclase |
| po | pyrrhotite |
| py | pyrite |
| pych | pyrochlore |
| pyx | pyroxene |
| qtz | quartz |
| rxn | reaction |
| scint | scintillometer |
| sil | silica |
| sulph | sulphide |
| susc | susceptibility |
| syen | syenite |
| tca | to core axis |
| UC/UCT | upper contact |
| vfg | very coarse grained |
| vfg | very fine grained |
| xtals | crystals |



| | | | |
|---------------------|------------------------------|---------------|---------------------------------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 13-Mar-2018 |
| Township/Area: | Killala Lake Area | End Date: | 21-Mar-2018 |
| Claims (converted): | 307858, 230752 | Described by: | LA Giroux, MSc, PGeo, A. Cleaver, BSc |
| Claims (legacy): | TB 4256251 | Log date: | 25-Mar-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 338.00° | | Easting: 519527 | | Core size: HQ | | Cemented: No | |
| Plunge: -50.00° | | Northing: 5432369 | | Casing: Pulled | | Stored: Yes | |
| Length: 501.00 m | | Elevation: 313.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth - Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-------------------------|---------|-------|
| PGH-18-01 | Reflex | 9 | 336.6 | -50.7 | 57030 |
| PGH-18-01 | Reflex | 60 | 338.1 | -50.7 | 56430 |
| PGH-18-01 | Reflex | 111 | 338.2 | -50.7 | 56316 |
| PGH-18-01 | Reflex | 162 | 337.7 | -50.8 | 56866 |
| PGH-18-01 | Reflex | 213 | 339.1 | -50.7 | 56500 |
| PGH-18-01 | Reflex | 264 | 343.4 | -50.5 | 56017 |
| PGH-18-01 | Reflex | 315 | 338 | -50.4 | 56790 |
| PGH-18-01 | Reflex | 369 | 339.5 | -50.6 | 56253 |
| PGH-18-01 | Reflex | 420 | 340.6 | -50.4 | 56359 |
| PGH-18-01 | Reflex | 471 | 340.2 | -50.3 | 56512 |
| PGH-18-01 | Reflex | 495 | 340.6 | -50.2 | 56460 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|------------------------|--|
| PGH-18-01 | 0 | 3 | OVB | Casing | Overburden to ~2.5m. |
| PGH-18-01 | 3 | 9.05 | SYE | Alkaline Feldspar Rock | Med pink to dark red mg to cg kspar with up to 30% finer grained dark blue-black to black amphibole or pyx. Variably brecciated by up to 15cm wide light grey carbonate veins, typically <1-2cm wide. At 6.26m: 2cm wide fracture, reddish-brown powdery coating + minor white calcite, rough non planer surface at 60-70deg (from bottom mark of core). Carbonate veins from 3.46-3.66m and 7.20-7.40m. |
| PGH-18-01 | 9.05 | 9.32 | MDYKE | Mafic Dyke | Massive, dark grey, fine grained, <10% fg-mg calcite + vfg dark red mineral. At ~70dtca (alpha angle). |
| PGH-18-01 | 9.32 | 13.63 | SYE | Alkaline Feldspar Rock | Similar to above. Deep reddish colour. More fenitized in appearance compared to upper interval. Crosscut by fg dark blue-black amph? veins. which also 'envelops' some of the calcite veins. Occasional blebs of fg to cg (cubes) of pyrite associated with dark blue-black veins. Calcite veins typically <1-2cm wide. From 11.84-12.08m: CRBT with highly brecciated non-planar upper and lower contacts (generally perpendicular to CA) with up to 1cm bleb vfg py, and patches vfg black mafic minerals (mica + pyx?), faint banding // to contact, spotted with fine dark reddish kspar. |
| PGH-18-01 | 13.63 | 14.48 | CRBT | Carbonatite | Patchy vein of lighter pink carbonatite and darker purplish -grey more silicate rich carbonatite. At ~25dtca. Upper and lower contacts irregular. Carbonate veining/banding parallel to contact extends out in KSPAR ROCK at both contacts. Approaching silicocarbonatite composition? < vfg deep red mineral - hematite? |
| PGH-18-01 | 14.48 | 15.6 | SYE | Alkaline Feldspar Rock | Similar to previous unit. |
| PGH-18-01 | 15.6 | 19.7 | CRBT | Carbonatite | Pale greyish pink carbonatite with subintervals (30% overall) of brecciated (sub- to angular) med pink to deep red Kspar Rock (with lesser mafic component than above). CRBT locally banded. Trace to 1% fg-mg disseminated pyrite (some cubes). At 17.27m & 19.03m: 1 & 3cm wide (respectively) fractures reddish-brown and cruddy, pitted rough non planer surface at 70deg. |
| PGH-18-01 | 19.7 | 22.18 | UNKN | Fractures/Ijolite??? | 19.7 to 19.85m: Two perpendicular dark brown cruddy, earthy, limonitized pitted open fractures (as previously described). At 35 and 65 dtca (measured from bottom mark of core). Upper shallower angled fracture is non-planar, lower steeper fracture is planar. 19.85 to 22.18m: Possible ijolite? Fg dark green (pyroxene + black mica) with 20-30% pale orangy pink nepheline?. Crosscutting carbonate veins/stringers (spotted with up to 10% fg kspar). Transitions from a more massive unit uphole to a banded unit where it is interbanded with repeating 10-20cm wide intervals of Kspar Rock. Banding at 15-45dtca. Blotchy pale green alteration within kspar rich bands (epidote?) and darker green chlorite. Mag Susc = 0.92. |
| PGH-18-01 | 22.18 | 26.21 | SYE | Alkaline Feldspar Rock | Similar to previous unit. |
| PGH-18-01 | 26.21 | 26.73 | CRBT | Carbonatite | Wispy banding perpendicular to core axis towards centre of interval with fine white calcite veining (extensional fracturing). Deep red (hematite alt'd) banding at upper contact. Lower contact is highly irregular and brecciated. Spotted with fine deep red hematite alteration throughout (mag susc 0.4, other crbt intervals have typically been ~0.1). |
| PGH-18-01 | 26.73 | 27.82 | SYE | Alkaline Feldspar Rock | Similar to above. Faintly brecciated with single 13cm wide massive CRBT vein at ~60dtca. |
| PGH-18-01 | 27.82 | 28.85 | UNKN | Unknown Dyke | Possibly ijolitic in composition. Very fine grained. Overall pale grey in colour - spotted with vfg black, med green and pink (nepheline?), Highly irregular flowing, banded appearance. Highly irregular low angle upper contact. More planer lower contact at 30dtca. Massive (unbrecciated). Mag Susc = 5.75. |
| PGH-18-01 | 28.85 | 30.13 | SYE | Alkaline Feldspar Rock | Similar to above. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|------------------------|--|
| PGH-18-01 | 30.13 | 30.7 | UNKN | Unknown Dyke | Similar to previous unknown unit. UCT at 75dtca, planar, limonitized (as above). At 30.25m: another fracture at 70dtca, 4cm thick dark brown earthy alt'n. LCT at ~10dtca, irregular, banded slightly. |
| PGH-18-01 | 30.7 | 32.3 | SYE | Alkaline Feldspar Rock | Overall similar breccia to before. Carbonatite vein from 31.18 to 31.50m, vein is fg pale grey to green, spotted with a fg deep red mineral and vfg mafic mineral, faint banding and minor deep red breccia clasts are present within the vein. |
| PGH-18-01 | 32.3 | 33.1 | CRBT | Carbonatite | More silicate rich, darker grey carbonatite vein. Silicocarbonatite. Fine micaceous bands at 35-40dtca. Single 6cm angular alkali clast with greenish rim. UCT brecciated. LCT at 50dtca, sharp, planar. Trace vfg mineral fluoresces purple. |
| PGH-18-01 | 33.1 | 35.82 | SYE | Alkaline Feldspar Rock | Similar alkalic feldspar rich unit brecciated by carbonate veins up to 10cm wide (25-35dtca generally). Becoming overall lighter pink in colour and less brecciated downhole. Increasing quartz to a more alkalic granite composition. |
| PGH-18-01 | 35.82 | 41.75 | QTZ-SYE | Quartz Syenite | Medium to coarse grained alkali quartz-rich syenite Medium pink in colour. 10%-20% quartz. At ~39m, becomes coarser grained and more mafic (predominantly black mica, lesser dark green pyx?). Unbrecciated. Occasional fine (<1cm) carbonate veins. Single fine grained black chlorite-hematite filled fracture. |
| PGH-18-01 | 41.75 | 42 | CRBT | Carbonatite | Pale mg-cg greyish carbonatite. Spotted by 1-2% fg deep red hematite + sulphides + black mineral (plus two 1-2cm patches). Planar UCT at 45dtca. Bx'td lower contact. |
| PGH-18-01 | 42 | 65.82 | QTZ-SYE | Quartz Syenite | Carbonate brecciated over top ~1m. Similar med to coarse grained alkali quartz syenite to previous unit. From 43.0 to 46.5m: Abundant patchy dark green (chl) and paler green (epidote) alteration, also in fractures. From 46.52-46.6m: CRBT vein at 55-60dtca. Small clasts (<1cm) of purply red hematized gran?. At 47.8m, fine (1mm) vein of shiny black (non magnetic) mineral at 55dtca. From 51.5-52.64m: Ijolite dyke? Subintervals of banded coarse dark green chlorite-micas at 75dtca. Paler pink nepheline (no kspar) in banded sections. From 56.57: Increasing carbonate brecciation. Sulphide bearing carbonate veins from 61.3m to LCT. |
| PGH-18-01 | 65.82 | 81.26 | CRBT | Carbonatite | Light pink to light grey medium grained Carbonatite. Mottled/patchy appearance. Minor brecciation in top 10cm. Locally faintly banded. Speckled with fine dark red alteration. Typically <1% (locally 1-2%) disseminated to blebby pyrite + pyrochlore? (black, non magnetic). Pyrochlores generally but not always associated with pyrite. At 67.32m and 67.62m, two mm-thick black veins (somewhat dendritic in appearance) at 60 & 30dtca respectively. Develops a more greenish wispy appearance below ~77m. Angular alkalic fsp clasts with thick fg black rims from 78.56 to 79.1m. From 79.4-80.18m: Greenish grey wispy banding at 50dtca. Some bands of brecciated angular kspar-chl material. Followed by 30cm massive cg clast of kspar+pyx. Blebs of py+pyrochlore? form two incomplete bands/veins at 50dtca. UCT at 30dtca, sharp, planar. Brecciated LCT approx. perpendicular to CA. (Note - apparent true dip of UCT is vertical, LCT near vertical dipping slightly to SE). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------|--|
| PGH-18-01 | 81.26 | 95.66 | GRAN | Granite | Top ~1m is deep reddish colour (predominantly kspar w/ 20% black pyx), then transitions to a paler pink cg granite similar to previous Gran unit. 30% dark green to black mafic component. Some weak banding defined by mafics. <5% quartz overall (locally absent). Fine calcite veining and chlorite veining (mm-scale) at variable angles (including //-to ca). Single 1cm wide qtz vein (with lesser kspar+milky white calcite) at 84.05m at 60dtca. Patchy bright green epidote-chlorite alteration in places. From 95.0 to 95.37m: Very fine irregular banding approx. perpendicular to core axis - light to med green chlorite+ black mica and whitish carb bands - mafic dyke? 7cm wide carb vein at 93.15m. 26cm carb vein wide 93.85m. Both approx. perpendicular to CA. |
| PGH-18-01 | 95.66 | 96.29 | CRBT | Carbonatite | Pale pinkish grey to pale blueish grey where greater fine micas present. Irregular flow banding. Occasional clasts of kspar rich rock up to 8cm wide. Up to 0.5cm blebs of fg brassy pyrite + black pyrochlore? 1-2% sulphide overall, blebs elongated along flow bands forming discontinuous veinlets in places. UCT at 65dtca. LCT at 70dtca. Both somewhat brecciated, near planar. |
| PGH-18-01 | 96.29 | 98.13 | SYE-BX | Alkaline Feldspar Rock | Similar to previous Alkaline Feldspar Breccia units. Top 13 cm is a vein near perp to CA of greenish-grey colour and spotted by fine deep reddish hematite alteration and up to 5% fine sulphide blebs. Below, alkali feldspar rock is med to coarse grained, deep red in colour (finitized) and coarsely brecciated by crosscutting carbonate veins 1-10cm in width. Patches are more mafic rich with up to 10-15% black pyx plus a lighter coloured mica locally. Brecciated lower contact. |
| PGH-18-01 | 98.13 | 99.19 | CRBT | Carbonatite | Massive medium grained light pink grey to pale white carbonatite. Speckled with fg deep red mineral (feldspar or hematite?) which defines faint purplish bands. Cross cutting millimeter thick veins of a dark green-black, soft mineral at 50 degrees. Fine rare blebs of sulphides. Brecciated contacts. |
| PGH-18-01 | 99.19 | 101.78 | SYE | Alkaline Feldspar Rock | Coarse grained deep reddish-pink alkali feldspar rich rock with 10% quartz and 5% mafics. Common crosscutting carbonate and/or mafic veins typically <1cm thick. |
| PGH-18-01 | 101.78 | 102.31 | CRBT | Carbonatite | Fine to medium grained carbonatite mottled/spotted with deep red to purple. UCT and LCT 80dtca. Contains up to 5cm wide clasts of deep reddish kspar-rich rock. |
| PGH-18-01 | 102.31 | 112.49 | SYE | Alkaline Feldspar Rock | Overall similar to Alkaline Feldspar Rock units with red deep k-feldspar clasts and crossing cutting carbonatite veins. From 106.40 to 109.70m, rock becomes rubbly and broken. Minor mafic mineral contain, with some mafic minerals occurring in fine veins. At 102.75m, a 17cm thick medium grained grey to light pink carbonatite vein with a dark purple black mafic bands. UCT and LCT 40 dtca. From 104.66 to 105.08m, grey to pink banded carbonatite vein speckled with fine grained red mineral. Red mineral outlines faint banding and colour variations from grey to pink. Contains a few deep red clasts up to 5cm. |
| PGH-18-01 | 112.49 | 113.59 | CRBT | Carbonatite | Medium grained carbonatite with strong banding. Bands alternate between pink to light grey and mafic rich bands. Fine bands of a very fine grained red mineral are also present. Bands have a fairly consistent orientation at 40 dtca. UCT and LCT are brecciated. Rare, isolated very fine sulphide grains are present. Few clasts up to 5cm thick are also present with associated sulphides. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------|---|
| PGH-18-01 | 113.59 | 123.28 | SYE | Alkaline Feldspar Rock | Similar Alkaline Feldspar Rock. UCT and LCT is brecciated. Top of unit contains blebs of sulphides with associated black mineral. Clasts are red deep and contain variable amounts of mafic minerals, locally some areas contain up to 40% mafic minerals. Locally up to 20% quartz. Some areas contain no quartz. Cross cutting carbonatite veins range from <0.5cm to 8cm thick. Fine carbonatites veins are more common. At 115.10m there is a 5cm grey-pink thick carbonatite vein at 50 dtca. At 115.60m ,20cm thick grey to pink carbonatite with <0.5cm blebs of sulphides. |
| PGH-18-01 | 123.28 | 125.31 | CRBT | Carbonatite | Medium grained light pink to grey carbonatite, with disseminated very fine grain sulphides and a red mineral. Faint banding present and sometimes outlined by a fine black mineral. At 124.38m, there is a 13cm thick Alkaline Feldspar Clast, which is deep red and contains approximately up to 10% mafic minerals. Carbonatite below this clast is a darker grey with pink to pale green banding .Millimetre thick veins of a dark mineral (Chlorite?) with some sulphides is present. At 124.90m, there is another Alkaline Feldspar clast which is 24 cm thick and cross cut by carbonatite veins. In the bottom 20cm, the carbonatite has a grey to pink mottled appearance (Similar to brecciated surface sample at pit 1). 5cm above the LTC, the carbonatite is brecciated with a pebbly/conglomerate appearance, containing sub-rounded alkaline feldspar contains 1-2cm thick. |
| PGH-18-01 | 125.31 | 141.44 | SYE | Alkaline Feldspar Rock | Similar Alkaline Feldspar Rock. Generally red deep and more brecciated then the previous unit. From 130.32 to 130.62 is a light pink to grey carbonatite vein. UCT is at 60 dtca and LCT is brecciated. Banding within the vein is variable from 25 to 40 dtca. Banding is defined by the fine back mica. Possible fluorite seen within the mafic bands. Trace to 1% disseminated sulphides. Few angular Alkaline clasts up to 5cm are found within the vein. Below this vein, the lithology is highly brecciated. Carbonatite veins tend to be finer and heterogenous in composition. The carb veins contain higher amounts of red minerals, mafics, and blebs of sulphides compared to typical carbonatite veins. Significant sulphides present in vein from 139.65 to 139.95m. Veins generally range from millimetres to about 7 cm. Some carbonatite veins are enveloped by fine grained mafic minerals and speckled with red mineral. Alkaline Feldspar clasts tend to be fairly consistent with deep red colour with minor amounts of mafics. A light pale green mineral is locally present. Locally some areas reach 40% mafic minerals and 15% quartz, elsewhere quartz absent. |
| PGH-18-01 | 141.44 | 142.96 | CRBT | Carbonatite | Highly variable carbonatite divided by a subinterval of Alkaline Feldspar Rock. UCT brecciated at 60 dtca. From 141.44-142.08m: Massive unbanded cg pink carbonatite cut by 3 1-3cm wide high CA fg light greenish grey veins. From 142.08-142.42m: Alkali Feldspar clasts highly brecciated by multiple generations of heterogenous carbonatite veins. Veins are pink to pale green and contain variable amount of red minerals, mafics and sulphide blebs. Veins are irregular in nature. UCT planar at 50dtca. LCT crosscut by both massive pink carbonatite and banded green carbonatite below. From 142.42-142.96m: Banded green carbonatite. Irregular moderately angled banding defined by fine reddish mineral. Several up 1cm wide sulphide (py) bands. Single 0.5cm by 2-3cm patch of fine purple fluorite? following banding. Broken lower contact. |
| PGH-18-01 | 142.96 | 143.42 | SYE | Alkaline Feldspar Rock | Typical alkali feldspar rich rock with 5-10% quartz, and 5-10% mafics . LCT is sharp and planar at 55dtca. |
| PGH-18-01 | 143.42 | 144.5 | DIAB | Diabase Dyke | Fg dark grey to black massive diabase dyke with 15-20% plagioclase phenocrysts (some lath shapes) and carbonate. Rare mm-scale carbonate or sulphide veins. UCT sharp and planar at 55dtca. LCT sharp but slightly irregular at 60dtca. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|--------|------------|------------------------|---|
| PGH-18-01 | 144.5 | 156 | QTZ-SYE | Quartz Syenite/Granite | Coarse grained greyish pink to medium pink in colour. 10-30% quartz. Generally lesser quartz and deeper red colour towards contacts with upper and lower diabase dykes. Locally up to 40% dark green mafic component, defining faint banding in places. High to moderate angle carbonate veining up to 4cm wide, generally <1cm. Veins typically flanked by chlorite and epidote+/-hematite alteration envelopes. From 145.2-145.8m: Pale pink carbonatite. Banded green-grey-red (hem) towards centre with bx'td kspar rich inclusions. Occasional blebs of sulphides (py). UCT at 80dtca, LCT at 60dtca. |
| PGH-18-01 | 156 | 158.2 | DIAB | Diabase Dyke | Similar to previous. Spotted by fg red and green. UCT at 40dtca, sharp, planar. LCT faulted. |
| PGH-18-01 | 158.2 | 158.5 | FZ | Fault Zone | Very broken up core. Intact pieces are heavily brecciated and chlorite-hematite altered. Some remnant calcite veining. |
| PGH-18-01 | 158.5 | 163 | QTZ-SYE | Quartz Syenite/Granite | Med to coarse grained medium pink qtz-syenite to granite. Variable quartz (10-30%) and mafic (5-40%) content. Crosscutting carbonate +/- chlorite fractures typically mm-scale, few up to 2cm. From 159.45-159.65m: Brecciated, brittle core with open & chloritic fractures. Possible brittle fault. From 160.94-161.19m: Zone of broken core. Broken along chlorite+hematite coated fractures. |
| PGH-18-01 | 163 | 164.3 | CRBT | Carbonatite | Coarse grained, whitish carbonatite. Massive over top half. Bottom half is banded (~//-LCT) by purplish bands and spotted with deep red hem alt'd mineral. Trace-1% fine disseminated sulphides. Very fine (<1mm) red (hem) and black (chl?) filled fractures. Spotted w/ <1% fg black pyx? (non-metallic appearance). UCT at 75dtca in near planar, sharp. LCT at 65dtca, planar, slightly carb bx'td. |
| PGH-18-01 | 164.3 | 170.4 | GRAN | Granite | Coarse grained red to pink granite. Generally quartz rich (~30%)with lesser amount of mafics (~10-15%). Carbonatite veins are generally <1cm, but up to 3 cm locally. Carbonatite veins tend to be enveloped by a black mafic mineral. Locally, thicker veins are present At 165.58m, 8cm thick coarse grained, light grey to pink carbonatite vein enveloped by a soft mafic mineral (chl?) and hematite. At 169.84m, 21 cm thick medium grained, grey to light purple banded carbonatite vein with a few granite clasts up to 5cm wide. At 170.20m, 12cm thick light pink carbonatite vein faintly banded purple and fine hematite bands. Dark black to light grey fine mineral veins are also present, generally on the millimetre scale. Fine light green alteration is locally present. |
| PGH-18-01 | 170.4 | 171.36 | CRBT | Carbonatite | Massive light pink coarse grained carbonatite. Mottled with purplish-red alteration. Rare very fine hematite veinlets. Brecciated UCT at 55dtca. Brecciated LCT at 40dtca with some kspar-rich material caught up in Crbt. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------|---|
| PGH-18-01 | 171.36 | 190.09 | GRAN | Granite | <p>Med pink to deeper reddish-pink granite to syenite. Quartz varies from absent to 30%. Up to 20% black mafics. Carbonatite veins commonly cross cut the core with a wide range of sizes. Carbonatite veins are generally massive, medium to coarse grained, pink to purplish grey associated chlorite rims with more significant veins located at 175.77 to 175.85m, 178.60 to 178.70m, 179.07 to 179.16m, 181.20 to 181.35m all at 40 dtca.</p> <p>From 183.75-183.87m, 183.96 to 184.07m, 184.55 to 184.70m, 188.45 to 188.58 additional significant carbonatite veins with more variably angles, some are cross cut by other veins. Rare blebs of sulphides present in veins.</p> <p>From 189.40 to 189.58m, carbonatite vein with blebs and veins of 10-15% sulphides - pyrite cubes in a more rusty/brassy brown sulphide (pyrrhotite?) matrix with coarse magnetite (attracts magnet - mag susc 30.6). UCT, LCT somewhat bx'td and irregular (wavy). Vein at ~50dtca.</p> <p>From 177.46 to 180.7m: Bands of greyish-green alteration (epidote+/-chlorite) overprinting granitic interval. Bands at 65-90dtca. Granite generally finer grained over these intervals.</p> <p>Small 5cm wide diabase dyke at 176.03m at 40dtca.</p> |
| PGH-18-01 | 190.09 | 198 | DIAB | Diabase Dyke | <p>Typical fg dark grey aphanitic diabase dyke with fine (millimetre scale) calcite veins enveloped by hematite. UCT at 25dtca, sharp, planar. LCT at 30dtca, sub planar, broken.</p> <p>From 190.66 to 190.90m: vein of pink to white carbonatite brecciating the diabase dyke. Contains diabase clasts up to 4 cm wide with red (hematite) alteration.</p> <p>From 192.0 to 192.67m, rubbly very broken up fault zone with abundant, very soft pieces of chlorite. Larger pieces have abundant slickenlines present on chloritic fractures.</p> <p>Over last 60cm to LCT, fine (<1cm) white carbonate veins brecciate the diabase dyke resulting in angular diabase clasts. Section also includes a single 4 cm wide red deep kspar-rich clast.</p> |
| PGH-18-01 | 198 | 203.49 | CRBT | Carbonatite | <p>Medium to coarse grain, light grey to pink massive carbonatite. Carbonatite gradually changes from a grey to light pink in colour. Spotted with of deep red mineral (hem) and fine black mafic mineral. Spotting is more dominant in pink sections. Blebs up sulphides up to 3cm are present and contain both py and a bronze sulphide (pyrrhotite?). Carbonatite has a mottled/ patchy appearance and lacks banding. At ~202.5m, two (3cm and 7cm wide) light green to green-grey bands spotted with purplish-red hematite alteration.</p> |
| PGH-18-01 | 203.49 | 206.63 | SYE-BX | Breccia Zone | <p>Breccia with abundant carbonatite and alkaline feldspar clasts. Carbonatite is generally pink to pale white. Kspar-rich clasts rimmed by up to 0.5cm wide envelops of vfg dark green to black mineral (some mica flakes noted). Clasts cg and sometimes spotted with 10% white carbonate & 5-10% pistachio green epidote alt'n. Clasts typically 2-3cm, up to 10cm wide and angular. Carbonate veins commonly spotted by a fg deep red mineral (hem). Trace sulphides.</p> |
| PGH-18-01 | 206.63 | 208.67 | GRAN | Granite | <p>Coarse grained granite with up to 30% quartz locally, patchy epidote+/-chlorite alteration where more mafic rich (15-20% mafics). Medium pink to deeper reddish-pink in colour. Below 208.25m becomes brecciated (as upper CRBT-BX unit) as approaches lower contact with CRBT. Crosscutting carbonate veins enveloped by fg dark brown to black minerals (incl. mica).</p> |
| PGH-18-01 | 208.67 | 210.88 | CRBT | Carbonatite | <p>More banded, white to medium grey coarse grained carbonatite. Pinker toward LCT. Abundant blebs and veinlets (near stringers following crbt banding) of py+pyrrhotite - 2-3% overall. Banding at 65dtca. UCT at 20dtca. LCT is brecciated.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------|--|
| PGH-18-01 | 210.88 | 213 | SYE-BX | Breccia Zone | Similar to previous Carbonatite-Breccia interval with 30-40% carbonate matrix, 60-70% angular kspar rock clasts (up to 30cm wide, rimmed by chlorite). |
| PGH-18-01 | 213 | 217.39 | GRAN | Granite | Medium to coarse grained, red granite with variable quartz and mafic content. Quartz ranges from 0-30%, mafics range from 5-30%. Small scale carbonatite veining is less common. Light green alteration present locally. Weak banding outlined by mafic minerals ~ 10cm above LCT. From 214.29-214.67m: Light pink, coarse grained carbonatite with angular bx'td clasts of kspar rock enveloped by ~0.5cm fine black mineral rims and blebs of py+po. Clasts are up to 8cm wide. Spotted with fine red hem. UCT at 40 dtca and LCT at 60 dtca, both contacts are irregular. |
| PGH-18-01 | 217.39 | 218.28 | CRBT | Carbonatite | Heterogeneously coloured carbonatite, generally light pink to medium grey, with areas of wispy banded grey-green, purple to dark grey, and white. Carbonatite is generally massive and patchy in appearance with spotted hem and fine black mineral. Disseminated sulphides (py) are present. Top 9cm is banded and contains a few deep red medium grain angular alkaline feldspar clasts rimmed by the black mineral. UCT is at 55 dtca. LCT is at 55 dtca. |
| PGH-18-01 | 218.28 | 222.65 | GRAN | Granite | Similar to previous granite unit. Med to coarse grained massive pink granite with 30-40% dark green to black mafics (black mica) and 10-20% quartz, 10-20% epidote+/-chl alteration. Below 220.98m, carbonate veins become more common, ranging from 1cm to 10cm wide. Veins vary in direction and cross cut each other. Veins tend to be fine grained with grey-green bands outlined by hem and black mineral, but also often with no envelopes. |
| PGH-18-01 | 222.65 | 223.67 | CRBT | Carbonatite | Coarse grained, massive, white to pink carbonatite spotted with red hem and black mineral. Blebs of sulphides (py) are present and abundant near the LCT. UCT is at 70 dtca and LCT is brecciated with wispy bands of a fine black mineral (mica) and abundant sulphides (py). |
| PGH-18-01 | 223.67 | 227.16 | GRAN | Granite | Similar to previous granite unit. Coarse grained, massive granite with 10-30% mafics, 10-15% quartz, and 10-30% epidote+/-chlorite alteration. UCT is wispy and irregular. Carbonate veins are generally rare and <1cm thick. At 224.29m, 13cm wide grey-green banded carbonatite vein. UCT is a 30 dtca and LCT is irregular. |
| PGH-18-01 | 227.16 | 242.49 | MIX ZONE | Mixed Zone | A mix interval dominated by sections of brecciated alkaline feldspar breccia (55%) with lesser carbonatite (15%) and granite (30%). The alkaline feldspar breccia contains angular, coarse grained, red deep alkaline feldspar clasts with up to 1cm thick envelopes of a fine grained black mineral. At ~ 241.50m, 5cm wide band of possible coarse grain hematite? (Purple/grey in colour with red edges in area, non-magnetic) + a couple fine grain py grains .Carbonatite is generally medium to coarse grained, massive pink to white and occurs in sections averaging 55cm long. Carbonatite also occurs as wispy, grey-purple veins at transition between different intervals. Within wispy carbonatite intervals, blebs of sulphides (cm-scale) black-dark grey, non-magnetic, metallic mineral + py. One 3cm long purple patch of fine grained fluorite in a small carbonatite vein at 232.5m. Granite is coarse grained and contains up to 10% quartz and up to 40% mafics. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------|--|
| PGH-18-01 | 242.49 | 255.81 | MIX ZONE | Mixed Zone | A mix interval similar to previously unit but with greater carbonatite (30%). Alkaline feldspar breccia comprises ~45%, granite ~25%. Carbonatite is generally coarse grained, pink to light purple in colour, with abundant sulphides blebs (py) and some well formed up to 1cm pyrite cubes. Often massive with few mm-scale wispy of purple to dark minerals. Grey-green wisps/bands are common during transition areas. One 40cm long section carbonatite section at 242.49m is medium to coarse grained, massive carbonatite, very purple in appearance, with multiple cm-scale blebs of coarse grained, cubic py. Granite is coarse grained with less mafics than previous unit (up to 10% quartz, 20% mafics, 10-20% epidote+/-chl) with few cm-scale carbonate veins (grey-grey-green in colour). Granite occurs in dominantly one ~2m section. Alkaline Feldspar breccia is similar to previously described breccia units. |
| PGH-18-01 | 255.81 | 268.02 | SYE-BX | Breccia Zone | Dominantly, alkaline feldspar breccia with a few significant carbonatite veins. Alkaline feldspar breccia clasts are angular deep red with up to 20% mafics and up to 20% epidote+/-chl alteration. Clasts are enveloped by hem +fine black mineral. Clasts range from 2-3cm up to 20cm. Larger clasts are dominant near middle of interval. Cross cutting carbonatite veins tend to be medium grain, pink to light grey and generally range from 1-10cm wide. Significant carbonatite veins include: From 255.81 to 256.39m, massive white to light pink, coarse grain carbonatite vein. Centimeter scale sulphide blebs (1-2%) with py + black mineral are present. UCT is brecciated and LCT at 50 dtca. From 264.33 to 264.95m, white to purple-grey, medium, coarse grain, banded carbonatite vein. UCT at 65 dtca and LCT is highly brecciated. Finely banded where colour changes due to hematite (reddish-purple) and occasionally a fine-medium grained dark purple mineral (fluorite). Fluorite rich areas occur locally and up to 6cm wide. Vein contains alkaline feldspar clasts up to 5cm wide. Some carbonatite within the breccia directly below vein also contains fluorite rich areas. From 266.69 to 267.23, coarse grain, white to light grey carbonatite with fluorite bands at 70 dtca. Fluorite bans are fine grained, dark purple and up to 0.5cm wide. From 267.79 to 268.02m, medium grained, banded, grey to light pink carbonatite spotted with hem and fine black mineral. Wisps of a fine black mineral (mica) are also present. UCT and LCT are brecciated. |
| PGH-18-01 | 268.02 | 273.91 | GRAN | Granite | Coarse grained medium to dark reddish-pink. Upper 50cm faintly-weakly brecciated by carbonate (no alteration rims). 5-15% dark green to black mafic component and up to 10% quartz. Locally mafic intermingled with coarse dark metallic red-brown hematite. Granite crosscut by up to 20% carbonate veining up to 10cm wide, typically <2cm. Generally veins have chloritic or fine hematite alt'd salvages. |
| PGH-18-01 | 273.91 | 278.3 | CRBT | Carbonatite | Multiple crosscutting phases of carbonatite. Youngest phases consists of sharply defined light greenish-grey to darker chloritic green to hematitic brown bands that cut perpendicular to CA. Bands locally well spotted by hematite alt'n. Overall carbonatite is mg-cg and pink to light grey. 1-2% disseminated pyrite associated w/ vfg dark (black) mineral. UCT banded, cross cut by vein, ~perpendicular to CA. LCT at 40dtca, planar chlorite coated. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------|--|
| PGH-18-01 | 278.3 | 287.5 | GRAN | Granite | Lighter to medium pink, massive, medium to coarse grained granite with up to 30% quartz locally. Predominantly potassium feldspar with 5-15% dark green to black mafics. Crosscut by minor carbonate +/- chlorite veins, typically 1cm or less in width. Very coarsely brecciated by carbonatite at lower contact with angular kspar-rich clasts rimmed by chlorite up to 10cm wide. |
| PGH-18-01 | 287.5 | 291.33 | CRBT | Carbonatite | Fine to medium grained, light grey to pink carbonatite. Massive. Locally streaked by wispy vfg blueish-black mineral. Some greenish-grey carb alt'n-hem banding at lower contact. Up to fg to coarser cubes of 1% pyrite. Spotted by 1-3% fine hematite. Drillers had difficulties during night shift - dropped the rods - core changes drastically in diameter. Both upper and lower contacts brecciated (no angle measured). |
| PGH-18-01 | 291.33 | 292.24 | SYE | Alkaline Feldspar Rock | Brecciated kspar rich rock (few % quartz) in carbonate matrix. Fg to mg, deep reddish colour. <5% mafics (chl). |
| PGH-18-01 | 292.24 | 292.97 | UNKN | Mica-Carbonate Rock | A fine to medium grained dark grey rock comprised of 70-80% black mica (+other fg mafic minerals?) and 20-30% coarser grained pink carbonate. UCT at 50dtca. LCT at 60dtca. |
| PGH-18-01 | 292.97 | 295.91 | GRAN | Granite | Medium to coarse grain, massive red granite with up to 15% quartz and 15-20% mafics. Cross cut with minor medium grey to light pink carbonate veins with chl envelopes, generally 2-4cm wide. One 12cm wide coarse grained pink carbonatite vein at ~295m. |
| PGH-18-01 | 295.91 | 299.1 | CRBT | Carbonatite | Coarse grained, massive, pink to light grey carbonatite with cross cutting green-grey carbonate and red hem veins, typically 1-4cm. Ribbons of sulphides generally <1cm thick (py). From 297.51 to 298.5m, Brecciated section with deep red alkaline clasts and green-grey chl envelopes. Clasts are generally <5cm, but can be up to 15cm. Carbonatite is heterogenous in colour ranging from pink to green to grey-green. sulphides blebs are also present (py). |
| PGH-18-01 | 299.1 | 313.49 | GRAN | Granite | Coarse grained red to light grey, massive granite with generally abundant quartz (quartz 0-40%, mafics up to 20% (mica rich)). Quartz is less abundant near contacts. Locally up to 15% chlorite and epidote alteration. A few fine 1cm black mineral and carbonate veins are present. Veins generally have chl/hem alteration and associated blebs of sulphides. At ~308.50, 18cm thick, coarse grained, grey to pink-grey carbonatite vein with hem/chl envelopes. LCT at 70 dtca. At 309.20-309.58m, Light pink to white carbonatite vein. UCT is highly brecciated with clasts up to 5cm wide with black envelopes up to 1cm thick. Carbonatite contains black to grey wisps associated with sulphide rich blebs (py). LCT at 70dtca. At 309.89 to 310.23m, White to light pink carbonatite vein with very similar features are described above. At 310.54 to 311.56m, light pink to grey carbonatite vein containing hem + grey-green to black veins (1-3cm wide). Veins are typically associated with sulphide ribbons + blebs (py). Locally spotted by hem and black mineral (mica). UCT at 50dtca, LCT brecciated. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------|---|
| PGH-18-01 | 313.49 | 340.9 | CRBT | Carbonatite | <p>Continuous interval of light grey to light pink massive carbonatite. Coarse to very coarse grained. Locally up to 30% fine blueish- to greenish-grey irregular wispy banding. Coarse (up to 2cm) very pale yellowy-green subhedral to euhedral apatite crystals (white under UV light, crystals fine sugary texture up close) most notably from 337.64-338.08m (not observed in upper carbonatite sections). Up to 2.5cm wide radiating masses of acicular blueish-black amphibole common from ~334m to ~338m. Coarse blebs of sulphide 1-2% (locally up to 10%) py+/-po. Deep reddish-brown 1-5mm mica 'books' (notably at ~338m). UCT at 65dtca (chl-amph? alt'n at contact), LCT brecciated. Minor brecciated granite caught up within carbonatite near contacts.</p> <p>From 320.57-321.22m (with sulph band at LCT) and 326.76-327.03m: Highly micaceous intervals. Fg, dark grey, 70-80% mica/mafics + 20-30% carb. Previously called 'Mica Rock', could be called Silicocarbonatite. Moderately magnetic locally (mag susc up to 3.35).</p> <p>At 322.0m: 3cm wide band at 60dtca spotted by fg mt. Similar band at 339.7m (2cm) wide.</p> <p>From 335.2-337.0m: Magnetite bearing sections. Locally up to 10% fine to medium grained magnetite. Mag susc readings up to 57.8. 30cm of brecciated 'kspar-rock' rimmed with brownish chl-mafics directly above mt-rich interval.</p> <p>From 338.25-338.37m: Band of phlogopite (deep brown mica) + fg sugary pale green apatite? (glows white/light blue under UV).</p> <p>From 338.5m-339.6m: Medium pink mg granite spotted by light green epidote+/-chl. Weakly bx'td by up to 3cm wide white carb veins. Gran clasts rimmed by dark brown-black chl-mica.</p> <p>From 340.43-340.5m: Mt + mica(?) rich band at 70dtca. Mag susc 45.4.</p> |
| PGH-18-01 | 340.9 | 354.58 | MIX ZONE | Mixed Zone | <p>A mixed interval comprised of equal parts carbonatite and alkali granite (0.20-1m long intervals). Carbonatite varies from fine to coarse grained (generally coarse). Ranges from massive light pink in colour to light-grey with patches/wispy bands of blue-grey (looks greener on broken surfaces) fine acicular/needle-like (sometimes radiating) amph. Granite is cg and comprised primarily of kspar (pink) with up to 40% mafics (dark brown mica, fg blueish-black amph? or pyx). Locally 10-20% qtz (absent in more mafic sections). Mafic rims kspar where in contact with carbonate veins. Local chlorite-epidote alteration.</p> <p>From 347.0-348.52m: Carbonatite w/ 5-7% mg magnetite (1-2mm). Appears to be associated with vfg sugary light green apatite. Mag susc - 86. Scintillometre counts up to 500. LCT with gran (75dtca). Fine black needle-shaped mineral noted contact.</p> <p>From 340.43-340.54m, 354.58-354.88m: Medium grey-green to brown micaceous banded subintervals. >80% black mica + carbonate. Upper interval mod magnetic. Banding at 65-80dtca.</p> <p>In CRBT, patches of blebby py+po (tr-1%). Patches often associated with wispy blue-grey amphibole bans. Spotted by <1% fg disseminated hem? (deep red).</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------|---|
| PGH-18-01 | 354.88 | 369 | GRAN | Granite | <p>Mg to cg, patchy pink to grey-green to blue-grey to brown granitic unit. Variably chlorite-epidote alt'd and carbonate brecciated granite (~10-20% crosscutting carbonate veins). Much less mixed than previous interval.</p> <p>Low (//to CA) to moderate angle vfg aphanitic med-grey mafic dykes. Medium grey-green chl+/-ep alt'd (wither entirely or up to 2cm thick at contacts). Most significant interval from 367.0-367.43m at 45dtca.</p> <p>Highly bx'td (~50% gran, 50% crbt) with very little remnant texture from 362.78-363.45m and ~366.0-366.4m.</p> <p>Chl-mica alt'd rims up to 1cm thick (typically <0.5cm) where granite contact carbonatite.</p> <p>Faintly banded by coarse grained mafics from ~357-359m, 360-361m etc.</p> <p>Deep red hematite? bands in some carb veins.</p> |
| PGH-18-01 | 369 | 395.41 | GRAN | Granite | <p>Massive coarse grained granite with up to 30-40% micaceous dark green to black mafic component. Somewhat gneissic in texture locally. Up to 20% quartz locally (opaque white in places, very hard).</p> <p>Generally lesser crosscutting carbonate veining and less brecciated. More significant CRBT veins are at:</p> <p>371.90-372.09m: Vcg, spotted w/ 1% hem & blebby sulph (py), irregular bx'td contacts.</p> <p>373.42-374.0m: Core is finely pitted, deep purplish colour on broken surfaces. 1cm thick blebby sulphide veinlets and light pinkish-orange carb(?) veins parallel to UCT at 25dtca. LCT bx'td, spotted red, few % sulph.</p> <p>380.4-380.78m: Crosscutting, hem spotted, blebby sulph.</p> <p>381.74-382.24m: Light pink, cg, spotted by fine hem? coarse py blebs +/- specular hem (shiny grey). UCT & LCT bx'td at 20-30dtca. Only place in interval where granitic clasts have mafic-micaceous rims (up to 1cm thick)</p> <p>From 385.9-387.65m: 'Absorbed' breccia similar to 362.78-363.45m & 366.0-366.4m. Bx'td contact, blotchy beige-pink colour. Fg. Some remnant kspar clasts can be distinguished locally. Coarse blebs of pyrite (1-3%). More massive whitish carbonatite towards centre.</p> <p>From 391.71-392.0m: Wispy banded light pink to white carbonatite vein. 10cm angular kspar-rich clast at LCT. 1-3% blebby py.</p> <p>From 392.29-395.41m: Granite bx'td by up to 30% x-cutting carbonate veins. Wispy bands of blueish fibrous (blue-->sodic) amphibole in carbonate veins and rimming gran clasts.</p> |
| PGH-18-01 | 395.41 | 397.52 | CRBT | Carbonatite | <p>From 395.41-397.52m: Massive, light pink to grey Carbonatite. Includes 30cm fenitized kspar rimmed and spotted by mafics (blue amph) near UCT. Includes from 396.4-396.62m: vfg dark grey micaceous interval (mafic dyke - mica rock). Perpendicular to CA.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|-------|------------|-------------|---|
| PGH-18-01 | 397.52 | 412 | GRAN | Granite | <p>From 398m, granite is mg to cg, med to dark red, and becoming more banded in places with a generally higher mafic component (mg black mica (biot) +/- dark green to black pyx?). 10-30% qtz locally.</p> <p>Crosscut by larger carbonatite veins from 5-50cm wide and also minor x-cutting mm-scale carb veins (<5% overall).</p> <p>Locally up to 1cm thick (most notable at ~410m) blue amph (fibrous) + carb veins. Notably less qtz where present. Elsewhere mafics replaced by patches & veins of bright medium to dark green (ep+/-chl) or secondary pyx?</p> <p>Carbonatite: 399.82-400.07m: Massive white, single sulph vein, no significant fluorescence, not sampled 401.52-402.13m: Transitions into bx'td zone below. Cg, white to v. light pink, blebby patches py (1%). UCT banded with ap, 40dtca. 404.14-404.72m: Light pink, finer grained towards centre, irregular very light green ap+/-? band wraps around gran clast (only partly fluoresces). 405.54-406.15m: Two crbt intervals broken up by a kspar-rich clast w/ patchy green alteration, blue amph+carb veins, deep purple hem+carb b veins. Crbt is light pink. Contains deep purple (hematized) clasts. 408.1-408.55m: Light pink cg carbonatite. Vfg red & yellow-green spotted veins/bands (ap?) and fg micaceous bands (<1 up to 5cm wide), 1-2% blebs sulph. 411.05-411.23m: Finer to med grained, spotted w/ fine red hem?. No obvious ap under UV. Blebs sulph at LCT only.</p> |
| PGH-18-01 | 412 | 442 | GRAN | Granite | <p>Granite similar to above. Mg to vcg. Abundant (20%) fine ribbony carb veins (1-2mm) from ~413.5-421m.</p> <p>Carbonatite from 413.95-414.35m: Banded w/ sulph +/- hem at 35dtca. Up to 5% py.</p> <p>414.35-414.9m: Heavily chloritized bx'td kspar-rich granite. Chl coating fractures. FZ.</p> <p>415.47-416.7m: Carbonatite with ~25c alt'd kspar-rich clast near UCT. Mg, pinkish grey, spotted by 2-4% fg red mineral (hem?), tr-1% disseminated py, occasional mm-thick hem veins. Bx'td LCT. Nothing under UV.</p> <p>420.8-425m: Multiple shorter carbonatite intervals up to 14cm wide at high angle to CA.</p> <p>429.19-429.69m: Patchy light pink to white Carbonatite. UV light indicates apatite in 3cm wide bands perpendicular to CA. Blebs py (<1%) generally associated w/ banding. UCT at 75dtca.</p> <p>432.8-343.1m: Granite is coarsely/angularly bx'td by up to 3cm wide carb veins.</p> <p>436.85-438.0m: Low angle (//-to CA) 3cm wide QTZ vein (milky white to semi-translucent, very hard, doesn't react to HCL) w/ black pyx? Hematized along fractures & along grain boundaries in qtz. Crosscut by softer carb veins.</p> <p>438.88-439.6m: CRBT. Fg, pinkish-grey to grey. UV light shows possible fg ap. Minor granitic clasts at both contacts.</p> |
| PGH-18-01 | 442 | 445.5 | GRAN | Granite | <p>Continuation of unit above.</p> <p>442.48-442.7m: Small CRBT vein, mg, purplish grey, 1-2% blebs py+pych??. spotted by vfg hem? (1-2%).</p> <p>444.1-444.37m: X-cutting fg greyish-pink CRBT. Sulphide blebs near contacts w/ gran.</p> <p>444.37-445.17m: Bands up to 20cm wide of very dark green chl-mica dominated rock w/ up to 20% carb --> alt'd mafic dykes? At 50dtca. Finely interbanded pink crbt, kspar, mica (pink to green to black) btwn micaceous sections.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------|---|
| PGH-18-01 | 445.5 | 447.4 | CRBT | Carbonatite | Carbonatite to Carbonatite-Gran Breccia. CRBT towards upper and lower contacts - bands of 'absorbed' gran clasts towards centre. Predominantly kspar + carbonates, some micaceous patched. Becomes purplish and somewhat pitted towards lower contact w/ up to 1% py blebs, 1-3% fine disseminated hem (+ <1mm veinlets). |
| PGH-18-01 | 447.4 | 450 | GRAN | Granite | Continuation of unit above. 449.6-450m: Carb vein, undulating contacts & bands (ap+sulp+hm?) at 25dtca. |
| PGH-18-01 | 450 | 459.55 | GRAN | Granite | Cg gran/syenite. 0-30% quartz (highly variable). Where more syenitic in appearance there are dark blue-grey x-cutting veins up to 1cm wide + patches (blue fibrous amphibole +/- carb). Where more qtz present, veins and patches of light yellow to yellow-green ep+/-chl. |
| PGH-18-01 | 459.55 | 460.17 | DIAB | Diabase Dyke | Vfg, dark grey to black, massive, aphanitic. Undulating fine mm to 1cm white carb veining over 6cm. UCT at 25dtca, LCT at 25dtca. Both contacts sharp but slightly irregular. |
| PGH-18-01 | 460.17 | 480 | GRAN | Granite | As above. 460.17-460.4m: CRBT, light grey, blebby sulph. 462.4-462.6m: Coarse blebs sulph in x-cutting carb. 465.57-465.78m: CRBT 466.74-466.95m: CRBT w/ ribbony veins of py+pych?? 466.95-467.19m: Carb-chl bx'td FZ. Up to 1cm wide mafic and gran clasts in carb matrix. UCT at 35dtca. LCT at 45dtca. 468.3-468.8m: Rubbly FZ. Carb veining at LCT (15dtca). From 459m, deeper reddish pink colour. Somewhat more syenitic in appearance, still 10-15% qtz. 471.08-471.97m: CRBT. Light pink to grey. Cg. Apatite (+ blebby py, deep red kspar?) patches. UCT at 55dtca w/ banded ap+sulp+kspar. LCT at 55dtca is slightly irregular and bx'td. 473.96-474.42m: CRBT. Cg, light greyish pink, bands/veins of apatite (UV) perpendicular to CA. UCT at 65dtca. LCT perpendicular to CA. Spotted by 1-2% fg deep red hem/pych??. 476.23-476.28m: BRECCIA DYKE. Medium yellowish-green grey dyke with vfg matrix at 50dtca. Rounded to angular clasts up to 1.5cm wide (mixed kspar-rich & mafic clasts). 477.35-477.46m: BRECCIA DYKE. Similar to previous but with fewer clasts (all less than 0.5cm). Clasts only near contacts. Irregular undulating contacts. |
| PGH-18-01 | 480 | 493.56 | GRAN | Granite | Granite generally with lesser carb veining. 480.18-480.34m and 482.1-482.19m: Smaller CRBT veins in massive cg granite. Hem+/-amph bands at contacts, fg ap?, coarse blebs py, spotted by fg hem? Or red pych??. 484.35-484.53m: Carbonatite at 30dtca. Fg, purplish grey, banded //- to contacts. <1% disseminated sulph. Vfg deep red hem veins. No apatite under mid-wave UV light. Both veins and patches (pyx xtal shape replacement?) of blue-grey amph+carb & med pistachio green ep+/-chl alteration present. In places green ep veins appear to cross-cut blue amph veins. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------|---|
| PGH-18-01 | 493.56 | 499.36 | CRBT | Carbonatite | Mg to vcg locally. Light grey to pink in colour. Lathy shaped xtals where vcg. Patches/bands of cg apatite noted under UV light. UCT at 65dtca contains granitic clasts but still fairly sharp and planar. LCT at 80-85dtca. Coarse blebs of py from 497.15-497.5m. |
| PGH-18-01 | 499.36 | 501 | GRAN | Granite | Massive cg granite. Banded by fibrous blue amph + biotite (black) at contact with upper Crbt. Very little carb veining. No bx'tn. EOH at 501.0m. |
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Assays

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-01 | 183.4 | 184.64 | 1.24 | 655393 | A18-09217 | | | 3.77 | | | | | | | 1.97 | | | | | | |
| PGH-18-01 | 184.64 | 185.73 | 1.09 | 655394 | A18-09217 | | | 3.16 | | | | | | | 0.64 | | | | | | |
| PGH-18-01 | 185.73 | 187 | 1.27 | 655395 | A18-09217 | | | 3.12 | | | | | | | 0.3 | | | | | | |
| PGH-18-01 | 187 | 188.3 | 1.3 | 655396 | A18-09217 | | | 3.85 | | | | | | | 0.25 | | | | | | |
| PGH-18-01 | 188.3 | 189.4 | 1.1 | 655397 | A18-09217 | | | 6.59 | | | | | | | 0.83 | | | | | | |
| PGH-18-01 | 189.4 | 189.58 | 0.18 | 589059 | A18-03553 | 19.08 | 4.52 | 9.9 | 0.4 | 2.32 | 31.36 | 1.49 | 1.65 | 0.116 | 0.29 | 21.34 | 92.46 | 3 | 3 | 65 | 1155 |
| PGH-18-01 | 198 | 199 | 1 | 589060 | A18-03553 | 2.6 | 0.19 | 2.99 | 0.358 | 1.21 | 51.34 | 0.06 | 0.05 | 0.024 | 1.3 | 38.03 | 98.14 | 5 | < 1 | 36 | 809 |
| PGH-18-01 | 199 | 200.01 | 1.01 | 589061 | A18-03553 | 2.51 | 0.07 | 1.69 | 0.324 | 1.58 | 50.88 | 0.22 | 0.04 | 0.052 | 4.61 | 35.9 | 97.89 | 3 | < 1 | 41 | 572 |
| PGH-18-01 | 200.01 | 201 | 0.99 | 589062 | A18-03553 | 0.49 | 0.03 | 1.37 | 0.354 | 0.8 | 54.13 | 0.07 | < 0.01 | 0.004 | 0.51 | 41.72 | 99.5 | 1 | < 1 | 10 | 526 |
| PGH-18-01 | 201 | 202 | 1 | 589063 | A18-03553 | 2.19 | 0.17 | 3.38 | 0.341 | 1.39 | 51.54 | 0.12 | 0.07 | 0.033 | 5.15 | 33.52 | 97.91 | 2 | < 1 | 35 | 343 |
| PGH-18-01 | 202 | 203.58 | 1.58 | 589064 | A18-03553 | 2.05 | 0.1 | 3.77 | 0.453 | 2.75 | 48.36 | 0.05 | 0.04 | 0.023 | 2.58 | 36.97 | 97.14 | 4 | < 1 | 33 | 7781 |
| PGH-18-01 | 203.58 | 204.51 | 0.93 | 589065 | A18-03553 | 31.08 | 7.62 | 5.55 | 0.224 | 5.2 | 21.64 | 2.4 | 4.42 | 0.305 | 1.6 | 18.25 | 98.31 | 7 | 4 | 124 | 807 |
| PGH-18-01 | 204.51 | 205.52 | 1.01 | 589066 | A18-03553 | 28.81 | 7.78 | 8.16 | 0.33 | 9.86 | 15.29 | 0.42 | 6.03 | 0.499 | 1.6 | 19.44 | 98.23 | 9 | 5 | 137 | 935 |
| PGH-18-01 | 205.52 | 206.51 | 0.99 | 589067 | A18-03553 | 29.59 | 7.99 | 8.08 | 0.319 | 8.8 | 17.18 | 0.71 | 5.66 | 0.334 | 1.62 | 18.41 | 98.69 | 13 | 5 | 136 | 1891 |
| PGH-18-01 | 206.51 | 207.49 | 0.98 | 589068 | A18-03553 | 55.13 | 13.92 | 4.97 | 0.119 | 3.72 | 6.74 | 4.7 | 4.57 | 0.402 | 0.38 | 5.82 | 100.5 | 8 | 6 | 98 | 1415 |
| PGH-18-01 | 207.49 | 208.67 | 1.18 | 589069 | A18-03553 | 47.66 | 11.95 | 6.93 | 0.152 | 6.43 | 7.52 | 4.49 | 5.04 | 0.46 | 0.62 | 8.24 | 99.5 | 11 | 5 | 124 | 833 |
| PGH-18-01 | 208.67 | 209.68 | 1.01 | 589070 | A18-03553 | 3.2 | 0.63 | 3.09 | 0.427 | 1.43 | 51.22 | 0.35 | 0.43 | 0.04 | 2.3 | 35.61 | 98.73 | 2 | < 1 | 29 | 440 |
| PGH-18-01 | 209.68 | 210.88 | 1.2 | 589071 | A18-03553 | 4.15 | 0.75 | 3.22 | 0.392 | 2.19 | 48.83 | 0.31 | 0.69 | 0.074 | 2.96 | 34.83 | 98.4 | 2 | 1 | 35 | 480 |
| PGH-18-01 | 210.88 | 211.87 | 0.99 | 589072 | A18-03553 | 27.32 | 6.76 | 6.47 | 0.257 | 7.76 | 22.38 | 1.57 | 4.74 | 0.339 | 2.68 | 19.57 | 99.86 | 7 | 5 | 103 | 558 |
| PGH-18-01 | 211.87 | 212.72 | 0.85 | 589073 | A18-03553 | 32.38 | 8.12 | 6.83 | 0.282 | 8.52 | 15.24 | 2.11 | 4.86 | 0.337 | 3.04 | 16.97 | 98.67 | 8 | 23 | 102 | 1077 |
| PGH-18-01 | 214.28 | 214.71 | 0.43 | 589075 | A18-03553 | 16.93 | 4.52 | 3.95 | 0.375 | 3.6 | 34.77 | 1.34 | 2.49 | 0.19 | 1.09 | 29.44 | 98.7 | 5 | 3 | 42 | 1144 |
| PGH-18-01 | 217.37 | 218.32 | 0.95 | 589076 | A18-03553 | 13.07 | 2.73 | 3.86 | 0.372 | 3.47 | 38.47 | 1.12 | 1.35 | 0.169 | 3.22 | 29.94 | 97.78 | 5 | 3 | 60 | 913 |
| PGH-18-01 | 222.63 | 223.88 | 1.25 | 589077 | A18-03553 | 9.59 | 2.27 | 2.65 | 0.389 | 2.21 | 42.82 | 0.91 | 0.98 | 0.098 | 0.42 | 35.28 | 97.61 | 5 | 1 | 33 | 1563 |
| PGH-18-01 | 227.18 | 227.75 | 0.57 | 589078 | A18-03553 | 7.77 | 1.16 | 3.23 | 0.38 | 3.16 | 44.56 | 0.12 | 1 | 0.092 | 3.35 | 34.1 | 98.92 | 5 | 2 | 33 | 915 |
| PGH-18-01 | 227.75 | 229.14 | 1.39 | 655398 | A18-09217 | | | 6.97 | | | | | | | 0.69 | | | | | | |
| PGH-18-01 | 229.14 | 230.03 | 0.89 | 589079 | A18-03553 | 11.6 | 3.22 | 3.7 | 0.371 | 3.07 | 38.85 | 0.52 | 2.06 | 0.197 | 1.58 | 32.71 | 97.88 | 4 | 1 | 39 | 1644 |
| PGH-18-01 | 229.82 | 231 | 1.18 | 655399 | A18-09217 | | | 5.28 | | | | | | | 0.31 | | | | | | |
| PGH-18-01 | 231 | 232.35 | 1.35 | 655400 | A18-09217 | | | 5.34 | | | | | | | 0.36 | | | | | | |
| PGH-18-01 | 232.35 | 233.36 | 1.01 | 1674601 | A18-09217 | | | 5.74 | | | | | | | 0.66 | | | | | | |
| PGH-18-01 | 233.36 | 234.45 | 1.09 | 1674602 | A18-09217 | | | 7.51 | | | | | | | 3.52 | | | | | | |
| PGH-18-01 | 234.47 | 235.47 | 1 | 589080 | A18-03553 | 10.81 | 1.54 | 7.28 | 0.492 | 5.69 | 33.24 | 0.13 | 1.2 | 0.14 | 7.34 | 26.88 | 94.75 | 8 | < 1 | 64 | 5827 |
| PGH-18-01 | 235.47 | 236.66 | 1.19 | 1674604 | A18-09217 | | | 7.82 | | | | | | | 0.34 | | | | | | |
| PGH-18-01 | 236.66 | 237.8 | 1.14 | 1674605 | A18-09217 | | | 7.32 | | | | | | | 0.81 | | | | | | |
| PGH-18-01 | 237.8 | 239.05 | 1.25 | 1674606 | A18-09217 | | | 6.77 | | | | | | | 0.23 | | | | | | |
| PGH-18-01 | 239.05 | 240.27 | 1.22 | 1674607 | A18-09217 | | | 7.31 | | | | | | | 1.59 | | | | | | |
| PGH-18-01 | 240.27 | 241.45 | 1.18 | 1674608 | A18-09217 | | | 8.14 | | | | | | | 0.62 | | | | | | |
| PGH-18-01 | 241.45 | 242.5 | 1.05 | 1674609 | A18-09217 | | | 5.38 | | | | | | | 0.27 | | | | | | |
| PGH-18-01 | 242.5 | 243.49 | 0.99 | 589081 | A18-03553 | 7.61 | 1.47 | 5.33 | 0.305 | 3.67 | 39.47 | 0.08 | 1.26 | 0.091 | 3.23 | 31.81 | 94.33 | 6 | < 1 | 55 | 5267 |
| PGH-18-01 | 243.49 | 244.44 | 0.95 | 589082 | A18-03553 | 7.07 | 1.22 | 4.74 | 0.32 | 2.79 | 46.1 | 0.15 | 0.85 | 0.103 | 6.27 | 28.68 | 98.28 | 6 | < 1 | 58 | 708 |
| PGH-18-01 | 244.44 | 245.26 | 0.82 | 589083 | A18-03553 | 50.48 | 13.6 | 5.89 | 0.177 | 4.29 | 6.17 | 3.35 | 5.43 | 0.516 | 0.21 | 9 | 99.12 | 17 | 5 | 121 | 1361 |
| PGH-18-01 | 245.26 | 246.34 | 1.08 | 589084 | A18-03553 | 17.85 | 3.54 | 7.51 | 0.53 | 6.76 | 26.39 | 0.13 | 3.1 | 0.23 | 4.36 | 25.17 | 95.57 | 10 | < 1 | 68 | 7923 |

Assays

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) | |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|--|
| PGH-18-01 | 246.34 | 247.3 | 0.96 | 589085 | A18-03553 | 11.43 | 0.92 | 4.3 | 0.315 | 2.27 | 41 | 0.08 | 0.77 | 0.062 | 5.31 | 28.39 | 94.84 | 5 | < 1 | 36 | 3705 | |
| PGH-18-01 | 247.3 | 248.68 | 1.38 | 1674611 | A18-09217 | | | 6.98 | | | | | | | 0.4 | | | | | | | |
| PGH-18-01 | 248.68 | 249.93 | 1.25 | 1674612 | A18-09217 | | | 5.07 | | | | | | | 0.28 | | | | | | | |
| PGH-18-01 | 249.93 | 251.07 | 1.14 | 1674613 | A18-09217 | | | 7.53 | | | | | | | 0.44 | | | | | | | |
| PGH-18-01 | 251.07 | 252 | 0.93 | 1674614 | A18-09217 | | | 9.02 | | | | | | | 0.51 | | | | | | | |
| PGH-18-01 | 252 | 253.24 | 1.24 | 1674615 | A18-09217 | | | 7.93 | | | | | | | 0.9 | | | | | | | |
| PGH-18-01 | 253.24 | 254.32 | 1.08 | 589087 | A18-03553 | 9.45 | 2.22 | 6.3 | 0.382 | 3.83 | 40.36 | 0.11 | 1.78 | 0.188 | 3.26 | 29.55 | 97.43 | 7 | 1 | 71 | 5740 | |
| PGH-18-01 | 254.32 | 255.22 | 0.9 | 589088 | A18-03553 | 10.84 | 2.54 | 4.94 | 0.348 | 4.08 | 40.51 | 0.15 | 2 | 0.203 | 2.41 | 30.63 | 98.64 | 5 | < 1 | 71 | 673 | |
| PGH-18-01 | 255.22 | 255.8 | 0.58 | 1674616 | A18-09217 | | | 6.6 | | | | | | | 0.84 | | | | | | | |
| PGH-18-01 | 255.8 | 257.06 | 1.26 | 589089 | A18-03918 | 8.68 | 1.22 | 7.23 | 1.212 | 13.38 | 27.27 | 0.09 | 0.79 | 0.145 | 2.45 | 34.92 | 97.38 | 6 | 1 | 54 | 8626 | |
| PGH-18-01 | 257.06 | 258.3 | 1.24 | 1674617 | A18-09217 | | | 5.67 | | | | | | | 0.28 | | | | | | | |
| PGH-18-01 | 258.3 | 259.32 | 1.02 | 1674618 | A18-09217 | | | 7.53 | | | | | | | 1.1 | | | | | | | |
| PGH-18-01 | 259.32 | 260.32 | 1 | 1674619 | A18-09217 | | | 7.74 | | | | | | | 0.68 | | | | | | | |
| PGH-18-01 | 260.32 | 261.42 | 1.1 | 1674620 | A18-09217 | | | 6.98 | | | | | | | 0.37 | | | | | | | |
| PGH-18-01 | 261.42 | 262.4 | 0.98 | 1674621 | A18-09217 | | | 6.86 | | | | | | | 0.87 | | | | | | | |
| PGH-18-01 | 262.4 | 263.38 | 0.98 | 1674622 | A18-09217 | | | 7.26 | | | | | | | 1.69 | | | | | | | |
| PGH-18-01 | 263.38 | 264.32 | 0.94 | 1674623 | A18-09217 | | | 7.65 | | | | | | | 2.76 | | | | | | | |
| PGH-18-01 | 264.32 | 264.78 | 0.46 | 589090 | A18-03918 | 22.01 | 4.7 | 5.7 | 0.305 | 6.68 | 27.31 | 0.25 | 3.56 | 0.298 | 1.89 | 26.51 | 99.2 | 8 | 3 | 118 | 629 | |
| PGH-18-01 | 264.78 | 265.82 | 1.04 | 589091 | A18-03918 | 20.07 | 4.11 | 6.4 | 0.44 | 8.17 | 26.04 | 0.17 | 3.03 | 0.234 | 4.5 | 23.79 | 96.96 | 9 | 5 | 94 | 11310 | |
| PGH-18-01 | 265.82 | 266.76 | 0.94 | 589092 | A18-03918 | 30.92 | 6.78 | 6.64 | 0.409 | 10.53 | 15.22 | 0.63 | 5.24 | 0.293 | 1.13 | 21.3 | 99.1 | 11 | 4 | 146 | 1100 | |
| PGH-18-01 | 266.76 | 267.23 | 0.47 | 589093 | A18-03918 | 0.31 | 0.05 | 5.18 | 1.238 | 16.32 | 29.72 | < 0.01 | < 0.01 | 0.018 | 0.02 | 38.73 | 91.6 | 5 | 2 | 40 | 12170 | |
| PGH-18-01 | 267.23 | 268.02 | 0.79 | 589094 | A18-03918 | 34.57 | 8.2 | 6.13 | 0.542 | 9.72 | 13.6 | 1.66 | 4.47 | 0.319 | 0.33 | 20.42 | 99.95 | 10 | 5 | 129 | 3594 | |
| PGH-18-01 | 268.02 | 269.2 | 1.18 | 1674624 | A18-09217 | | | 6.72 | | | | | | | 0.44 | | | | | | | |
| PGH-18-01 | 269.2 | 270.3 | 1.1 | 1674625 | A18-09217 | | | 6.57 | | | | | | | 0.48 | | | | | | | |
| PGH-18-01 | 270.3 | 271.5 | 1.2 | 1674626 | A18-09217 | | | 5.81 | | | | | | | 0.94 | | | | | | | |
| PGH-18-01 | 271.5 | 272.89 | 1.39 | 1674627 | A18-09217 | | | 7.21 | | | | | | | 1.2 | | | | | | | |
| PGH-18-01 | 272.89 | 273.92 | 1.03 | 1674628 | A18-09217 | | | 6.39 | | | | | | | 0.55 | | | | | | | |
| PGH-18-01 | 273.92 | 275.04 | 1.12 | 589095 | A18-03918 | 10.54 | 0.78 | 6.06 | 0.463 | 6.61 | 33.69 | 0.08 | 0.61 | 0.768 | 8.09 | 27.29 | 94.97 | 6 | < 1 | 80 | 6481 | |
| PGH-18-01 | 275.04 | 276 | 0.96 | 589096 | A18-03918 | 7.04 | 1.01 | 5.07 | 0.476 | 5.12 | 39.34 | 0.05 | 0.44 | 0.21 | 4.35 | 33.08 | 96.18 | 5 | 1 | 70 | 5502 | |
| PGH-18-01 | 276 | 277.15 | 1.15 | 589097 | A18-03918 | 4.68 | 0.44 | 4.42 | 0.353 | 2.73 | 43.36 | 0.08 | 0.22 | 0.398 | 3.19 | 34.38 | 94.26 | 5 | < 1 | 67 | 1628 | |
| PGH-18-01 | 277.15 | 278.3 | 1.15 | 589098 | A18-03918 | 9.58 | 1.14 | 3.53 | 0.322 | 2.36 | 45.14 | 0.11 | 0.09 | 0.085 | 3.2 | 33.63 | 99.17 | 2 | < 1 | 58 | 649 | |
| PGH-18-01 | 287.52 | 288.8 | 1.28 | 589099 | A18-03918 | 6.86 | 1.55 | 2.78 | 0.377 | 2.05 | 45.61 | 0.28 | 1.14 | 0.09 | 2.1 | 35.11 | 97.95 | 4 | < 1 | 49 | 1590 | |
| PGH-18-01 | 288.8 | 290.1 | 1.3 | 589100 | A18-03918 | 0.46 | 0.08 | 3.51 | 0.622 | 3.25 | 47.7 | 0.04 | 0.05 | 0.04 | 0.27 | 41.81 | 97.84 | 7 | < 1 | 27 | 4995 | |
| PGH-18-01 | 290.1 | 291.33 | 1.23 | 589101 | A18-03918 | 2.58 | 0.4 | 4.8 | 0.694 | 7.81 | 37.53 | 0.07 | 0.21 | 0.024 | 3.04 | 37.69 | 94.83 | 6 | 1 | 41 | 7480 | |
| PGH-18-01 | 291.33 | 292.27 | 0.94 | 1674629 | A18-09217 | | | 5.76 | | | | | | | 1 | | | | | | | |
| PGH-18-01 | 292.27 | 293.05 | 0.78 | 1674630 | A18-09217 | | | 6.41 | | | | | | | 3.47 | | | | | | | |
| PGH-18-01 | 293.05 | 294 | 0.95 | 1674631 | A18-09217 | | | 4.2 | | | | | | | 3.7 | | | | | | | |
| PGH-18-01 | 294 | 295.09 | 1.09 | 1674632 | A18-09217 | | | 4.97 | | | | | | | 0.46 | | | | | | | |
| PGH-18-01 | 295.09 | 295.9 | 0.81 | 1674633 | A18-09217 | | | 3.24 | | | | | | | 0.54 | | | | | | | |
| PGH-18-01 | 295.9 | 296.7 | 0.8 | 589102 | A18-03918 | 5.18 | 0.73 | 5.3 | 0.552 | 4.16 | 39.15 | 0.22 | 0.3 | 0.073 | 4.5 | 32.78 | 92.94 | 7 | < 1 | 41 | 8606 | |
| PGH-18-01 | 296.7 | 297.45 | 0.75 | 589103 | A18-03918 | 2.06 | 0.09 | 4.74 | 0.518 | 3.4 | 44.6 | 0.02 | 0.04 | 0.047 | 2.2 | 36.4 | 94.12 | 6 | < 1 | 31 | 3520 | |

Assays

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) | |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|--|
| PGH-18-01 | 344.45 | 345.5 | 1.05 | 589143 | A18-03918 | 47.1 | 11.59 | 5.71 | 0.165 | 4.79 | 10.53 | 5.15 | 3.34 | 0.463 | 0.49 | 9.47 | 98.8 | 10 | 7 | 115 | 931 | |
| PGH-18-01 | 345.5 | 345.76 | 0.26 | 589144 | A18-03918 | 13.4 | 2.6 | 2.82 | 0.344 | 2.93 | 40.3 | 0.88 | 1.11 | 0.116 | 1.15 | 31.91 | 97.54 | 3 | 2 | 46 | 677 | |
| PGH-18-01 | 345.76 | 346.36 | 0.6 | 589145 | A18-03918 | 58.76 | 12.44 | 5.95 | 0.09 | 3.09 | 3.91 | 5.85 | 5.89 | 0.359 | 0.28 | 3.41 | 100 | 6 | 7 | 153 | 447 | |
| PGH-18-01 | 346.36 | 347.03 | 0.67 | 589146 | A18-03918 | 3.38 | 0.29 | 1.54 | 0.305 | 1.74 | 48.97 | 0.43 | 0.29 | 0.057 | 2.77 | 37.26 | 97.03 | 2 | 1 | 33 | 450 | |
| PGH-18-01 | 347.03 | 347.85 | 0.82 | 589147 | A18-03918 | 4.55 | 0.33 | 3.03 | 0.271 | 2.17 | 47.36 | 0.52 | 0.32 | 0.487 | 2.82 | 35.47 | 97.33 | 3 | 2 | 48 | 428 | |
| PGH-18-01 | 347.85 | 348.53 | 0.68 | 589148 | A18-03918 | 7.92 | 1.29 | 5.92 | 0.275 | 2.16 | 41.89 | 0.8 | 0.39 | 0.42 | 3.72 | 30.96 | 95.76 | 2 | 2 | 368 | 502 | |
| PGH-18-01 | 348.53 | 349.42 | 0.89 | 589150 | A18-03918 | 41.94 | 9.4 | 6.17 | 0.182 | 5.3 | 13.67 | 4.13 | 3.67 | 0.331 | 1.66 | 11.68 | 98.13 | 6 | 6 | 144 | 745 | |
| PGH-18-01 | 349.42 | 350.15 | 0.73 | 589151 | A18-03918 | 1.71 | 0.22 | 1.69 | 0.318 | 1.28 | 50.61 | 0.34 | 0.17 | 0.034 | 2.75 | 37.88 | 97 | 2 | < 1 | 21 | 544 | |
| PGH-18-01 | 350.15 | 351.13 | 0.98 | 589152 | A18-03918 | 52.53 | 11.59 | 5.05 | 0.136 | 4.01 | 7.78 | 5.05 | 4.06 | 0.315 | 0.69 | 7.7 | 98.89 | 7 | 7 | 122 | 926 | |
| PGH-18-01 | 351.13 | 352.09 | 0.96 | 589153 | A18-03918 | 15.47 | 2.94 | 5.5 | 0.32 | 6 | 32.25 | 0.77 | 1.82 | 0.317 | 6.11 | 24.38 | 95.86 | 3 | 3 | 87 | 682 | |
| PGH-18-01 | 352.09 | 353 | 0.91 | 589154 | A18-03918 | 4.34 | 0.58 | 3.49 | 0.352 | 2.42 | 47.46 | 0.38 | 0.55 | 0.09 | 3.51 | 34.4 | 97.57 | 3 | 3 | 42 | 768 | |
| PGH-18-01 | 353 | 353.4 | 0.4 | 589156 | A18-03918 | 54.06 | 13.62 | 5.39 | 0.134 | 4.49 | 5.72 | 5.25 | 3.24 | 0.486 | 0.41 | 6.03 | 98.81 | 12 | 6 | 128 | 1233 | |
| PGH-18-01 | 353.4 | 353.65 | 0.25 | 589157 | A18-03918 | 6.85 | 1.23 | 7.4 | 0.964 | 13.49 | 27.67 | 0.22 | 0.85 | 0.226 | 0.05 | 38.42 | 97.36 | 3 | < 1 | 59 | 3327 | |
| PGH-18-01 | 353.65 | 354.05 | 0.4 | 589158 | A18-03918 | 57.16 | 13.74 | 4.27 | 0.119 | 3.73 | 4.97 | 5.75 | 3.58 | 0.315 | 0.18 | 6.2 | 100 | 7 | 8 | 120 | 992 | |
| PGH-18-01 | 354.05 | 354.57 | 0.52 | 589159 | A18-03918 | 16.59 | 3.05 | 5.13 | 0.307 | 6.22 | 32.25 | 0.38 | 1.6 | 0.277 | 5.1 | 26.33 | 97.22 | 5 | 3 | 80 | 714 | |
| PGH-18-01 | 354.57 | 355.05 | 0.48 | 589160 | A18-03918 | 18.64 | 2.98 | 11.85 | 0.268 | 7.7 | 23.73 | 1.7 | 2.42 | 3.701 | 2.77 | 22.6 | 98.36 | 17 | 6 | 317 | 866 | |
| PGH-18-01 | 355.05 | 356.28 | 1.23 | 1674637 | A18-09217 | | | 8.33 | | | | | | | 0.28 | | | | | | | |
| PGH-18-01 | 356.28 | 357.51 | 1.23 | 1674638 | A18-09217 | | | 6.42 | | | | | | | 0.48 | | | | | | | |
| PGH-18-01 | 357.51 | 358.51 | 1 | 1674639 | A18-09217 | | | 6.33 | | | | | | | 0.74 | | | | | | | |
| PGH-18-01 | 358.51 | 359.6 | 1.09 | 1674640 | A18-09217 | | | 8.79 | | | | | | | 0.65 | | | | | | | |
| PGH-18-01 | 359.6 | 360.8 | 1.2 | 1674641 | A18-09217 | | | 7.07 | | | | | | | 0.18 | | | | | | | |
| PGH-18-01 | 360.8 | 361.92 | 1.12 | 1674642 | A18-09217 | | | 6.34 | | | | | | | 0.42 | | | | | | | |
| PGH-18-01 | 361.92 | 362.8 | 0.88 | 1674643 | A18-09217 | | | 5.96 | | | | | | | 0.53 | | | | | | | |
| PGH-18-01 | 362.8 | 363.55 | 0.75 | 589161 | A18-03918 | 19.5 | 4.1 | 8.87 | 0.465 | 8.23 | 22.14 | 0.54 | 3.24 | 1.459 | 4.28 | 23.77 | 96.6 | 9 | 2 | 151 | 1291 | |
| PGH-18-01 | 363.55 | 364.77 | 1.22 | 589162 | A18-03918 | 28.05 | 6.25 | 5.92 | 0.231 | 7.11 | 21.17 | 1.3 | 4.44 | 0.41 | 4.8 | 18.29 | 97.96 | 6 | 3 | 107 | 829 | |
| PGH-18-01 | 364.77 | 366 | 1.23 | 589163 | A18-03918 | 42.46 | 9.74 | 6.36 | 0.193 | 5.91 | 12.6 | 3.25 | 4.69 | 0.43 | 1.54 | 12.8 | 99.96 | 10 | 6 | 136 | 775 | |
| PGH-18-01 | 366 | 366.58 | 0.58 | 589164 | A18-03918 | 34.44 | 7.38 | 7.44 | 0.239 | 7.97 | 13.9 | 1.59 | 5.34 | 0.439 | 0.99 | 18.99 | 98.72 | 8 | 5 | 133 | 538 | |
| PGH-18-01 | 366.58 | 367.75 | 1.17 | 1674644 | A18-09217 | | | 8.66 | | | | | | | 0.2 | | | | | | | |
| PGH-18-01 | 367.75 | 369 | 1.25 | 1674645 | A18-09217 | | | 6.38 | | | | | | | 0.58 | | | | | | | |
| PGH-18-01 | 369 | 370.1 | 1.1 | 1674646 | A18-09217 | | | 6.73 | | | | | | | 0.49 | | | | | | | |
| PGH-18-01 | 370.1 | 371.1 | 1 | 1674647 | A18-09217 | | | 5.97 | | | | | | | 0.67 | | | | | | | |
| PGH-18-01 | 371.1 | 372.13 | 1.03 | 1674648 | A18-09217 | | | 6.49 | | | | | | | 0.58 | | | | | | | |
| PGH-18-01 | 372.13 | 373.35 | 1.22 | 1674649 | A18-09217 | | | 4.55 | | | | | | | 0.54 | | | | | | | |
| PGH-18-01 | 373.35 | 374.02 | 0.67 | 589165 | A18-03918 | 18.35 | 3.28 | 4.47 | 0.231 | 1.68 | 35.44 | 1.02 | 1.2 | 0.213 | 3.18 | 25 | 94.06 | 4 | 1 | 37 | 5969 | |
| PGH-18-01 | 381.52 | 382.28 | 0.76 | 589166 | A18-03918 | 11.78 | 2.9 | 3.39 | 0.299 | 3.32 | 39.76 | 0.66 | 1.87 | 0.138 | 2.85 | 30.75 | 97.73 | 3 | 1 | 33 | 763 | |
| PGH-18-01 | 385.9 | 386.75 | 0.85 | 589167 | A18-03918 | 26.26 | 6.17 | 10.24 | 0.544 | 7.22 | 17.4 | 0.44 | 4.68 | 0.586 | 0.52 | 22.55 | 96.6 | 13 | 1 | 133 | 2446 | |
| PGH-18-01 | 386.75 | 387.69 | 0.94 | 589168 | A18-03918 | 12.39 | 2.03 | 8.14 | 0.49 | 4.85 | 32.82 | 0.09 | 1.59 | 0.347 | 5.3 | 26.03 | 94.08 | 6 | < 1 | 58 | 3089 | |
| PGH-18-01 | 387.69 | 388.86 | 1.17 | 1674650 | A18-09217 | | | 6.11 | | | | | | | 1.96 | | | | | | | |
| PGH-18-01 | 388.86 | 390 | 1.14 | D08051 | A18-09217 | | | 5.98 | | | | | | | 1.27 | | | | | | | |
| PGH-18-01 | 390 | 391.12 | 1.12 | D08052 | A18-09217 | | | 5.25 | | | | | | | 0.42 | | | | | | | |
| PGH-18-01 | 391.12 | 392.29 | 1.17 | D08053 | A18-09217 | | | 4.84 | | | | | | | 0.49 | | | | | | | |

Assays

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-01 | 392.29 | 393.28 | 0.99 | D08054 | A18-09217 | | | 4.81 | | | | | | | 1.85 | | | | | | |
| PGH-18-01 | 393.28 | 394.38 | 1.1 | D08055 | A18-09217 | | | 7.25 | | | | | | | 2.38 | | | | | | |
| PGH-18-01 | 394.38 | 395.39 | 1.01 | D08056 | A18-09217 | | | 6.15 | | | | | | | 0.74 | | | | | | |
| PGH-18-01 | 395.39 | 396.6 | 1.21 | 589169 | A18-03918 | 14.79 | 2.82 | 4.69 | 0.343 | 3.82 | 36.08 | 1.13 | 1.43 | 0.912 | 1.83 | 30.06 | 97.91 | 5 | 3 | 102 | 559 |
| PGH-18-01 | 396.6 | 397.53 | 0.93 | 589170 | A18-03918 | 1 | 0.05 | 1.52 | 0.41 | 1.24 | 50 | 0.03 | 0.02 | 0.021 | 2.23 | 39.12 | 95.64 | 3 | < 1 | 16 | 595 |
| PGH-18-01 | 397.53 | 398.47 | 0.94 | D08058 | A18-09217 | | | 7.38 | | | | | | | 1.42 | | | | | | |
| PGH-18-01 | 398.47 | 399.44 | 0.97 | D08059 | A18-09217 | | | 6.52 | | | | | | | 0.35 | | | | | | |
| PGH-18-01 | 399.44 | 400.46 | 1.02 | D08060 | A18-09217 | | | 6.37 | | | | | | | 0.18 | | | | | | |
| PGH-18-01 | 400.46 | 401.52 | 1.06 | D08061 | A18-09217 | | | 6.66 | | | | | | | 0.92 | | | | | | |
| PGH-18-01 | 401.52 | 402.13 | 0.61 | 589171 | A18-03918 | 8.25 | 1.86 | 3.47 | 0.329 | 2.88 | 40.35 | 0.46 | 1 | 0.259 | 1.55 | 34.67 | 95.09 | 4 | 1 | 42 | 1722 |
| PGH-18-01 | 402.13 | 403.43 | 1.3 | 589172 | A18-03918 | 26.85 | 6.06 | 7.22 | 0.294 | 6.1 | 22.44 | 1.99 | 3.18 | 1.263 | 2.68 | 20.53 | 98.6 | 7 | 4 | 160 | 807 |
| PGH-18-01 | 403.43 | 404.14 | 0.71 | 589173 | A18-03918 | 49.62 | 11.81 | 5.4 | 0.146 | 3.67 | 9.63 | 5.14 | 3.65 | 0.372 | 0.72 | 9.69 | 99.85 | 6 | 6 | 137 | 644 |
| PGH-18-01 | 404.14 | 404.7 | 0.56 | 589174 | A18-03918 | 11.59 | 2.21 | 4.14 | 0.376 | 3.04 | 38.52 | 0.63 | 1.27 | 0.247 | 2.81 | 30.42 | 95.25 | 5 | 1 | 59 | 1113 |
| PGH-18-01 | 404.7 | 405.55 | 0.85 | 589176 | A18-03918 | 54.71 | 10.47 | 7.33 | 0.161 | 6.87 | 6.34 | 4.55 | 4.23 | 0.525 | 0.13 | 4.4 | 99.71 | 13 | 8 | 115 | 1341 |
| PGH-18-01 | 405.55 | 406.15 | 0.6 | 589177 | A18-03918 | 20.5 | 3.87 | 3.92 | 0.312 | 3.76 | 32.47 | 1.06 | 2.37 | 0.194 | 2.51 | 26.99 | 97.96 | 6 | 2 | 74 | 742 |
| PGH-18-01 | 406.15 | 407.12 | 0.97 | D08062 | A18-09217 | | | 3.97 | | | | | | | 0.21 | | | | | | |
| PGH-18-01 | 407.12 | 408.1 | 0.98 | D08063 | A18-09217 | | | 3.12 | | | | | | | 0.12 | | | | | | |
| PGH-18-01 | 408.1 | 408.6 | 0.5 | 589178 | A18-03918 | 14.75 | 3.33 | 3.32 | 0.31 | 2.02 | 36.31 | 1.15 | 0.97 | 0.154 | 2.72 | 28.72 | 93.75 | 4 | 1 | 47 | 668 |
| PGH-18-01 | 408.6 | 409.62 | 1.02 | D08064 | A18-09217 | | | 3.63 | | | | | | | 0.26 | | | | | | |
| PGH-18-01 | 409.62 | 410.5 | 0.88 | D08065 | A18-09217 | | | 4.78 | | | | | | | 0.19 | | | | | | |
| PGH-18-01 | 410.5 | 411.66 | 1.16 | D08066 | A18-09217 | | | 5.15 | | | | | | | 0.3 | | | | | | |
| PGH-18-01 | 411.66 | 412.71 | 1.05 | D08067 | A18-09217 | | | 4.4 | | | | | | | 0.12 | | | | | | |
| PGH-18-01 | 412.71 | 413.95 | 1.24 | D08068 | A18-09217 | | | 5.38 | | | | | | | 1.18 | | | | | | |
| PGH-18-01 | 413.95 | 414.35 | 0.4 | 589179 | A18-03918 | 13.15 | 3.09 | 5.37 | 0.364 | 2.18 | 41.28 | 0.95 | 0.77 | 0.154 | 3.14 | 27.34 | 97.8 | 8 | 1 | 54 | 2301 |
| PGH-18-01 | 414.35 | 415.74 | 1.39 | D08069 | A18-09217 | | | 6.14 | | | | | | | 0.31 | | | | | | |
| PGH-18-01 | 415.74 | 416.7 | 0.96 | 589180 | A18-03918 | 10.43 | 1.6 | 2.44 | 0.262 | 1.3 | 44.48 | 0.17 | 1.2 | 0.035 | 0.35 | 36.24 | 98.51 | 4 | < 1 | 25 | 3914 |
| PGH-18-01 | 429.2 | 429.68 | 0.48 | 589181 | A18-03918 | 3.08 | 0.61 | 2.57 | 0.421 | 1.84 | 48.21 | 0.17 | 0.57 | 0.072 | 1.87 | 38 | 97.4 | 4 | < 1 | 24 | 912 |
| PGH-18-01 | 438.89 | 439.62 | 0.73 | 589182 | A18-03918 | 12.26 | 2.77 | 3.6 | 0.429 | 3.43 | 39.02 | 0.78 | 1.75 | 0.139 | 3.45 | 30.61 | 98.23 | 5 | 2 | 73 | 3309 |
| PGH-18-01 | 442.47 | 442.75 | 0.28 | 589183 | A18-03918 | 28.84 | 6.53 | 3.63 | 0.375 | 3.24 | 26.99 | 1.58 | 3.8 | 0.131 | 0.99 | 23.85 | 99.95 | 7 | 2 | 73 | 1204 |
| PGH-18-01 | 445.59 | 446.79 | 1.2 | 589184 | A18-03918 | 13.7 | 2.52 | 6.43 | 0.356 | 6.24 | 29.95 | 0.23 | 2.03 | 1.255 | 2.66 | 30.86 | 96.22 | 11 | 1 | 140 | 1659 |
| PGH-18-01 | 446.79 | 447.2 | 0.41 | 589185 | A18-03918 | 4.08 | 0.22 | 2.26 | 0.219 | 1.56 | 40.02 | < 0.01 | 0.11 | 0.05 | 0.13 | 39.37 | 88.02 | 4 | < 1 | 20 | 7205 |
| PGH-18-01 | 447.2 | 447.7 | 0.5 | 589186 | A18-03918 | 27.77 | 5.99 | 6.07 | 0.349 | 6.77 | 20.84 | 0.73 | 4.13 | 0.273 | 2.27 | 23.11 | 98.31 | 11 | 2 | 111 | 1794 |
| PGH-18-01 | 449.6 | 450 | 0.4 | 589187 | A18-03918 | 17.47 | 3.5 | 4.8 | 0.353 | 4.02 | 32.92 | 0.6 | 1.96 | 0.174 | 2.3 | 28.15 | 96.26 | 5 | 1 | 64 | 772 |
| PGH-18-01 | 460.11 | 460.42 | 0.31 | 589188 | A18-03918 | 12.61 | 2.95 | 5.19 | 0.378 | 3.97 | 37.95 | 0.75 | 1.23 | 0.598 | 0.74 | 32.01 | 98.37 | 10 | 2 | 131 | 1898 |
| PGH-18-01 | 466.63 | 466.83 | 0.2 | 589189 | A18-03918 | 13.43 | 3.05 | 2.52 | 0.355 | 0.73 | 39.4 | 1.03 | 0.82 | 0.08 | 0.75 | 30.62 | 92.78 | 4 | < 1 | 33 | 1146 |
| PGH-18-01 | 471.08 | 471.98 | 0.9 | 589190 | A18-03918 | 7.01 | 1.28 | 2.46 | 0.371 | 1.62 | 44.69 | 0.38 | 0.59 | 0.054 | 2.01 | 35.63 | 96.1 | 4 | < 1 | 33 | 890 |
| PGH-18-01 | 473.96 | 474.44 | 0.48 | 589191 | A18-03918 | 2.03 | 0.32 | 1.4 | 0.345 | 0.91 | 50.96 | 0.06 | 0.23 | 0.035 | 1.36 | 40.5 | 98.14 | 4 | < 1 | 22 | 770 |
| PGH-18-01 | 474.44 | 475.23 | 0.79 | 589192 | A18-03918 | 47.64 | 10.56 | 4.86 | 0.243 | 4.35 | 9.35 | 2.69 | 5.49 | 0.342 | 0.6 | 11.95 | 98.08 | 9 | 3 | 128 | 1870 |
| PGH-18-01 | 492.85 | 493.55 | 0.7 | 589193 | A18-03918 | 50.33 | 10.91 | 3.25 | 0.23 | 2.9 | 11.18 | 3.36 | 3.98 | 0.129 | 0.85 | 11.31 | 98.43 | 6 | 4 | 90 | 1898 |
| PGH-18-01 | 493.55 | 494.65 | 1.1 | 589194 | A18-03918 | 0.29 | 0.08 | 1.46 | 0.419 | 1.03 | 53.03 | 0.09 | 0.06 | 0.007 | 0.71 | 41.71 | 98.88 | 2 | < 1 | 17 | 422 |
| PGH-18-01 | 494.65 | 495.85 | 1.2 | 589195 | A18-03918 | 1.16 | 0.22 | 2.4 | 0.405 | 1.62 | 50.6 | 0.07 | 0.17 | 0.072 | 3.6 | 37.75 | 98.07 | 4 | < 1 | 31 | 656 |

Assays

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-01 | 495.85 | 496.74 | 0.89 | 589196 | A18-03918 | 0.2 | 0.06 | 1.81 | 0.403 | 1.16 | 52.37 | 0.06 | 0.04 | 0.02 | 1.36 | 41.07 | 98.55 | 4 | < 1 | 18 | 314 |
| PGH-18-01 | 496.74 | 497.58 | 0.84 | 589197 | A18-03918 | 0.91 | 0.12 | 3.19 | 0.463 | 2.35 | 49.18 | 0.08 | 0.09 | 0.025 | 3.06 | 38.15 | 97.61 | 5 | < 1 | 28 | 670 |
| PGH-18-01 | 497.58 | 498.43 | 0.85 | 589198 | A18-03918 | 1.64 | 0.18 | 2.38 | 0.406 | 1.53 | 50.33 | 0.09 | 0.15 | 0.025 | 3.68 | 37.44 | 97.85 | 3 | < 1 | 24 | 1678 |
| PGH-18-01 | 498.43 | 499.36 | 0.93 | 589199 | A18-03918 | 1.75 | 0.19 | 2.02 | 0.389 | 1.76 | 50.26 | 0.14 | 0.13 | 0.038 | 5.26 | 36.16 | 98.1 | 3 | < 1 | 28 | 1041 |
| PGH-18-01 | 499.36 | 499.93 | 0.57 | 589200 | A18-03918 | 62.88 | 14.15 | 3.38 | 0.086 | 2.58 | 4.97 | 5.55 | 2.52 | 0.247 | 0.23 | 3.74 | 100.3 | 5 | 5 | 58 | 769 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|-------|-------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 11.85 | 12.1 | 0.25 | 589001 | 2607 | 100 | 21 | 40 | 14 | 50 | < 10 | 80 | 5 | < 1 | 6 | 13 | 351 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 12.1 | 12.92 | 0.82 | 351542 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 12.92 | 13.66 | 0.74 | 351543 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 13.66 | 14.23 | 0.57 | 589002 | 3708 | 99 | 141 | < 20 | < 1 | < 20 | < 10 | 70 | 5 | 1 | < 5 | 3 | 101 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 14.23 | 15.64 | 1.41 | 351544 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 15.64 | 16.31 | 0.67 | 589003 | 6102 | 99 | 73 | < 20 | 4 | < 20 | < 10 | 190 | 7 | < 1 | 7 | 5 | 700 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 16.31 | 17.14 | 0.83 | 589004 | 1998 | 130 | 58 | < 20 | 2 | < 20 | < 10 | 110 | 14 | 1 | < 5 | 52 | 672 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 17.14 | 18 | 0.86 | 589005 | 2870 | 79 | 6 | < 20 | 3 | < 20 | < 10 | 140 | 5 | < 1 | 6 | < 2 | 170 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 18 | 18.91 | 0.91 | 589006 | 1953 | 57 | 41 | < 20 | 4 | < 20 | < 10 | 220 | 12 | < 1 | 8 | 58 | 440 | 5 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 18.91 | 19.75 | 0.84 | 589007 | 3229 | 74 | 47 | < 20 | 4 | < 20 | 10 | 220 | 7 | 1 | 13 | 3 | 668 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 19.75 | 20.46 | 0.71 | 589008 | 2430 | 80 | 948 | < 20 | 19 | < 20 | 20 | 170 | 22 | 2 | 7 | 59 | 201 | 25 | 2.9 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 20.46 | 21.72 | 1.26 | 351545 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 21.72 | 22.95 | 1.23 | 351546 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 22.95 | 24.15 | 1.2 | 351547 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 24.15 | 25.2 | 1.05 | 351548 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 25.2 | 26.19 | 0.99 | 351549 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 26.19 | 26.79 | 0.6 | 589009 | 2448 | 228 | 303 | 50 | 13 | 30 | 30 | 140 | 12 | 1 | 8 | 34 | 633 | 10 | 1 | < 0.2 | 6 | 0.6 |
| PGH-18-01 | 26.79 | 27.77 | 0.98 | 351550 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 27.77 | 28.35 | 0.58 | 655377 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 28.35 | 28.8 | 0.45 | 589010 | 4555 | 99 | 377 | 140 | 29 | 140 | 50 | 140 | 11 | 1 | 18 | 56 | 334 | < 2 | 1.1 | < 0.2 | 3 | 0.7 |
| PGH-18-01 | 31.18 | 31.51 | 0.33 | 589011 | 1777 | 149 | 71 | < 20 | 6 | 20 | 10 | 100 | 8 | < 1 | < 5 | 31 | 156 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 32.28 | 33.05 | 0.77 | 589012 | 5419 | 77 | 191 | < 20 | 6 | < 20 | 10 | 180 | 9 | < 1 | 8 | 25 | 142 | 7 | 0.6 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 34.09 | 34.77 | 0.68 | 589013 | 911 | 13 | 58 | < 20 | 6 | < 20 | 20 | 120 | 16 | 1 | < 5 | 88 | 474 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 41.76 | 42 | 0.24 | 589014 | 1149 | 51 | 36 | < 20 | 3 | 20 | < 10 | 60 | 12 | 2 | 6 | 25 | 106 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 46.49 | 46.78 | 0.29 | 589015 | 1025 | 84 | 80 | 30 | 2 | < 20 | 10 | 150 | 17 | 2 | < 5 | 59 | 97 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 52.53 | 53.47 | 0.94 | 589016 | 1039 | 28 | 59 | 50 | 4 | 20 | 10 | 80 | 16 | 1 | < 5 | 76 | 476 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 53.47 | 54.64 | 1.17 | 589017 | 1516 | 63 | 97 | 30 | 4 | < 20 | < 10 | 90 | 16 | 1 | < 5 | 65 | 356 | 4 | < 0.5 | < 0.2 | 5 | < 0.5 |
| PGH-18-01 | 60.61 | 61.8 | 1.19 | 589018 | 1315 | 43 | 80 | 50 | 11 | 30 | < 10 | 70 | 16 | 1 | < 5 | 56 | 101 | 12 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 61.8 | 63 | 1.2 | 589019 | 896 | 19 | 110 | 60 | 13 | 30 | < 10 | 90 | 20 | < 1 | < 5 | 65 | 67 | 10 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 63 | 63.95 | 0.95 | 589021 | 1171 | 42 | 119 | 50 | 7 | 30 | 10 | 90 | 18 | 1 | < 5 | 58 | 115 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 63.95 | 64.95 | 1 | 589022 | 948 | 24 | 181 | 100 | 13 | 40 | < 10 | 80 | 19 | 1 | < 5 | 52 | 37 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 64.95 | 65.93 | 0.98 | 589023 | 1209 | 35 | 138 | 70 | 11 | 40 | < 10 | 100 | 19 | 1 | < 5 | 86 | 330 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 65.93 | 66.85 | 0.92 | 589024 | 2832 | 71 | 117 | < 20 | 4 | < 20 | < 10 | 120 | 5 | < 1 | 10 | 8 | 323 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 66.85 | 67.85 | 1 | 589025 | 3684 | 52 | 111 | < 20 | 2 | < 20 | < 10 | 50 | 4 | < 1 | 5 | 2 | 109 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 67.85 | 68.81 | 0.96 | 589026 | 5507 | 61 | 12 | < 20 | < 1 | < 20 | 10 | 40 | 4 | < 1 | < 5 | < 2 | 214 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 68.81 | 69.8 | 0.99 | 589027 | 3428 | 66 | 99 | < 20 | < 1 | < 20 | < 10 | 60 | 4 | < 1 | < 5 | < 2 | 245 | 8 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 69.8 | 70.86 | 1.06 | 589028 | 5298 | 51 | 9 | < 20 | < 1 | < 20 | < 10 | 40 | 3 | < 1 | < 5 | < 2 | 216 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 70.86 | 72 | 1.14 | 589029 | 5329 | 66 | 64 | < 20 | 2 | < 20 | < 10 | 70 | 4 | < 1 | 9 | < 2 | 486 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 72 | 73 | 1 | 589030 | 3295 | 95 | 89 | < 20 | 2 | < 20 | 10 | 80 | 4 | < 1 | 10 | < 2 | 644 | 11 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 73 | 74.05 | 1.05 | 589031 | 3155 | 85 | 53 | < 20 | 4 | < 20 | 10 | 110 | 5 | < 1 | 13 | < 2 | 332 | 14 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 74.05 | 74.88 | 0.83 | 589032 | 3680 | 54 | 74 | < 20 | 3 | < 20 | < 10 | 60 | 4 | 1 | 8 | < 2 | 287 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 74.88 | 75.87 | 0.99 | 589033 | 3901 | 60 | 321 | < 20 | 4 | < 20 | < 10 | 120 | 8 | 1 | 8 | 7 | 842 | 16 | 1.1 | < 0.2 | 2 | 0.5 |
| PGH-18-01 | 75.87 | 76.87 | 1 | 589034 | 3125 | 59 | 72 | < 20 | 2 | < 20 | 10 | 100 | 5 | < 1 | 11 | 2 | 851 | 38 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 76.87 | 78 | 1.13 | 589035 | 3584 | 63 | 198 | < 20 | 3 | < 20 | 10 | 100 | 12 | 2 | 11 | < 2 | 707 | 35 | 0.6 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 78 | 79.11 | 1.11 | 589036 | 2987 | 58 | 235 | < 20 | 3 | < 20 | < 10 | 120 | 8 | < 1 | < 5 | 51 | 340 | < 2 | 0.7 | < 0.2 | 2 | 0.8 |
| PGH-18-01 | 79.11 | 80.14 | 1.03 | 589037 | 2846 | 91 | 276 | 30 | 15 | 30 | 70 | 90 | 11 | < 1 | < 5 | 45 | 252 | 3 | 0.6 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 80.14 | 81.25 | 1.11 | 589038 | 1400 | 38 | 38 | < 20 | 3 | < 20 | < 10 | 130 | 12 | 1 | 8 | 20 | 245 | 16 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 81.25 | 82.25 | 1 | 589039 | 974 | 23 | 133 | 250 | 11 | 40 | < 10 | 80 | 21 | 1 | < 5 | 84 | 131 | 9 | < 0.5 | < 0.2 | 7 | < 0.5 |
| PGH-18-01 | 95.75 | 96.29 | 0.54 | 589040 | 4950 | 97 | 100 | < 20 | 7 | 20 | 10 | 140 | 9 | < 1 | 10 | 36 | 153 | 26 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 96.29 | 97.28 | 0.99 | 589041 | 1356 | 43 | 66 | 200 | 13 | 50 | 30 | 130 | 16 | 1 | < 5 | 94 | 247 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 97.28 | 98.14 | 0.86 | 589042 | 1185 | 36 | 70 | 30 | 3 | < 20 | < 10 | 190 | 19 | 1 | < 5 | 93 | 157 | < 2 | < 0.5 | < 0.2 | 6 | < 0.5 |
| PGH-18-01 | 98.14 | 99.2 | 1.06 | 589043 | 3115 | 86 | 12 | < 20 | < 1 | < 20 | < 10 | 50 | 7 | 1 | < 5 | < 2 | 152 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 99.2 | 100.49 | 1.29 | 589044 | 1065 | 18 | 65 | < 20 | 3 | < 20 | 20 | 80 | 18 | < 1 | < 5 | 70 | 80 | 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 100.49 | 101.78 | 1.29 | 589045 | 1017 | 16 | 75 | 210 | 4 | < 20 | 20 | 100 | 19 | 1 | < 5 | 68 | 139 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 101.78 | 102.31 | 0.53 | 589046 | 1407 | 32 | 21 | < 20 | 1 | < 20 | 10 | 120 | 15 | 2 | 6 | 25 | 77 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 112.5 | 113.62 | 1.12 | 589047 | 5985 | 117 | 75 | < 20 | 5 | < 20 | 20 | 100 | 10 | 1 | 7 | 21 | 270 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 113.62 | 114.22 | 0.6 | 589048 | 3043 | 51 | 61 | 130 | 15 | 40 | 10 | 150 | 19 | < 1 | 6 | 93 | 250 | 6 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 115.5 | 115.8 | 0.3 | 589074 | 2484 | 76 | 59 | 40 | 12 | 30 | 10 | 190 | 18 | 2 | 17 | 41 | 150 | 54 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 123.21 | 124.36 | 1.15 | 589049 | 2502 | 114 | 22 | < 20 | 2 | < 20 | < 10 | 80 | 12 | 3 | 11 | < 2 | 325 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 124.36 | 125.33 | 0.97 | 589051 | 2022 | 61 | 201 | 40 | 8 | < 20 | 20 | 140 | 11 | 1 | 8 | 37 | 343 | 3 | 0.8 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 130.24 | 130.93 | 0.69 | 589052 | 5776 | 81 | 47 | < 20 | 2 | < 20 | 10 | 50 | 8 | < 1 | 5 | 20 | 196 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 139.65 | 140.04 | 0.39 | 589053 | 1991 | 64 | 33 | 140 | 20 | 20 | 10 | 280 | 18 | 2 | 45 | 69 | 276 | 30 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 141.45 | 142.08 | 0.63 | 589054 | 6584 | 90 | 8 | < 20 | < 1 | < 20 | 10 | 60 | 6 | < 1 | < 5 | 14 | 430 | 7 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 142.08 | 143 | 0.92 | 589055 | 2759 | 91 | 54 | 50 | 13 | < 20 | 10 | 260 | 11 | 2 | 12 | 30 | 809 | 39 | < 0.5 | 0.2 | 3 | < 0.5 |
| PGH-18-01 | 145.24 | 145.84 | 0.6 | 589056 | 4476 | 77 | 18 | < 20 | 3 | < 20 | < 10 | 130 | 32 | 4 | 13 | 22 | 187 | 72 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 163 | 164.33 | 1.33 | 589057 | 2882 | 103 | 11 | < 20 | < 1 | < 20 | < 10 | 240 | 9 | 2 | 7 | < 2 | 143 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 164.33 | 165.73 | 1.4 | 655378 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 165.73 | 167.05 | 1.32 | 655379 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 167.05 | 168.18 | 1.13 | 655380 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 168.18 | 169.37 | 1.19 | 655381 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 169.37 | 170.4 | 1.03 | 655382 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 170.4 | 171.36 | 0.96 | 589058 | 3116 | 86 | 23 | < 20 | < 1 | < 20 | < 10 | 60 | 7 | 1 | < 5 | 19 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 171.36 | 172.54 | 1.18 | 655383 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 172.54 | 174 | 1.46 | 655384 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 174 | 175.15 | 1.15 | 655385 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 175.15 | 176.43 | 1.28 | 655386 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 176.43 | 177.37 | 0.94 | 655387 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 177.37 | 178.5 | 1.13 | 655388 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 178.5 | 179.83 | 1.33 | 655389 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 179.83 | 181.1 | 1.27 | 655390 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 181.1 | 182.27 | 1.17 | 655391 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 182.27 | 183.4 | 1.13 | 655392 | | | | | | | | | | | | | | | | | | |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 183.4 | 184.64 | 1.24 | 655393 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 184.64 | 185.73 | 1.09 | 655394 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 185.73 | 187 | 1.27 | 655395 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 187 | 188.3 | 1.3 | 655396 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 188.3 | 189.4 | 1.1 | 655397 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 189.4 | 189.58 | 0.18 | 589059 | 4484 | 45 | 41 | 50 | 38 | < 20 | 20 | 300 | 8 | < 1 | 14 | 35 | 44 | 7 | < 0.5 | < 0.2 | 2 | 1.7 |
| PGH-18-01 | 198 | 199 | 1 | 589060 | 7073 | 63 | 12 | < 20 | 6 | < 20 | 10 | 40 | 7 | 2 | 11 | < 2 | 252 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 199 | 200.01 | 1.01 | 589061 | 8479 | 111 | 99 | < 20 | < 1 | < 20 | 10 | 40 | 6 | 1 | 5 | < 2 | > 1000 | 8 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 200.01 | 201 | 0.99 | 589062 | 9426 | 79 | 5 | < 20 | < 1 | < 20 | 10 | < 30 | 4 | < 1 | < 5 | < 2 | 109 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 201 | 202 | 1 | 589063 | 7301 | 93 | 15 | < 20 | 9 | < 20 | 10 | < 30 | 8 | < 1 | 7 | < 2 | 876 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 202 | 203.58 | 1.58 | 589064 | 4298 | 100 | 16 | < 20 | 4 | < 20 | 20 | 70 | 8 | 2 | 17 | < 2 | 123 | 10 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 203.58 | 204.51 | 0.93 | 589065 | 3739 | 42 | 126 | 30 | 5 | 20 | < 10 | 80 | 17 | < 1 | < 5 | 82 | 835 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 204.51 | 205.52 | 1.01 | 589066 | 1795 | 29 | 87 | < 20 | 8 | < 20 | < 10 | 330 | 27 | 1 | 8 | 130 | 530 | 11 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 205.52 | 206.51 | 0.99 | 589067 | 2290 | 44 | 58 | < 20 | 11 | < 20 | 10 | 210 | 23 | < 1 | 8 | 123 | 770 | 31 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 206.51 | 207.49 | 0.98 | 589068 | 1226 | 19 | 208 | 60 | 10 | 30 | < 10 | 80 | 19 | < 1 | < 5 | 88 | 136 | < 2 | 0.8 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 207.49 | 208.67 | 1.18 | 589069 | 1180 | 18 | 128 | 70 | 10 | 30 | < 10 | 120 | 23 | < 1 | < 5 | 106 | 382 | 2 | < 0.5 | < 0.2 | 5 | < 0.5 |
| PGH-18-01 | 208.67 | 209.68 | 1.01 | 589070 | > 10000 | 78 | 28 | < 20 | 7 | < 20 | 20 | < 30 | 6 | < 1 | 6 | 9 | 391 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 209.68 | 210.88 | 1.2 | 589071 | 9419 | 83 | 17 | < 20 | 6 | < 20 | 20 | < 30 | 7 | < 1 | 7 | 20 | 479 | 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 210.88 | 211.87 | 0.99 | 589072 | 3452 | 58 | 85 | 20 | 8 | 20 | 10 | 130 | 17 | 1 | < 5 | 119 | 629 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 211.87 | 212.72 | 0.85 | 589073 | 1892 | 75 | 95 | 30 | 6 | < 20 | < 10 | 130 | 21 | 1 | < 5 | 115 | 434 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 214.28 | 214.71 | 0.43 | 589075 | 6356 | 81 | 26 | 20 | 7 | 20 | 20 | 90 | 12 | < 1 | 7 | 57 | 187 | 5 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 217.37 | 218.32 | 0.95 | 589076 | 7689 | 84 | 45 | 30 | 6 | 30 | 20 | 50 | 9 | 1 | 6 | 28 | 601 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 222.63 | 223.88 | 1.25 | 589077 | 6839 | 83 | 18 | < 20 | 2 | < 20 | 10 | 50 | 8 | < 1 | < 5 | 20 | 138 | 9 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 227.18 | 227.75 | 0.57 | 589078 | 3681 | 123 | 30 | < 20 | 1 | < 20 | 20 | 60 | 9 | 1 | 5 | 26 | 639 | 6 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 227.75 | 229.14 | 1.39 | 655398 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 229.14 | 230.03 | 0.89 | 589079 | 6601 | 93 | 27 | < 20 | 4 | 20 | 20 | 60 | 12 | 1 | 7 | 42 | 338 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 229.82 | 231 | 1.18 | 655399 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 231 | 232.35 | 1.35 | 655400 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 232.35 | 233.36 | 1.01 | 1674601 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 233.36 | 234.45 | 1.09 | 1674602 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 234.47 | 235.47 | 1 | 589080 | 3778 | 243 | 73 | 20 | 22 | 30 | 30 | 210 | 14 | 2 | 31 | 18 | 638 | 11 | 0.8 | < 0.2 | 1 | 0.8 |
| PGH-18-01 | 235.47 | 236.66 | 1.19 | 1674604 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 236.66 | 237.8 | 1.14 | 1674605 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 237.8 | 239.05 | 1.25 | 1674606 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 239.05 | 240.27 | 1.22 | 1674607 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 240.27 | 241.45 | 1.18 | 1674608 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 241.45 | 242.5 | 1.05 | 1674609 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 242.5 | 243.49 | 0.99 | 589081 | 2215 | 126 | 102 | < 20 | 10 | 20 | 30 | 140 | 12 | 2 | 17 | 22 | 826 | < 2 | 0.6 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 243.49 | 244.44 | 0.95 | 589082 | 5346 | 126 | 25 | < 20 | 14 | 30 | 30 | 90 | 9 | 1 | 14 | 15 | > 1000 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 244.44 | 245.26 | 0.82 | 589083 | 995 | 14 | 55 | 90 | 11 | 50 | < 10 | 180 | 22 | < 1 | 5 | 98 | 192 | 3 | < 0.5 | < 0.2 | 5 | < 0.5 |
| PGH-18-01 | 245.26 | 246.34 | 1.08 | 589084 | 2201 | 172 | 46 | < 20 | 10 | < 20 | 10 | 150 | 20 | 2 | 14 | 43 | > 1000 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 246.34 | 247.3 | 0.96 | 589085 | 3295 | 214 | 30 | < 20 | 10 | < 20 | 20 | 50 | 9 | 1 | 11 | 12 | 737 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 247.3 | 248.68 | 1.38 | 1674611 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 248.68 | 249.93 | 1.25 | 1674612 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 249.93 | 251.07 | 1.14 | 1674613 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 251.07 | 252 | 0.93 | 1674614 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 252 | 253.24 | 1.24 | 1674615 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 253.24 | 254.32 | 1.08 | 589087 | 3213 | 181 | 57 | < 20 | 17 | 30 | 20 | 120 | 12 | 2 | 22 | 24 | 520 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 254.32 | 255.22 | 0.9 | 589088 | 4802 | 81 | 40 | < 20 | 12 | 20 | 30 | 90 | 12 | < 1 | 12 | 36 | 534 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 255.22 | 255.8 | 0.58 | 1674616 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 255.8 | 257.06 | 1.26 | 589089 | 3251 | 90 | 17 | < 20 | 5 | < 20 | 30 | 130 | 25 | 3 | 14 | 16 | 436 | 23 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 257.06 | 258.3 | 1.24 | 1674617 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 258.3 | 259.32 | 1.02 | 1674618 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 259.32 | 260.32 | 1 | 1674619 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 260.32 | 261.42 | 1.1 | 1674620 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 261.42 | 262.4 | 0.98 | 1674621 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 262.4 | 263.38 | 0.98 | 1674622 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 263.38 | 264.32 | 0.94 | 1674623 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 264.32 | 264.78 | 0.46 | 589090 | 2832 | 62 | 70 | 30 | 6 | < 20 | < 10 | 90 | 15 | < 1 | < 5 | 69 | 359 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 264.78 | 265.82 | 1.04 | 589091 | 2282 | 161 | 53 | 30 | 5 | < 20 | 30 | 130 | 18 | 2 | 7 | 62 | 468 | 3 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 265.82 | 266.76 | 0.94 | 589092 | 1744 | 44 | 106 | 40 | 6 | < 20 | < 10 | 180 | 20 | < 1 | < 5 | 122 | 410 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 266.76 | 267.23 | 0.47 | 589093 | 5421 | 25 | 5 | < 20 | < 1 | < 20 | 20 | 430 | 38 | 5 | 20 | < 2 | 8 | 44 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 267.23 | 268.02 | 0.79 | 589094 | 1902 | 23 | 73 | 50 | 6 | 20 | < 10 | 190 | 19 | < 1 | < 5 | 88 | 149 | 14 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 268.02 | 269.2 | 1.18 | 1674624 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 269.2 | 270.3 | 1.1 | 1674625 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 270.3 | 271.5 | 1.2 | 1674626 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 271.5 | 272.89 | 1.39 | 1674627 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 272.89 | 273.92 | 1.03 | 1674628 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 273.92 | 275.04 | 1.12 | 589095 | 3055 | 232 | 162 | 30 | 11 | 30 | 30 | 120 | 10 | 2 | 19 | 10 | > 1000 | 5 | 0.7 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 275.04 | 276 | 0.96 | 589096 | 3758 | 126 | 223 | < 20 | 5 | < 20 | 40 | 150 | 12 | 1 | 11 | 9 | 385 | 5 | 1 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 276 | 277.15 | 1.15 | 589097 | 4817 | 114 | 208 | < 20 | 10 | 20 | 40 | 130 | 9 | 1 | 15 | 4 | 338 | 7 | 1 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 277.15 | 278.3 | 1.15 | 589098 | 7108 | 76 | 48 | < 20 | 8 | < 20 | 20 | 40 | 6 | < 1 | 5 | 2 | > 1000 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 287.52 | 288.8 | 1.28 | 589099 | 6696 | 79 | 17 | < 20 | 2 | < 20 | < 10 | 40 | 4 | < 1 | < 5 | 19 | 554 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 288.8 | 290.1 | 1.3 | 589100 | 4356 | 74 | 9 | < 20 | < 1 | < 20 | < 10 | 130 | 4 | < 1 | < 5 | < 2 | 46 | 9 | < 0.5 | 0.3 | < 1 | < 0.5 |
| PGH-18-01 | 290.1 | 291.33 | 1.23 | 589101 | 2932 | 176 | 38 | < 20 | < 1 | < 20 | 20 | 230 | 16 | 2 | 10 | 4 | 145 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 291.33 | 292.27 | 0.94 | 1674629 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 292.27 | 293.05 | 0.78 | 1674630 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 293.05 | 294 | 0.95 | 1674631 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 294 | 295.09 | 1.09 | 1674632 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 295.09 | 295.9 | 0.81 | 1674633 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 295.9 | 296.7 | 0.8 | 589102 | 2953 | 206 | 13 | < 20 | 4 | < 20 | 10 | 60 | 16 | 3 | 15 | 6 | > 1000 | 22 | < 0.5 | 0.2 | 2 | < 0.5 |
| PGH-18-01 | 296.7 | 297.45 | 0.75 | 589103 | 2789 | 110 | 14 | < 20 | 11 | < 20 | 20 | 130 | 13 | 2 | 20 | < 2 | 597 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 297.45 | 298.44 | 0.99 | 589104 | 1382 | 79 | 76 | < 20 | 7 | < 20 | 20 | 230 | 19 | < 1 | 7 | 81 | > 1000 | 20 | < 0.5 | 0.2 | 3 | < 0.5 |
| PGH-18-01 | 298.44 | 299.1 | 0.66 | 589105 | 4710 | 91 | 12 | < 20 | 5 | < 20 | < 10 | 50 | 3 | < 1 | 6 | 6 | 136 | 6 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 308.2 | 309.35 | 1.15 | 1674634 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 309.35 | 310.54 | 1.19 | 589106 | 4243 | 52 | 71 | < 20 | 10 | < 20 | < 10 | 110 | 13 | < 1 | < 5 | 47 | 745 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 310.54 | 311.56 | 1.02 | 589107 | 5790 | 114 | 37 | < 20 | 4 | < 20 | 20 | 100 | 12 | 2 | 12 | 27 | > 1000 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 311.56 | 312.73 | 1.17 | 1674635 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 312.73 | 313.92 | 1.19 | 1674636 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 313.92 | 315 | 1.08 | 589108 | 5923 | 113 | 46 | < 20 | 5 | < 20 | < 10 | 70 | 5 | < 1 | 6 | 12 | 400 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 315 | 316 | 1 | 589109 | 9144 | 88 | 13 | < 20 | 8 | < 20 | < 10 | < 30 | 5 | < 1 | 8 | 2 | 464 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 316 | 317 | 1 | 589110 | > 10000 | 78 | 5 | < 20 | 15 | < 20 | 10 | < 30 | 3 | < 1 | 5 | < 2 | 109 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 317 | 317.93 | 0.93 | 589112 | 9463 | 84 | 11 | < 20 | 7 | < 20 | < 10 | < 30 | 5 | < 1 | < 5 | < 2 | 269 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 317.93 | 318.96 | 1.03 | 589113 | 7519 | 103 | 164 | < 20 | 3 | < 20 | < 10 | 30 | 7 | < 1 | < 5 | 7 | 894 | 2 | 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 318.96 | 319.74 | 0.78 | 589114 | 8202 | 93 | 85 | < 20 | 2 | < 20 | < 10 | 30 | 7 | < 1 | < 5 | 10 | 563 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 319.74 | 320.55 | 0.81 | 589115 | 7971 | 93 | 30 | < 20 | 2 | < 20 | < 10 | 30 | 4 | < 1 | < 5 | < 2 | 434 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 320.55 | 321.22 | 0.67 | 589116 | 5697 | 72 | 635 | < 20 | 20 | < 20 | 30 | 130 | 21 | 1 | 10 | 38 | 483 | 5 | 3.3 | < 0.2 | 2 | 0.5 |
| PGH-18-01 | 321.22 | 322 | 0.78 | 589117 | 7960 | 88 | 359 | < 20 | 4 | < 20 | < 10 | < 30 | 7 | < 1 | 5 | 5 | 129 | 4 | 1.2 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 322 | 323 | 1 | 589118 | 3608 | 90 | 176 | < 20 | 3 | < 20 | 20 | < 30 | 10 | 2 | 14 | < 2 | 65 | 4 | 0.8 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 323 | 324 | 1 | 589119 | 4748 | 91 | 74 | < 20 | 2 | < 20 | < 10 | 150 | 3 | < 1 | < 5 | < 2 | 153 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 324 | 325 | 1 | 589120 | 8592 | 92 | 74 | < 20 | 3 | < 20 | < 10 | < 30 | 4 | < 1 | < 5 | < 2 | 551 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 325 | 326 | 1 | 589121 | 7688 | 86 | 114 | < 20 | 2 | < 20 | < 10 | < 30 | 6 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 326 | 326.78 | 0.78 | 589122 | 7381 | 92 | 301 | < 20 | < 1 | < 20 | < 10 | < 30 | 5 | < 1 | < 5 | < 2 | 696 | < 2 | 1 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 326.78 | 327.08 | 0.3 | 589123 | 6101 | 85 | 896 | < 20 | 25 | < 20 | 30 | 60 | 13 | < 1 | 15 | 26 | 754 | 5 | 3.4 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 327.08 | 327.94 | 0.86 | 589124 | > 10000 | 84 | 46 | < 20 | 3 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | < 2 | 386 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 327.94 | 328.75 | 0.81 | 589125 | 7899 | 91 | 140 | < 20 | < 1 | < 20 | < 10 | < 30 | 3 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 328.75 | 329.8 | 1.05 | 589126 | 6495 | 90 | 25 | < 20 | < 1 | < 20 | < 10 | 140 | 4 | < 1 | < 5 | < 2 | 623 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 329.8 | 330.81 | 1.01 | 589127 | 9583 | 88 | 68 | < 20 | 4 | < 20 | < 10 | < 30 | 5 | < 1 | < 5 | < 2 | > 1000 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 330.81 | 331.81 | 1 | 589128 | > 10000 | 83 | 119 | < 20 | < 1 | < 20 | < 10 | < 30 | 4 | < 1 | < 5 | < 2 | 971 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 331.81 | 332.85 | 1.04 | 589129 | > 10000 | 77 | 9 | < 20 | 6 | < 20 | 10 | < 30 | 5 | < 1 | < 5 | 3 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 332.85 | 333.84 | 0.99 | 589130 | > 10000 | 83 | 11 | < 20 | < 1 | < 20 | < 10 | < 30 | 3 | < 1 | < 5 | < 2 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 333.84 | 334.99 | 1.15 | 589131 | 9569 | 80 | 15 | < 20 | 7 | < 20 | 10 | < 30 | 5 | < 1 | 6 | 4 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 334.99 | 335.77 | 0.78 | 589132 | 6091 | 72 | 151 | < 20 | 5 | < 20 | 30 | 70 | 18 | 1 | 14 | 39 | > 1000 | 2 | 0.7 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 335.77 | 336.96 | 1.19 | 589133 | 9921 | 83 | 39 | < 20 | 2 | < 20 | < 10 | < 30 | 4 | < 1 | 5 | < 2 | 249 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 336.96 | 337.64 | 0.68 | 589134 | > 10000 | 81 | 13 | < 20 | 6 | < 20 | 10 | < 30 | 4 | < 1 | 47 | < 2 | 126 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 337.64 | 338.52 | 0.88 | 589135 | 8673 | 80 | 41 | < 20 | 5 | < 20 | < 10 | 80 | 14 | < 1 | < 5 | 23 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 338.52 | 339.44 | 0.92 | 589136 | 1658 | 21 | 196 | < 20 | 7 | < 20 | 30 | 60 | 22 | < 1 | 6 | 106 | 411 | 3 | 0.7 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 339.44 | 340.43 | 0.99 | 589137 | 5677 | 105 | 183 | < 20 | 4 | < 20 | < 10 | 50 | 9 | < 1 | 9 | 8 | 272 | 3 | 1.1 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 340.43 | 340.9 | 0.47 | 589138 | 5357 | 94 | 327 | < 20 | 9 | < 20 | 10 | 160 | 11 | < 1 | 6 | 19 | 353 | 4 | 1.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 340.9 | 341.44 | 0.54 | 589139 | 1504 | 36 | 106 | < 20 | 23 | < 20 | 30 | 150 | 24 | < 1 | < 5 | 117 | 658 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 341.44 | 342.16 | 0.72 | 589140 | 5295 | 64 | 62 | < 20 | 4 | < 20 | 20 | 70 | 14 | < 1 | < 5 | 40 | 917 | 24 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 342.16 | 343.32 | 1.16 | 589141 | 1928 | 34 | 144 | 50 | 23 | 40 | 20 | 100 | 19 | 1 | < 5 | 110 | 187 | 11 | 0.6 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 343.32 | 344.45 | 1.13 | 589142 | 3207 | 138 | 145 | < 20 | 2 | < 20 | 20 | 100 | 14 | 2 | 12 | 18 | 311 | 4 | 0.7 | < 0.2 | < 1 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 344.45 | 345.5 | 1.05 | 589143 | 1769 | 24 | 194 | 110 | 12 | 60 | 60 | 120 | 19 | < 1 | 5 | 81 | 93 | 3 | 0.8 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 345.5 | 345.76 | 0.26 | 589144 | 7222 | 70 | 28 | < 20 | < 1 | < 20 | 30 | 60 | 9 | 1 | < 5 | 23 | 117 | 4 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 345.76 | 346.36 | 0.6 | 589145 | 767 | 16 | 184 | 30 | 4 | < 20 | 70 | 90 | 20 | < 1 | < 5 | 88 | 86 | 12 | 0.8 | < 0.2 | 7 | < 0.5 |
| PGH-18-01 | 346.36 | 347.03 | 0.67 | 589146 | 9580 | 85 | 93 | < 20 | < 1 | < 20 | < 10 | < 30 | 5 | < 1 | < 5 | 5 | 276 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 347.03 | 347.85 | 0.82 | 589147 | 9470 | 88 | 86 | 30 | 9 | 30 | 20 | < 30 | 7 | < 1 | < 5 | 8 | 489 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 347.85 | 348.53 | 0.68 | 589148 | 7835 | 80 | 78 | < 20 | 2 | < 20 | 30 | 50 | 11 | 1 | 7 | 9 | 791 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 348.53 | 349.42 | 0.89 | 589150 | 3713 | 36 | 235 | 40 | 7 | < 20 | < 10 | 120 | 21 | < 1 | 7 | 71 | 734 | 6 | 0.8 | < 0.2 | 6 | < 0.5 |
| PGH-18-01 | 349.42 | 350.15 | 0.73 | 589151 | > 10000 | 89 | 44 | < 20 | < 1 | < 20 | < 10 | < 30 | 6 | < 1 | < 5 | 3 | 288 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 350.15 | 351.13 | 0.98 | 589152 | 2005 | 26 | 161 | 50 | 8 | 30 | 20 | 100 | 22 | < 1 | < 5 | 77 | 272 | 5 | 0.6 | < 0.2 | 5 | < 0.5 |
| PGH-18-01 | 351.13 | 352.09 | 0.96 | 589153 | 5321 | 117 | 167 | < 20 | 5 | < 20 | 20 | 120 | 19 | 2 | 8 | 42 | > 1000 | 2 | 0.9 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 352.09 | 353 | 0.91 | 589154 | 9099 | 91 | 28 | < 20 | 9 | < 20 | 10 | 100 | 7 | < 1 | 7 | 14 | 770 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 353 | 353.4 | 0.4 | 589156 | 1657 | 24 | 148 | 100 | 14 | 50 | 160 | 110 | 21 | < 1 | 6 | 70 | 249 | 4 | 0.6 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 353.4 | 353.65 | 0.25 | 589157 | 3824 | 25 | 89 | 20 | 8 | 20 | 10 | 120 | 17 | 3 | 25 | 13 | 150 | 31 | < 0.5 | < 0.2 | < 1 | 0.6 |
| PGH-18-01 | 353.65 | 354.05 | 0.4 | 589158 | 1878 | 14 | 114 | 50 | 7 | 30 | < 10 | 80 | 22 | < 1 | < 5 | 68 | 62 | 6 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 354.05 | 354.57 | 0.52 | 589159 | 6472 | 104 | 72 | 20 | 1 | < 20 | 20 | 90 | 17 | 1 | 5 | 39 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 354.57 | 355.05 | 0.48 | 589160 | 3795 | 71 | 457 | 130 | 40 | 130 | 120 | 200 | 16 | 1 | 15 | 67 | 232 | 2 | 1.8 | < 0.2 | 3 | 0.6 |
| PGH-18-01 | 355.05 | 356.28 | 1.23 | 1674637 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 356.28 | 357.51 | 1.23 | 1674638 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 357.51 | 358.51 | 1 | 1674639 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 358.51 | 359.6 | 1.09 | 1674640 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 359.6 | 360.8 | 1.2 | 1674641 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 360.8 | 361.92 | 1.12 | 1674642 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 361.92 | 362.8 | 0.88 | 1674643 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 362.8 | 363.55 | 0.75 | 589161 | 3894 | 195 | 46 | 60 | 9 | 30 | 30 | 280 | 21 | 2 | 9 | 51 | > 1000 | 52 | 0.5 | 0.2 | 2 | 0.5 |
| PGH-18-01 | 363.55 | 364.77 | 1.22 | 589162 | 5417 | 93 | 173 | 50 | 8 | 20 | < 10 | 130 | 21 | < 1 | < 5 | 116 | > 1000 | < 2 | 0.7 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 364.77 | 366 | 1.23 | 589163 | 3885 | 52 | 162 | 90 | 11 | 30 | 20 | 130 | 21 | < 1 | < 5 | 101 | 407 | 3 | 0.6 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 366 | 366.58 | 0.58 | 589164 | 3338 | 32 | 171 | 60 | 7 | 20 | 80 | 140 | 24 | 1 | 6 | 118 | 966 | < 2 | 0.9 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 366.58 | 367.75 | 1.17 | 1674644 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 367.75 | 369 | 1.25 | 1674645 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 369 | 370.1 | 1.1 | 1674646 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 370.1 | 371.1 | 1 | 1674647 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 371.1 | 372.13 | 1.03 | 1674648 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 372.13 | 373.35 | 1.22 | 1674649 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 373.35 | 374.02 | 0.67 | 589165 | 3892 | 192 | 23 | 20 | 10 | < 20 | 60 | 50 | 14 | 2 | 17 | 21 | 177 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 381.52 | 382.28 | 0.76 | 589166 | 5585 | 83 | 15 | < 20 | 4 | < 20 | < 10 | 80 | 10 | < 1 | < 5 | 46 | 169 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 385.9 | 386.75 | 0.85 | 589167 | 1072 | 38 | 60 | 80 | 23 | 40 | 30 | 350 | 17 | 2 | 19 | 63 | 338 | 47 | 0.6 | 0.2 | 3 | < 0.5 |
| PGH-18-01 | 386.75 | 387.69 | 0.94 | 589168 | 2031 | 241 | 37 | 30 | 20 | 30 | 30 | 80 | 12 | 2 | 22 | 22 | 463 | 27 | 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 387.69 | 388.86 | 1.17 | 1674650 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 388.86 | 390 | 1.14 | D08051 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 390 | 391.12 | 1.12 | D08052 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 391.12 | 392.29 | 1.17 | D08053 | | | | | | | | | | | | | | | | | | |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 392.29 | 393.28 | 0.99 | D08054 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 393.28 | 394.38 | 1.1 | D08055 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 394.38 | 395.39 | 1.01 | D08056 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 395.39 | 396.6 | 1.21 | 589169 | 6039 | 73 | 134 | 60 | 11 | 50 | 20 | 40 | 9 | < 1 | < 5 | 29 | 228 | 2 | 0.6 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 396.6 | 397.53 | 0.93 | 589170 | 4708 | 91 | 59 | < 20 | < 1 | < 20 | 20 | < 30 | 6 | 1 | 7 | < 2 | 351 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 397.53 | 398.47 | 0.94 | D08058 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 398.47 | 399.44 | 0.97 | D08059 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 399.44 | 400.46 | 1.02 | D08060 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 400.46 | 401.52 | 1.06 | D08061 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 401.52 | 402.13 | 0.61 | 589171 | 7338 | 98 | 50 | < 20 | 2 | < 20 | 30 | 110 | 10 | 1 | 10 | 20 | 180 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 402.13 | 403.43 | 1.3 | 589172 | 4467 | 67 | 538 | < 20 | 7 | < 20 | < 10 | 130 | 21 | < 1 | < 5 | 72 | 891 | 2 | 2 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 403.43 | 404.14 | 0.71 | 589173 | 2171 | 27 | 122 | 40 | 5 | < 20 | 30 | 90 | 19 | 1 | 5 | 64 | 147 | 5 | 0.6 | < 0.2 | 5 | < 0.5 |
| PGH-18-01 | 404.14 | 404.7 | 0.56 | 589174 | 5143 | 121 | 80 | 30 | 12 | 20 | 50 | 140 | 9 | 1 | 16 | 24 | 233 | 6 | 0.6 | < 0.2 | < 1 | 0.6 |
| PGH-18-01 | 404.7 | 405.55 | 0.85 | 589176 | 1192 | 23 | 130 | 540 | 24 | 180 | < 10 | 140 | 19 | 1 | < 5 | 81 | 47 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 405.55 | 406.15 | 0.6 | 589177 | 4684 | 108 | 38 | 70 | 5 | 30 | < 10 | 90 | 10 | < 1 | < 5 | 47 | 274 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-01 | 406.15 | 407.12 | 0.97 | D08062 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 407.12 | 408.1 | 0.98 | D08063 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 408.1 | 408.6 | 0.5 | 589178 | 4567 | 72 | 44 | < 20 | 8 | 20 | 30 | 90 | 9 | 1 | 11 | 23 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 408.6 | 409.62 | 1.02 | D08064 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 409.62 | 410.5 | 0.88 | D08065 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 410.5 | 411.66 | 1.16 | D08066 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 411.66 | 412.71 | 1.05 | D08067 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 412.71 | 413.95 | 1.24 | D08068 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 413.95 | 414.35 | 0.4 | 589179 | 5187 | 145 | 24 | 30 | 22 | 20 | 30 | 50 | 7 | < 1 | 13 | 19 | 418 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 414.35 | 415.74 | 1.39 | D08069 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 415.74 | 416.7 | 0.96 | 589180 | 776 | 47 | 42 | < 20 | < 1 | < 20 | < 10 | 70 | 8 | 1 | 7 | 18 | 117 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 429.2 | 429.68 | 0.48 | 589181 | 6437 | 109 | 10 | < 20 | 3 | < 20 | 10 | 140 | 5 | < 1 | 5 | 22 | 131 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 438.89 | 439.62 | 0.73 | 589182 | 4882 | 96 | 98 | < 20 | 3 | < 20 | < 10 | 150 | 9 | < 1 | 6 | 34 | 153 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-01 | 442.47 | 442.75 | 0.28 | 589183 | 1506 | 57 | 25 | < 20 | 5 | < 20 | 10 | 120 | 13 | < 1 | < 5 | 62 | 536 | 6 | < 0.5 | < 0.2 | 1 | 0.6 |
| PGH-18-01 | 445.59 | 446.79 | 1.2 | 589184 | 1776 | 104 | 155 | 50 | 14 | 40 | 60 | 170 | 11 | 1 | 9 | 35 | 137 | < 2 | 0.7 | < 0.2 | 1 | 0.5 |
| PGH-18-01 | 446.79 | 447.2 | 0.41 | 589185 | 906 | 24 | 3 | < 20 | < 1 | < 20 | 70 | 70 | 13 | 3 | 12 | < 2 | 54 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 447.2 | 447.7 | 0.5 | 589186 | 1374 | 98 | 106 | < 20 | 6 | < 20 | 10 | 140 | 13 | < 1 | < 5 | 76 | 282 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 449.6 | 450 | 0.4 | 589187 | 2100 | 94 | 26 | 30 | 9 | < 20 | 40 | 160 | 9 | 1 | 9 | 35 | 462 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 460.11 | 460.42 | 0.31 | 589188 | 2506 | 67 | 107 | 160 | 14 | 100 | 40 | 550 | 9 | < 1 | 6 | 31 | 290 | 26 | < 0.5 | < 0.2 | 1 | 0.8 |
| PGH-18-01 | 466.63 | 466.83 | 0.2 | 589189 | 2345 | 69 | 23 | < 20 | 12 | < 20 | 40 | 580 | 8 | < 1 | 17 | 18 | 56 | 23 | < 0.5 | < 0.2 | < 1 | 1.2 |
| PGH-18-01 | 471.08 | 471.98 | 0.9 | 589190 | 4095 | 110 | 28 | < 20 | 3 | < 20 | < 10 | 180 | 6 | < 1 | 5 | 10 | 284 | 48 | < 0.5 | < 0.2 | < 1 | 1.1 |
| PGH-18-01 | 473.96 | 474.44 | 0.48 | 589191 | 1771 | 93 | 9 | < 20 | < 1 | < 20 | < 10 | 40 | 4 | < 1 | < 5 | 4 | 127 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 474.44 | 475.23 | 0.79 | 589192 | 945 | 45 | 85 | 30 | 6 | < 20 | 10 | 150 | 18 | < 1 | < 5 | 94 | 505 | 6 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-01 | 492.85 | 493.55 | 0.7 | 589193 | 1117 | 52 | 48 | < 20 | 3 | < 20 | < 10 | 130 | 18 | 1 | < 5 | 69 | 103 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-01 | 493.55 | 494.65 | 1.1 | 589194 | 6474 | 75 | 4 | < 20 | < 1 | < 20 | < 10 | < 30 | 4 | < 1 | < 5 | < 2 | 115 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 494.65 | 495.85 | 1.2 | 589195 | 4073 | 128 | 73 | < 20 | 2 | < 20 | < 10 | 80 | 5 | < 1 | < 5 | 3 | 160 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 495.85 | 496.74 | 0.89 | 589196 | 2343 | 92 | 7 | < 20 | < 1 | < 20 | < 10 | 40 | 4 | < 1 | < 5 | < 2 | 56 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 496.74 | 497.58 | 0.84 | 589197 | 3217 | 128 | 7 | < 20 | 3 | < 20 | < 10 | 90 | 6 | < 1 | 5 | < 2 | 177 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 497.58 | 498.43 | 0.85 | 589198 | 4249 | 111 | 9 | < 20 | < 1 | < 20 | < 10 | 100 | 7 | < 1 | < 5 | < 2 | 236 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 498.43 | 499.36 | 0.93 | 589199 | 6354 | 157 | 20 | < 20 | < 1 | < 20 | < 10 | 60 | 5 | < 1 | < 5 | 2 | 590 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-01 | 499.36 | 499.93 | 0.57 | 589200 | 801 | 17 | 104 | 90 | 9 | 70 | < 10 | 60 | 17 | < 1 | < 5 | 55 | 91 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|-------|-------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 11.85 | 12.1 | 0.25 | 589001 | < 0.5 | 270 | 598 | 73.1 | 293 | 53.1 | 16.6 | 40.1 | 5.6 | 28.5 | 4.3 | 9.7 | 1.07 | 5.4 | 0.65 | 0.6 | 4.8 |
| PGH-18-01 | 12.1 | 12.92 | 0.82 | 351542 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 12.92 | 13.66 | 0.74 | 351543 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 13.66 | 14.23 | 0.57 | 589002 | < 0.5 | 309 | 756 | 96.5 | 397 | 80.6 | 24.4 | 57.4 | 6.7 | 29.8 | 4 | 9 | 1.03 | 5.5 | 0.73 | 2.5 | 2.2 |
| PGH-18-01 | 14.23 | 15.64 | 1.41 | 351544 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 15.64 | 16.31 | 0.67 | 589003 | < 0.5 | 332 | 808 | 98.8 | 400 | 70.9 | 20.7 | 47.5 | 5.7 | 26.8 | 4 | 9 | 1.01 | 5.6 | 0.78 | 0.8 | 7.1 |
| PGH-18-01 | 16.31 | 17.14 | 0.83 | 589004 | < 0.5 | 322 | 746 | 92.3 | 376 | 72.7 | 23.3 | 56.5 | 7.6 | 36.8 | 5.5 | 11.9 | 1.23 | 5.9 | 0.69 | 1.1 | 9.1 |
| PGH-18-01 | 17.14 | 18 | 0.86 | 589005 | < 0.5 | 329 | 786 | 98.7 | 402 | 72.1 | 21.1 | 46.2 | 5.3 | 23.6 | 3.5 | 7.3 | 0.84 | 4.7 | 0.63 | < 0.2 | 1.1 |
| PGH-18-01 | 18 | 18.91 | 0.91 | 589006 | < 0.5 | 225 | 516 | 63 | 253 | 47.5 | 14.3 | 32.5 | 4 | 17.5 | 2.4 | 5.3 | 0.59 | 3.2 | 0.42 | 1 | 4 |
| PGH-18-01 | 18.91 | 19.75 | 0.84 | 589007 | < 0.5 | 471 | 1070 | 129 | 498 | 76.9 | 20.7 | 43.3 | 4.7 | 22 | 3.2 | 7.2 | 0.78 | 4.3 | 0.57 | 0.8 | 3.7 |
| PGH-18-01 | 19.75 | 20.46 | 0.71 | 589008 | 0.8 | 356 | 833 | 108 | 438 | 70.9 | 18.9 | 41.9 | 4.5 | 21.4 | 3.4 | 7.7 | 0.86 | 4.3 | 0.56 | 11 | 7.8 |
| PGH-18-01 | 20.46 | 21.72 | 1.26 | 351545 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 21.72 | 22.95 | 1.23 | 351546 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 22.95 | 24.15 | 1.2 | 351547 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 24.15 | 25.2 | 1.05 | 351548 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 25.2 | 26.19 | 0.99 | 351549 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 26.19 | 26.79 | 0.6 | 589009 | < 0.5 | 588 | 1160 | 127 | 477 | 89.9 | 29.5 | 74.9 | 11.1 | 58.2 | 9.1 | 19.9 | 2.03 | 10.5 | 1.19 | 5 | 7.2 |
| PGH-18-01 | 26.79 | 27.77 | 0.98 | 351550 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 27.77 | 28.35 | 0.58 | 655377 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 28.35 | 28.8 | 0.45 | 589010 | 0.7 | 357 | 643 | 71 | 267 | 47.1 | 14.5 | 34.6 | 5 | 23.9 | 3.8 | 8.8 | 0.98 | 5.1 | 0.61 | 6.8 | 5.3 |
| PGH-18-01 | 31.18 | 31.51 | 0.33 | 589011 | < 0.5 | 293 | 629 | 76.8 | 313 | 73.2 | 25.9 | 67.7 | 9.9 | 46.8 | 6.5 | 12.2 | 1.13 | 4.9 | 0.51 | 1.5 | 6.4 |
| PGH-18-01 | 32.28 | 33.05 | 0.77 | 589012 | < 0.5 | 345 | 767 | 90.3 | 346 | 63.1 | 18.4 | 43.1 | 5 | 22.1 | 3.2 | 7.1 | 0.81 | 4.3 | 0.53 | 1.4 | 1.3 |
| PGH-18-01 | 34.09 | 34.77 | 0.68 | 589013 | < 0.5 | 255 | 578 | 72.1 | 295 | 47.1 | 11.6 | 20.4 | 1.7 | 5.9 | 0.7 | 1.4 | 0.16 | 0.9 | 0.13 | 1.2 | 3 |
| PGH-18-01 | 41.76 | 42 | 0.24 | 589014 | < 0.5 | 584 | 1440 | 176 | 714 | 116 | 31.8 | 63.8 | 5.3 | 18.3 | 2.3 | 4.4 | 0.42 | 2 | 0.26 | 0.8 | 0.6 |
| PGH-18-01 | 46.49 | 46.78 | 0.29 | 589015 | < 0.5 | 402 | 885 | 112 | 486 | 125 | 40.7 | 96.8 | 9.8 | 34.3 | 3.7 | 6.6 | 0.58 | 2.5 | 0.29 | 2.6 | 1.2 |
| PGH-18-01 | 52.53 | 53.47 | 0.94 | 589016 | < 0.5 | 315 | 744 | 99.4 | 427 | 81.2 | 21.6 | 42.8 | 3.5 | 11.9 | 1.4 | 2.5 | 0.27 | 1.5 | 0.23 | 1.5 | 1.6 |
| PGH-18-01 | 53.47 | 54.64 | 1.17 | 589017 | < 0.5 | 221 | 492 | 62.4 | 262 | 63 | 19.8 | 46.4 | 5.1 | 21.2 | 2.6 | 4.9 | 0.51 | 2.4 | 0.31 | 2.7 | 3.2 |
| PGH-18-01 | 60.61 | 61.8 | 1.19 | 589018 | < 0.5 | 162 | 345 | 41.3 | 166 | 31.5 | 9.42 | 22.1 | 2.9 | 12.6 | 1.8 | 3.7 | 0.42 | 2.2 | 0.28 | 2.5 | 0.5 |
| PGH-18-01 | 61.8 | 63 | 1.2 | 589019 | 1.3 | 67.1 | 142 | 17.1 | 68.2 | 12.8 | 3.24 | 8.2 | 1 | 4.5 | 0.7 | 1.8 | 0.23 | 1.4 | 0.2 | 2.6 | 0.4 |
| PGH-18-01 | 63 | 63.95 | 0.95 | 589021 | < 0.5 | 320 | 684 | 81.9 | 321 | 52.3 | 14.3 | 28.9 | 3.1 | 12.5 | 1.8 | 3.8 | 0.42 | 2.3 | 0.32 | 2.9 | 0.5 |
| PGH-18-01 | 63.95 | 64.95 | 1 | 589022 | 0.7 | 58.6 | 126 | 15.5 | 63.1 | 12.4 | 3.45 | 8.8 | 1.2 | 5.8 | 0.9 | 2.3 | 0.28 | 1.6 | 0.22 | 4 | 0.3 |
| PGH-18-01 | 64.95 | 65.93 | 0.98 | 589023 | 0.5 | 143 | 316 | 38.1 | 147 | 25 | 7.03 | 16 | 2 | 9 | 1.4 | 3.2 | 0.38 | 2.1 | 0.27 | 3.4 | 1.5 |
| PGH-18-01 | 65.93 | 66.85 | 0.92 | 589024 | < 0.5 | 243 | 509 | 58.7 | 224 | 39.8 | 12.4 | 27.2 | 3.5 | 17.6 | 2.7 | 6.1 | 0.7 | 3.8 | 0.47 | 0.9 | 2.1 |
| PGH-18-01 | 66.85 | 67.85 | 1 | 589025 | < 0.5 | 219 | 450 | 52.4 | 200 | 34.5 | 10.6 | 22.8 | 3 | 13.5 | 2 | 4.7 | 0.54 | 2.9 | 0.39 | 1 | 0.7 |
| PGH-18-01 | 67.85 | 68.81 | 0.96 | 589026 | < 0.5 | 297 | 628 | 72.8 | 276 | 46.3 | 13.5 | 29.3 | 3.7 | 16.5 | 2.4 | 5.9 | 0.69 | 3.6 | 0.48 | 0.3 | 1 |
| PGH-18-01 | 68.81 | 69.8 | 0.99 | 589027 | < 0.5 | 294 | 623 | 72.3 | 278 | 45 | 13.2 | 28.2 | 3.8 | 17.8 | 2.7 | 6.3 | 0.72 | 3.9 | 0.52 | 0.7 | 1.1 |
| PGH-18-01 | 69.8 | 70.86 | 1.06 | 589028 | < 0.5 | 229 | 493 | 57.4 | 224 | 39.1 | 11.5 | 25.6 | 3.1 | 14 | 2.1 | 4.9 | 0.58 | 3.4 | 0.46 | 0.2 | 0.7 |
| PGH-18-01 | 70.86 | 72 | 1.14 | 589029 | < 0.5 | 260 | 557 | 64 | 244 | 42.7 | 13 | 27.7 | 3.9 | 17.9 | 2.8 | 6.3 | 0.73 | 3.9 | 0.51 | 0.6 | 2.1 |
| PGH-18-01 | 72 | 73 | 1 | 589030 | < 0.5 | 292 | 639 | 74.8 | 285 | 50.2 | 15.4 | 34.8 | 5 | 24.8 | 3.8 | 8.9 | 1 | 5.1 | 0.64 | 0.8 | 3.2 |
| PGH-18-01 | 73 | 74.05 | 1.05 | 589031 | < 0.5 | 365 | 742 | 83.2 | 311 | 52.9 | 16.2 | 35.8 | 4.9 | 23.6 | 3.6 | 8.1 | 0.94 | 4.8 | 0.6 | 0.6 | 1.9 |
| PGH-18-01 | 74.05 | 74.88 | 0.83 | 589032 | < 0.5 | 258 | 584 | 69.2 | 273 | 48.2 | 14.4 | 31.1 | 3.6 | 16 | 2.2 | 4.9 | 0.56 | 3 | 0.43 | 0.9 | 1 |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 74.88 | 75.87 | 0.99 | 589033 | < 0.5 | 333 | 723 | 85.4 | 328 | 55.8 | 16.3 | 35.1 | 4.2 | 18 | 2.5 | 5.6 | 0.61 | 3.3 | 0.41 | 2.5 | 5.6 |
| PGH-18-01 | 75.87 | 76.87 | 1 | 589034 | < 0.5 | 278 | 648 | 78.1 | 310 | 54.6 | 16.1 | 34.6 | 4.3 | 17.7 | 2.4 | 5.4 | 0.59 | 3.1 | 0.4 | 0.8 | 2.5 |
| PGH-18-01 | 76.87 | 78 | 1.13 | 589035 | < 0.5 | 1420 | 2280 | 212 | 656 | 72.2 | 18.1 | 34.6 | 4 | 17.4 | 2.4 | 5.6 | 0.7 | 3.7 | 0.49 | 1.6 | 2.9 |
| PGH-18-01 | 78 | 79.11 | 1.11 | 589036 | 0.6 | 218 | 468 | 55.2 | 215 | 40.7 | 12.4 | 27.8 | 3.3 | 15.4 | 2.3 | 5.3 | 0.65 | 3.4 | 0.46 | 1.6 | 0.7 |
| PGH-18-01 | 79.11 | 80.14 | 1.03 | 589037 | < 0.5 | 261 | 522 | 60.1 | 236 | 46.5 | 14.6 | 35.3 | 4.8 | 22.9 | 3.5 | 7.9 | 0.92 | 4.7 | 0.58 | 3.9 | 2 |
| PGH-18-01 | 80.14 | 81.25 | 1.11 | 589038 | < 0.5 | 771 | 1510 | 164 | 594 | 72.8 | 17.9 | 34.1 | 3.1 | 12.7 | 1.7 | 3.5 | 0.37 | 2 | 0.29 | 0.9 | < 0.1 |
| PGH-18-01 | 81.25 | 82.25 | 1 | 589039 | < 0.5 | 156 | 331 | 39 | 150 | 23.2 | 6.19 | 13.2 | 1.5 | 6.4 | 0.9 | 2.1 | 0.24 | 1.3 | 0.16 | 4.4 | 0.7 |
| PGH-18-01 | 95.75 | 96.29 | 0.54 | 589040 | < 0.5 | 329 | 753 | 92.4 | 366 | 64.5 | 18.1 | 42.5 | 5.2 | 25.1 | 4.1 | 9.1 | 1.05 | 5.7 | 0.68 | 1.4 | 2.1 |
| PGH-18-01 | 96.29 | 97.28 | 0.99 | 589041 | < 0.5 | 228 | 495 | 59.3 | 227 | 36.6 | 10.1 | 21.4 | 2.6 | 11.6 | 1.8 | 3.8 | 0.39 | 1.8 | 0.22 | 2.5 | 1.9 |
| PGH-18-01 | 97.28 | 98.14 | 0.86 | 589042 | < 0.5 | 220 | 448 | 52.5 | 201 | 33.2 | 9.27 | 19.5 | 2.2 | 10.1 | 1.6 | 3.4 | 0.37 | 1.8 | 0.24 | 2.9 | 1.2 |
| PGH-18-01 | 98.14 | 99.2 | 1.06 | 589043 | < 0.5 | 476 | 1130 | 144 | 573 | 93.2 | 25 | 50.5 | 5.3 | 24.7 | 3.6 | 7.8 | 0.82 | 4 | 0.48 | 0.3 | 0.2 |
| PGH-18-01 | 99.2 | 100.49 | 1.29 | 589044 | < 0.5 | 227 | 413 | 44.1 | 156 | 24.3 | 7.28 | 14.7 | 1.5 | 5.9 | 0.8 | 1.6 | 0.18 | 1 | 0.13 | 2.1 | 0.6 |
| PGH-18-01 | 100.49 | 101.78 | 1.29 | 589045 | < 0.5 | 131 | 257 | 28.6 | 104 | 17.3 | 5.32 | 11.3 | 1.2 | 5.1 | 0.7 | 1.5 | 0.16 | 0.8 | 0.11 | 2.1 | 0.6 |
| PGH-18-01 | 101.78 | 102.31 | 0.53 | 589046 | < 0.5 | 1290 | 2410 | 253 | 876 | 129 | 34.3 | 63.4 | 4.6 | 14.4 | 1.4 | 2.7 | 0.29 | 1.5 | 0.2 | 0.5 | 1.6 |
| PGH-18-01 | 112.5 | 113.62 | 1.12 | 589047 | < 0.5 | 410 | 925 | 112 | 437 | 78.6 | 23.4 | 55.5 | 6.8 | 32.4 | 4.8 | 11.1 | 1.26 | 6.5 | 0.84 | 1.1 | 4 |
| PGH-18-01 | 113.62 | 114.22 | 0.6 | 589048 | < 0.5 | 218 | 501 | 61.7 | 242 | 43.2 | 12.3 | 28.3 | 3.2 | 14.6 | 2.1 | 4.8 | 0.55 | 2.7 | 0.33 | 1.8 | 1.4 |
| PGH-18-01 | 115.5 | 115.8 | 0.3 | 589074 | < 0.5 | 653 | 1500 | 184 | 731 | 134 | 35.8 | 76.1 | 6.8 | 23.6 | 3.2 | 7.1 | 0.78 | 3.7 | 0.47 | 1.3 | 0.9 |
| PGH-18-01 | 123.21 | 124.36 | 1.15 | 589049 | < 0.5 | 656 | 1530 | 194 | 807 | 163 | 45.3 | 96.6 | 9.6 | 36.9 | 4.9 | 10.2 | 1.05 | 5.1 | 0.62 | 0.6 | 0.2 |
| PGH-18-01 | 124.36 | 125.33 | 0.97 | 589051 | < 0.5 | 315 | 665 | 79.8 | 309 | 54.6 | 15.4 | 36.2 | 4.2 | 18 | 2.5 | 5.5 | 0.63 | 3.2 | 0.4 | 2.1 | 4.6 |
| PGH-18-01 | 130.24 | 130.93 | 0.69 | 589052 | < 0.5 | 287 | 642 | 77.6 | 299 | 51.4 | 14.7 | 36 | 4.4 | 20.8 | 3.1 | 7.5 | 0.89 | 4.9 | 0.64 | 0.7 | 3.1 |
| PGH-18-01 | 139.65 | 140.04 | 0.39 | 589053 | < 0.5 | 458 | 1070 | 132 | 526 | 99.6 | 28 | 61.4 | 5.9 | 21.3 | 2.8 | 5.8 | 0.62 | 3.1 | 0.42 | 1 | 1.8 |
| PGH-18-01 | 141.45 | 142.08 | 0.63 | 589054 | < 0.5 | 299 | 664 | 81.1 | 313 | 59 | 17.1 | 41.7 | 5.1 | 23.8 | 3.5 | 8.4 | 1 | 5.4 | 0.73 | 0.3 | 0.1 |
| PGH-18-01 | 142.08 | 143 | 0.92 | 589055 | < 0.5 | 483 | 1020 | 120 | 489 | 93.6 | 25.9 | 54.8 | 5.6 | 25 | 3.7 | 8.6 | 0.95 | 5.2 | 0.66 | 0.9 | 1.9 |
| PGH-18-01 | 145.24 | 145.84 | 0.6 | 589056 | < 0.5 | 3330 | 4800 | 426 | 1310 | 146 | 33.9 | 66.1 | 5.6 | 22.2 | 3.3 | 8.6 | 0.83 | 4.5 | 0.65 | 0.5 | 0.2 |
| PGH-18-01 | 163 | 164.33 | 1.33 | 589057 | < 0.5 | 492 | 1150 | 143 | 579 | 98.1 | 27.4 | 59.3 | 6.4 | 27.4 | 4 | 9.3 | 0.87 | 4.3 | 0.5 | 0.3 | < 0.1 |
| PGH-18-01 | 164.33 | 165.73 | 1.4 | 655378 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 165.73 | 167.05 | 1.32 | 655379 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 167.05 | 168.18 | 1.13 | 655380 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 168.18 | 169.37 | 1.19 | 655381 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 169.37 | 170.4 | 1.03 | 655382 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 170.4 | 171.36 | 0.96 | 589058 | < 0.5 | 221 | 523 | 65.8 | 262 | 48.6 | 14.7 | 37.2 | 4.8 | 22.7 | 3.4 | 8.1 | 0.99 | 5.2 | 0.7 | 0.5 | 4.1 |
| PGH-18-01 | 171.36 | 172.54 | 1.18 | 655383 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 172.54 | 174 | 1.46 | 655384 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 174 | 175.15 | 1.15 | 655385 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 175.15 | 176.43 | 1.28 | 655386 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 176.43 | 177.37 | 0.94 | 655387 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 177.37 | 178.5 | 1.13 | 655388 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 178.5 | 179.83 | 1.33 | 655389 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 179.83 | 181.1 | 1.27 | 655390 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 181.1 | 182.27 | 1.17 | 655391 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 182.27 | 183.4 | 1.13 | 655392 | | | | | | | | | | | | | | | | | |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) | |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| PGH-18-01 | 183.4 | 184.64 | 1.24 | 655393 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 184.64 | 185.73 | 1.09 | 655394 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 185.73 | 187 | 1.27 | 655395 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 187 | 188.3 | 1.3 | 655396 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 188.3 | 189.4 | 1.1 | 655397 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 189.4 | 189.58 | 0.18 | 589059 | < 0.5 | 119 | 268 | 31.8 | 121 | 22.3 | 6.8 | 16.9 | 2.3 | 11.4 | 1.8 | 4.6 | 0.6 | 3.3 | 0.46 | 1 | < 0.1 | |
| PGH-18-01 | 198 | 199 | 1 | 589060 | < 0.5 | 341 | 910 | 124 | 559 | 119 | 31.6 | 65.1 | 5.9 | 20.3 | 2.8 | 6.2 | 0.73 | 4 | 0.54 | 0.3 | 0.9 | |
| PGH-18-01 | 199 | 200.01 | 1.01 | 589061 | < 0.5 | 284 | 685 | 86.3 | 347 | 66.9 | 20 | 51.5 | 6.6 | 31.1 | 4.5 | 10 | 1.15 | 5.7 | 0.71 | 1 | 8.2 | |
| PGH-18-01 | 200.01 | 201 | 0.99 | 589062 | < 0.5 | 223 | 511 | 61.6 | 239 | 42.2 | 12.4 | 29.9 | 3.9 | 19 | 3 | 7.6 | 0.92 | 5.1 | 0.66 | < 0.2 | 0.2 | |
| PGH-18-01 | 201 | 202 | 1 | 589063 | < 0.5 | 299 | 736 | 90.7 | 366 | 63.8 | 18 | 44.4 | 5.3 | 24.2 | 3.7 | 8.7 | 1.01 | 5.1 | 0.66 | 0.3 | 2 | |
| PGH-18-01 | 202 | 203.58 | 1.58 | 589064 | < 0.5 | 479 | 1090 | 131 | 525 | 105 | 31.1 | 72.2 | 7.7 | 29.9 | 4.1 | 9 | 1 | 5 | 0.65 | 0.4 | 0.4 | |
| PGH-18-01 | 203.58 | 204.51 | 0.93 | 589065 | 1 | 134 | 317 | 39.3 | 154 | 27.3 | 7.7 | 18.7 | 2.3 | 10.7 | 1.6 | 4 | 0.47 | 2.4 | 0.32 | 2.1 | 3.5 | |
| PGH-18-01 | 204.51 | 205.52 | 1.01 | 589066 | 1.3 | 276 | 584 | 69.1 | 258 | 43.2 | 11.8 | 25.1 | 2.3 | 8.7 | 1.3 | 3 | 0.35 | 1.8 | 0.23 | 1.3 | 1.6 | |
| PGH-18-01 | 205.52 | 206.51 | 0.99 | 589067 | 1.1 | 189 | 432 | 53.8 | 220 | 46.9 | 13.9 | 31.9 | 3.4 | 13.7 | 1.9 | 4.2 | 0.49 | 2.6 | 0.37 | 1.2 | 2.2 | |
| PGH-18-01 | 206.51 | 207.49 | 0.98 | 589068 | 1.3 | 58.9 | 129 | 15.4 | 59.7 | 10.8 | 2.9 | 7.8 | 1 | 4.7 | 0.8 | 1.8 | 0.22 | 1.3 | 0.19 | 4.2 | 0.5 | |
| PGH-18-01 | 207.49 | 208.67 | 1.18 | 589069 | 1.6 | 70.3 | 162 | 20.3 | 81 | 14.3 | 3.86 | 8.9 | 1 | 4.5 | 0.7 | 1.7 | 0.21 | 1.2 | 0.16 | 2.2 | 0.8 | |
| PGH-18-01 | 208.67 | 209.68 | 1.01 | 589070 | < 0.5 | 237 | 564 | 69.8 | 272 | 47.7 | 13.7 | 33.2 | 4.2 | 19.9 | 3 | 7.5 | 0.87 | 4.8 | 0.62 | 0.4 | 0.6 | |
| PGH-18-01 | 209.68 | 210.88 | 1.2 | 589071 | < 0.5 | 230 | 550 | 67.7 | 267 | 47.4 | 13.7 | 33.4 | 4.2 | 20.6 | 3.3 | 7.9 | 0.97 | 5.3 | 0.68 | 0.4 | 0.3 | |
| PGH-18-01 | 210.88 | 211.87 | 0.99 | 589072 | 1.3 | 166 | 389 | 49 | 194 | 35.3 | 10 | 25.4 | 3.1 | 14.8 | 2.3 | 5.5 | 0.65 | 3.7 | 0.5 | 1.4 | 1.3 | |
| PGH-18-01 | 211.87 | 212.72 | 0.85 | 589073 | 0.9 | 268 | 562 | 67.8 | 264 | 47.3 | 14.1 | 36.3 | 4.6 | 21.4 | 3 | 6.8 | 0.76 | 3.8 | 0.48 | 1.5 | 1.2 | |
| PGH-18-01 | 214.28 | 214.71 | 0.43 | 589075 | 0.6 | 238 | 546 | 68.6 | 269 | 48.8 | 13.4 | 32.7 | 4.1 | 19.4 | 3 | 7.5 | 0.94 | 5.2 | 0.68 | 0.6 | 0.3 | |
| PGH-18-01 | 217.37 | 218.32 | 0.95 | 589076 | < 0.5 | 259 | 597 | 73.9 | 290 | 49.2 | 14 | 34.1 | 4.3 | 20.6 | 3.2 | 7.5 | 0.9 | 4.9 | 0.62 | 0.9 | 0.5 | |
| PGH-18-01 | 222.63 | 223.88 | 1.25 | 589077 | < 0.5 | 298 | 617 | 72.4 | 278 | 50.3 | 14.2 | 34.6 | 4.1 | 19.3 | 3 | 7.8 | 0.98 | 5.9 | 0.78 | 0.5 | 0.3 | |
| PGH-18-01 | 227.18 | 227.75 | 0.57 | 589078 | < 0.5 | 260 | 626 | 79.1 | 322 | 63.9 | 18.8 | 46.9 | 6.2 | 30.2 | 4.6 | 10.6 | 1.3 | 6.4 | 0.8 | 0.6 | 0.8 | |
| PGH-18-01 | 227.75 | 229.14 | 1.39 | 655398 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 229.14 | 230.03 | 0.89 | 589079 | < 0.5 | 274 | 649 | 82.3 | 333 | 60.7 | 17.2 | 40.9 | 5 | 23.2 | 3.5 | 8.9 | 1.09 | 6.3 | 0.8 | 0.5 | 0.5 | |
| PGH-18-01 | 229.82 | 231 | 1.18 | 655399 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 231 | 232.35 | 1.35 | 655400 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 232.35 | 233.36 | 1.01 | 1674601 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 233.36 | 234.45 | 1.09 | 1674602 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 234.47 | 235.47 | 1 | 589080 | < 0.5 | 620 | 1340 | 159 | 637 | 128 | 39.5 | 103 | 14.1 | 67 | 9.6 | 20.8 | 2.17 | 11.4 | 1.43 | 1.4 | 1.1 | |
| PGH-18-01 | 235.47 | 236.66 | 1.19 | 1674604 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 236.66 | 237.8 | 1.14 | 1674605 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 237.8 | 239.05 | 1.25 | 1674606 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 239.05 | 240.27 | 1.22 | 1674607 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 240.27 | 241.45 | 1.18 | 1674608 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 241.45 | 242.5 | 1.05 | 1674609 | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 242.5 | 243.49 | 0.99 | 589081 | < 0.5 | 347 | 882 | 115 | 488 | 103 | 30.9 | 75.4 | 8.7 | 36.9 | 4.9 | 11.3 | 1.32 | 6.7 | 0.84 | 1.7 | 0.6 | |
| PGH-18-01 | 243.49 | 244.44 | 0.95 | 589082 | < 0.5 | 284 | 699 | 90.2 | 366 | 72.4 | 21.9 | 55.4 | 7.1 | 34 | 5.3 | 12 | 1.43 | 7.5 | 0.92 | 0.8 | 1.8 | |
| PGH-18-01 | 244.44 | 245.26 | 0.82 | 589083 | 0.7 | 117 | 239 | 28.3 | 109 | 19.5 | 5.08 | 11.5 | 1.1 | 4.5 | 0.6 | 1.5 | 0.17 | 1 | 0.14 | 1.8 | 1.2 | |
| PGH-18-01 | 245.26 | 246.34 | 1.08 | 589084 | < 0.5 | 661 | 1420 | 169 | 674 | 137 | 40.7 | 98.4 | 11.7 | 49.7 | 7 | 15 | 1.56 | 7.2 | 0.85 | 0.9 | 2.3 | |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 246.34 | 247.3 | 0.96 | 589085 | < 0.5 | 329 | 815 | 105 | 433 | 101 | 33.4 | 89.1 | 12.4 | 59.4 | 8.6 | 18.8 | 2.02 | 10.1 | 1.19 | 0.7 | 1.5 |
| PGH-18-01 | 247.3 | 248.68 | 1.38 | 1674611 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 248.68 | 249.93 | 1.25 | 1674612 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 249.93 | 251.07 | 1.14 | 1674613 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 251.07 | 252 | 0.93 | 1674614 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 252 | 253.24 | 1.24 | 1674615 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 253.24 | 254.32 | 1.08 | 589087 | < 0.5 | 363 | 898 | 116 | 508 | 125 | 39 | 96.7 | 11.8 | 51 | 6.9 | 15.2 | 1.68 | 8.1 | 0.98 | 1.1 | 0.2 |
| PGH-18-01 | 254.32 | 255.22 | 0.9 | 589088 | < 0.5 | 206 | 491 | 60.3 | 239 | 44.2 | 13 | 32.6 | 4.2 | 20.4 | 3.1 | 7.7 | 0.92 | 5.3 | 0.7 | 0.7 | 0.4 |
| PGH-18-01 | 255.22 | 255.8 | 0.58 | 1674616 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 255.8 | 257.06 | 1.26 | 589089 | < 0.5 | 2180 | 3220 | 273 | 874 | 116 | 29.1 | 58.2 | 5.9 | 25.4 | 3.4 | 7.3 | 0.86 | 4.8 | 0.64 | 0.5 | 0.5 |
| PGH-18-01 | 257.06 | 258.3 | 1.24 | 1674617 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 258.3 | 259.32 | 1.02 | 1674618 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 259.32 | 260.32 | 1 | 1674619 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 260.32 | 261.42 | 1.1 | 1674620 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 261.42 | 262.4 | 0.98 | 1674621 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 262.4 | 263.38 | 0.98 | 1674622 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 263.38 | 264.32 | 0.94 | 1674623 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 264.32 | 264.78 | 0.46 | 589090 | < 0.5 | 204 | 487 | 59.1 | 236 | 41.4 | 11.3 | 26.6 | 3.2 | 15.7 | 2.4 | 5.8 | 0.74 | 4 | 0.55 | 1.7 | 0.9 |
| PGH-18-01 | 264.78 | 265.82 | 1.04 | 589091 | < 0.5 | 617 | 1060 | 101 | 354 | 63.4 | 19.5 | 49.6 | 7.4 | 38 | 6 | 13.5 | 1.61 | 9.4 | 1.22 | 1.4 | 1.2 |
| PGH-18-01 | 265.82 | 266.76 | 0.94 | 589092 | 0.7 | 679 | 1060 | 101 | 334 | 47.6 | 12.6 | 26.4 | 2.7 | 12.3 | 1.8 | 4.4 | 0.53 | 3 | 0.42 | 2.4 | 1.2 |
| PGH-18-01 | 266.76 | 267.23 | 0.47 | 589093 | < 0.5 | 3910 | 5750 | 530 | 1550 | 190 | 45.4 | 78.4 | 5 | 13.5 | 1.3 | 2.3 | 0.26 | 1.7 | 0.3 | 0.2 | < 0.1 |
| PGH-18-01 | 267.23 | 268.02 | 0.79 | 589094 | < 0.5 | 1090 | 1710 | 156 | 490 | 56.4 | 13.3 | 24.7 | 2.1 | 7.3 | 0.9 | 2.1 | 0.26 | 1.7 | 0.27 | 2.3 | 0.5 |
| PGH-18-01 | 268.02 | 269.2 | 1.18 | 1674624 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 269.2 | 270.3 | 1.1 | 1674625 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 270.3 | 271.5 | 1.2 | 1674626 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 271.5 | 272.89 | 1.39 | 1674627 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 272.89 | 273.92 | 1.03 | 1674628 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 273.92 | 275.04 | 1.12 | 589095 | < 0.5 | 499 | 1100 | 120 | 467 | 86.5 | 25.6 | 62.3 | 9.2 | 50.5 | 8.4 | 21.5 | 2.56 | 13.8 | 1.74 | 2 | 4.2 |
| PGH-18-01 | 275.04 | 276 | 0.96 | 589096 | < 0.5 | 375 | 926 | 105 | 415 | 70.5 | 19.7 | 46 | 5.8 | 29.1 | 4.7 | 10.4 | 1.32 | 7.9 | 1.04 | 2.3 | 1.6 |
| PGH-18-01 | 276 | 277.15 | 1.15 | 589097 | < 0.5 | 304 | 828 | 94.9 | 387 | 78.1 | 23.3 | 53.9 | 6.6 | 29.8 | 4.4 | 9.6 | 1.15 | 6.4 | 0.78 | 1.8 | 1.6 |
| PGH-18-01 | 277.15 | 278.3 | 1.15 | 589098 | < 0.5 | 237 | 572 | 68.7 | 275 | 49.1 | 13.6 | 32.7 | 4.1 | 20 | 3.1 | 7.3 | 0.84 | 5 | 0.63 | 0.8 | 2.8 |
| PGH-18-01 | 287.52 | 288.8 | 1.28 | 589099 | < 0.5 | 204 | 496 | 60.5 | 242 | 45.1 | 13 | 29.9 | 3.7 | 18.1 | 2.9 | 6.6 | 0.82 | 4.8 | 0.59 | 0.3 | 0.6 |
| PGH-18-01 | 288.8 | 290.1 | 1.3 | 589100 | < 0.5 | 1060 | 1920 | 197 | 686 | 94.5 | 24.9 | 51.3 | 5.4 | 22 | 3 | 7.1 | 0.87 | 4.5 | 0.57 | < 0.2 | 0.3 |
| PGH-18-01 | 290.1 | 291.33 | 1.23 | 589101 | < 0.5 | 1310 | 2260 | 212 | 732 | 104 | 28.4 | 62.3 | 8.1 | 41 | 6.5 | 14.9 | 1.62 | 8.6 | 1.04 | 0.8 | 0.2 |
| PGH-18-01 | 291.33 | 292.27 | 0.94 | 1674629 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 292.27 | 293.05 | 0.78 | 1674630 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 293.05 | 294 | 0.95 | 1674631 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 294 | 295.09 | 1.09 | 1674632 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 295.09 | 295.9 | 0.81 | 1674633 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 295.9 | 296.7 | 0.8 | 589102 | < 0.5 | 1090 | 2040 | 197 | 702 | 119 | 36.5 | 89.9 | 12.1 | 56.9 | 8.2 | 16.5 | 1.7 | 8.8 | 1.05 | 0.6 | 2.6 |
| PGH-18-01 | 296.7 | 297.45 | 0.75 | 589103 | < 0.5 | 921 | 1770 | 175 | 630 | 104 | 29.7 | 65.8 | 7.6 | 33.1 | 4.5 | 9.6 | 1.02 | 5.1 | 0.65 | 0.4 | 0.8 |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 297.45 | 298.44 | 0.99 | 589104 | < 0.5 | 468 | 999 | 115 | 427 | 70.5 | 19.5 | 42.8 | 5.3 | 22.8 | 3.2 | 6.9 | 0.7 | 3.3 | 0.42 | 1.4 | 2.7 |
| PGH-18-01 | 298.44 | 299.1 | 0.66 | 589105 | < 0.5 | 262 | 592 | 70.4 | 277 | 55.4 | 16.9 | 39.5 | 5 | 24.5 | 3.6 | 8.2 | 0.95 | 5.4 | 0.71 | 0.2 | 0.2 |
| PGH-18-01 | 308.2 | 309.35 | 1.15 | 1674634 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 309.35 | 310.54 | 1.19 | 589106 | 0.6 | 144 | 353 | 42.9 | 172 | 31.7 | 9.29 | 21.6 | 2.8 | 13.4 | 2 | 4.7 | 0.57 | 3 | 0.37 | 1.5 | 2.4 |
| PGH-18-01 | 310.54 | 311.56 | 1.02 | 589107 | < 0.5 | 370 | 984 | 111 | 434 | 75.2 | 21.4 | 49.4 | 6.1 | 29.2 | 4.6 | 10.7 | 1.2 | 6 | 0.77 | 0.8 | 11.6 |
| PGH-18-01 | 311.56 | 312.73 | 1.17 | 1674635 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 312.73 | 313.92 | 1.19 | 1674636 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 313.92 | 315 | 1.08 | 589108 | < 0.5 | 338 | 802 | 98.1 | 393 | 68.6 | 19.3 | 44.4 | 6 | 28.2 | 4.5 | 10.3 | 1.19 | 6.1 | 0.76 | 0.5 | 2.6 |
| PGH-18-01 | 315 | 316 | 1 | 589109 | < 0.5 | 259 | 631 | 76.7 | 309 | 56.1 | 16.2 | 38.1 | 4.8 | 23.4 | 3.5 | 8.3 | 0.93 | 4.9 | 0.65 | 0.3 | 1.4 |
| PGH-18-01 | 316 | 317 | 1 | 589110 | < 0.5 | 215 | 503 | 60 | 236 | 41.9 | 12.1 | 29.2 | 4 | 18.9 | 3 | 7.2 | 0.84 | 5.2 | 0.65 | < 0.2 | 0.2 |
| PGH-18-01 | 317 | 317.93 | 0.93 | 589112 | < 0.5 | 234 | 546 | 64.9 | 257 | 47.2 | 13.4 | 31.2 | 4.1 | 20.6 | 3.2 | 7.6 | 0.88 | 5 | 0.67 | 0.2 | 0.5 |
| PGH-18-01 | 317.93 | 318.96 | 1.03 | 589113 | < 0.5 | 293 | 721 | 89.1 | 360 | 65.3 | 18 | 43.5 | 5.7 | 26 | 4 | 9.1 | 1.05 | 5.4 | 0.65 | 1.4 | 4.2 |
| PGH-18-01 | 318.96 | 319.74 | 0.78 | 589114 | < 0.5 | 257 | 614 | 74.8 | 302 | 54.8 | 15.8 | 37.3 | 4.6 | 22.7 | 3.5 | 8.3 | 0.91 | 5.1 | 0.69 | 0.8 | 2.4 |
| PGH-18-01 | 319.74 | 320.55 | 0.81 | 589115 | < 0.5 | 287 | 683 | 82.3 | 323 | 57.5 | 16.1 | 38.7 | 5.1 | 24 | 3.7 | 8.3 | 0.97 | 5.1 | 0.68 | 0.4 | 2.8 |
| PGH-18-01 | 320.55 | 321.22 | 0.67 | 589116 | 0.6 | 252 | 697 | 80.3 | 321 | 57.4 | 16.2 | 37.4 | 4.4 | 19.8 | 2.9 | 7 | 0.82 | 4.1 | 0.52 | 4.6 | 9.1 |
| PGH-18-01 | 321.22 | 322 | 0.78 | 589117 | < 0.5 | 256 | 596 | 71.5 | 286 | 51.4 | 15.1 | 35 | 4.5 | 21.2 | 3.3 | 7.8 | 0.88 | 5 | 0.65 | 2.2 | 3.3 |
| PGH-18-01 | 322 | 323 | 1 | 589118 | < 0.5 | 470 | 1170 | 143 | 640 | 144 | 42.5 | 91.4 | 9.2 | 34 | 4.2 | 8.3 | 0.96 | 4.6 | 0.59 | 1.5 | 1.2 |
| PGH-18-01 | 323 | 324 | 1 | 589119 | < 0.5 | 309 | 744 | 92.8 | 391 | 81.9 | 25.2 | 60 | 7.3 | 29.5 | 4 | 7.5 | 0.89 | 5.1 | 0.62 | 0.7 | 1.4 |
| PGH-18-01 | 324 | 325 | 1 | 589120 | < 0.5 | 249 | 599 | 72.7 | 288 | 53.3 | 15.1 | 36.5 | 4.6 | 22.9 | 3.5 | 8.4 | 0.95 | 5.5 | 0.74 | 0.6 | 4.2 |
| PGH-18-01 | 325 | 326 | 1 | 589121 | < 0.5 | 270 | 667 | 82 | 331 | 59.4 | 16.6 | 38.6 | 4.7 | 22.2 | 3.4 | 8 | 0.96 | 5.2 | 0.69 | 1.2 | 7 |
| PGH-18-01 | 326 | 326.78 | 0.78 | 589122 | < 0.5 | 278 | 677 | 82.8 | 334 | 60.7 | 17.5 | 41.1 | 5 | 23.1 | 3.5 | 8.5 | 0.98 | 5.3 | 0.69 | 2 | 6.7 |
| PGH-18-01 | 326.78 | 327.08 | 0.3 | 589123 | < 0.5 | 267 | 663 | 82.3 | 340 | 60.4 | 17.4 | 40.1 | 4.9 | 22.8 | 3.4 | 8 | 0.96 | 4.8 | 0.63 | 4.9 | 6.5 |
| PGH-18-01 | 327.08 | 327.94 | 0.86 | 589124 | < 0.5 | 251 | 595 | 71 | 280 | 50.9 | 14.4 | 33.8 | 4.2 | 20.6 | 3.2 | 7.9 | 0.92 | 5.1 | 0.7 | 0.6 | 3.5 |
| PGH-18-01 | 327.94 | 328.75 | 0.81 | 589125 | < 0.5 | 277 | 665 | 79.9 | 316 | 57 | 17 | 39.6 | 4.9 | 23.5 | 3.6 | 8.3 | 1.04 | 5.3 | 0.68 | 1.2 | 6.8 |
| PGH-18-01 | 328.75 | 329.8 | 1.05 | 589126 | < 0.5 | 408 | 1020 | 127 | 513 | 88.2 | 24.4 | 53.7 | 6.6 | 27 | 3.9 | 8.3 | 0.94 | 4.9 | 0.62 | 0.4 | 2.5 |
| PGH-18-01 | 329.8 | 330.81 | 1.01 | 589127 | < 0.5 | 279 | 682 | 83.6 | 337 | 60.2 | 16.8 | 38.6 | 4.8 | 22.3 | 3.5 | 7.8 | 0.94 | 5.1 | 0.64 | 0.7 | 5.3 |
| PGH-18-01 | 330.81 | 331.81 | 1 | 589128 | < 0.5 | 259 | 617 | 74 | 291 | 50.8 | 14.5 | 33.8 | 4.3 | 20.6 | 3.1 | 7.6 | 0.92 | 4.9 | 0.68 | 1.1 | 3.3 |
| PGH-18-01 | 331.81 | 332.85 | 1.04 | 589129 | < 0.5 | 227 | 529 | 62.6 | 249 | 44.4 | 12.7 | 29.4 | 3.8 | 18.9 | 2.9 | 7.3 | 0.83 | 5 | 0.66 | < 0.2 | 0.3 |
| PGH-18-01 | 332.85 | 333.84 | 0.99 | 589130 | < 0.5 | 243 | 568 | 67.9 | 267 | 47.1 | 13.8 | 32.1 | 4.1 | 20.2 | 3.1 | 7.8 | 0.96 | 5.2 | 0.69 | 0.2 | 0.6 |
| PGH-18-01 | 333.84 | 334.99 | 1.15 | 589131 | < 0.5 | 251 | 576 | 68.2 | 267 | 47.5 | 13.3 | 31.7 | 4 | 19.4 | 3.1 | 7.1 | 0.84 | 4.9 | 0.61 | 0.3 | 0.4 |
| PGH-18-01 | 334.99 | 335.77 | 0.78 | 589132 | 0.6 | 262 | 696 | 78.1 | 304 | 51.8 | 14.7 | 34.1 | 4 | 18.4 | 2.9 | 6.8 | 0.78 | 4.1 | 0.52 | 1.3 | 22 |
| PGH-18-01 | 335.77 | 336.96 | 1.19 | 589133 | < 0.5 | 248 | 582 | 69.4 | 274 | 48.5 | 13.7 | 32 | 4.2 | 20.1 | 3.1 | 7.4 | 0.9 | 5.1 | 0.66 | 0.5 | 6.1 |
| PGH-18-01 | 336.96 | 337.64 | 0.68 | 589134 | < 0.5 | 216 | 503 | 60.2 | 237 | 43.8 | 12.7 | 29.9 | 4.1 | 19.9 | 3.1 | 7.4 | 0.9 | 5.2 | 0.7 | 0.3 | 1.2 |
| PGH-18-01 | 337.64 | 338.52 | 0.88 | 589135 | < 0.5 | 269 | 665 | 81.1 | 324 | 56.3 | 15.7 | 36.8 | 4.6 | 20.7 | 3.1 | 7.3 | 0.87 | 4.6 | 0.57 | 0.6 | 3.6 |
| PGH-18-01 | 338.52 | 339.44 | 0.92 | 589136 | 2.4 | 156 | 323 | 35 | 127 | 17.8 | 4.3 | 10.2 | 1.2 | 5.1 | 0.8 | 1.9 | 0.22 | 1.2 | 0.18 | 3.5 | 1.6 |
| PGH-18-01 | 339.44 | 340.43 | 0.99 | 589137 | < 0.5 | 348 | 805 | 101 | 400 | 73.6 | 21.2 | 49.3 | 6.2 | 30.2 | 4.7 | 10.8 | 1.24 | 6.4 | 0.83 | 1.6 | 2.9 |
| PGH-18-01 | 340.43 | 340.9 | 0.47 | 589138 | < 0.5 | 436 | 917 | 106 | 405 | 68.3 | 19.3 | 45.3 | 5.7 | 26.7 | 4.1 | 9.4 | 1.12 | 5.6 | 0.69 | 4 | 5.5 |
| PGH-18-01 | 340.9 | 341.44 | 0.54 | 589139 | 4.8 | 149 | 297 | 35 | 133 | 23.8 | 5.67 | 15.5 | 2 | 9.4 | 1.5 | 3.9 | 0.48 | 2.9 | 0.42 | 2.6 | 3.1 |
| PGH-18-01 | 341.44 | 342.16 | 0.72 | 589140 | 0.7 | 558 | 979 | 102 | 352 | 54.9 | 15.9 | 35.1 | 4.3 | 19.4 | 2.8 | 6.5 | 0.73 | 3.9 | 0.55 | 0.9 | 3.4 |
| PGH-18-01 | 342.16 | 343.32 | 1.16 | 589141 | 1.8 | 613 | 948 | 90.8 | 298 | 39.3 | 10.2 | 20.8 | 2.5 | 10.7 | 1.5 | 3.6 | 0.43 | 2.2 | 0.3 | 2.7 | 1.8 |
| PGH-18-01 | 343.32 | 344.45 | 1.13 | 589142 | < 0.5 | 557 | 1390 | 165 | 695 | 146 | 42.8 | 96.1 | 10.9 | 44.9 | 6 | 12.5 | 1.39 | 6.9 | 0.85 | 1.3 | 2.7 |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 344.45 | 345.5 | 1.05 | 589143 | 1 | 132 | 240 | 26.1 | 93.6 | 15.7 | 4.32 | 10.1 | 1.3 | 6.3 | 1 | 2.4 | 0.3 | 1.8 | 0.26 | 3.9 | 1 |
| PGH-18-01 | 345.5 | 345.76 | 0.26 | 589144 | < 0.5 | 357 | 764 | 76.3 | 276 | 45.7 | 12.9 | 29.7 | 3.6 | 17 | 2.8 | 6.6 | 0.84 | 4.4 | 0.58 | 0.7 | 1.4 |
| PGH-18-01 | 345.76 | 346.36 | 0.6 | 589145 | < 0.5 | 248 | 418 | 44 | 151 | 22 | 5.4 | 10.7 | 1 | 4.3 | 0.6 | 1.4 | 0.16 | 0.8 | 0.11 | 2.2 | 1 |
| PGH-18-01 | 346.36 | 347.03 | 0.67 | 589146 | < 0.5 | 268 | 620 | 75.2 | 292 | 52.5 | 15.3 | 35.9 | 4.8 | 22.8 | 3.5 | 8.1 | 0.97 | 5.4 | 0.7 | 0.8 | 4.9 |
| PGH-18-01 | 347.03 | 347.85 | 0.82 | 589147 | < 0.5 | 271 | 635 | 76.6 | 298 | 53.2 | 15.4 | 37.6 | 5.1 | 23.7 | 3.6 | 8.4 | 1.01 | 5.4 | 0.69 | 1.1 | 7 |
| PGH-18-01 | 347.85 | 348.53 | 0.68 | 589148 | < 0.5 | 335 | 831 | 89.9 | 346 | 59.1 | 16.8 | 37.2 | 4.4 | 20.1 | 3.1 | 7.4 | 0.86 | 4.6 | 0.56 | 0.9 | 13.7 |
| PGH-18-01 | 348.53 | 349.42 | 0.89 | 589150 | 0.7 | 206 | 408 | 46.2 | 172 | 28.8 | 7.95 | 18 | 2.2 | 9.6 | 1.5 | 3.4 | 0.4 | 2.3 | 0.3 | 3.1 | 9 |
| PGH-18-01 | 349.42 | 350.15 | 0.73 | 589151 | < 0.5 | 282 | 653 | 78.9 | 304 | 55.1 | 15.8 | 37.7 | 5.2 | 23.9 | 3.7 | 8.8 | 1.05 | 6 | 0.75 | 0.5 | 1.2 |
| PGH-18-01 | 350.15 | 351.13 | 0.98 | 589152 | < 0.5 | 109 | 246 | 30.2 | 117 | 20.3 | 5.57 | 12.7 | 1.6 | 7.2 | 1.1 | 2.6 | 0.31 | 1.7 | 0.23 | 3 | 2.9 |
| PGH-18-01 | 351.13 | 352.09 | 0.96 | 589153 | < 0.5 | 364 | 951 | 106 | 412 | 78.3 | 23 | 55.2 | 6.9 | 31.4 | 4.8 | 10.6 | 1.16 | 5.8 | 0.7 | 1.9 | 27.5 |
| PGH-18-01 | 352.09 | 353 | 0.91 | 589154 | < 0.5 | 300 | 673 | 79.5 | 303 | 54.6 | 15.9 | 38.7 | 5.4 | 24.5 | 3.8 | 9.2 | 1.09 | 5.8 | 0.75 | 0.5 | 3.1 |
| PGH-18-01 | 353 | 353.4 | 0.4 | 589156 | 0.9 | 104 | 215 | 25.2 | 97.6 | 18.8 | 4.93 | 12.1 | 1.4 | 6.5 | 1 | 2.3 | 0.3 | 1.8 | 0.26 | 3.6 | 1.7 |
| PGH-18-01 | 353.4 | 353.65 | 0.25 | 589157 | < 0.5 | 1580 | 2970 | 345 | 1280 | 206 | 53.2 | 97 | 6.1 | 15.3 | 1.1 | 2 | 0.26 | 1.4 | 0.22 | 1.7 | < 0.1 |
| PGH-18-01 | 353.65 | 354.05 | 0.4 | 589158 | < 0.5 | 146 | 265 | 28.9 | 105 | 17.6 | 5.06 | 10.8 | 1.1 | 4.4 | 0.6 | 1.2 | 0.14 | 0.9 | 0.14 | 3.4 | 0.3 |
| PGH-18-01 | 354.05 | 354.57 | 0.52 | 589159 | < 0.5 | 282 | 731 | 79.9 | 310 | 56.3 | 15.8 | 38.8 | 5.3 | 25.4 | 4 | 9.5 | 1.1 | 5.6 | 0.68 | 0.9 | 10.3 |
| PGH-18-01 | 354.57 | 355.05 | 0.48 | 589160 | 1.2 | 247 | 536 | 65.1 | 252 | 47 | 13.8 | 33 | 4.2 | 20.4 | 3.1 | 6.7 | 0.73 | 3.9 | 0.48 | 8 | 6.1 |
| PGH-18-01 | 355.05 | 356.28 | 1.23 | 1674637 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 356.28 | 357.51 | 1.23 | 1674638 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 357.51 | 358.51 | 1 | 1674639 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 358.51 | 359.6 | 1.09 | 1674640 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 359.6 | 360.8 | 1.2 | 1674641 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 360.8 | 361.92 | 1.12 | 1674642 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 361.92 | 362.8 | 0.88 | 1674643 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 362.8 | 363.55 | 0.75 | 589161 | < 0.5 | 280 | 826 | 105 | 478 | 126 | 40.5 | 99.9 | 12.5 | 54.1 | 7.6 | 15.2 | 1.66 | 7.5 | 0.8 | 1.4 | 8.3 |
| PGH-18-01 | 363.55 | 364.77 | 1.22 | 589162 | 0.7 | 242 | 587 | 72.4 | 282 | 49.4 | 13.6 | 33.2 | 4.4 | 22.6 | 3.7 | 9.3 | 1.07 | 5.7 | 0.7 | 2.3 | 6.9 |
| PGH-18-01 | 364.77 | 366 | 1.23 | 589163 | 0.7 | 117 | 271 | 33.2 | 130 | 24.4 | 7.07 | 18.2 | 2.4 | 12.9 | 2.1 | 5 | 0.59 | 3.2 | 0.38 | 3.6 | 1.3 |
| PGH-18-01 | 366 | 366.58 | 0.58 | 589164 | 0.6 | 201 | 536 | 58.9 | 223 | 33.2 | 8.04 | 16.3 | 1.9 | 8 | 1.2 | 2.8 | 0.35 | 2.1 | 0.27 | 2.5 | 3.2 |
| PGH-18-01 | 366.58 | 367.75 | 1.17 | 1674644 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 367.75 | 369 | 1.25 | 1674645 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 369 | 370.1 | 1.1 | 1674646 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 370.1 | 371.1 | 1 | 1674647 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 371.1 | 372.13 | 1.03 | 1674648 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 372.13 | 373.35 | 1.22 | 1674649 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 373.35 | 374.02 | 0.67 | 589165 | < 0.5 | 496 | 1320 | 162 | 708 | 160 | 47.5 | 108 | 12.5 | 54.4 | 7.4 | 14.4 | 1.57 | 7.4 | 0.8 | 0.9 | 1.4 |
| PGH-18-01 | 381.52 | 382.28 | 0.76 | 589166 | < 0.5 | 247 | 586 | 72.1 | 285 | 54.6 | 16.1 | 38.7 | 4.8 | 22.5 | 3.3 | 7.7 | 0.9 | 4.9 | 0.65 | 0.4 | < 0.1 |
| PGH-18-01 | 385.9 | 386.75 | 0.85 | 589167 | < 0.5 | 221 | 630 | 81.8 | 377 | 74.4 | 18.8 | 35.7 | 3.3 | 11.4 | 1.5 | 3 | 0.34 | 1.9 | 0.25 | 1.7 | 2.3 |
| PGH-18-01 | 386.75 | 387.69 | 0.94 | 589168 | < 0.5 | 321 | 914 | 113 | 504 | 124 | 40.3 | 101 | 13.8 | 64.7 | 9.3 | 18.9 | 2.07 | 9.9 | 1.15 | 0.9 | 2.4 |
| PGH-18-01 | 387.69 | 388.86 | 1.17 | 1674650 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 388.86 | 390 | 1.14 | D08051 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 390 | 391.12 | 1.12 | D08052 | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 391.12 | 392.29 | 1.17 | D08053 | | | | | | | | | | | | | | | | | |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) | | |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| PGH-18-01 | 392.29 | 393.28 | 0.99 | D08054 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 393.28 | 394.38 | 1.1 | D08055 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 394.38 | 395.39 | 1.01 | D08056 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 395.39 | 396.6 | 1.21 | 589169 | < 0.5 | 233 | 532 | 65 | 251 | 43.9 | 12.8 | 30.2 | 3.8 | 19.4 | 3 | 6.9 | 0.8 | 4.2 | 0.59 | 2.4 | 3.7 | | |
| PGH-18-01 | 396.6 | 397.53 | 0.93 | 589170 | < 0.5 | 312 | 835 | 94.1 | 370 | 65.5 | 18.6 | 41.8 | 4.9 | 23.1 | 3.4 | 7.5 | 0.89 | 5.2 | 0.68 | 0.7 | 4.2 | | |
| PGH-18-01 | 397.53 | 398.47 | 0.94 | D08058 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 398.47 | 399.44 | 0.97 | D08059 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 399.44 | 400.46 | 1.02 | D08060 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 400.46 | 401.52 | 1.06 | D08061 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 401.52 | 402.13 | 0.61 | 589171 | < 0.5 | 222 | 595 | 68.7 | 286 | 60.7 | 18 | 43.1 | 5.4 | 24.9 | 3.7 | 8 | 0.92 | 5.3 | 0.66 | 0.7 | 0.3 | | |
| PGH-18-01 | 402.13 | 403.43 | 1.3 | 589172 | 0.6 | 227 | 496 | 59.5 | 230 | 46.1 | 13.8 | 32.7 | 4.1 | 19.4 | 2.9 | 6.4 | 0.67 | 3.6 | 0.49 | 5.7 | 5.9 | | |
| PGH-18-01 | 403.43 | 404.14 | 0.71 | 589173 | < 0.5 | 93.8 | 214 | 26.1 | 101 | 18.2 | 5.41 | 12.5 | 1.5 | 6.9 | 1 | 2.2 | 0.27 | 1.6 | 0.21 | 3.3 | 0.5 | | |
| PGH-18-01 | 404.14 | 404.7 | 0.56 | 589174 | < 0.5 | 262 | 696 | 79.3 | 324 | 67 | 20.1 | 49.1 | 6.5 | 30.9 | 4.7 | 10.4 | 1.19 | 6.4 | 0.82 | 1.4 | 1 | | |
| PGH-18-01 | 404.7 | 405.55 | 0.85 | 589176 | 0.7 | 108 | 204 | 23 | 85.3 | 14.8 | 3.73 | 9.4 | 1.1 | 5.2 | 0.8 | 2.2 | 0.3 | 2 | 0.29 | 3.1 | 0.5 | | |
| PGH-18-01 | 405.55 | 406.15 | 0.6 | 589177 | < 0.5 | 220 | 511 | 62.5 | 245 | 45.9 | 13.7 | 34.3 | 5 | 25.9 | 4.1 | 9.6 | 1.07 | 5.5 | 0.71 | 1.1 | 0.4 | | |
| PGH-18-01 | 406.15 | 407.12 | 0.97 | D08062 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 407.12 | 408.1 | 0.98 | D08063 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 408.1 | 408.6 | 0.5 | 589178 | < 0.5 | 240 | 640 | 70.3 | 272 | 47.7 | 13.5 | 31.4 | 3.8 | 18.1 | 2.7 | 6.5 | 0.72 | 4.1 | 0.54 | 0.8 | 1.4 | | |
| PGH-18-01 | 408.6 | 409.62 | 1.02 | D08064 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 409.62 | 410.5 | 0.88 | D08065 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 410.5 | 411.66 | 1.16 | D08066 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 411.66 | 412.71 | 1.05 | D08067 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 412.71 | 413.95 | 1.24 | D08068 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 413.95 | 414.35 | 0.4 | 589179 | < 0.5 | 247 | 580 | 71.3 | 282 | 60.1 | 19.4 | 52.5 | 8.1 | 38.8 | 5.8 | 12.8 | 1.5 | 8.1 | 1.03 | 0.7 | 1 | | |
| PGH-18-01 | 414.35 | 415.74 | 1.39 | D08069 | | | | | | | | | | | | | | | | | | | |
| PGH-18-01 | 415.74 | 416.7 | 0.96 | 589180 | < 0.5 | 550 | 1310 | 162 | 650 | 110 | 29 | 54.9 | 5 | 18 | 2.2 | 4.3 | 0.45 | 2.4 | 0.32 | 0.9 | 0.7 | | |
| PGH-18-01 | 429.2 | 429.68 | 0.48 | 589181 | < 0.5 | 252 | 576 | 68.5 | 260 | 47.5 | 14.4 | 36.3 | 5.1 | 26.3 | 4.1 | 10.1 | 1.23 | 6.8 | 0.87 | 0.2 | < 0.1 | | |
| PGH-18-01 | 438.89 | 439.62 | 0.73 | 589182 | < 0.5 | 388 | 845 | 99.8 | 375 | 66.5 | 19.2 | 45.3 | 5.5 | 25.5 | 3.8 | 9 | 0.99 | 5.2 | 0.64 | 1.1 | 2.9 | | |
| PGH-18-01 | 442.47 | 442.75 | 0.28 | 589183 | < 0.5 | 260 | 584 | 69.3 | 259 | 42.1 | 12.1 | 27.8 | 3.5 | 16.8 | 2.4 | 5.4 | 0.62 | 3.2 | 0.42 | 0.9 | 1.7 | | |
| PGH-18-01 | 445.59 | 446.79 | 1.2 | 589184 | < 0.5 | 277 | 685 | 75.2 | 296 | 56.5 | 17.1 | 41.6 | 5.4 | 25.9 | 3.9 | 9.1 | 1.13 | 5.8 | 0.75 | 2.3 | 1.6 | | |
| PGH-18-01 | 446.79 | 447.2 | 0.41 | 589185 | < 0.5 | 708 | 1670 | 192 | 805 | 142 | 35.4 | 62.1 | 4.3 | 11.5 | 1.3 | 2.4 | 0.26 | 1.5 | 0.24 | < 0.2 | 0.5 | | |
| PGH-18-01 | 447.2 | 447.7 | 0.5 | 589186 | < 0.5 | 270 | 568 | 66.6 | 254 | 53.4 | 17 | 41.3 | 5.4 | 26.1 | 3.7 | 8.5 | 0.97 | 4.5 | 0.54 | 1.9 | 2.8 | | |
| PGH-18-01 | 449.6 | 450 | 0.4 | 589187 | < 0.5 | 222 | 582 | 65.2 | 252 | 50.5 | 16.6 | 40.6 | 5.5 | 25.6 | 3.7 | 8.5 | 0.98 | 5 | 0.62 | 0.7 | 2.3 | | |
| PGH-18-01 | 460.11 | 460.42 | 0.31 | 589188 | 1.1 | 213 | 484 | 58.8 | 234 | 48.8 | 15.2 | 35.1 | 4 | 17.6 | 2.5 | 6.2 | 0.71 | 4 | 0.55 | 2 | 1.1 | | |
| PGH-18-01 | 466.63 | 466.83 | 0.2 | 589189 | < 0.5 | 227 | 562 | 60 | 229 | 42.4 | 13 | 30.7 | 3.9 | 17.8 | 2.7 | 6.6 | 0.79 | 4.4 | 0.55 | 0.7 | < 0.1 | | |
| PGH-18-01 | 471.08 | 471.98 | 0.9 | 589190 | < 0.5 | 305 | 714 | 88.1 | 348 | 68.6 | 21.1 | 50.8 | 6.4 | 30.3 | 4.4 | 9.8 | 1.13 | 5.7 | 0.72 | 0.6 | 0.7 | | |
| PGH-18-01 | 473.96 | 474.44 | 0.48 | 589191 | < 0.5 | 305 | 701 | 84.6 | 329 | 63.9 | 20.8 | 51 | 6.3 | 27.2 | 3.7 | 7.9 | 0.89 | 4.5 | 0.58 | 0.3 | 0.2 | | |
| PGH-18-01 | 474.44 | 475.23 | 0.79 | 589192 | < 0.5 | 150 | 324 | 38.8 | 151 | 33 | 10.5 | 25.1 | 3 | 13.9 | 1.8 | 3.8 | 0.39 | 1.9 | 0.24 | 2.6 | 2.3 | | |
| PGH-18-01 | 492.85 | 493.55 | 0.7 | 589193 | 0.5 | 268 | 518 | 58.5 | 220 | 46.4 | 14.8 | 34 | 4 | 16.3 | 2.1 | 4.6 | 0.48 | 2.2 | 0.25 | 1.4 | 1.2 | | |
| PGH-18-01 | 493.55 | 494.65 | 1.1 | 589194 | < 0.5 | 234 | 525 | 61.5 | 232 | 40.9 | 12.2 | 29.1 | 3.8 | 19 | 2.9 | 7.3 | 0.91 | 5.1 | 0.66 | < 0.2 | < 0.1 | | |
| PGH-18-01 | 494.65 | 495.85 | 1.2 | 589195 | < 0.5 | 285 | 672 | 81.7 | 316 | 58.5 | 17.6 | 43.3 | 6 | 29.7 | 4.9 | 11.3 | 1.29 | 6.5 | 0.81 | 0.9 | 1.1 | | |

Assays

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-01 | 495.85 | 496.74 | 0.89 | 589196 | < 0.5 | 341 | 777 | 93.9 | 360 | 61.4 | 17.9 | 39.3 | 4.8 | 23.2 | 3.6 | 8.3 | 0.95 | 4.5 | 0.59 | 0.2 | 0.7 |
| PGH-18-01 | 496.74 | 497.58 | 0.84 | 589197 | < 0.5 | 362 | 824 | 99.8 | 387 | 73.6 | 22.4 | 52.6 | 6.6 | 31.6 | 4.9 | 10.9 | 1.18 | 5.6 | 0.7 | 0.2 | 0.4 |
| PGH-18-01 | 497.58 | 498.43 | 0.85 | 589198 | < 0.5 | 338 | 799 | 98.9 | 388 | 66.5 | 19.5 | 43.7 | 5.7 | 26.9 | 4.3 | 9.8 | 1.09 | 5.5 | 0.69 | 0.3 | 0.5 |
| PGH-18-01 | 498.43 | 499.36 | 0.93 | 589199 | < 0.5 | 314 | 743 | 90.9 | 347 | 64.6 | 19.6 | 48.1 | 6.9 | 36.4 | 6 | 13.8 | 1.63 | 8.1 | 0.96 | 0.4 | 1.8 |
| PGH-18-01 | 499.36 | 499.93 | 0.57 | 589200 | 1.3 | 27.1 | 58.8 | 7.12 | 26.8 | 5.5 | 1.78 | 4.3 | 0.7 | 3.6 | 0.6 | 1.5 | 0.2 | 1.2 | 0.15 | 2.7 | 0.8 |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | TI (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|-------|-------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 11.85 | 12.1 | 0.25 | 589001 | < 1 | < 0.1 | 18 | < 0.4 | 31.1 | 28.6 | 0.099 | crbt |
| PGH-18-01 | 12.1 | 12.92 | 0.82 | 351542 | | | | | | | 0.01 | syefen w/ xcut carb-blue amph veins |
| PGH-18-01 | 12.92 | 13.66 | 0.74 | 351543 | | | | | | | 0.049 | syefen w/ x-cut amph-carb veins, epd alt'n |
| PGH-18-01 | 13.66 | 14.23 | 0.57 | 589002 | 3 | < 0.1 | 16 | < 0.4 | 40.4 | 18.3 | 0.017 | crbt |
| PGH-18-01 | 14.23 | 15.64 | 1.41 | 351544 | | | | | | | 0.028 | syefen w/ veining |
| PGH-18-01 | 15.64 | 16.31 | 0.67 | 589003 | < 1 | < 0.1 | 84 | < 0.4 | 19.9 | 47.5 | 0.423 | crbt |
| PGH-18-01 | 16.31 | 17.14 | 0.83 | 589004 | 15 | < 0.1 | 20 | < 0.4 | 41.5 | 25.2 | 0.157 | crbt + alkali clasts |
| PGH-18-01 | 17.14 | 18 | 0.86 | 589005 | < 1 | < 0.1 | 43 | < 0.4 | 43.6 | 11.6 | 0.044 | crbt |
| PGH-18-01 | 18 | 18.91 | 0.91 | 589006 | < 1 | < 0.1 | 39 | < 0.4 | 36.1 | 15.8 | 0.076 | crbt-alkali bx |
| PGH-18-01 | 18.91 | 19.75 | 0.84 | 589007 | 1 | < 0.1 | 41 | < 0.4 | 53.1 | 20.4 | 0.231 | crbt |
| PGH-18-01 | 19.75 | 20.46 | 0.71 | 589008 | < 1 | 0.2 | 12 | < 0.4 | 38.9 | 13.1 | 0.053 | ijolite |
| PGH-18-01 | 20.46 | 21.72 | 1.26 | 351545 | | | | | | | 0.046 | banded alt'd gran/sye and mdyke (green-grey) |
| PGH-18-01 | 21.72 | 22.95 | 1.23 | 351546 | | | | | | | 0.037 | same to massive sye |
| PGH-18-01 | 22.95 | 24.15 | 1.2 | 351547 | | | | | | | 0.032 | sye w/ min carb+amph veining |
| PGH-18-01 | 24.15 | 25.2 | 1.05 | 351548 | | | | | | | 0.027 | sye, increasing carb veining |
| PGH-18-01 | 25.2 | 26.19 | 0.99 | 351549 | | | | | | | 0.024 | sye, increasing carb veining |
| PGH-18-01 | 26.19 | 26.79 | 0.6 | 589009 | 16 | < 0.1 | 43 | < 0.4 | 48.8 | 26 | 0.126 | whispy crbt |
| PGH-18-01 | 26.79 | 27.77 | 0.98 | 351550 | | | | | | | 0.022 | sye, increasing carb veining |
| PGH-18-01 | 27.77 | 28.35 | 0.58 | 655377 | | | | | | | 0.047 | sye w/ low angle felsic/siliceous dyke |
| PGH-18-01 | 28.35 | 28.8 | 0.45 | 589010 | 28 | < 0.1 | 16 | < 0.4 | 19.2 | 13.6 | 0.08 | unknown dyke |
| PGH-18-01 | 31.18 | 31.51 | 0.33 | 589011 | < 1 | < 0.1 | 29 | < 0.4 | 43.4 | 29 | 0.043 | crbt |
| PGH-18-01 | 32.28 | 33.05 | 0.77 | 589012 | 9 | < 0.1 | 56 | < 0.4 | 20 | 21.7 | 0.042 | pink to mica banded silcarb |
| PGH-18-01 | 34.09 | 34.77 | 0.68 | 589013 | < 1 | 0.2 | 46 | < 0.4 | 25.7 | 9.9 | 0.08 | carb bx'td alkali rock |
| PGH-18-01 | 41.76 | 42 | 0.24 | 589014 | < 1 | < 0.1 | 9 | < 0.4 | 70.5 | 7.4 | 0.013 | crbt, blebby sulph w/ black non-mag rims |
| PGH-18-01 | 46.49 | 46.78 | 0.29 | 589015 | < 1 | < 0.1 | 108 | < 0.4 | 63.2 | 5.4 | 0.015 | 10cm + 2cm wide crbt veins in kspar rock |
| PGH-18-01 | 52.53 | 53.47 | 0.94 | 589016 | < 1 | 0.1 | 13 | < 0.4 | 44.2 | 7.2 | 0.078 | similar bx w/ 20cm & 10cm wide crbt veins |
| PGH-18-01 | 53.47 | 54.64 | 1.17 | 589017 | 3 | < 0.1 | 15 | < 0.4 | 33.7 | 10.7 | 0.063 | kspar rock w/ 37cm crbt vein + 1-2cm wide carb+py vein |
| PGH-18-01 | 60.61 | 61.8 | 1.19 | 589018 | < 1 | 0.1 | 14 | < 0.4 | 16.5 | 5 | 0.015 | alkali breccia |
| PGH-18-01 | 61.8 | 63 | 1.2 | 589019 | 1 | 0.3 | 24 | < 0.4 | 8 | 3.8 | 0.01 | granite breccia |
| PGH-18-01 | 63 | 63.95 | 0.95 | 589021 | < 1 | 0.1 | 12 | < 0.4 | 19 | 7.2 | 0.018 | gran w/ 25cm crbt vein |
| PGH-18-01 | 63.95 | 64.95 | 1 | 589022 | 2 | < 0.1 | 8 | < 0.4 | 5.4 | 1 | 0.005 | gran |
| PGH-18-01 | 64.95 | 65.93 | 0.98 | 589023 | < 1 | 0.1 | 8 | < 0.4 | 8.9 | 6.7 | 0.057 | gran |
| PGH-18-01 | 65.93 | 66.85 | 0.92 | 589024 | < 1 | < 0.1 | 63 | < 0.4 | 15.4 | 71.9 | 0.106 | crbt |
| PGH-18-01 | 66.85 | 67.85 | 1 | 589025 | < 1 | < 0.1 | 20 | < 0.4 | 11.2 | 42.9 | 0.025 | crbt |
| PGH-18-01 | 67.85 | 68.81 | 0.96 | 589026 | < 1 | < 0.1 | 45 | < 0.4 | 6.9 | 39.4 | 0.085 | crbt |
| PGH-18-01 | 68.81 | 69.8 | 0.99 | 589027 | < 1 | < 0.1 | 21 | < 0.4 | 12 | 36 | 0.082 | crbt |
| PGH-18-01 | 69.8 | 70.86 | 1.06 | 589028 | < 1 | < 0.1 | 26 | < 0.4 | 7.5 | 25.9 | 0.062 | crbt |
| PGH-18-01 | 70.86 | 72 | 1.14 | 589029 | < 1 | < 0.1 | 28 | < 0.4 | 12.8 | 33 | 0.173 | crbt |
| PGH-18-01 | 72 | 73 | 1 | 589030 | 3 | < 0.1 | 63 | < 0.4 | 27.3 | 58.3 | 0.191 | crbt |
| PGH-18-01 | 73 | 74.05 | 1.05 | 589031 | 2 | < 0.1 | 73 | 0.4 | 23.8 | 67.8 | 0.128 | crbt |
| PGH-18-01 | 74.05 | 74.88 | 0.83 | 589032 | < 1 | < 0.1 | 30 | < 0.4 | 15.9 | 42.3 | 0.104 | crbt |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | TI (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 74.88 | 75.87 | 0.99 | 589033 | < 1 | < 0.1 | 112 | < 0.4 | 14.1 | 102 | 0.226 | crbt |
| PGH-18-01 | 75.87 | 76.87 | 1 | 589034 | < 1 | 0.2 | 24 | < 0.4 | 25.7 | 36.6 | 0.246 | crbt |
| PGH-18-01 | 76.87 | 78 | 1.13 | 589035 | < 1 | 0.1 | 54 | < 0.4 | 34.3 | 53.4 | 0.202 | crbt |
| PGH-18-01 | 78 | 79.11 | 1.11 | 589036 | < 1 | < 0.1 | 20 | < 0.4 | 17.3 | 22.7 | 0.157 | crbt w/ <10% rimmed kspar clasts |
| PGH-18-01 | 79.11 | 80.14 | 1.03 | 589037 | < 1 | < 0.1 | 15 | < 0.4 | 13.5 | 19.9 | 0.07 | crbt |
| PGH-18-01 | 80.14 | 81.25 | 1.11 | 589038 | < 1 | < 0.1 | 15 | < 0.4 | 30.3 | 8.7 | 0.091 | crbt w/ 30cm kspar rock |
| PGH-18-01 | 81.25 | 82.25 | 1 | 589039 | < 1 | 0.2 | 6 | < 0.4 | 9.7 | 4.2 | 0.019 | gran w/ carb veining (weakly bx'td) |
| PGH-18-01 | 95.75 | 96.29 | 0.54 | 589040 | < 1 | < 0.1 | 55 | < 0.4 | 16.2 | 21.4 | 0.045 | crbt |
| PGH-18-01 | 96.29 | 97.28 | 0.99 | 589041 | 2 | 0.1 | 19 | < 0.4 | 16.7 | 14.4 | 0.04 | alkali breccia |
| PGH-18-01 | 97.28 | 98.14 | 0.86 | 589042 | 2 | 0.2 | 31 | < 0.4 | 15.7 | 7.4 | 0.023 | alkali breccia |
| PGH-18-01 | 98.14 | 99.2 | 1.06 | 589043 | < 1 | < 0.1 | 16 | < 0.4 | 32.5 | 12.7 | 0.063 | crbt |
| PGH-18-01 | 99.2 | 100.49 | 1.29 | 589044 | 2 | < 0.1 | 11 | < 0.4 | 15.1 | 2.6 | 0.013 | alkali breccia |
| PGH-18-01 | 100.49 | 101.78 | 1.29 | 589045 | < 1 | 0.1 | 12 | < 0.4 | 11 | 3.5 | 0.021 | alkali breccia |
| PGH-18-01 | 101.78 | 102.31 | 0.53 | 589046 | < 1 | < 0.1 | 13 | < 0.4 | 58.3 | 5.7 | 0.008 | crbt |
| PGH-18-01 | 112.5 | 113.62 | 1.12 | 589047 | < 1 | < 0.1 | 39 | < 0.4 | 17.8 | 26 | 0.072 | crbt |
| PGH-18-01 | 113.62 | 114.22 | 0.6 | 589048 | < 1 | < 0.1 | 11 | < 0.4 | 22.3 | 10 | 0.038 | breccia+sulphides |
| PGH-18-01 | 115.5 | 115.8 | 0.3 | 589074 | 4 | 0.2 | 123 | < 0.4 | 66.9 | 9.3 | 0.021 | 20cm crbt (sample out of sequence) |
| PGH-18-01 | 123.21 | 124.36 | 1.15 | 589049 | 6 | < 0.1 | 25 | < 0.4 | 57.2 | 11.1 | 0.109 | crbt |
| PGH-18-01 | 124.36 | 125.33 | 0.97 | 589051 | 8 | 0.1 | 15 | < 0.4 | 22 | 16.8 | 0.08 | crbt + clasts |
| PGH-18-01 | 130.24 | 130.93 | 0.69 | 589052 | 2 | < 0.1 | 18 | < 0.4 | 8 | 18.7 | 0.046 | crbt |
| PGH-18-01 | 139.65 | 140.04 | 0.39 | 589053 | 5 | 0.2 | 51 | < 0.4 | 73.6 | 9 | 0.041 | bcrbt vein + sulfides |
| PGH-18-01 | 141.45 | 142.08 | 0.63 | 589054 | 2 | < 0.1 | 16 | < 0.4 | 26.6 | 12.3 | 0.142 | crbt |
| PGH-18-01 | 142.08 | 143 | 0.92 | 589055 | < 1 | 0.2 | 101 | 0.6 | 46.5 | 50.8 | 0.245 | crbt |
| PGH-18-01 | 145.24 | 145.84 | 0.6 | 589056 | < 1 | 0.1 | 35 | < 0.4 | 46.5 | 22 | 0.048 | crbt |
| PGH-18-01 | 163 | 164.33 | 1.33 | 589057 | 1 | < 0.1 | 18 | < 0.4 | 44.2 | 11.8 | 0.034 | crbt |
| PGH-18-01 | 164.33 | 165.73 | 1.4 | 655378 | | | | | | | 0.015 | syw w/ carb veins |
| PGH-18-01 | 165.73 | 167.05 | 1.32 | 655379 | | | | | | | 0.015 | syw w/ carb veins |
| PGH-18-01 | 167.05 | 168.18 | 1.13 | 655380 | | | | | | | 0.015 | syw w/ carb veins |
| PGH-18-01 | 168.18 | 169.37 | 1.19 | 655381 | | | | | | | 0.007 | syw w/ carb veins |
| PGH-18-01 | 169.37 | 170.4 | 1.03 | 655382 | | | | | | | 0.061 | syw w/ 20 & 10cm carb veins |
| PGH-18-01 | 170.4 | 171.36 | 0.96 | 589058 | < 1 | < 0.1 | 21 | < 0.4 | 26.3 | 20.7 | 0.356 | crbt |
| PGH-18-01 | 171.36 | 172.54 | 1.18 | 655383 | | | | | | | 0.013 | gran |
| PGH-18-01 | 172.54 | 174 | 1.46 | 655384 | | | | | | | 0.012 | gran |
| PGH-18-01 | 174 | 175.15 | 1.15 | 655385 | | | | | | | 0.007 | gran, ap in carb-amph veins |
| PGH-18-01 | 175.15 | 176.43 | 1.28 | 655386 | | | | | | | 0.015 | alkalic w/ crbt-amph-ap veins, 5cm diab dyke |
| PGH-18-01 | 176.43 | 177.37 | 0.94 | 655387 | | | | | | | 0.008 | alkalic w/ crbt-amph-ap veins |
| PGH-18-01 | 177.37 | 178.5 | 1.13 | 655388 | | | | | | | 0.027 | syw/fen w/ green bands (mdyke?) |
| PGH-18-01 | 178.5 | 179.83 | 1.33 | 655389 | | | | | | | 0.076 | same + carb-amph veins |
| PGH-18-01 | 179.83 | 181.1 | 1.27 | 655390 | | | | | | | 0.056 | same, ap in irreg carb veins |
| PGH-18-01 | 181.1 | 182.27 | 1.17 | 655391 | | | | | | | 0.046 | ap in 18cm crbt vein |
| PGH-18-01 | 182.27 | 183.4 | 1.13 | 655392 | | | | | | | 0.035 | gran, ap in purple-yellow vein near end |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 183.4 | 184.64 | 1.24 | 655393 | | | | | | | 0.094 | gran w/ ap in x-cut carb veins up to 15cm |
| PGH-18-01 | 184.64 | 185.73 | 1.09 | 655394 | | | | | | | 0.058 | gran w/ carb veins |
| PGH-18-01 | 185.73 | 187 | 1.27 | 655395 | | | | | | | 0.007 | gran/sye - amph+/-carb veins |
| PGH-18-01 | 187 | 188.3 | 1.3 | 655396 | | | | | | | 0.021 | gran/sye - amph+/-carb veins |
| PGH-18-01 | 188.3 | 189.4 | 1.1 | 655397 | | | | | | | 0.052 | same, ~10cm carb veins |
| PGH-18-01 | 189.4 | 189.58 | 0.18 | 589059 | 13 | 0.9 | 13 | < 0.4 | 7.5 | 5.2 | 0.004 | crbt + multiple sulphide phases and magnetite in veins |
| PGH-18-01 | 198 | 199 | 1 | 589060 | 22 | < 0.1 | 19 | < 0.4 | 53.9 | 9.8 | 0.084 | crbt |
| PGH-18-01 | 199 | 200.01 | 1.01 | 589061 | < 1 | < 0.1 | 25 | < 0.4 | 19.7 | 31.6 | 0.543 | crbt |
| PGH-18-01 | 200.01 | 201 | 0.99 | 589062 | < 1 | < 0.1 | < 5 | < 0.4 | 2.9 | 0.9 | 0.01 | crbt |
| PGH-18-01 | 201 | 202 | 1 | 589063 | < 1 | < 0.1 | 7 | < 0.4 | 6.1 | 7.7 | 0.211 | crbt |
| PGH-18-01 | 202 | 203.58 | 1.58 | 589064 | < 1 | < 0.1 | 26 | < 0.4 | 46.3 | 9.4 | 0.018 | crbt |
| PGH-18-01 | 203.58 | 204.51 | 0.93 | 589065 | < 1 | 0.2 | 10 | < 0.4 | 7 | 10.1 | 0.169 | crbt-bx |
| PGH-18-01 | 204.51 | 205.52 | 1.01 | 589066 | 8 | 0.4 | 18 | < 0.4 | 29.9 | 15.4 | 0.094 | crbt-bx |
| PGH-18-01 | 205.52 | 206.51 | 0.99 | 589067 | 2 | 0.6 | 26 | < 0.4 | 38.4 | 16.3 | 0.144 | crbt-bx |
| PGH-18-01 | 206.51 | 207.49 | 0.98 | 589068 | 3 | 0.3 | 11 | < 0.4 | 10 | 2.3 | 0.021 | granite breccia |
| PGH-18-01 | 207.49 | 208.67 | 1.18 | 589069 | < 1 | 0.3 | < 5 | < 0.4 | 5.5 | 2.2 | 0.06 | granite breccia |
| PGH-18-01 | 208.67 | 209.68 | 1.01 | 589070 | 1 | < 0.1 | 7 | < 0.4 | 3.2 | 3.6 | 0.144 | crbt |
| PGH-18-01 | 209.68 | 210.88 | 1.2 | 589071 | 6 | < 0.1 | 7 | < 0.4 | 5.9 | 4.4 | 0.125 | crbt |
| PGH-18-01 | 210.88 | 211.87 | 0.99 | 589072 | 13 | 0.3 | 10 | < 0.4 | 11.2 | 10.6 | 0.132 | crbt-bx |
| PGH-18-01 | 211.87 | 212.72 | 0.85 | 589073 | < 1 | 0.3 | 7 | < 0.4 | 28.8 | 8.7 | 0.073 | crbt-bx |
| PGH-18-01 | 214.28 | 214.71 | 0.43 | 589075 | 3 | 0.2 | 11 | < 0.4 | 21 | 2.9 | 0.025 | crbt- 20% breccia |
| PGH-18-01 | 217.37 | 218.32 | 0.95 | 589076 | < 1 | < 0.1 | 18 | < 0.4 | 17 | 6.9 | 0.21 | crbt |
| PGH-18-01 | 222.63 | 223.88 | 1.25 | 589077 | 1 | < 0.1 | 9 | < 0.4 | 26.3 | 2.3 | 0.018 | crbt |
| PGH-18-01 | 227.18 | 227.75 | 0.57 | 589078 | < 1 | < 0.1 | 13 | < 0.4 | 42.2 | 15.4 | 0.22 | crbt |
| PGH-18-01 | 227.75 | 229.14 | 1.39 | 655398 | | | | | | | 0.041 | sye w/ x-cut carb, minor bx'tn txt |
| PGH-18-01 | 229.14 | 230.03 | 0.89 | 589079 | 6 | 0.2 | 19 | < 0.4 | 33.1 | 7.9 | 0.086 | crbt |
| PGH-18-01 | 229.82 | 231 | 1.18 | 655399 | | | | | | | 0.016 | crbt at start to sye w/ x-cut veins |
| PGH-18-01 | 231 | 232.35 | 1.35 | 655400 | | | | | | | 0.019 | sye w/ min carb veins |
| PGH-18-01 | 232.35 | 233.36 | 1.01 | 1674601 | | | | | | | 0.017 | same, starts in bx'td zone |
| PGH-18-01 | 233.36 | 234.45 | 1.09 | 1674602 | | | | | | | 0.296 | sye-bax, ap+/- fluorite in carb |
| PGH-18-01 | 234.47 | 235.47 | 1 | 589080 | 6 | 0.1 | 435 | 0.5 | 110 | 50.1 | 0.178 | whispy crbt + breccia |
| PGH-18-01 | 235.47 | 236.66 | 1.19 | 1674604 | | | | | | | 0.16 | sye-bx to sye w/ x-cut carb veins |
| PGH-18-01 | 236.66 | 237.8 | 1.14 | 1674605 | | | | | | | 0.164 | sye-bx |
| PGH-18-01 | 237.8 | 239.05 | 1.25 | 1674606 | | | | | | | 0.031 | same w/ 10cm peg vein |
| PGH-18-01 | 239.05 | 240.27 | 1.22 | 1674607 | | | | | | | 0.098 | sye-x (ap in carb veins) |
| PGH-18-01 | 240.27 | 241.45 | 1.18 | 1674608 | | | | | | | 0.083 | sye w/ lesser sye-bx |
| PGH-18-01 | 241.45 | 242.5 | 1.05 | 1674609 | | | | | | | 0.017 | sye, min x-cut carb veins |
| PGH-18-01 | 242.5 | 243.49 | 0.99 | 589081 | 10 | < 0.1 | 44 | < 0.4 | 84.8 | 30.1 | 0.233 | crbt |
| PGH-18-01 | 243.49 | 244.44 | 0.95 | 589082 | 1 | 0.1 | 34 | < 0.4 | 46.7 | 35.6 | 0.531 | crbt |
| PGH-18-01 | 244.44 | 245.26 | 0.82 | 589083 | 8 | 0.4 | 12 | < 0.4 | 16 | 6.5 | 0.029 | alkali breccia |
| PGH-18-01 | 245.26 | 246.34 | 1.08 | 589084 | 3 | 0.1 | 19 | < 0.4 | 128 | 38.4 | 0.272 | crbt + 50% breccia |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 246.34 | 247.3 | 0.96 | 589085 | 3 | < 0.1 | 23 | < 0.4 | 87.9 | 41.8 | 0.225 | crbt |
| PGH-18-01 | 247.3 | 248.68 | 1.38 | 1674611 | | | | | | | 0.03 | sy |
| PGH-18-01 | 248.68 | 249.93 | 1.25 | 1674612 | | | | | | | 0.013 | sy |
| PGH-18-01 | 249.93 | 251.07 | 1.14 | 1674613 | | | | | | | 0.041 | sy, incr carb veins and bx at end |
| PGH-18-01 | 251.07 | 252 | 0.93 | 1674614 | | | | | | | 0.067 | sy-bx |
| PGH-18-01 | 252 | 253.24 | 1.24 | 1674615 | | | | | | | 0.079 | sy-bx |
| PGH-18-01 | 253.24 | 254.32 | 1.08 | 589087 | 3 | < 0.1 | 25 | < 0.4 | 81 | 19.7 | 0.087 | crbt |
| PGH-18-01 | 254.32 | 255.22 | 0.9 | 589088 | 11 | 0.1 | 21 | < 0.4 | 20.4 | 14.1 | 0.164 | crbt |
| PGH-18-01 | 255.22 | 255.8 | 0.58 | 1674616 | | | | | | | 0.054 | sy |
| PGH-18-01 | 255.8 | 257.06 | 1.26 | 589089 | 3 | < 0.1 | 22 | < 0.4 | 56.5 | 46.7 | 0.167 | crbt + 30% breccia |
| PGH-18-01 | 257.06 | 258.3 | 1.24 | 1674617 | | | | | | | 0.021 | sy w/ carb veining |
| PGH-18-01 | 258.3 | 259.32 | 1.02 | 1674618 | | | | | | | 0.104 | sy-bx |
| PGH-18-01 | 259.32 | 260.32 | 1 | 1674619 | | | | | | | 0.062 | sy/sy-bx |
| PGH-18-01 | 260.32 | 261.42 | 1.1 | 1674620 | | | | | | | 0.022 | sy w/ carb veining |
| PGH-18-01 | 261.42 | 262.4 | 0.98 | 1674621 | | | | | | | 0.054 | sy, ap in carb veins |
| PGH-18-01 | 262.4 | 263.38 | 0.98 | 1674622 | | | | | | | 0.216 | sy, ap in carb veins |
| PGH-18-01 | 263.38 | 264.32 | 0.94 | 1674623 | | | | | | | 0.11 | sy-bx |
| PGH-18-01 | 264.32 | 264.78 | 0.46 | 589090 | 11 | < 0.1 | 11 | < 0.4 | 23.4 | 14.4 | 0.18 | crbt with fluorite |
| PGH-18-01 | 264.78 | 265.82 | 1.04 | 589091 | 3 | < 0.1 | 20 | < 0.4 | 48.1 | 38.5 | 0.119 | breccia |
| PGH-18-01 | 265.82 | 266.76 | 0.94 | 589092 | 4 | 0.1 | 10 | < 0.4 | 27.4 | 12.6 | 0.083 | breccia |
| PGH-18-01 | 266.76 | 267.23 | 0.47 | 589093 | 1 | < 0.1 | 9 | < 0.4 | 55.4 | 5.7 | < 0.003 | crbt with fluorite |
| PGH-18-01 | 267.23 | 268.02 | 0.79 | 589094 | 5 | < 0.1 | 10 | < 0.4 | 30.1 | 12 | 0.026 | breccia |
| PGH-18-01 | 268.02 | 269.2 | 1.18 | 1674624 | | | | | | | 0.044 | sy, bx at top |
| PGH-18-01 | 269.2 | 270.3 | 1.1 | 1674625 | | | | | | | 0.033 | sy w/ carb veins |
| PGH-18-01 | 270.3 | 271.5 | 1.2 | 1674626 | | | | | | | 0.048 | same, min blue amph |
| PGH-18-01 | 271.5 | 272.89 | 1.39 | 1674627 | | | | | | | 0.083 | sy - sy/bx |
| PGH-18-01 | 272.89 | 273.92 | 1.03 | 1674628 | | | | | | | 0.055 | sy w/ carb veins |
| PGH-18-01 | 273.92 | 275.04 | 1.12 | 589095 | 6 | < 0.1 | 35 | < 0.4 | 77 | 73 | 0.456 | crbt |
| PGH-18-01 | 275.04 | 276 | 0.96 | 589096 | 2 | < 0.1 | 32 | < 0.4 | 43 | 34.8 | 0.155 | crbt |
| PGH-18-01 | 276 | 277.15 | 1.15 | 589097 | 2 | < 0.1 | 30 | < 0.4 | 28.3 | 28.7 | 0.15 | crbt |
| PGH-18-01 | 277.15 | 278.3 | 1.15 | 589098 | 2 | < 0.1 | 15 | < 0.4 | 15.2 | 14.8 | 0.665 | crbt |
| PGH-18-01 | 287.52 | 288.8 | 1.28 | 589099 | 4 | < 0.1 | 9 | < 0.4 | 13.6 | 4.8 | 0.265 | crbt (narrower core over 80cm due to drilling error) |
| PGH-18-01 | 288.8 | 290.1 | 1.3 | 589100 | 5 | < 0.1 | 34 | < 0.4 | 77.7 | 9.2 | 0.004 | white crbt |
| PGH-18-01 | 290.1 | 291.33 | 1.23 | 589101 | < 1 | < 0.1 | 89 | < 0.4 | 76.8 | 26.7 | 0.102 | crbt grayish banding at uct |
| PGH-18-01 | 291.33 | 292.27 | 0.94 | 1674629 | | | | | | | 0.103 | sy w/ low angle carb, x-cut amph veins |
| PGH-18-01 | 292.27 | 293.05 | 0.78 | 1674630 | | | | | | | 0.24 | carb<amph+biot-phlog veins, silcarb or mdyke??? |
| PGH-18-01 | 293.05 | 294 | 0.95 | 1674631 | | | | | | | 0.382 | sy w/ 20cm carb+ap vein |
| PGH-18-01 | 294 | 295.09 | 1.09 | 1674632 | | | | | | | 0.04 | fen/sy w/ 15cm cg crbt |
| PGH-18-01 | 295.09 | 295.9 | 0.81 | 1674633 | | | | | | | 0.03 | sy, blue amph veins |
| PGH-18-01 | 295.9 | 296.7 | 0.8 | 589102 | 2 | < 0.1 | 20 | < 0.4 | 88.9 | 25.8 | 0.637 | massive crbt |
| PGH-18-01 | 296.7 | 297.45 | 0.75 | 589103 | < 1 | < 0.1 | 65 | < 0.4 | 66.8 | 13.6 | 0.239 | crbt |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|---|
| PGH-18-01 | 297.45 | 298.44 | 0.99 | 589104 | 7 | < 0.1 | 47 | < 0.4 | 63.2 | 12.3 | 0.33 | bx gran with up to 30 % crbt |
| PGH-18-01 | 298.44 | 299.1 | 0.66 | 589105 | 4 | < 0.1 | 24 | < 0.4 | 34.4 | 6.7 | 0.024 | crbt |
| PGH-18-01 | 308.2 | 309.35 | 1.15 | 1674634 | | | | | | | 0.042 | syw w/ bx at end |
| PGH-18-01 | 309.35 | 310.54 | 1.19 | 589106 | 3 | < 0.1 | 50 | < 0.4 | 14.7 | 4 | 0.171 | interbedded crbt/gran with sulfide blebs |
| PGH-18-01 | 310.54 | 311.56 | 1.02 | 589107 | < 1 | < 0.1 | 22 | < 0.4 | 16.7 | 31.3 | 0.558 | crbt with gran clasts (60%) |
| PGH-18-01 | 311.56 | 312.73 | 1.17 | 1674635 | | | | | | | 0.027 | syw w/ carb-amph veins |
| PGH-18-01 | 312.73 | 313.92 | 1.19 | 1674636 | | | | | | | 0.085 | syw w/ carb-amph veins |
| PGH-18-01 | 313.92 | 315 | 1.08 | 589108 | 2 | < 0.1 | 25 | < 0.4 | 21.1 | 21.3 | 0.165 | crbt |
| PGH-18-01 | 315 | 316 | 1 | 589109 | 4 | < 0.1 | 15 | < 0.4 | 8.9 | 9.3 | 0.207 | crbt |
| PGH-18-01 | 316 | 317 | 1 | 589110 | 4 | < 0.1 | 8 | < 0.4 | 4.4 | 2.3 | 0.018 | crbt |
| PGH-18-01 | 317 | 317.93 | 0.93 | 589112 | 5 | < 0.1 | 10 | < 0.4 | 10.3 | 7.5 | 0.133 | crbt |
| PGH-18-01 | 317.93 | 318.96 | 1.03 | 589113 | 2 | < 0.1 | 19 | < 0.4 | 22.9 | 31.4 | 0.337 | crbt |
| PGH-18-01 | 318.96 | 319.74 | 0.78 | 589114 | 2 | < 0.1 | 15 | < 0.4 | 14.8 | 14.3 | 0.242 | crbt |
| PGH-18-01 | 319.74 | 320.55 | 0.81 | 589115 | 3 | < 0.1 | 16 | < 0.4 | 14.5 | 19.9 | 0.186 | crbt |
| PGH-18-01 | 320.55 | 321.22 | 0.67 | 589116 | < 1 | < 0.1 | 13 | < 0.4 | 12 | 28.6 | 0.144 | mica rich crbt |
| PGH-18-01 | 321.22 | 322 | 0.78 | 589117 | 4 | < 0.1 | 27 | < 0.4 | 8.2 | 40.3 | 0.05 | crbt |
| PGH-18-01 | 322 | 323 | 1 | 589118 | 7 | < 0.1 | 16 | < 0.4 | 48.5 | 31.8 | 0.037 | crbt |
| PGH-18-01 | 323 | 324 | 1 | 589119 | 6 | < 0.1 | 22 | < 0.4 | 34.9 | 19.4 | 0.058 | crbt |
| PGH-18-01 | 324 | 325 | 1 | 589120 | 7 | < 0.1 | 19 | < 0.4 | 9.4 | 14.6 | 0.201 | crbt |
| PGH-18-01 | 325 | 326 | 1 | 589121 | 6 | < 0.1 | 12 | < 0.4 | 10.9 | 20 | 0.353 | crbt |
| PGH-18-01 | 326 | 326.78 | 0.78 | 589122 | 5 | < 0.1 | 23 | < 0.4 | 14.7 | 34.5 | 0.27 | crbt |
| PGH-18-01 | 326.78 | 327.08 | 0.3 | 589123 | 2 | < 0.1 | 22 | < 0.4 | 15.5 | 37 | 0.295 | mica rich crbt |
| PGH-18-01 | 327.08 | 327.94 | 0.86 | 589124 | 3 | < 0.1 | 13 | < 0.4 | 10.1 | 22.4 | 0.173 | crbt |
| PGH-18-01 | 327.94 | 328.75 | 0.81 | 589125 | 3 | < 0.1 | 17 | < 0.4 | 24.8 | 28.9 | 0.412 | crbt |
| PGH-18-01 | 328.75 | 329.8 | 1.05 | 589126 | 3 | < 0.1 | 35 | < 0.4 | 53.4 | 15.8 | 0.243 | crbt |
| PGH-18-01 | 329.8 | 330.81 | 1.01 | 589127 | 3 | < 0.1 | 12 | < 0.4 | 16.5 | 15.7 | 0.542 | crbt |
| PGH-18-01 | 330.81 | 331.81 | 1 | 589128 | 4 | < 0.1 | 9 | < 0.4 | 15.5 | 12.7 | 0.361 | crbt |
| PGH-18-01 | 331.81 | 332.85 | 1.04 | 589129 | 8 | < 0.1 | < 5 | < 0.4 | 2.6 | 1.3 | 0.023 | crbt |
| PGH-18-01 | 332.85 | 333.84 | 0.99 | 589130 | 4 | < 0.1 | < 5 | < 0.4 | 4 | 4.7 | 0.054 | crbt |
| PGH-18-01 | 333.84 | 334.99 | 1.15 | 589131 | 4 | < 0.1 | 9 | < 0.4 | 8.1 | 9.5 | 0.055 | crbt |
| PGH-18-01 | 334.99 | 335.77 | 0.78 | 589132 | 1 | < 0.1 | 31 | < 0.4 | 23.4 | 92.9 | 0.458 | crbt |
| PGH-18-01 | 335.77 | 336.96 | 1.19 | 589133 | 3 | < 0.1 | 34 | < 0.4 | 7.7 | 58 | 0.13 | mgt rich crbt |
| PGH-18-01 | 336.96 | 337.64 | 0.68 | 589134 | 4 | < 0.1 | 11 | < 0.4 | 4.3 | 15.2 | 0.046 | crbt with ap |
| PGH-18-01 | 337.64 | 338.52 | 0.88 | 589135 | 6 | < 0.1 | 20 | < 0.4 | 23.1 | 8.6 | 0.543 | crbt with mica books and ap |
| PGH-18-01 | 338.52 | 339.44 | 0.92 | 589136 | 4 | 0.2 | 8 | < 0.4 | 20 | 7.3 | 0.086 | granite breccia |
| PGH-18-01 | 339.44 | 340.43 | 0.99 | 589137 | < 1 | 0.9 | 25 | < 0.4 | 16.2 | 27 | 0.131 | crbt |
| PGH-18-01 | 340.43 | 340.9 | 0.47 | 589138 | < 1 | 0.6 | 20 | < 0.4 | 16.7 | 25.7 | 0.126 | crbt + ~15cm mica-mt band |
| PGH-18-01 | 340.9 | 341.44 | 0.54 | 589139 | 2 | 0.8 | 13 | < 0.4 | 9.8 | 7.2 | 0.115 | gran, 10-15% carb veins |
| PGH-18-01 | 341.44 | 342.16 | 0.72 | 589140 | 1 | 0.4 | 30 | < 0.4 | 34.5 | 23.9 | 0.355 | crbt, whisby banding, lower half of sample with gran clasts |
| PGH-18-01 | 342.16 | 343.32 | 1.16 | 589141 | 5 | 0.6 | 15 | < 0.4 | 19.3 | 7 | 0.03 | bx'td alt'd gran |
| PGH-18-01 | 343.32 | 344.45 | 1.13 | 589142 | 3 | < 0.1 | 18 | < 0.4 | 46.5 | 26.2 | 0.144 | mg massive pink crbt, 15cm bx'td gran clast |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 344.45 | 345.5 | 1.05 | 589143 | 5 | 0.5 | 6 | < 0.4 | 7.1 | 2.5 | 0.016 | cg gran, minor carb veining |
| PGH-18-01 | 345.5 | 345.76 | 0.26 | 589144 | 2 | < 0.1 | 5 | < 0.4 | 6.5 | 5.6 | 0.037 | crbt w/ blue-grey wispy bands |
| PGH-18-01 | 345.76 | 346.36 | 0.6 | 589145 | < 1 | 0.4 | 7 | < 0.4 | 10.3 | 2 | 0.02 | gran, chl-ep alt'n |
| PGH-18-01 | 346.36 | 347.03 | 0.67 | 589146 | < 1 | 0.2 | 46 | < 0.4 | 8.6 | 66 | 0.138 | crbt w/ blue-grey wispy bands |
| PGH-18-01 | 347.03 | 347.85 | 0.82 | 589147 | 9 | 0.2 | 33 | < 0.4 | 11.4 | 49.2 | 0.197 | crbt w/ blue-grey wispy bands |
| PGH-18-01 | 347.85 | 348.53 | 0.68 | 589148 | 1 | < 0.1 | 24 | < 0.4 | 10.6 | 68.9 | 0.297 | crbt (mt+ap?), 500cps |
| PGH-18-01 | 348.53 | 349.42 | 0.89 | 589150 | < 1 | 0.4 | 31 | < 0.4 | 13.3 | 35.9 | 0.133 | gran w/ 20% carb bx'tn |
| PGH-18-01 | 349.42 | 350.15 | 0.73 | 589151 | 9 | 0.1 | 17 | < 0.4 | 13.1 | 18.2 | 0.158 | crbt, vcg at UCT |
| PGH-18-01 | 350.15 | 351.13 | 0.98 | 589152 | < 1 | 0.3 | 14 | < 0.4 | 12.8 | 12.4 | 0.051 | gran w/ carb veining (cg qtz) |
| PGH-18-01 | 351.13 | 352.09 | 0.96 | 589153 | < 1 | < 0.1 | 53 | < 0.4 | 50.8 | 172 | 0.852 | gran bx w/ 40% carb veining (much //-to CA) |
| PGH-18-01 | 352.09 | 353 | 0.91 | 589154 | < 1 | 0.1 | 55 | < 0.4 | 26.9 | 39.2 | 0.363 | vcg pink crbt, amph+sulph patches |
| PGH-18-01 | 353 | 353.4 | 0.4 | 589156 | < 1 | 0.3 | 23 | < 0.4 | 15.6 | 6.1 | 0.052 | gran (mafic veining only) |
| PGH-18-01 | 353.4 | 353.65 | 0.25 | 589157 | 5 | 0.2 | 29 | < 0.4 | 135 | 4.1 | 0.028 | white crbt, 1-4% deep red to black hem (non-mag) |
| PGH-18-01 | 353.65 | 354.05 | 0.4 | 589158 | 1 | 0.3 | 19 | < 0.4 | 12.7 | 2.5 | 0.013 | cg gran |
| PGH-18-01 | 354.05 | 354.57 | 0.52 | 589159 | 4 | < 0.1 | 24 | < 0.4 | 42.3 | 45.8 | 0.536 | crbt, irreg bands, minor kspar + mafic clasts |
| PGH-18-01 | 354.57 | 355.05 | 0.48 | 589160 | 6 | 0.3 | 36 | < 0.4 | 31.4 | 16.5 | 0.06 | mica rock |
| PGH-18-01 | 355.05 | 356.28 | 1.23 | 1674637 | | | | | | | 0.089 | sy, abundant xcut carb w/ rxn rims |
| PGH-18-01 | 356.28 | 357.51 | 1.23 | 1674638 | | | | | | | 0.042 | same --> sye/gran |
| PGH-18-01 | 357.51 | 358.51 | 1 | 1674639 | | | | | | | 0.054 | sye/gran |
| PGH-18-01 | 358.51 | 359.6 | 1.09 | 1674640 | | | | | | | 0.073 | gran w/ irreg green-grey mafic bands (ap in carb vein) |
| PGH-18-01 | 359.6 | 360.8 | 1.2 | 1674641 | | | | | | | 0.094 | same to gran |
| PGH-18-01 | 360.8 | 361.92 | 1.12 | 1674642 | | | | | | | 0.018 | gran x-cut carb veining w/ rxn rims |
| PGH-18-01 | 361.92 | 362.8 | 0.88 | 1674643 | | | | | | | 0.014 | gran |
| PGH-18-01 | 362.8 | 363.55 | 0.75 | 589161 | 5 | < 0.1 | 26 | 0.7 | 76.5 | 18.6 | 0.502 | 50:50 bx (obliterated textures) |
| PGH-18-01 | 363.55 | 364.77 | 1.22 | 589162 | 2 | 0.3 | 20 | < 0.4 | 55.9 | 25.6 | 0.761 | bx'td gran |
| PGH-18-01 | 364.77 | 366 | 1.23 | 589163 | 2 | 0.3 | 12 | < 0.4 | 17.5 | 9.4 | 0.06 | bx'td gran |
| PGH-18-01 | 366 | 366.58 | 0.58 | 589164 | 6 | < 0.1 | 10 | < 0.4 | 20.2 | 9.8 | 0.177 | 50:50 bx (more primary textures preserved) |
| PGH-18-01 | 366.58 | 367.75 | 1.17 | 1674644 | | | | | | | 0.024 | gran w/ mdyke |
| PGH-18-01 | 367.75 | 369 | 1.25 | 1674645 | | | | | | | 0.025 | gran w/ minor carb veins |
| PGH-18-01 | 369 | 370.1 | 1.1 | 1674646 | | | | | | | 0.013 | gran |
| PGH-18-01 | 370.1 | 371.1 | 1 | 1674647 | | | | | | | 0.038 | gran w/ x-cut carb veins |
| PGH-18-01 | 371.1 | 372.13 | 1.03 | 1674648 | | | | | | | 0.024 | gran w/ x-cut carb veins |
| PGH-18-01 | 372.13 | 373.35 | 1.22 | 1674649 | | | | | | | 0.016 | gran w/ single carb vein |
| PGH-18-01 | 373.35 | 374.02 | 0.67 | 589165 | 3 | < 0.1 | 27 | < 0.4 | 77.6 | 10.8 | 0.054 | pitted crbt w/ sulphides |
| PGH-18-01 | 381.52 | 382.28 | 0.76 | 589166 | < 1 | 0.2 | 15 | < 0.4 | 13 | 8.7 | 0.056 | vcg pink crbt & gran clasts |
| PGH-18-01 | 385.9 | 386.75 | 0.85 | 589167 | 6 | < 0.1 | 50 | 0.8 | 43.6 | 6.9 | 0.061 | assimilated gran/crbt bx |
| PGH-18-01 | 386.75 | 387.69 | 0.94 | 589168 | 6 | < 0.1 | 25 | < 0.4 | 77.6 | 30.9 | 0.157 | sim to prev |
| PGH-18-01 | 387.69 | 388.86 | 1.17 | 1674650 | | | | | | | 0.08 | sye - x-cut carb veins w/ ap |
| PGH-18-01 | 388.86 | 390 | 1.14 | D08051 | | | | | | | 0.139 | same |
| PGH-18-01 | 390 | 391.12 | 1.12 | D08052 | | | | | | | 0.024 | gran, min carb veining |
| PGH-18-01 | 391.12 | 392.29 | 1.17 | D08053 | | | | | | | 0.023 | grgn w/ 30cm carb (+sye-bx) |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | TI (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 392.29 | 393.28 | 0.99 | D08054 | | | | | | | 0.121 | sy/gran-bx w/ cg dark ap+amph in crbt |
| PGH-18-01 | 393.28 | 394.38 | 1.1 | D08055 | | | | | | | 0.383 | sy-bx/gran |
| PGH-18-01 | 394.38 | 395.39 | 1.01 | D08056 | | | | | | | 0.117 | sy-bx/gran |
| PGH-18-01 | 395.39 | 396.6 | 1.21 | 589169 | < 1 | 0.2 | 12 | < 0.4 | 6.9 | 11.5 | 0.073 | crbt + 30cm gran clast + micaceous mafic dyke? |
| PGH-18-01 | 396.6 | 397.53 | 0.93 | 589170 | 2 | < 0.1 | 11 | < 0.4 | 8.5 | 18 | 0.172 | crbt (poss cg apatite under UV) |
| PGH-18-01 | 397.53 | 398.47 | 0.94 | D08058 | | | | | | | 0.067 | gran w/ 30cm zone mafic (micaceous) + carb bands |
| PGH-18-01 | 398.47 | 399.44 | 0.97 | D08059 | | | | | | | 0.02 | gran - narrower mafic bands + blue amph |
| PGH-18-01 | 399.44 | 400.46 | 1.02 | D08060 | | | | | | | 0.024 | mixed gran/mafic bands w/ 25cm barren white carb vein |
| PGH-18-01 | 400.46 | 401.52 | 1.06 | D08061 | | | | | | | 0.043 | gran/sye w/ carb-amph veining |
| PGH-18-01 | 401.52 | 402.13 | 0.61 | 589171 | 4 | < 0.1 | 20 | < 0.4 | 21.5 | 6 | 0.117 | crbt - bx'td from 402m |
| PGH-18-01 | 402.13 | 403.43 | 1.3 | 589172 | 4 | 0.3 | 15 | < 0.4 | 34.1 | 14.1 | 0.255 | mixed bx, micaceous + gran zones |
| PGH-18-01 | 403.43 | 404.14 | 0.71 | 589173 | 8 | < 0.1 | 8 | < 0.4 | 8 | 2.4 | 0.03 | gran w/ <20% x-cutting carb veins, sulph+ap? In veins |
| PGH-18-01 | 404.14 | 404.7 | 0.56 | 589174 | 3 | < 0.1 | 46 | 0.5 | 23.6 | 6.7 | 0.111 | crbt |
| PGH-18-01 | 404.7 | 405.55 | 0.85 | 589176 | 8 | 0.4 | 10 | < 0.4 | 6.8 | 1 | 0.009 | massive cg micaceous grsn w/ carb patches |
| PGH-18-01 | 405.55 | 406.15 | 0.6 | 589177 | < 1 | 0.2 | 24 | < 0.4 | 23.2 | 9.6 | 0.097 | crbt w/ 25cm alt'd gran, deep purple hem veins/patches |
| PGH-18-01 | 406.15 | 407.12 | 0.97 | D08062 | | | | | | | 0.014 | sy/gran w/ min carb veining |
| PGH-18-01 | 407.12 | 408.1 | 0.98 | D08063 | | | | | | | 0.011 | sy/gran |
| PGH-18-01 | 408.1 | 408.6 | 0.5 | 589178 | 2 | < 0.1 | 42 | < 0.4 | 21.3 | 10.8 | 0.484 | banded crbt |
| PGH-18-01 | 408.6 | 409.62 | 1.02 | D08064 | | | | | | | 0.014 | cg gran, no carb |
| PGH-18-01 | 409.62 | 410.5 | 0.88 | D08065 | | | | | | | 0.023 | gran w/ amph+/-carb veins |
| PGH-18-01 | 410.5 | 411.66 | 1.16 | D08066 | | | | | | | 0.032 | cg gran, 15cm carb vein |
| PGH-18-01 | 411.66 | 412.71 | 1.05 | D08067 | | | | | | | 0.018 | cg gran <5cm carb vein |
| PGH-18-01 | 412.71 | 413.95 | 1.24 | D08068 | | | | | | | 0.079 | cg gran <15cm carb vein/bx |
| PGH-18-01 | 413.95 | 414.35 | 0.4 | 589179 | 1 | 0.2 | 22 | < 0.4 | 46.7 | 14 | 0.137 | crbt |
| PGH-18-01 | 414.35 | 415.74 | 1.39 | D08069 | | | | | | | 0.009 | chl fract'd sye, min carb |
| PGH-18-01 | 415.74 | 416.7 | 0.96 | 589180 | 4 | < 0.1 | 8 | < 0.4 | 112 | 5.2 | 0.015 | crbt |
| PGH-18-01 | 429.2 | 429.68 | 0.48 | 589181 | < 1 | < 0.1 | 76 | < 0.4 | 24.1 | 8.2 | 0.072 | crbt |
| PGH-18-01 | 438.89 | 439.62 | 0.73 | 589182 | < 1 | 0.2 | 86 | < 0.4 | 22.4 | 41.7 | 0.062 | fg crbt |
| PGH-18-01 | 442.47 | 442.75 | 0.28 | 589183 | < 1 | 0.2 | 14 | < 0.4 | 34.2 | 8.3 | 0.115 | crbt, poss pych |
| PGH-18-01 | 445.59 | 446.79 | 1.2 | 589184 | 8 | < 0.1 | 40 | < 0.4 | 32.8 | 13.5 | 0.052 | crbt + 'absorbed' gran clasts |
| PGH-18-01 | 446.79 | 447.2 | 0.41 | 589185 | 3 | < 0.1 | 18 | < 0.4 | 99.8 | 4.7 | 0.006 | hem spotted crbt |
| PGH-18-01 | 447.2 | 447.7 | 0.5 | 589186 | 5 | 0.3 | 13 | < 0.4 | 46.7 | 14.1 | 0.056 | carb bx'td gran |
| PGH-18-01 | 449.6 | 450 | 0.4 | 589187 | 3 | < 0.1 | 49 | < 0.4 | 41 | 12.5 | 0.154 | crbt |
| PGH-18-01 | 460.11 | 460.42 | 0.31 | 589188 | 1 | 0.4 | 100 | < 0.4 | 53.2 | 16.8 | 0.112 | crbt |
| PGH-18-01 | 466.63 | 466.83 | 0.2 | 589189 | 2 | < 0.1 | 99 | 0.5 | 28 | 14.6 | 0.006 | crbt |
| PGH-18-01 | 471.08 | 471.98 | 0.9 | 589190 | < 1 | 0.3 | 75 | < 0.4 | 51.2 | 40.9 | 0.122 | pink crbt, ap bands under UV |
| PGH-18-01 | 473.96 | 474.44 | 0.48 | 589191 | < 1 | 0.1 | 32 | < 0.4 | 61.6 | 16.5 | 0.046 | crbt |
| PGH-18-01 | 474.44 | 475.23 | 0.79 | 589192 | 4 | 0.3 | 17 | < 0.4 | 34.1 | 9.6 | 0.087 | gran w/ x-cutting carb veins (1 w/ cg hem?) + blue-grey amph veins |
| PGH-18-01 | 492.85 | 493.55 | 0.7 | 589193 | 4 | 0.3 | 17 | < 0.4 | 47.7 | 4.1 | 0.018 | gran |
| PGH-18-01 | 493.55 | 494.65 | 1.1 | 589194 | < 1 | < 0.1 | 9 | < 0.4 | 9.3 | 1.7 | 0.021 | crbt, ap in bands |
| PGH-18-01 | 494.65 | 495.85 | 1.2 | 589195 | < 1 | < 0.1 | 55 | < 0.4 | 30.7 | 18.4 | 0.067 | crbt, wispy ap+ksp+py bands |

Assays

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-01 | 495.85 | 496.74 | 0.89 | 589196 | < 1 | < 0.1 | 15 | < 0.4 | 35.6 | 4.6 | 0.007 | crbt, banding only at end |
| PGH-18-01 | 496.74 | 497.58 | 0.84 | 589197 | < 1 | < 0.1 | 35 | < 0.4 | 48 | 8.3 | 0.076 | crbt, aggregated blebs py+drk grey hem? Or pych? |
| PGH-18-01 | 497.58 | 498.43 | 0.85 | 589198 | < 1 | < 0.1 | 26 | < 0.4 | 35.4 | 5.6 | 0.081 | crbt, cg ap under uv |
| PGH-18-01 | 498.43 | 499.36 | 0.93 | 589199 | < 1 | < 0.1 | 31 | < 0.4 | 44.3 | 10.5 | 0.253 | crbt |
| PGH-18-01 | 499.36 | 499.93 | 0.57 | 589200 | < 1 | 0.3 | 9 | < 0.4 | 5.9 | 2 | 0.016 | gran (last sample PGH-18-01) |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|------------------|----------|-----------|
| PGH-18-01 | 63.0 | 63.0 | 0 | 589020 | A18-03553 | STANDARD | Oka 1 | 2.42 | 0.514 |
| PGH-18-01 | 124.36 | 124.36 | 0 | 589050 | A18-03553 | STANDARD | Oka 1 | 2.4 | 0.5 |
| PGH-18-01 | 234.45 | 234.45 | 0 | I674603 | A18-09217 | STANDARD | Oka 1 | 2.43 | 0.542 |
| PGH-18-01 | 242.5 | 242.5 | 0 | I674610 | A18-09217 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-01 | 247.3 | 247.3 | 0 | 589086 | A18-03553 | STANDARD | Oka 1 | 2.46 | 0.492 |
| PGH-18-01 | 317.0 | 317.0 | 0 | 589111 | A18-03918 | STANDARD | Oka 1 | 2.43 | 0.527 |
| PGH-18-01 | 348.53 | 348.53 | 0 | 589149 | A18-03918 | BLANK | Marble | 0.04 | < 0.003 |
| PGH-18-01 | 353.0 | 353.0 | 0 | 589155 | A18-03918 | STANDARD | Oka 1 | 2.36 | 0.519 |
| PGH-18-01 | 395.39 | 395.39 | 0 | D08057 | A18-09217 | STANDARD | Oka 1 | 2.39 | 0.527 |
| PGH-18-01 | 404.7 | 404.7 | 0 | 589175 | A18-03918 | BLANK | Marble | 0.03 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|-----------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 21-Mar-2018 |
| Township/Area: | Killala Lake Area | End Date: | 25-Mar-2018 |
| Claims (converted): | 230752 | Described by: | B. Clark, B.Sc. |
| Claims (legacy): | TB 4256251, TB 4256258 | Log date: | 26-Mar-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 338.00° | | Easting: 519437 | | Core size: HQ | | Cemented: No | |
| Plunge: -50.00° | | Northing: 5432594 | | Casing: Pulled | | Stored: Yes | |
| Length: 372.0 m | | Elevation: 310.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-02 | Reflex | 42 | 334.2 | -53.3 | 56555 |
| PGH-18-02 | Reflex | 93 | 332.9 | -53.4 | 56249 |
| PGH-18-02 | Reflex | 144 | 334.1 | -53.7 | 56447 |
| PGH-18-02 | Reflex | 195 | 335.5 | -53.1 | 56453 |
| PGH-18-02 | Reflex | 249 | 335.1 | -53.2 | 56450 |
| PGH-18-02 | Reflex | 300 | 334.4 | -53.2 | 56488 |
| PGH-18-02 | Reflex | 354 | 334.2 | -53.3 | 56391 |

Description

Rods stuck at 369m.

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|------------------------|---|
| PGH-18-02 | 0 | 27.6 | OVB | Casing | Casing, no recovery |
| PGH-18-02 | 27.6 | 39.33 | GRAN | Granite | <p>Medium to coarse grained (crystals up to 5mm), grain size increasing down, medium pink, 15-25% qtz. Local fg mafic dykes from 1-10cm, contacts are ~ perpendicular to core axis, green-dark green, non-magnetic.</p> <p>near contacts with carbonatite sharp increase in chlorite (blue green-green -dark grey) and mafics (amphibole?), chl replacing biotite/micas, locally up to 35%.</p> <p>29.55-30.8: carbonatite dyke, undulating contact at 10-15 TCA, pale pink to cream, massive, patchy hematite <2mm, 2% pyrite disseminated and local blebs up to 10mm. apatite clasts 5mm-30mm (white-blue under UV). 3m cross cutting calcite veins. mag sus 0.1 , scint 200 c/s</p> <p>35.44-35.72: Carbonatite vein, sharp UC & LC, contact rimmed by blue-grey vfg-fg chlorite(?). pale pink to cream colour, trace pyrite (disseminated, blebs up to 20mm near contacts). Dominantly orange fluorescence (calcite), with trace blue (apatite <3mm) under UV. patchy hematite along discontinuous fractures/disseminated. Mag sus 0.35, scint 170c/s</p> |
| PGH-18-02 | 39.33 | 42 | CRBT-BX | Carbonatite w/ Granite | <p>Multiple carbonatite veins from 20-50cm with granitic zones (clasts?) up to 50cm.</p> <p>39.33-40: Carbonatite; pale pink-cream, massive, trace disseminated pyrite. Apatite(white-blue UV light) fg, sub-rounded. Clasts of granite up to 10cm. Contacts with granite are commonly gradational with grading from carbonatite, to interstitial calcite w/biotite(+/- amph). Rims of granitic clasts show increased chlorite alteration. contact ~20d TCA</p> <p>40.28-40.5: Carbonatite, mottled texture, pale pink to green-blue, apatite (green blue [NL], white-blue[UV]) as discontinuous bands, crystals 3mm-30mm, sub-angular to sub-rounded, commonly rimmed by hematite. mag sus 0.12, scint 180c/s</p> <p>41.03-41.76: Carbonatite; pale pink to cream, discontinuous "bands" of blue green containing apatite up to 2cm. Trace fg pyrite up to 5mm. Brecciated lower contact zone 25cm, angular fractured clasts up to 7cm,fg, black-blue green, dominantly biotite/chlorite/amph?, dissolution reaction rims, patchy hematite alteration. mag sus 0.11 (carbonatite), mag sus 0.34 (clasts). scint 190c/s</p> |
| PGH-18-02 | 42 | 44.8 | SYE-BX | Breccia Zone | <p>Clasts of Alkali feldspathic rock (syenite?), 10-15% qtz, fine to medium grained, medium pink to blue, crystals up to 5mm, numerous cross cutting carbonatite veins from 3mm to 20cm. Blueish mineral along contacts/fractures and disseminated through alkali rock, replacing biotite? (amphibole?, hardness 5-6, radiating crystals). Patchy hematitic alteration along fractures/grain boundaries.</p> <p>Carbonatite veins pale pink to light purple, mottled apatite up to 2cm (white-blue in UV), veins commonly rimmed by blue (amph?), clasts of ALK have dissolution boundaries.</p> <p>43.26-43.9: Carbonatite vein, pale pink to cream, hematite along fractures, mottled,</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|--------------------------------|--|
| PGH-18-02 | 44.8 | 47.4 | CRBT | Carbonatite | Possibly two phases or zoned carbonatite with course grained core. Brecciated upper and lower contact 'zones' extend 10-15cm either side of carbonatite. 44.8-45.72: light purple to cream-pink, fg, weakly weathered, trace disseminated py, hematite along discontinuous 'bands' commonly rimming dolomite (light green-opaque, up to 2cm masses) and disseminated through groundmass. Under UV light discontinuous bands are whiteish blue (H4, reacts with HCL when powdered), surrounded by orange (calcite?). 30cm clast of alkali felspathic rock; 10-15% qtz, dissolution boundaries, patchy hematite along grain boundaries. Lower contact sharp @ 35dTCA. scint 240c/s 45.72-46.67: Coarse grain carbonatite, cream to pale pink, crystals up to 3cm, disseminated py 2% euhedral crystals up to 2mm, disseminated blue-grey mineral (H4-5, poorly formed crystals, batches up to 3mm, associated with py, possibly another sulphide?). Gradational lower contact. scint 220c/s 46.67-47.4: Similar to first carbonatite unit described in section. cross cut by veins up to 2cm. brecciated lower contact. |
| PGH-18-02 | 47.4 | 50.2 | GRAN | Granite | Medium to coarse grained (crystals up to 5mm), medium to dark pink-cream, 10-15% qtz, fenitized (blue-green, radiating, H5, mineral selectively pervasive, occurring along/with carbonatite veins). Multiple carbonatite veins from 2-8cm, various orientations, vary from light purple-pink-cream, trace disseminated sulphides with higher concentrations along vein margins. irregular lower contact. |
| PGH-18-02 | 50.2 | 51.45 | CRBT | Carbonatite | Fine to course grained, crystals up to 2cm, cream to light pink, trace disseminated pyrite(+sulphides), pods of apatite(? White under UV) up to 3cm. Blue-green mineral, H5, fg, elongated blades (actinolite?, or other amph?). Brecciated lower contact. |
| PGH-18-02 | 51.45 | 61.5 | GRAN | Granite, phases of Carbonatite | Medium to coarse grained, crystals up to 7mm, 10-15% qtz, 15% mafics, biotite commonly being replaced by chlorite, blue amph?(described above) occurring along fractures and patchy in areas of increased carbonatite veining . 53.1-53.6: fg carbonatite vein, massive, light grey-green, patchy hematite, trace disseminated py, sharp lower contact. 55.90-56.04: cg carbonatite vein, crystals up to 2cm, cream to pale pink, rimmed by chl, patchy hematite 56.1-56.35: fg carbonatite vein, light purple to red (hematite), rimmed by vfg blue amph? |
| PGH-18-02 | 61.5 | 62.3 | CRBT | Carbonatite | Medium to coarse grained , crystals up to 2cm, undulating to irregular contact, pale pink to cream-light purple, pods of apatite(?)[white under UV, pale green in normal light] up to 3cm with inclusions of blue-green fg mineral (amph?), disseminated hematite up to 3mm, 2% disseminated and blebs of fg pyrite (+other dark fg sulphides?) |
| PGH-18-02 | 62.3 | 64.38 | GRAN | Granite | Fg to cg alkali, crystals from 1-15mm, red to grey-blue, 15% qtz, 15% mafics (biotite being replaced by chl, blue-grey mineral (amph?)). Carbonatite veins(3) up to 20cm; pale pink to cream, locally discontinuous bands of hematite+blue amph(?)+apatite?, patchy hematite, |
| PGH-18-02 | 64.38 | 65.65 | CRBT | Carbonatite | Massive, fg, medium pink to cream, contacts are finer grained and grey-light purple, disseminated py 2%, patchy hematite, upper/lower contact are <10d TCA; brecciated. Under UV light vein is dominantly orange (calcite?) with 'pods' of white (apatite?, up to 2cm, in normal light is opaque, H: 3-4, concentrated throughout finer grained contact zones). scint up to 220c/s |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|----------------------------------|--|
| PGH-18-02 | 65.65 | 66.9 | GRAN | Granite | Fg to cg, crystals up to 5mm, red-pink, pervasive hematite alteration(?), 10-15% qtz, 15% mafic minerals (micas being replaced by chl). Minor carbonatite veins <3cm |
| PGH-18-02 | 66.9 | 67.94 | CRBT | Carbonatite | Undulating upper contact at ~15d TCA. Pale pink to cream, brecciated lower contact. Massive, pods of opaque grey(H3-4, White under UV) up to 2cm. Patchy hematite, disseminated sulphides 2% (pyrite). Scint 180c/s |
| PGH-18-02 | 67.94 | 74.28 | GRAN | Granite w/ Carbonatite | Fg to cg alkali, crystals up to 5mm; crystal size varies across section, qtz crystals up to 10-15%, mafics 15% (biotite/phlogopite? Being altered to chl, blue amph). Multiple carbonatite veins varying from 3cm to 20cm, commonly rimmed by blue amp/chl? 68.6-69.00: CRBT vein, cream to pink-green blue, weakly banded, disseminated blue sub-metallic sulphide(?), patchy hematite, undulating lower contact, rimmed by blue amph(?) 70.95-71.34: weakly banded, fg margins with coarse grain core. crystals up to 2cm, hematite along 'band' plains, opaque apatite?(white under UV) crystals/pods up to 2cm. sharp upper and lower contacts at 70 dTCA. 72.90-73.10: crbt vein, pink, fg, contacts rimmed by blue amph(?)/chl, LC @ 40dTCA |
| PGH-18-02 | 74.28 | 74.84 | CRBT | Carbonatite | Cream-light grey to light purple, weakly possibly pseudo banding from alteration, disseminated hematite, trace disseminated py. Under UV light white apatite(?) along grain boundaries |
| PGH-18-02 | 74.84 | 81.3 | GRAN | Granite | Fg to cg, xtals up to 2cm, 15% qtz, 10% mafics (bt being locally replaced by chl), chl along fractures, patchy potassic alteration(?). Minor phases of crbt vein up to 20cm. |
| PGH-18-02 | 81.3 | 81.9 | CRBT | Carbonatite | Massive, brecciated upper/lower contact, cream-light pink-blue-green, apatite(? White under UV, opaque, rimmed with hematite) discontinuous band ~2cm wide at upper contact. Disseminated hematite, trace disseminated py |
| PGH-18-02 | 81.9 | 88.45 | SYE | Alkali | Fg-cg, pink, fenitized (blue amph along fractures, near crbt veining, locally replacing bt?), chl also present along fractures and locally replacing bt, local zones up to 60% biotite. Phases of crbt veins from 2-20cm, large veins described below 89.90-85.10: cream to light pink-purple, coarse grain 'core', rimmed by fg crbt and vein envelope blue amph/chl, dark purple fluorite, patchy hematite, trace disseminated py. |
| PGH-18-02 | 88.45 | 89.8 | CRBT | Carbonatite | Light purple-cream pink, fg to cg, open weathered fractures, mottled apatite 'bands/pods' concentrated around lower contact. Cross cut by late stage low angle crbt veins 2cm wide. Disseminated hematite and along fractures, trace py disseminated and blebs up to 2mm, brecciated contacts, LC ~25d TCA. |
| PGH-18-02 | 89.8 | 92.24 | QTZ-SYE | Alkali (granite) and Carbonatite | Fg-mg granite, pink-red, 15% qtz, 10-15% mafics (bt, being replaced/partially by chl). 90.25-90.5: CRBT vein w\ alkali clasts, cream to light purple-pink, fg-cg locally xtals up to 3cm, pod of apatite up to 3cm across(? Red-opaque in normal, H4, white under UV) 91.7-92: crbt vein, cream-light pink, fg-cg xtals up to 1.5cm, fg phase near contacts, ~10% apatite, vein enveloped by chlorite/blue amph?, disseminated hem, trace disseminated py, UC @ 65/180 (α/β) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------------------|--|
| PGH-18-02 | 92.24 | 105.3 | SYE | Alkali Feldspathic rock | Fg-cg, crystals from 1mm-10mm, reddish-pink to black, weakly defined alternating zones of finer grained and course grained, fg sections containing more bt (up to 20%), bt commonly has chl (blue-green) along rims and locally completely replaced. Veins/veinlets of qtz +/- qtz/carb up to 10mm wide, with potassic alteration envelope(? within envelope bt replaced by chl). 98.75-99.32: crbt vein, pale pink-cream, xtals up to 10mm, fg near contact, 'wisps' of apatite up to 3cm long, larger crystals concentrated near contacts. disseminated trace py, LC is brecciated. |
| PGH-18-02 | 105.3 | 106.45 | CRBT | Carbonatite Vein | Pale pink-cream to light purple, fg near contacts, cg 'core' w/ crystals up to 25mm. Pods pf apatite xtals up to 5cm. Hematite along crystal boundaries/disseminated, trace disseminated sulfides. Lower contact planar at 45/290. |
| PGH-18-02 | 106.45 | 107.14 | GRAN | Granite | Light-dark pink, fg-cg grain size varies in weak bands, 15% qtz, bt commonly alt to chl, brecciated upper and lower contact |
| PGH-18-02 | 107.14 | 107.89 | CRBT | Carbonatite vein | Massive, poorly formed crystals up to 25mm, light pink-cream to purple, apatite ~10% (light green-opaque poorly formed crystals, H~5, dissolves in HCL when powdered). Trace disseminated py (locally visible euhedral crystals), disseminated hematite (locally black-submetallic vfg). |
| PGH-18-02 | 107.89 | 115 | QTZ-SYE | Alkali | Fg-cg, crystals up to 10mm, 10-15% qtz, mafics (bt/pyx) commonly alt to chl (locally completely replaced) up to 20% locally. Minor crbt veins up to 8cm. |
| PGH-18-02 | 115 | 115.62 | CRBT | CRBT(?) | Dominantly carbonatite, contains sub-rounded clasts of glimmerite(? Dominated by bt 70%, with fracture fill of carbonate, minor hematite, and disseminated sulphides), clasts are up to 4cm. Crbt is light pink-cream, contains weak bands/wisps defined blue-green vfg amph(?). Gradational lower contact with alteration halo. |
| PGH-18-02 | 115.62 | 118.03 | QTZ-SYE | Alkali | Crystals from 1-7mm, 15% qtz, 15% mafics (bt +/- pyx), fractures filled with chl / blue bladey amph(?), potassic alteration(?) along grain boundaries. Sharp lower contact with alteration halo. |
| PGH-18-02 | 118.03 | 123 | CRBT | Carbonatite | Massive, pale pink-cream to light purple, fracture fill of fg blue amph, apatite crystals up to 1cm, disseminated trace sulphides (py), disseminated hematite. Lower 0.5m brecciated alkali feldspathic rock. |
| PGH-18-02 | 123 | 134.96 | MDYKE | Mafic Dyke | Magnetic, fg, vesicles filled with carb, fractures coated in chl. Undulating upper and lower contacts. |
| PGH-18-02 | 134.96 | 139.15 | QTZ-SYE | Alkali Feldspathic rock | Fg-cg, pink-red, crystals up to 2cm, 15% qtz, fracture fill of chl, locally increased bt (replaced by chl) up to 15%. |
| PGH-18-02 | 139.15 | 150.2 | CRBT | Carbonatite w/ Alkali Bx | Pale pink-cream to light purple, multiple phases of crbt, cg sections lighter in colour with crystals up to 3cm, fg phases grey-purple. Local well formed pyrochlore crystals from 1-4mm. Locally weathered fractures from 143-144.60. Disseminated trace pyrite, disseminated hematite along grain boundaries and fractures. local purple fluorite parallel to alternating bands of fg/cg crbt. 140-142: bx alkali with crbt veins |
| PGH-18-02 | 150.2 | 154.45 | SYE-BX | Alkali bx w/ carbonatite infill | Brecciated Alkali as described above, Crbt veins up to 5cm. |
| PGH-18-02 | 154.45 | 157.3 | CRBT | Carbonatite vein | Low angle TCA crbt vein, undulating upper/lower contact, cream to light purple, locally weakly banded alternating bands of calcite/apatite rich, apatite xtals up to 2cm, disseminated hem, patches of dark purple fluorite up to 2cm. Clasts of alkali within vein are nearly completely altered with only cores intact. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------------|--|
| PGH-18-02 | 157.3 | 181.2 | SYE-BX | Alkali bx w/ Carbonatite veins | Fg-cg, pink-light red, crystals up to 7mm, locally brecciated with carbonatite infill, chl commonly replacing mafics (bt/pyx), 15-20% qtz. Carbonatite veins less than 10cm locally up to 0.5m. 163.4-164: Carbonatite vein, cream-light purple, local apatite xtals up to 5mm, disseminated hem, brecciated contacts, trace disseminated sulphides. 175.8-176.5: crbt vein, mottled, light pink to cream, green-blue. disseminated fg hematite and fluorite. |
| PGH-18-02 | 181.2 | 187.4 | CRBT | Carbonatite w/ minor Granite | Carbonatite fg-cg, mottled texture, locally weakly banded, light pink-cream to light purple, light purple zones; colour may be attributed to increase in hematite. Local crystals of apatite up to 5cm (light green, H5, white under UV (mid-wave), possible 'pod' of ferro-columbite at 186.32m (dark red-grey, H5?) 184.6-184.95: Granite 185.60-185.90: Granitic bx |
| PGH-18-02 | 187.4 | 196.44 | GRAN | Granite | Fg-cg, crystals up to 7mm, medium pink to light red, patchy hematite varying in intensity from weak to strong, 15% qtz, biotite (10-15%), mafics commonly altered by chl, upper contact near crbt vein is brecciated with infill of blue vfg amph(?) described above. |
| PGH-18-02 | 196.44 | 201.1 | CRBT | Carbonatite | Fg-cg, crystals up to 3cm, light pink-cream to light purple to red, purple red colouration in fg zones with increased hematite. 196.44-197.40: fg, increased hematitic alteration, local gran clasts. 197.4-201: cg zone, massive, apatite(?) crystals/pods up to 3cm, commonly rimmed by hematite. Trace disseminated columbite(?) or tantalite(?) (fg, black, submetallic, H6). disseminated hematite. patchy fg fluorite. Brecciated lower contact Scint 220cps. |
| PGH-18-02 | 201.1 | 208.34 | SYE-BX | Carbonatite veins and Alkali breccia | Dominated by alkali bx, crbt veins up to 0.55m. Alkali: fg-cg, xtals up to 5mm, moderate chl&hem alt'n selective pervasive & patchy, respectively. Contacts w/ crbt commonly bx. 202.68-203.43: Crbt vein, fg-cg, calcite xtals up to 3cm, weakly banded (discontinuous), light purple/red to cream; purple-red due to disseminated hem, dark "bands" containing more hem and apatite (possibly Fe-Nb oxide?). Scint 250c/s 204.10-204.65: crbt vein, fg-cg, light pink to cream - purple/red. Purple red zone (fg) have increased hem, possibly Fe-Nb Oxide(? fg, black). Trace disseminated py, hem. Scint 250c/s 207.48-207.44: CRBT vein, cream-light pink, massive, cg, trace disseminated py/hem. Scint 210 c/s |
| PGH-18-02 | 208.34 | 209.69 | CRBT | Carbonatite dyke | Fg later phase crbt 208.72-208.78. light pink-cream-light purple, mg-cg xtals up to 3cm, crystals are poorly formed, massive, calcite dominated, "pods" of apatite commonly rimmed by hem, with possible inclusions/rimming of Fe-Nb oxides(?). Scint 170c/s |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------------------|---|
| PGH-18-02 | 209.69 | 219.45 | GRAN | Granite with Carbonatite Dykes | GRAN; fg-cg, pink-red(hem), bt commonly alt/replaced by chl, locally massive qtz infill, contacts with crbt undulating to locally brecciated. 212.94-214.10: crbt dyke, light pink-cream light purple, apatite (light green-blue, H5,vfg) pods up to 2cm increase near contacts. Trace disseminated py, hematite (also rimming xtals/fracture), fg blue amph(?) 216.35-216.6: light pink cream to purple, trace disseminated hem/py, + other fg, black (possibly Fe-Nb Oxide?) |
| PGH-18-02 | 219.45 | 224.44 | CRBT | Carbonatite | Fg-cg, light pink-cream to light purple, weakly banded (banded zones defined by hem, apatite, possibly other fg Fe-Nb Oxides). Disseminated hematite. Light green to blue crystals of apatite(?), trace disseminated py, patchy flourite. Scint 280 cps. |
| PGH-18-02 | 224.44 | 237.37 | SYE-BX | Granite BX w/ Carbonatite | Brecciated Alkali, infill of carbonatite, fracture fill of qtz-carb, 15% qtz, bt/pyx alternating to chl or locally blue amph. 231.72-232.46: CRBT, cg, light pink to cream purple, apatite 'pods' up to 1cm, trace disseminated py/hem. |
| PGH-18-02 | 237.37 | 241.88 | CRBT | Carbonatite | Fg-cg, light purple to light pink-cream, weakly banded defined by hem+apt, disseminated hem, trace disseminated py, other possible Fe-Nb oxides (fg, black, metallic). 240.2-240.5: strongly weathered, dark purple-black-red. Brecciated lower contacts. Scint 320 c/s |
| PGH-18-02 | 241.88 | 250.28 | SYE-BX | Granitic Breccia | Fenitized granite, fg-cg, 15-20% qtz, locally vcg fspar up to 5cm, carbonatite veins from 1-15cm, breccia infill qtz-carb with blue amph(?), chl replacing biot. Undulating lower contact (dissolution). |
| PGH-18-02 | 250.28 | 255.9 | MIX ZONE | Mixed Carbonatite and Unknown(?) | Country rock, light green (pervasive chl alt'n?), however bt/pyx crystals intact (crystallized post alteration?), zones of crbt vein up to 35cm, zone dominated by fg light green rock. Disseminated hematite, trace disseminated py, patchy potassic alteration(? light pink, amorphous). Locally 'clasts' of granite distinguishable. Believe unit to be pre-carbonatite mafic dyke but it has been strongly to completely altered by qtz-carb fluid and pervasive chl? alteration. |
| PGH-18-02 | 255.9 | 257.8 | GRAN | Granite with carbonatite veins | Fg-cg, pink-light red, 10% qtz, bt alt to chl, blue vfg amph(?) near contacts w/ crbt and along fracture. Disseminated hematite, trace disseminated py. 255.9-256.8: Carbonatite, light purple to cream, disseminated hematite, trace disseminated py (+ other dark, Fe-Nb Oxide?) |
| PGH-18-02 | 257.8 | 270.77 | CRBT | Carbonatite | Fg-cg, massive to mottled, light pink-cream to light purple, disseminated hematite, trace disseminated py, trace disseminated Nb Oxide (columbite or tantalite?, fg bladed, black). Local 'bands'/pods of apatite (light green-cream) 260.75-262.09: Gran breccia with crbt infill, dissolution boundaries around clasts. Scint up to 550 c/s |
| PGH-18-02 | 270.77 | 282.8 | SYE-BX | Granitic Breccia with Carbonatite | Granitic clasts are subangular to sub rounded, rounded having dissolved boundaries, clasts size 5mm - 20cm, clasts are pink-light red, bt/pyx commonly replaced by chl, containing 15-20% qtz. Carbonatite infill cream-grey, fg hematite, fg apatite. 280.40-282.80: Carbonatite and Granitic breccia; fg, light purple, disseminated patchy hematite, trace disseminated py, apatite fg light green. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-02 | 282.8 | 297.94 | GRAN | Granite w/ breccia and minor carbonatite | Locally vcg, kspar crystals up to 4cm, dominated by kspar 70%, 10-15% qtz, 10% bt (alt to chl, mod-complete), plag <10%. Modal percentages vary slightly across section but overall similar composition. Minor carbonatite veins up to 30cm, near contacts blue vfg amph(?) & chl alteration increases. Patchy hematitic alteration, along grain boundaries, fractures, and over printing k-spar xtals. Local fg 'zones' of glimmerite(?) [zone defined by fg bt >50% of rock], commonly showing chl alt'n halos around fractures. |
| PGH-18-02 | 297.94 | 299 | CRBT | Carbonatite + Glimmerite | Massive crbt, light green to light purple, hematitic alteration (disseminated, along fractures). Brecciated lower contact, strong hematitic alt'n near contacts. |
| PGH-18-02 | 299 | 300.6 | MDYKE | Mixed GRAN, CRBT, and Mafic Dyke(?) | Dark green-black, locally magnetic, dominated by bt (70%), pyx (30%), interstitial qtz-carb, pervasive chl alteration. Zones of altered granite within 'mafic'. Contacts are gradational and obscured. Possibly early mafic dyke which has been undergone metasomatism from intruding carbonatite. |
| PGH-18-02 | 300.6 | 311.8 | SYE-BX | Granitic breccia with Carbonatite infill | Medium pink to light pink, mg, k-spar 50%, qtz 30%, 20% bt, patchy weak hematitic alteration. Locally brecciated near crbt veining. Bt commonly altering to chl. Locally jointed at 40/070. Carbonatite veins commonly fg, mottled to massive, light purple to light grey (hematite). largest is 30cm, commonly disseminated py & hematite. |
| PGH-18-02 | 311.8 | 324.7 | MIX ZONE | Granite + Carbonatite | Alkali (GRAN) ~70%, CRBT 30%. Gran in commonly pink to light pink, medium grained (Qtz 15%, fspar 70%, 15% bt). GRAN clasts commonly show dissolution around boundaries, local fg blue amph/chl rimming crbt veins. Multiple orientations for crbt dykes, up to 30cm. CRBT commonly light pink, fg, disseminated hem/trace py. Locally up to 640c/s in bx. |
| PGH-18-02 | 324.7 | 336.42 | GRAN | Granite + minor Carbonatite veins | Medium pink to light pink, mg, 15% qtz, 65% fspar, bt 20%. Bt commonly alt to chl, locally ff and selectively pervasive blue chl?. 325.12-326.15: Largest crbt vein; light pink to purple to light green, massive, fg, wispy discontinuous bands, patchy purple fluorite. |
| PGH-18-02 | 336.42 | 337.6 | CRBT | Carbonatite | Light purple to light green, fg, massive, very weakly banded, slightly undulating contacts (upper and lower). Upper contact has strong hematitic alteration. Vfg black mineral (Fe-Nb Oxide?) |
| PGH-18-02 | 337.6 | 348.9 | SYE-BX | Granitic breccia | Pink to light red, moderate-strong patchy hematitic alt'n, mg xtals up to 3mm, 15% qtz, 70% k-fspar, 15% bt +/- pyx. Bt commonly alt to chl, partially or completely replaced. Veins/veinlets of crbt from 3mm-10cm. Outside of bx zone described below Scint up to 400c/s 342-344: zone of strong hematite alt, breccia with crbt infill, Scint between 800-850c/s. Clasts are sub-angular and show weak reaction rims, hydrothermal breccia(?). Two phases of crbt, first being more ferro-dolomitic rich (light khaki, fg, reacts with HCL when powdered), later being light purple fg, calcite rich. irregular contact but @ low angle TCA ~10 degrees |
| PGH-18-02 | 348.9 | 351.63 | SYE-BX | Carbonatite veins and Alkali breccia | GRAN as above, crbt veins from 1-5cm, brecciated contacts to larger crbt vein. 350.3-351.63: Crbt vein, light grey to purple-pink, fg, weakly banded, apatite clusters up to 5mm, brecciated upper and lower contacts. Trace disseminated py. Scint up to 270 c/s |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|----------------------------------|--|
| PGH-18-02 | 351.63 | 355.5 | GRAN | Granite | As above, minor crbt veins <3cm, becoming brecciated ~ 1m before lower contact with CRBT vein |
| PGH-18-02 | 355.5 | 359.94 | CRBT-BX | Carbonatite with minor Alkali BX | Crbt grey to light grey, fg, massive, locally brecciated veins, commonly brecciated contacts, patchy fluorite, apatite cumulates(?) up to 3mm. Scint up to 600cps. |
| PGH-18-02 | 359.94 | 365.25 | GRAN | Granite | Fg-mg, Qtz (20%), k-spar(70%), Bt (10%), moderate hematitic alteration, crbt veins <10cm, sharp lower contact. |
| PGH-18-02 | 365.25 | 372 | MDYKE | Mafic Dyke | Magnetic, massive, carb/chl infill of amygdales. 369-372: fault zone |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------------------------|---|
| PGH-18-02 | 35.72 | CT | 40 | 265 | | Carbonatite | carbonatite dyke, Lower contact |
| PGH-18-02 | 39.4 | CT | 20 | 180 | | | upper contact zone between carbonatite / granite |
| PGH-18-02 | 43.9 | CT | 40 | 225 | | contact | lower contact between carbonatite vein and syenite(?) |
| PGH-18-02 | 45.72 | CT | 35 | 225 | | contact | upper contact of cg carbonatite |
| PGH-18-02 | 52.56 | JNT | 40 | 100 | | joint | planar, slightly rough, chl coating |
| PGH-18-02 | 71.34 | CT | 70 | 80 | | contact | lower contact btw crbt vein and gran |
| PGH-18-02 | 73.1 | CT | 40 | 225 | | contact | lower contact btw crbt vein and gran |
| PGH-18-02 | 92.7 | CT | 65 | 180 | | upper contact | btw crbt and alkali |
| PGH-18-02 | 106.45 | CT | 45 | 290 | | contact | lower contact of crbt w/ granite. |
| PGH-18-02 | 204.1 | CT | 35 | 340 | | upper contact of crbt to GRAN | |
| PGH-18-02 | 217.3 | CT | 65 | 285 | | upper contact | weakly undulating contact btw GRAN and CRBT |
| PGH-18-02 | 308.2 | JNT | 40 | 70 | | joint set | joint set in GRAN |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|-----------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-02 | 270.77 | 272.00 | 1.23 | 589335 | A18-04296 | 33.24 | 7.11 | 7.09 | 0.3 | 7.09 | 16.02 | 0.88 | 5.14 | 0.238 | 1.35 | 20.06 | 98.52 | 10 | 3 | 139 | 1267 |
| PGH-18-02 | 280.00 | 281.00 | 1.00 | 589336 | A18-04296 | 11.83 | 2.79 | 3.98 | 0.454 | 4.46 | 38.49 | 0.22 | 2.16 | 0.078 | 1.22 | 33.57 | 99.25 | 10 | 1 | 50 | 3061 |
| PGH-18-02 | 281.00 | 282.00 | 1.00 | 589338 | A18-04296 | 20.01 | 4.12 | 5.16 | 0.505 | 4.45 | 32.01 | 0.33 | 3.34 | 0.129 | 5.44 | 23.82 | 99.31 | 10 | 1 | 73 | 2053 |
| PGH-18-02 | 282.00 | 283.00 | 1.00 | 589339 | A18-04296 | 39.85 | 7.17 | 5.97 | 0.386 | 4.68 | 16.29 | 1.17 | 5.39 | 0.232 | 0.43 | 17.9 | 99.48 | 14 | 3 | 148 | 1483 |
| PGH-18-02 | 312.00 | 313.50 | 1.50 | 589340 | A18-04296 | 33.38 | 6.88 | 6.88 | 0.655 | 5.81 | 19.29 | 1.51 | 3.98 | 0.268 | 2.03 | 19.02 | 99.71 | 11 | 2 | 115 | 2354 |
| PGH-18-02 | 313.50 | 314.25 | 0.75 | 589341 | A18-04296 | 33.41 | 5.65 | 6.3 | 0.71 | 5.74 | 21.26 | 1.49 | 3.17 | 0.16 | 1.27 | 20.71 | 99.88 | 18 | 3 | 157 | 1341 |
| PGH-18-02 | 314.25 | 315.00 | 0.75 | 589342 | A18-04296 | 17.19 | 2.12 | 6.24 | 0.913 | 5.23 | 34.36 | 0.29 | 1.44 | 0.219 | 4.57 | 25.23 | 97.81 | 10 | 2 | 64 | 5834 |
| PGH-18-02 | 315.00 | 316.50 | 1.50 | 589344 | A18-04296 | 37.22 | 7.44 | 5.91 | 0.505 | 4.42 | 18.09 | 2.07 | 4.71 | 0.227 | 1.01 | 18.01 | 99.62 | 15 | 4 | 147 | 1515 |
| PGH-18-02 | 316.50 | 318.00 | 1.50 | 589345 | A18-04296 | 43.87 | 8.46 | 5.82 | 0.602 | 4.08 | 13.81 | 2.98 | 3.91 | 0.153 | 0.77 | 14.36 | 98.8 | 14 | 4 | 129 | 3933 |
| PGH-18-02 | 318.00 | 319.50 | 1.50 | 589346 | A18-04296 | 48.65 | 9.73 | 7.23 | 0.431 | 3.55 | 10.65 | 4.68 | 3.82 | 0.178 | 0.86 | 9.93 | 99.71 | 14 | 5 | 110 | 1514 |
| PGH-18-02 | 333.95 | 334.95 | 1.00 | 589347 | A18-04296 | 37.22 | 6.9 | 4.68 | 0.438 | 3.54 | 20.94 | 2.22 | 3.45 | 0.224 | 1.68 | 18.73 | 100 | 9 | 3 | 102 | 1997 |
| PGH-18-02 | 336.40 | 337.60 | 1.20 | 589348 | A18-04296 | 2.71 | 0.39 | 3.92 | 0.644 | 3.53 | 46.78 | 0.08 | 0.25 | 0.015 | 0.48 | 40.28 | 99.09 | 10 | 1 | 42 | 1163 |
| PGH-18-02 | 339.50 | 341.00 | 1.50 | 589349 | A18-04296 | 55.28 | 11.19 | 3.84 | 0.219 | 3.14 | 7.37 | 4.25 | 3.82 | 0.27 | 0.06 | 9.5 | 98.94 | 9 | 7 | 145 | 2977 |
| PGH-18-02 | 341.00 | 342.50 | 1.50 | 589350 | A18-04296 | 59.13 | 13.27 | 3.8 | 0.141 | 2.36 | 4.99 | 4.2 | 3.96 | 0.233 | 0.02 | 6.55 | 98.66 | 8 | 3 | 68 | 3890 |
| PGH-18-02 | 342.50 | 344.00 | 1.50 | 589351 | A18-04296 | 37.03 | 9.92 | 3.64 | 0.232 | 5.92 | 14.61 | 2.03 | 5.41 | 0.204 | 0.02 | 18.58 | 97.6 | 9 | 2 | 60 | 7363 |
| PGH-18-02 | 344.00 | 345.00 | 1.00 | 589353 | A18-04296 | 49.93 | 9.39 | 3.59 | 0.326 | 2.92 | 12.06 | 2.53 | 3.76 | 0.244 | 2.86 | 10.15 | 97.77 | 11 | 3 | 85 | 4789 |
| PGH-18-02 | 349.00 | 350.50 | 1.50 | 589354 | A18-04296 | 34.9 | 6.74 | 5.41 | 0.642 | 6.21 | 18.1 | 1.48 | 3.72 | 0.206 | 0.68 | 20.62 | 98.71 | 15 | 5 | 137 | 2107 |
| PGH-18-02 | 350.50 | 351.64 | 1.14 | 589355 | A18-04296 | 6.82 | 1.02 | 6.61 | 1.522 | 8.05 | 36.44 | 0.2 | 0.76 | 0.076 | 1.65 | 35.25 | 98.4 | 7 | 2 | 51 | 687 |
| PGH-18-02 | 351.64 | 352.14 | 0.50 | 589356 | A18-04296 | 63.31 | 12.32 | 2.96 | 0.147 | 1.98 | 4.23 | 3.6 | 5.17 | 0.195 | 0.17 | 4.86 | 98.96 | 6 | 4 | 87 | 1520 |
| PGH-18-02 | 355.00 | 355.50 | 0.50 | 589357 | A18-04296 | 55.77 | 10.55 | 3.95 | 0.238 | 2.79 | 7.77 | 1.46 | 6.88 | 0.275 | 1.13 | 8.7 | 99.5 | 15 | 4 | 229 | 1134 |
| PGH-18-02 | 355.50 | 356.75 | 1.25 | 589358 | A18-04296 | 18.19 | 4.33 | 7.12 | 0.557 | 6.12 | 26.93 | 0.35 | 3.35 | 2.058 | 4.22 | 25.09 | 98.33 | 19 | 3 | 159 | 1470 |
| PGH-18-02 | 356.75 | 358.25 | 1.50 | 589359 | A18-04296 | 53.06 | 13.22 | 3.05 | 0.113 | 3.97 | 7.18 | 3.27 | 6.66 | 0.177 | 0.1 | 7.64 | 98.42 | 6 | 18 | 55 | 3933 |
| PGH-18-02 | 358.25 | 359.00 | 0.75 | 589360 | A18-04296 | 22.6 | 5.33 | 3.97 | 0.497 | 11.31 | 20.88 | 0.96 | 3.3 | 0.138 | 0.22 | 29.3 | 98.5 | 16 | 2 | 73 | 3495 |
| PGH-18-02 | 359.00 | 359.94 | 0.94 | 589361 | A18-04296 | 32.28 | 6.68 | 4.64 | 0.389 | 8.36 | 17.35 | 1.56 | 3.75 | 0.165 | 2.46 | 20.74 | 98.39 | 18 | 5 | 116 | 793 |
| PGH-18-02 | 359.94 | 360.44 | 0.50 | 589363 | A18-04296 | 61.58 | 13.62 | 3.04 | 0.118 | 2.28 | 3.69 | 5.24 | 4.09 | 0.214 | 0.15 | 4.36 | 98.38 | 9 | 7 | 101 | 704 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|-----------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-02 | 270.77 | 272.00 | 1.23 | 589335 | 1306 | 83 | 79 | 30 | 6 | < 20 | < 10 | 130 | 17 | 1 | < 5 | 106 | 502 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-02 | 280.00 | 281.00 | 1.00 | 589336 | 1532 | 98 | 39 | < 20 | 6 | < 20 | < 10 | 90 | 11 | 2 | 9 | 35 | 125 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-02 | 281.00 | 282.00 | 1.00 | 589338 | 1816 | 257 | 78 | < 20 | 7 | < 20 | 20 | 110 | 14 | 2 | 12 | 51 | 343 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-02 | 282.00 | 283.00 | 1.00 | 589339 | 871 | 43 | 101 | 50 | 8 | 30 | 20 | 210 | 18 | 1 | 7 | 88 | 173 | 3 | < 0.5 | < 0.2 | 6 | < 0.5 |
| PGH-18-02 | 312.00 | 313.50 | 1.50 | 589340 | 1750 | 142 | 65 | 30 | 12 | 20 | 20 | 280 | 15 | 1 | < 5 | 74 | 217 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-02 | 313.50 | 314.25 | 0.75 | 589341 | 1880 | 100 | 49 | 40 | 7 | 20 | 10 | 260 | 13 | 2 | 6 | 60 | 222 | 3 | < 0.5 | 0.2 | 4 | 0.5 |
| PGH-18-02 | 314.25 | 315.00 | 0.75 | 589342 | 2657 | 323 | 9 | < 20 | 12 | 20 | 40 | 240 | 11 | 1 | 13 | 28 | 154 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-02 | 315.00 | 316.50 | 1.50 | 589344 | 2072 | 84 | 75 | 20 | 5 | < 20 | < 10 | 170 | 14 | 1 | < 5 | 82 | 96 | 4 | < 0.5 | 0.2 | 4 | 0.5 |
| PGH-18-02 | 316.50 | 318.00 | 1.50 | 589345 | 1413 | 70 | 54 | 30 | 5 | < 20 | < 10 | 270 | 17 | 2 | 8 | 64 | 235 | 8 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-02 | 318.00 | 319.50 | 1.50 | 589346 | 1651 | 47 | 75 | 30 | 7 | 20 | 50 | 300 | 17 | 1 | < 5 | 69 | 68 | 14 | < 0.5 | 0.3 | 5 | < 0.5 |
| PGH-18-02 | 333.95 | 334.95 | 1.00 | 589347 | 1732 | 101 | 54 | < 20 | 4 | < 20 | < 10 | 180 | 13 | 1 | < 5 | 55 | 505 | 4 | < 0.5 | < 0.2 | 2 | 0.6 |
| PGH-18-02 | 336.40 | 337.60 | 1.20 | 589348 | 1080 | 63 | 15 | < 20 | 2 | < 20 | 20 | 110 | 5 | 1 | 9 | 4 | 162 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-02 | 339.50 | 341.00 | 1.50 | 589349 | 1577 | 33 | 117 | < 20 | 2 | < 20 | < 10 | 80 | 18 | 1 | 12 | 63 | 41 | < 2 | < 0.5 | < 0.2 | 3 | 0.5 |
| PGH-18-02 | 341.00 | 342.50 | 1.50 | 589350 | 1088 | 36 | 106 | 20 | 2 | < 20 | < 10 | 40 | 17 | < 1 | 15 | 67 | 50 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-02 | 342.50 | 344.00 | 1.50 | 589351 | 2528 | 73 | 87 | 20 | 3 | < 20 | < 10 | 260 | 13 | < 1 | 16 | 84 | 102 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-02 | 344.00 | 345.00 | 1.00 | 589353 | 1611 | 479 | 154 | < 20 | 3 | < 20 | < 10 | 230 | 15 | < 1 | 40 | 66 | 136 | < 2 | 0.7 | < 0.2 | 2 | 1.2 |
| PGH-18-02 | 349.00 | 350.50 | 1.50 | 589354 | 1308 | 65 | 52 | < 20 | 4 | < 20 | < 10 | 190 | 13 | 1 | < 5 | 77 | 134 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-02 | 350.50 | 351.64 | 1.14 | 589355 | 3832 | 94 | 10 | < 20 | 8 | < 20 | 10 | 210 | 5 | < 1 | 9 | 25 | 158 | 3 | < 0.5 | 0.2 | 1 | < 0.5 |
| PGH-18-02 | 351.64 | 352.14 | 0.50 | 589356 | 801 | 16 | 52 | < 20 | 2 | < 20 | < 10 | 70 | 17 | 1 | < 5 | 96 | 40 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-02 | 355.00 | 355.50 | 0.50 | 589357 | 945 | 85 | 71 | 50 | 5 | < 20 | < 10 | 160 | 15 | < 1 | < 5 | 107 | 63 | 4 | < 0.5 | < 0.2 | 6 | 0.5 |
| PGH-18-02 | 355.50 | 356.75 | 1.25 | 589358 | 2357 | 368 | 426 | < 20 | 13 | < 20 | 50 | 160 | 12 | < 1 | 10 | 53 | 234 | < 2 | 1.6 | < 0.2 | 2 | 1 |
| PGH-18-02 | 356.75 | 358.25 | 1.50 | 589359 | 858 | 18 | 76 | 20 | 4 | < 20 | 10 | 110 | 18 | < 1 | < 5 | 165 | 58 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-02 | 358.25 | 359.00 | 0.75 | 589360 | 2854 | 42 | 27 | 30 | 6 | < 20 | < 10 | 210 | 9 | < 1 | 7 | 52 | 83 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-02 | 359.00 | 359.94 | 0.94 | 589361 | 2580 | 157 | 42 | 50 | 5 | 20 | < 10 | 210 | 12 | 1 | < 5 | 68 | 110 | < 2 | < 0.5 | < 0.2 | 3 | 0.6 |
| PGH-18-02 | 359.94 | 360.44 | 0.50 | 589363 | 701 | 21 | 88 | < 20 | 3 | < 20 | < 10 | 80 | 19 | 1 | < 5 | 68 | 34 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|-----------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-02 | 270.77 | 272.00 | 1.23 | 589335 | < 0.5 | 284 | 638 | 76.4 | 292 | 47.8 | 14.1 | 34.2 | 4.9 | 24.9 | 3.9 | 8.5 | 0.83 | 3.8 | 0.43 | 1.6 | 4.6 |
| PGH-18-02 | 280.00 | 281.00 | 1.00 | 589336 | < 0.5 | 468 | 1160 | 151 | 621 | 114 | 32.6 | 74.4 | 8.3 | 34.6 | 4.5 | 9.3 | 1.04 | 5 | 0.65 | 0.9 | < 0.1 |
| PGH-18-02 | 281.00 | 282.00 | 1.00 | 589338 | < 0.5 | 549 | 1330 | 170 | 690 | 140 | 46.4 | 124 | 17.6 | 86.1 | 12.4 | 25.3 | 2.55 | 11.2 | 1.33 | 1.5 | 1.6 |
| PGH-18-02 | 282.00 | 283.00 | 1.00 | 589339 | < 0.5 | 352 | 810 | 102 | 426 | 79.8 | 21.4 | 41.8 | 4 | 15.4 | 2 | 4.4 | 0.48 | 2.3 | 0.27 | 2.2 | 1 |
| PGH-18-02 | 312.00 | 313.50 | 1.50 | 589340 | < 0.5 | 436 | 884 | 99.5 | 365 | 70.7 | 22.6 | 57.5 | 8 | 40.7 | 6.3 | 13.4 | 1.46 | 6.6 | 0.77 | 1.5 | 3.4 |
| PGH-18-02 | 313.50 | 314.25 | 0.75 | 589341 | < 0.5 | 370 | 862 | 104 | 404 | 74.3 | 22.2 | 52.9 | 6.5 | 30.5 | 4.5 | 9.7 | 1.06 | 5.1 | 0.59 | 2.4 | 1.3 |
| PGH-18-02 | 314.25 | 315.00 | 0.75 | 589342 | < 0.5 | 580 | 1290 | 152 | 574 | 116 | 38.4 | 107 | 16.4 | 87.2 | 13.8 | 30.3 | 3.31 | 15.9 | 1.85 | 0.7 | 0.1 |
| PGH-18-02 | 315.00 | 316.50 | 1.50 | 589344 | < 0.5 | 636 | 1240 | 135 | 486 | 79.4 | 22.6 | 49.4 | 6.1 | 26.4 | 3.6 | 7.6 | 0.86 | 4.4 | 0.55 | 2.3 | 1.6 |
| PGH-18-02 | 316.50 | 318.00 | 1.50 | 589345 | < 0.5 | 1050 | 1880 | 189 | 609 | 72.6 | 18.9 | 38.8 | 4.6 | 22 | 3 | 6.3 | 0.68 | 3.1 | 0.4 | 1.6 | 1.2 |
| PGH-18-02 | 318.00 | 319.50 | 1.50 | 589346 | < 0.5 | 764 | 1400 | 144 | 469 | 55.1 | 14 | 28.2 | 3.3 | 15.9 | 2.1 | 4.7 | 0.47 | 2.1 | 0.24 | 1.8 | 0.3 |
| PGH-18-02 | 333.95 | 334.95 | 1.00 | 589347 | < 0.5 | 528 | 1100 | 125 | 464 | 82.2 | 23.8 | 53.4 | 6.8 | 29.5 | 4 | 9 | 1 | 4.8 | 0.56 | 1.2 | 2.5 |
| PGH-18-02 | 336.40 | 337.60 | 1.20 | 589348 | < 0.5 | 682 | 1670 | 211 | 852 | 128 | 30.5 | 55.7 | 5.4 | 22.7 | 3.2 | 6.3 | 0.74 | 4 | 0.55 | 0.3 | 1 |
| PGH-18-02 | 339.50 | 341.00 | 1.50 | 589349 | < 0.5 | 538 | 998 | 106 | 372 | 60.5 | 16.9 | 32.6 | 3.1 | 11.1 | 1.4 | 3.3 | 0.38 | 1.9 | 0.25 | 2.6 | 0.4 |
| PGH-18-02 | 341.00 | 342.50 | 1.50 | 589350 | < 0.5 | 167 | 346 | 38.7 | 141 | 24.6 | 7.3 | 17.5 | 2.5 | 11.7 | 1.5 | 2.9 | 0.33 | 1.7 | 0.22 | 2 | 0.7 |
| PGH-18-02 | 342.50 | 344.00 | 1.50 | 589351 | < 0.5 | 334 | 686 | 79 | 296 | 52.5 | 15.6 | 40.2 | 5.7 | 24.9 | 3.4 | 6.5 | 0.65 | 3.4 | 0.42 | 1.9 | 0.8 |
| PGH-18-02 | 344.00 | 345.00 | 1.00 | 589353 | < 0.5 | 234 | 499 | 60.8 | 253 | 74.8 | 30.2 | 95.8 | 19.5 | 118 | 19.5 | 43 | 4.77 | 23 | 2.58 | 2.9 | 1.8 |
| PGH-18-02 | 349.00 | 350.50 | 1.50 | 589354 | < 0.5 | 653 | 1260 | 139 | 502 | 90.8 | 26.5 | 55.2 | 5.5 | 22 | 2.8 | 6.4 | 0.72 | 3.5 | 0.4 | 1.9 | 1.1 |
| PGH-18-02 | 350.50 | 351.64 | 1.14 | 589355 | < 0.5 | 375 | 772 | 86.3 | 312 | 57.3 | 18.2 | 45.5 | 6.2 | 29.8 | 4.3 | 9.3 | 1.05 | 5.3 | 0.67 | 0.4 | 0.4 |
| PGH-18-02 | 351.64 | 352.14 | 0.50 | 589356 | 0.9 | 161 | 312 | 34.6 | 126 | 23.3 | 6.78 | 14.1 | 1.5 | 5.6 | 0.7 | 1.5 | 0.16 | 0.8 | 0.11 | 1.4 | 0.8 |
| PGH-18-02 | 355.00 | 355.50 | 0.50 | 589357 | < 0.5 | 169 | 366 | 43.7 | 174 | 39.6 | 13 | 33.1 | 4.8 | 23.7 | 3.7 | 8.1 | 0.87 | 4.5 | 0.54 | 2.1 | 1 |
| PGH-18-02 | 355.50 | 356.75 | 1.25 | 589358 | < 0.5 | 481 | 1030 | 124 | 495 | 112 | 38.2 | 102 | 16 | 85.8 | 14.3 | 34.3 | 4.32 | 22.1 | 2.47 | 5.3 | 4.3 |
| PGH-18-02 | 356.75 | 358.25 | 1.50 | 589359 | 0.6 | 165 | 340 | 40.2 | 156 | 28.6 | 8.22 | 16.7 | 1.6 | 6 | 0.8 | 1.9 | 0.26 | 1.3 | 0.16 | 1.6 | 0.7 |
| PGH-18-02 | 358.25 | 359.00 | 0.75 | 589360 | < 0.5 | 377 | 843 | 100 | 405 | 70.7 | 19 | 37.9 | 3.3 | 13 | 1.8 | 4.1 | 0.52 | 3.1 | 0.38 | 0.6 | 0.9 |
| PGH-18-02 | 359.00 | 359.94 | 0.94 | 589361 | < 0.5 | 715 | 1360 | 156 | 607 | 125 | 39.1 | 94.9 | 11.6 | 51.5 | 6.9 | 14.1 | 1.51 | 7.2 | 0.81 | 1.5 | 1 |
| PGH-18-02 | 359.94 | 360.44 | 0.50 | 589363 | < 0.5 | 120 | 242 | 27.4 | 103 | 21.7 | 6.82 | 14.9 | 1.6 | 6.4 | 0.8 | 1.8 | 0.2 | 1.1 | 0.14 | 2.4 | 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|-------|-------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|-------------------------------------|
| PGH-18-02 | 29.00 | 29.50 | 0.50 | 589201 | 5 | 0.2 | 12 | < 0.4 | 21.5 | 1.5 | 0.011 | granite w/ mnr carbonatite veins |
| PGH-18-02 | 29.50 | 30.70 | 1.20 | 589202 | 4 | 0.2 | 35 | < 0.4 | 74.1 | 14.2 | 0.534 | carbonatite |
| PGH-18-02 | 30.70 | 31.20 | 0.50 | 589203 | 2 | 0.3 | 15 | < 0.4 | 28.4 | 3.6 | 0.044 | granite, mnr carbonaitie |
| PGH-18-02 | 38.75 | 39.25 | 0.50 | 589204 | 9 | 0.2 | 10 | < 0.4 | 13.4 | 2.4 | 0.024 | granite (fenite) |
| PGH-18-02 | 39.25 | 40.00 | 0.75 | 589205 | 5 | < 0.1 | 27 | < 0.4 | 25.4 | 18.1 | 0.342 | carbonatite w\ alkali clasts |
| PGH-18-02 | 40.00 | 40.50 | 0.50 | 589206 | 40 | 0.2 | 17 | < 0.4 | 17.6 | 18 | 0.231 | carbonatite w\ alkali clasts |
| PGH-18-02 | 40.50 | 41.00 | 0.50 | 589207 | 4 | 0.2 | 18 | < 0.4 | 23.1 | 19.3 | 0.335 | granite w\ minor carb veins |
| PGH-18-02 | 41.00 | 42.00 | 1.00 | 589208 | 3 | 0.1 | 37 | < 0.4 | 23.3 | 20.9 | 0.572 | carbonatite w/ breccia |
| PGH-18-02 | 42.00 | 43.00 | 1.00 | 589209 | 2 | 0.2 | 18 | < 0.4 | 22 | 11.5 | 0.265 | granite breccia w/ carbonatite |
| PGH-18-02 | 43.00 | 44.00 | 1.00 | 589210 | 4 | 0.1 | 16 | < 0.4 | 38.7 | 10.6 | 0.214 | carbonatite vein w/ minor alkali |
| PGH-18-02 | 44.00 | 44.50 | 0.50 | 589211 | 2 | < 0.1 | 10 | < 0.4 | 3.3 | 0.8 | 0.005 | alkali w\ minor crbt veins |
| PGH-18-02 | 44.50 | 45.00 | 0.50 | 589212 | 2 | < 0.1 | 8 | < 0.4 | 21.7 | 4.8 | 0.027 | crbt w/ alkali clast |
| PGH-18-02 | 45.00 | 45.75 | 0.75 | 589213 | 1 | < 0.1 | 19 | < 0.4 | 66.3 | 38.9 | 0.211 | cg carbt |
| PGH-18-02 | 45.75 | 46.50 | 0.75 | 589214 | < 1 | < 0.1 | 12 | < 0.4 | 25.9 | 1.8 | 0.006 | carbt w breccia alkali |
| PGH-18-02 | 46.50 | 47.00 | 0.50 | 589215 | 4 | < 0.1 | 126 | < 0.4 | 83.2 | 22.2 | 0.384 | cg/fg carbt |
| PGH-18-02 | 47.00 | 47.75 | 0.75 | 589216 | < 1 | < 0.1 | 31 | < 0.4 | 78.5 | 7.8 | 0.278 | fg carbt w/ minor brecciated alkali |
| PGH-18-02 | 47.75 | 48.25 | 0.50 | 589217 | < 1 | 0.3 | 17 | < 0.4 | 33.8 | 3.9 | 0.159 | alkali w\ minor crbt veins |
| PGH-18-02 | 50.00 | 50.50 | 0.50 | 589218 | 3 | < 0.1 | 24 | < 0.4 | 86.5 | 10.6 | 0.236 | contact akali w/ carbonatite |
| PGH-18-02 | 50.50 | 51.00 | 0.50 | 589219 | < 1 | < 0.1 | 16 | < 0.4 | 18.8 | 1 | < 0.003 | carbonatite |
| PGH-18-02 | 51.00 | 51.50 | 0.50 | 589221 | 3 | < 0.1 | 34 | < 0.4 | 42.5 | 5.5 | 0.128 | carbonatite w/alkali breccia |
| PGH-18-02 | 61.50 | 62.25 | 0.75 | 589222 | < 1 | < 0.1 | 29 | < 0.4 | 37.6 | 5.8 | 0.21 | crbt |
| PGH-18-02 | 63.85 | 64.40 | 0.55 | 589223 | < 1 | < 0.1 | 14 | < 0.4 | 25.3 | 5.2 | 0.171 | crbt w/alkali |
| PGH-18-02 | 64.40 | 65.50 | 1.10 | 589224 | < 1 | < 0.1 | 23 | < 0.4 | 19.5 | 7.5 | 0.127 | crbt |
| PGH-18-02 | 65.50 | 66.00 | 0.50 | 589225 | 9 | 0.3 | 29 | < 0.4 | 16.6 | 6.5 | 0.039 | alkali bx |
| PGH-18-02 | 66.90 | 68.00 | 1.10 | 589226 | 3 | < 0.1 | 16 | < 0.4 | 31.5 | 15.2 | 0.198 | crbt + alkali bx |
| PGH-18-02 | 68.00 | 68.50 | 0.50 | 589227 | 4 | 0.5 | 9 | < 0.4 | 47.4 | 7.9 | 0.032 | alkali bx w/ crbt |
| PGH-18-02 | 68.50 | 69.00 | 0.50 | 589228 | 17 | 0.2 | 7 | < 0.4 | 32.5 | 6 | 0.05 | alkali bx w/ crbt |
| PGH-18-02 | 73.78 | 74.28 | 0.50 | 589229 | 4 | 0.2 | 11 | < 0.4 | 11.9 | 4.6 | 0.015 | alkali bx |
| PGH-18-02 | 74.28 | 74.84 | 0.56 | 589230 | 8 | < 0.1 | 14 | < 0.4 | 84.3 | 19.8 | 0.033 | crbt vein |
| PGH-18-02 | 74.84 | 75.34 | 0.50 | 589231 | 3 | < 0.1 | 9 | < 0.4 | 13 | 2.4 | 0.016 | alkali |
| PGH-18-02 | 80.80 | 81.30 | 0.50 | 589232 | 3 | < 0.1 | 11 | < 0.4 | 14.2 | 3 | 0.024 | alkali w/ mnr crbt |
| PGH-18-02 | 81.30 | 82.00 | 0.70 | 589233 | 5 | < 0.1 | 18 | < 0.4 | 19.2 | 4.4 | 0.024 | crbt |
| PGH-18-02 | 82.00 | 82.50 | 0.50 | 589234 | 4 | 0.3 | 10 | < 0.4 | 9.4 | 2.3 | 0.008 | alkali bx |
| PGH-18-02 | 87.75 | 88.45 | 0.70 | 589235 | < 1 | 0.2 | 9 | < 0.4 | 14.9 | 3.3 | 0.023 | alkali bx |
| PGH-18-02 | 88.45 | 89.15 | 0.70 | 589236 | < 1 | < 0.1 | 22 | < 0.4 | 74.1 | 26.3 | 0.082 | crbt, apt xystals |
| PGH-18-02 | 89.15 | 89.80 | 0.65 | 589237 | < 1 | < 0.1 | 44 | < 0.4 | 68.4 | 39.4 | 0.351 | crbt |
| PGH-18-02 | 89.80 | 90.25 | 0.45 | 589238 | < 1 | 0.2 | 10 | < 0.4 | 10.5 | 3.1 | 0.018 | alkali |
| PGH-18-02 | 90.25 | 90.75 | 0.50 | 589239 | < 1 | < 0.1 | 8 | < 0.4 | 30.1 | 3.9 | 0.013 | crbt, cg |
| PGH-18-02 | 91.60 | 92.10 | 0.50 | 589241 | < 1 | < 0.1 | 14 | < 0.4 | 30.6 | 7.4 | 0.046 | crbt + alkali bx |
| PGH-18-02 | 98.24 | 98.74 | 0.50 | 589242 | 4 | 0.5 | 17 | < 0.4 | 16.9 | 2.2 | 0.015 | alkali |
| PGH-18-02 | 98.74 | 99.36 | 0.62 | 589243 | 3 | < 0.1 | 100 | < 0.4 | 57.6 | 19.8 | 0.241 | crbt |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|---------------------------|
| PGH-18-02 | 99.36 | 99.86 | 0.50 | 589244 | 7 | 0.1 | 19 | < 0.4 | 31.8 | 7.8 | 0.105 | alkali w/ minor crbt |
| PGH-18-02 | 104.81 | 105.31 | 0.50 | 589245 | 6 | 0.1 | 12 | < 0.4 | 10.5 | 5 | 0.02 | alkali |
| PGH-18-02 | 105.31 | 106.45 | 1.14 | 589246 | 1 | < 0.1 | 18 | < 0.4 | 61.5 | 16.9 | 0.086 | crbt |
| PGH-18-02 | 106.45 | 107.14 | 0.69 | 589247 | 8 | 0.1 | 19 | < 0.4 | 16.9 | 4.9 | 0.031 | alkali w/ minor crbt vein |
| PGH-18-02 | 107.14 | 107.89 | 0.75 | 589248 | 7 | < 0.1 | 63 | < 0.4 | 36.3 | 14.8 | 0.103 | crbt |
| PGH-18-02 | 107.89 | 108.39 | 0.50 | 589249 | 9 | 0.2 | 16 | < 0.4 | 8.7 | 3.4 | 0.028 | alkali |
| PGH-18-02 | 114.50 | 115.00 | 0.50 | 589250 | 4 | 0.2 | 20 | < 0.4 | 9.6 | 9.1 | 0.036 | alkali w/ bx crbt |
| PGH-18-02 | 115.00 | 115.62 | 0.62 | 589251 | 4 | < 0.1 | 23 | < 0.4 | 14.4 | 17.2 | 0.137 | crbt w/ glim clasts |
| PGH-18-02 | 115.62 | 116.12 | 0.50 | 589252 | 3 | < 0.1 | 109 | < 0.4 | 29.1 | 49.8 | 0.067 | alkali |
| PGH-18-02 | 117.53 | 118.03 | 0.50 | 589253 | 7 | < 0.1 | 37 | < 0.4 | 34.8 | 4.4 | 0.057 | crbt |
| PGH-18-02 | 118.03 | 119.00 | 0.97 | 589254 | 4 | < 0.1 | 18 | < 0.4 | 51.7 | 16.6 | 0.141 | crbt |
| PGH-18-02 | 119.00 | 120.00 | 1.00 | 589255 | 5 | < 0.1 | 38 | < 0.4 | 5.1 | 3 | < 0.003 | crbt |
| PGH-18-02 | 120.00 | 121.00 | 1.00 | 589256 | 2 | < 0.1 | 22 | < 0.4 | 9.2 | 4.6 | < 0.003 | crbt |
| PGH-18-02 | 121.00 | 122.00 | 1.00 | 589258 | < 1 | < 0.1 | 16 | < 0.4 | 5.2 | 2.1 | < 0.003 | crbt |
| PGH-18-02 | 122.00 | 122.46 | 0.46 | 589259 | 4 | < 0.1 | 46 | < 0.4 | 13.5 | 2.3 | 0.007 | crbt + alkali bx |
| PGH-18-02 | 122.46 | 122.96 | 0.50 | 589261 | 5 | < 0.1 | 38 | < 0.4 | 26 | 17.5 | 0.185 | alkali |
| PGH-18-02 | 139.15 | 140.00 | 0.85 | 589262 | 6 | < 0.1 | 15 | < 0.4 | 31.3 | 9.1 | 0.127 | crbt, cg, apatite |
| PGH-18-02 | 140.00 | 141.00 | 1.00 | 589263 | 4 | < 0.1 | 10 | < 0.4 | 12.4 | 2.1 | 0.03 | alkali bx with crbt |
| PGH-18-02 | 141.00 | 142.00 | 1.00 | 589264 | 7 | < 0.1 | 21 | < 0.4 | 57.9 | 20.5 | 0.081 | alkali bx with crbt |
| PGH-18-02 | 142.00 | 143.00 | 1.00 | 589265 | 3 | < 0.1 | 34 | < 0.4 | 37.6 | 35 | 0.061 | crbt |
| PGH-18-02 | 143.00 | 144.00 | 1.00 | 589266 | 4 | < 0.1 | 13 | < 0.4 | 53.3 | 13.1 | 0.09 | crbt, pyrochlore(?) |
| PGH-18-02 | 144.00 | 145.00 | 1.00 | 589267 | 19 | < 0.1 | 36 | < 0.4 | 79.2 | 43.2 | 0.16 | crbt |
| PGH-18-02 | 145.00 | 146.00 | 1.00 | 589268 | 13 | < 0.1 | 42 | 0.4 | 51.5 | 29.2 | 0.069 | crbt |
| PGH-18-02 | 146.00 | 147.00 | 1.00 | 589269 | 4 | < 0.1 | 67 | < 0.4 | 39.9 | 79 | 0.391 | crbt w alkali clasts |
| PGH-18-02 | 147.00 | 148.00 | 1.00 | 589270 | 8 | < 0.1 | 85 | < 0.4 | 21.3 | 15.4 | 0.112 | crbt, cg, apatite |
| PGH-18-02 | 148.00 | 149.00 | 1.00 | 589272 | 6 | < 0.1 | 62 | < 0.4 | 44.3 | 52.6 | 0.227 | crbt, fg, alkali clsts |
| PGH-18-02 | 149.00 | 150.20 | 1.20 | 589273 | 6 | < 0.1 | 54 | < 0.4 | 29.7 | 27.7 | 0.125 | alkali bx w\ crbt |
| PGH-18-02 | 155.45 | 156.35 | 0.90 | 589274 | 15 | < 0.1 | 33 | < 0.4 | 59.8 | 26.5 | 0.261 | crbt w alkali clasts |
| PGH-18-02 | 156.35 | 157.30 | 0.95 | 589275 | 9 | < 0.1 | 45 | < 0.4 | 87.7 | 49.7 | 0.512 | crbt |
| PGH-18-02 | 163.30 | 164.00 | 0.70 | 589277 | 5 | < 0.1 | 129 | 0.5 | 84.3 | 25.7 | 0.202 | GRAN bx w/ CRBT |
| PGH-18-02 | 164.00 | 165.00 | 1.00 | 589278 | 7 | < 0.1 | 27 | < 0.4 | 42.9 | 12 | 0.164 | CRBT w/ GRAN |
| PGH-18-02 | 165.00 | 165.75 | 0.75 | 589279 | 15 | < 0.1 | 23 | < 0.4 | 24.5 | 3.6 | 0.12 | CRBT w/ GRAN |
| PGH-18-02 | 180.70 | 181.20 | 0.50 | 589280 | 9 | 0.1 | 30 | < 0.4 | 20.9 | 4.8 | 0.042 | Gran |
| PGH-18-02 | 181.20 | 182.20 | 1.00 | 589281 | 5 | < 0.1 | 15 | < 0.4 | 70 | 12.8 | 0.054 | CRBT |
| PGH-18-02 | 182.20 | 183.20 | 1.00 | 589282 | 5 | < 0.1 | 13 | < 0.4 | 50.9 | 12.1 | 0.055 | CRBT |
| PGH-18-02 | 183.20 | 184.58 | 1.38 | 589283 | 5 | < 0.1 | 20 | < 0.4 | 47.2 | 27.4 | 0.133 | CRBT |
| PGH-18-02 | 184.58 | 184.94 | 0.36 | 589284 | 3 | < 0.1 | 10 | < 0.4 | 20.8 | 6 | 0.07 | Gran bx w/ CRBT |
| PGH-18-02 | 184.94 | 186.00 | 1.06 | 589285 | 7 | < 0.1 | 19 | < 0.4 | 49.2 | 18.2 | 0.203 | CRBT |
| PGH-18-02 | 186.00 | 187.40 | 1.40 | 589287 | 7 | < 0.1 | 22 | < 0.4 | 106 | 11.8 | 0.097 | CRBT |
| PGH-18-02 | 187.40 | 187.90 | 0.50 | 589288 | 4 | < 0.1 | 9 | < 0.4 | 15.3 | 2.4 | 0.023 | Gran |
| PGH-18-02 | 195.90 | 196.40 | 0.50 | 589290 | < 1 | < 0.1 | 12 | < 0.4 | 13.7 | 1.4 | 0.008 | GRAN |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--|
| PGH-18-02 | 196.40 | 197.40 | 1.00 | 589291 | 22 | < 0.1 | 19 | < 0.4 | 50.4 | 16.2 | 0.113 | CRBT fg |
| PGH-18-02 | 197.40 | 198.00 | 0.60 | 589292 | 4 | < 0.1 | 27 | < 0.4 | 49.2 | 6.5 | 0.036 | CRBT cg, apt, trace columbite(?) |
| PGH-18-02 | 198.00 | 199.00 | 1.00 | 589293 | 2 | < 0.1 | 31 | < 0.4 | 32.6 | 1.7 | < 0.003 | CRBT cg, apt, trace columbite(?) |
| PGH-18-02 | 199.00 | 200.00 | 1.00 | 589294 | 5 | < 0.1 | 17 | < 0.4 | 63.8 | 2.1 | < 0.003 | CRBT cg, apt, trace columbite(?) |
| PGH-18-02 | 200.00 | 201.10 | 1.10 | 589295 | 5 | < 0.1 | 21 | < 0.4 | 99.6 | 10.8 | 0.102 | CRBT, apt clsts +/- columbite w/mnr GRN bx |
| PGH-18-02 | 202.68 | 203.43 | 0.75 | 589296 | 2 | < 0.1 | 24 | < 0.4 | 83.6 | 27.6 | 0.362 | |
| PGH-18-02 | 204.00 | 204.75 | 0.75 | 589297 | 3 | < 0.1 | 19 | < 0.4 | 55 | 20.2 | 0.272 | |
| PGH-18-02 | 208.34 | 209.01 | 0.67 | 589298 | 4 | < 0.1 | 32 | < 0.4 | 39.3 | 9.8 | 0.072 | |
| PGH-18-02 | 209.01 | 209.69 | 0.68 | 589299 | 2 | < 0.1 | 22 | < 0.4 | 38.9 | 17.6 | 0.135 | |
| PGH-18-02 | 212.41 | 212.94 | 0.53 | 589300 | 5 | < 0.1 | 20 | < 0.4 | 9 | 1.3 | 0.013 | GRAN |
| PGH-18-02 | 212.94 | 214.10 | 1.16 | 589301 | 3 | < 0.1 | 55 | < 0.4 | 50.1 | 12.3 | 0.143 | CRBT |
| PGH-18-02 | 214.10 | 214.60 | 0.50 | 589302 | 5 | < 0.1 | 13 | < 0.4 | 9.2 | 5.3 | 0.062 | GRAN |
| PGH-18-02 | 218.95 | 219.45 | 0.50 | 589303 | 6 | < 0.1 | 14 | < 0.4 | 50 | 8.1 | 0.053 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 219.45 | 220.00 | 0.55 | 589304 | 4 | < 0.1 | 16 | < 0.4 | 51.3 | 23.1 | 0.19 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 220.00 | 221.00 | 1.00 | 589305 | < 1 | < 0.1 | 11 | < 0.4 | 48.6 | 6.8 | < 0.003 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 221.00 | 222.00 | 1.00 | 589306 | < 1 | < 0.1 | 15 | < 0.4 | 71.8 | 3.6 | < 0.003 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 222.00 | 223.00 | 1.00 | 589307 | 3 | < 0.1 | 39 | < 0.4 | 92.8 | 38.7 | 0.119 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 223.00 | 223.75 | 0.75 | 589309 | 2 | < 0.1 | 21 | < 0.4 | 120 | 25.6 | 0.03 | CRBT wkly banded, apatite +/- columbite |
| PGH-18-02 | 223.75 | 224.44 | 0.69 | 589310 | < 1 | < 0.1 | 17 | < 0.4 | 98.8 | 11.7 | 0.071 | crbt |
| PGH-18-02 | 224.44 | 224.94 | 0.50 | 589311 | 2 | < 0.1 | 51 | < 0.4 | 8.6 | 3.4 | 0.028 | GRAN |
| PGH-18-02 | 231.72 | 232.56 | 0.84 | 589312 | 2 | < 0.1 | 38 | < 0.4 | 41.5 | 6.4 | 0.036 | cg CRBT |
| PGH-18-02 | 236.85 | 237.35 | 0.50 | 589313 | 6 | < 0.1 | 15 | < 0.4 | 49.3 | 10.1 | 0.047 | GRAN BX w/ minor CRBT |
| PGH-18-02 | 237.35 | 238.00 | 0.65 | 589314 | 2 | < 0.1 | 16 | < 0.4 | 62 | 15.1 | 0.068 | CRBT |
| PGH-18-02 | 238.00 | 239.00 | 1.00 | 589315 | 1 | < 0.1 | 8 | < 0.4 | 104 | 7 | 0.01 | CRBT |
| PGH-18-02 | 239.00 | 240.00 | 1.00 | 589316 | < 1 | < 0.1 | 8 | < 0.4 | 135 | 7.5 | 0.005 | CRBT |
| PGH-18-02 | 240.00 | 241.00 | 1.00 | 589318 | 3 | < 0.1 | 13 | < 0.4 | 171 | 14.6 | 0.003 | Highly weathered CRBT |
| PGH-18-02 | 241.00 | 241.88 | 0.88 | 589319 | 49 | < 0.1 | 16 | < 0.4 | 54.7 | 30.7 | 0.167 | CRBT w minor GRAN BX |
| PGH-18-02 | 241.88 | 242.38 | 0.50 | 589320 | 1 | < 0.1 | 17 | < 0.4 | 23.7 | 9 | 0.04 | GRAN |
| PGH-18-02 | 257.80 | 259.00 | 1.20 | 589321 | 1 | < 0.1 | 160 | 1.1 | 50.8 | 24 | 0.109 | CRBT |
| PGH-18-02 | 259.00 | 260.00 | 1.00 | 589322 | < 1 | < 0.1 | 43 | < 0.4 | 35.8 | 22.2 | 0.09 | CRBT |
| PGH-18-02 | 260.00 | 260.75 | 0.75 | 589323 | < 1 | < 0.1 | 39 | < 0.4 | 40.9 | 12.8 | 0.01 | CRBT |
| PGH-18-02 | 260.75 | 262.09 | 1.34 | 589324 | 8 | < 0.1 | 33 | < 0.4 | 45 | 109 | 0.187 | CRBT |
| PGH-18-02 | 262.09 | 263.00 | 0.91 | 589325 | < 1 | < 0.1 | 53 | < 0.4 | 44.5 | 28.9 | 0.031 | CRBT |
| PGH-18-02 | 263.00 | 264.00 | 1.00 | 589326 | < 1 | < 0.1 | 78 | < 0.4 | 59.1 | 34 | 0.023 | CRBT |
| PGH-18-02 | 264.00 | 265.00 | 1.00 | 589327 | 1 | < 0.1 | 70 | < 0.4 | 51.2 | 101 | 0.073 | CRBT |
| PGH-18-02 | 265.00 | 266.00 | 1.00 | 589328 | < 1 | < 0.1 | 62 | < 0.4 | 41.8 | 64 | 0.044 | CRBT |
| PGH-18-02 | 266.00 | 267.00 | 1.00 | 589330 | 9 | < 0.1 | 41 | < 0.4 | 35.5 | 60.2 | 0.06 | CRBT |
| PGH-18-02 | 267.00 | 268.00 | 1.00 | 589331 | 2 | < 0.1 | 29 | < 0.4 | 52.6 | 12 | 0.008 | CRBT |
| PGH-18-02 | 268.00 | 269.00 | 1.00 | 589332 | < 1 | < 0.1 | 41 | < 0.4 | 74.8 | 33.7 | 0.199 | CRBT |
| PGH-18-02 | 269.00 | 270.00 | 1.00 | 589333 | < 1 | < 0.1 | 54 | < 0.4 | 136 | 46.7 | 0.273 | CRBT |
| PGH-18-02 | 270.00 | 270.77 | 0.77 | 589334 | 1 | < 0.1 | 26 | < 0.4 | 123 | 19.5 | 0.021 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|-----------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|--------------------------------|
| PGH-18-02 | 270.77 | 272.00 | 1.23 | 589335 | 7 | < 0.1 | 14 | < 0.4 | 45.6 | 14.9 | 0.093 | Gran BX CRBT infill |
| PGH-18-02 | 280.00 | 281.00 | 1.00 | 589336 | 5 | < 0.1 | 19 | < 0.4 | 106 | 13.5 | 0.044 | GRAN bx + CRBT |
| PGH-18-02 | 281.00 | 282.00 | 1.00 | 589338 | 3 | < 0.1 | 30 | < 0.4 | 121 | 36.5 | 0.151 | GRAN bx + CRBT |
| PGH-18-02 | 282.00 | 283.00 | 1.00 | 589339 | 8 | < 0.1 | 21 | < 0.4 | 65.3 | 5.5 | 0.029 | Gran bx + CRBT |
| PGH-18-02 | 312.00 | 313.50 | 1.50 | 589340 | 11 | < 0.1 | 52 | < 0.4 | 92.1 | 14.1 | 0.037 | GRAN bx w/ crbt |
| PGH-18-02 | 313.50 | 314.25 | 0.75 | 589341 | 2 | < 0.1 | 28 | < 0.4 | 67.2 | 9.4 | 0.035 | GRAN bx w/ crbt |
| PGH-18-02 | 314.25 | 315.00 | 0.75 | 589342 | 7 | < 0.1 | 138 | < 0.4 | 349 | 62.1 | 0.086 | GRAN bx w/ crbt, scint 640 c/s |
| PGH-18-02 | 315.00 | 316.50 | 1.50 | 589344 | 8 | 0.3 | 40 | < 0.4 | 71.1 | 6.6 | 0.019 | GRAN bx w/ crbt |
| PGH-18-02 | 316.50 | 318.00 | 1.50 | 589345 | 3 | 0.2 | 30 | < 0.4 | 54.9 | 9 | 0.042 | GRAN bx w/ crbt |
| PGH-18-02 | 318.00 | 319.50 | 1.50 | 589346 | 1 | 0.2 | 21 | < 0.4 | 29.7 | 3.8 | 0.013 | GRAN bx w/ crbt |
| PGH-18-02 | 333.95 | 334.95 | 1.00 | 589347 | 5 | 0.2 | 34 | < 0.4 | 68.8 | 10.9 | 0.086 | GRAN bx / crbt |
| PGH-18-02 | 336.40 | 337.60 | 1.20 | 589348 | 3 | < 0.1 | 35 | < 0.4 | 106 | 18.8 | 0.052 | CRBT |
| PGH-18-02 | 339.50 | 341.00 | 1.50 | 589349 | 20 | 0.2 | 65 | < 0.4 | 58.1 | 14.2 | 0.007 | GRAN BX |
| PGH-18-02 | 341.00 | 342.50 | 1.50 | 589350 | 7 | 0.3 | 24 | < 0.4 | 294 | 25.5 | 0.013 | GRAN BX |
| PGH-18-02 | 342.50 | 344.00 | 1.50 | 589351 | 13 | 0.3 | 159 | < 0.4 | 806 | 32.5 | 0.013 | GRAN BX Scint up to 850c/s |
| PGH-18-02 | 344.00 | 345.00 | 1.00 | 589353 | 6 | 0.2 | 81 | < 0.4 | 494 | 83.2 | 0.031 | ALKALI w/ CRBT |
| PGH-18-02 | 349.00 | 350.50 | 1.50 | 589354 | 4 | 0.2 | 32 | < 0.4 | 104 | 9.4 | 0.024 | ALKALI w/ CRBT |
| PGH-18-02 | 350.50 | 351.64 | 1.14 | 589355 | 3 | < 0.1 | 60 | < 0.4 | 73.4 | 5.4 | 0.023 | CRBT |
| PGH-18-02 | 351.64 | 352.14 | 0.50 | 589356 | 7 | 0.3 | 18 | < 0.4 | 22.8 | 1.3 | 0.009 | ALKALI w/ CRBT |
| PGH-18-02 | 355.00 | 355.50 | 0.50 | 589357 | 5 | 0.3 | 24 | < 0.4 | 49.9 | 26.6 | 0.013 | Alkali w/ minor CRBT |
| PGH-18-02 | 355.50 | 356.75 | 1.25 | 589358 | 17 | 0.1 | 69 | < 0.4 | 172 | 72.3 | 0.07 | CRBT, fg, bx |
| PGH-18-02 | 356.75 | 358.25 | 1.50 | 589359 | 6 | 0.5 | 12 | < 0.4 | 32 | 4.4 | 0.009 | Alkali BX, 600 c/s |
| PGH-18-02 | 358.25 | 359.00 | 0.75 | 589360 | 6 | 0.2 | 22 | < 0.4 | 75.7 | 6.6 | 0.011 | CRBT w/ minor alkali bx |
| PGH-18-02 | 359.00 | 359.94 | 0.94 | 589361 | 7 | 0.2 | 27 | < 0.4 | 155 | 9.7 | 0.017 | CRBT w/ minor alkali bx |
| PGH-18-02 | 359.94 | 360.44 | 0.50 | 589363 | 6 | 0.2 | 14 | < 0.4 | 23.3 | 1.7 | 0.01 | Alkali |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|--------------------|----------|-----------|
| PGH-18-02 | 120.00 | 121.00 | 1.00 | 589256 | A18-04296 | N/A | ORIGINAL SAMPLE | 0.12 | < 0.003 |
| PGH-18-02 | 120.00 | 121.00 | 1.00 | 589257 | A18-04296 | DUPLICATE | DUPLICATE (589256) | 0.13 | < 0.003 |
| PGH-18-02 | 239.00 | 240.00 | 1.00 | 589316 | A18-04296 | N/A | ORIGINAL SAMPLE | 2.86 | 0.005 |
| PGH-18-02 | 239.00 | 240.00 | 1.00 | 589317 | A18-04296 | DUPLICATE | DUPLICATE (589316) | 2.87 | 0.009 |
| PGH-18-02 | 51.00 | 51.00 | 0.00 | 589220 | A18-04296 | BLANK | Marble | < 0.01 | < 0.003 |
| PGH-18-02 | 90.75 | 90.75 | 0.00 | 589240 | A18-04296 | STANDARD | Oka 1 | 2.37 | 0.553 |
| PGH-18-02 | 122.46 | 122.46 | 0.00 | 589260 | A18-04296 | BLANK | Marble | 0.04 | < 0.003 |
| PGH-18-02 | 148.00 | 148.00 | 0.00 | 589271 | A18-04296 | STANDARD | Oka 1 | 2.4 | 0.548 |
| PGH-18-02 | 157.30 | 157.30 | 0.00 | 589276 | A18-04296 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-02 | 186.00 | 186.00 | 0.00 | 589286 | A18-04296 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-02 | 187.90 | 187.90 | 0.00 | 589289 | A18-04296 | STANDARD | Oka 1 | 2.39 | 0.542 |
| PGH-18-02 | 223.00 | 223.00 | 0.00 | 589308 | A18-04296 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-02 | 266.00 | 266.00 | 0.00 | 589329 | A18-04296 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-02 | 281.00 | 281.00 | 0.00 | 589337 | A18-04296 | STANDARD | Oka 1 | 2.36 | 0.513 |
| PGH-18-02 | 315.00 | 315.00 | 0.00 | 589343 | A18-04296 | STANDARD | Oka 1 | 2.39 | 0.541 |
| PGH-18-02 | 344.00 | 344.00 | 0.00 | 589352 | A18-04296 | BLANK | Marble | 0.04 | < 0.003 |
| PGH-18-02 | 359.94 | 359.94 | 0.00 | 589362 | A18-04296 | BLANK | Marble | 0.02 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|-----------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 28-Mar-2018 |
| Township/Area: | Killala Lake Area | End Date: | 4-Apr-2018 |
| Claims (converted): | 307858 | Described by: | B. Clark, B.Sc. |
| Claims (legacy): | TB 4256251, TB 4256252 | Log date: | 5-Apr-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 290.00° | | Easting: 519526 | | Core size: HQ | | Cemented: No | |
| Plunge: -50.00° | | Northing: 5432367 | | Casing: Pulled | | Stored: Yes | |
| Length: 480.0 m | | Elevation: 313.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-03B | Reflex | 18 | 284.9 | -50.6 | 58036 |
| PGH-18-03B | Reflex | 69 | 285.6 | -50.8 | 56647 |
| PGH-18-03B | Reflex | 120 | 286.1 | -50.8 | 56811 |
| PGH-18-03B | Reflex | 174 | 286 | -51.4 | 56905 |
| PGH-18-03B | Reflex | 225 | 287.6 | -51 | 56781 |
| PGH-18-03B | Reflex | 276 | 284.6 | -50.3 | 55404 |
| PGH-18-03B | Reflex | 327 | 290.9 | -49.6 | 56999 |
| PGH-18-03B | Reflex | 377 | 292.5 | -49.3 | 56651 |
| PGH-18-03B | Reflex | 429 | 293.6 | -48.5 | 56691 |
| PGH-18-03B | Reflex | 480 | 295.5 | -47.6 | 56760 |

Description

Hole moved from 519435E, 5432302N after first attempt (PGH-18-03) failed to reach bedrock by 78m.

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------------|----------|-----------|------------|--|---|
| PGH-18-03 | 0 | 78 | OVB | Overburden | Overburden |
| PGH-18-03B | 0 | 3 | OVB | Overburden | Casing |
| PGH-18-03B | 3 | 4.1 | QTZ-SYE | Quartz Syenite | Medium pink, mg, 25% qtz, 55% k-fspar, 20% bt. Selectively pervasive hematite alteration. |
| PGH-18-03B | 4.1 | 7.84 | SYE-BX | Quartz syenite breccia with Carbonatite infill | Alkali as described above. Clasts are sub rounded, up to 10cm, diffuse boundaries (dissolution), fractures in clasts, infill is light green to pink to light purple fg carbonatite. Possible fg black Fe-Nb Oxides(?). Breccia zones up to 1m. |
| PGH-18-03B | 7.84 | 13.3 | SYE | Quartz Syenite | Med pink to red, mg, qtz 15%, 70% k-fspar, 15% bt (alt to chl). Bt commonly alt to chl, fracture fill fg blue chl(?). Small crbt veins up to 4cm. 9.41-9.85: CRBT dyke, fg, massive, light grey to light purple to light green, trace disseminated py/hem. |
| PGH-18-03B | 13.3 | 15.1 | CRBT | Carbonatite | Fg, light purple to grey green, 13.3-14.4: Possibly highly altered Alkali(?) contains abundant bt (alt to chl) with interstitial carbonate. Wispy bands of blue fg amph(?) and light green apatite cumulates <1cm. Brecciated contacts. |
| PGH-18-03B | 15.1 | 19.85 | SYE-BX | Quartz Syenite + Carbonatite | QTZ SYN as above. CRBT light purple to light pink to light green, fg, local wispy bands of blue-green (amph / apatite?). Apatite cumulates up to 6mm, disseminated hematite, breccias up to 0.6m. Syn clasts with diffuse boundaries. |
| PGH-18-03B | 19.85 | 22 | QTZ-SYE | Alkali syenite | Mg, light pink-red, qtz(20%), k-fspar(60%), bt (20%). Minor CRBT vein <3cm. |
| PGH-18-03B | 22 | 23.85 | CRBT | Carbonatite | Massive, fg-mg, light purple-pink-light green, local wispy bands of apatite cumulate up to 4cm. Trace disseminated py (possible other black sulphide), disseminated hem |
| PGH-18-03B | 23.85 | 27.65 | SYE | Alkali quartz syentie and Carbonatite veins | Modal percentages as above for Alkali. Bt being altered to green chl and vfg blue amph. Carbonatite veins are fg, light purple to grey, light pink-light green, locally very weakly banded to mottled, contacts are rimmed by blue amph. Local patchy fluorite. |
| PGH-18-03B | 27.65 | 31.31 | CRBT | Carbonatite Dyke | Upper contact undulating @ ~10d TCA. Light pink-light purple to cream, local wispy bands of blue (fluorapatite?), near contacts red-brown apatite cumulates (<4mm) forming wispy bands. 3% disseminated and blebs up to 5cm of py, trace disseminated (<1.5mm) bluish-black (possibly Fe-Nb Oxide?). lower contact planar @60/160 |
| PGH-18-03B | 31.31 | 34.7 | QTZ-SYE | Alkali quartz syenite | As above, undulating diffuse lower contact |
| PGH-18-03B | 34.7 | 40.1 | MIX_ZONE | Alkali qtz syenite breccia with crbt infill | Alkali; 20% qtz, 70% k-fldsp, 10% bt, patchy hematite alteration, mg, breccia clasts are angular with diffuse boundaries. Breccia and CRBT zones are ~2.60m of interval. CRBT light pink-purple to light green, fg, locally weakly banded, trace disseminated py, disseminated hem. |
| PGH-18-03B | 40.1 | 49.37 | SYE | Alkali qtz syenite | As above, intermittent crbt dykes up to 30cm (makes up 10% of interval collectively). CRBT; fg, grey-light pink/purple-green, disseminated hem / py, blue fg wispy bands locally. |
| PGH-18-03B | 49.37 | 50 | DIAB | Diabase dyke | Vfg, black, strongly magnetic, sharp upper and lower contacts (lower contact has section of crbt between alkali. Amygdales filled with carb & veinlets, weak patchy chl/hem alteration |
| PGH-18-03B | 50 | 50.95 | SYE | Alkali qtz syentie | As above. |
| PGH-18-03B | 50.95 | 52.45 | MIX_ZONE | Alkali with Carbonatite dykes | Alkali as above; CRBT: 50.97-51.25: cream, mg-cg, irregular brecciated upper and lower contact, wispy bands defined by blue mineral (fluorapatite?) 51.50-51.80: brecciated, light purple to light green, mg, apatite cumulated up to 4mm, brown-reddish. Disseminated hem. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|-------|--------|------------|--|--|
| PGH-18-03B | 52.45 | 62.08 | CRBT | Carbonatite | Light pink-purple to green-brown, fg-cg, apatite cumulates up to 6cm. Disseminated hematite, trace disseminated sulphides(py). 53.20-53.75: massive apatite(?) up to 25cm. Opaque, cream, H5-6, HCL; effervesces when powdered, sub-concoidal fracture, fg (sugary), minimal UV florescence (no impurities, pyrochlore?). Outside of massive apatite zones breccia(?) of light purple calco-rich carbonatite, disseminated hematite (15%), disseminated fg and euhedral py up to 3mm. 55.00-59.00: mottled, calco-rich and apatite(?)/fero-dolomite, light purple-light green less commonly light pink. Diss fg blue-blk, elongate blades <2mm, ~5%. 3% trace disseminated py/crystals up to 3mm. 59.00-60.5: Brecciated with alkali clasts up to 4cm, some completely altered to bt? reaction rims around alkali clasts up to 5mm, diffuse boundaries with angular to sub-angular clasts. However, near end of section there is an alkali clasts with much less alteration, sub - rounded, and diffuse boundaries. 61-61.5: banded, stylo-litic/wavy bands, alternating in colour red/light purple/grey, vfg 1% disseminated sulphide(?) blue-black |
| PGH-18-03B | 62.08 | 70.1 | QTZ-SYE | Alkali qtz syenite | 15% qtz, 75% k-fldsp, 10% bt, red-pink, mg. Local breccia up to 15cm, diffuse clast boundaries, angular to sub. 67.50-68.16: CRBT dyke, light pink, light green cumulates of apatite up to 3cm, fg disseminated blue submetallic mineral. |
| PGH-18-03B | 70.1 | 74.36 | CRBT | Carbonatite | Light pink-purple to light green, mottled, disseminated hematite, light green apatite(?) cumulates up to 5mm. Trace disseminated sulphides (py). Contacts diffuse(dissolution). |
| PGH-18-03B | 74.36 | 79.69 | SYE | Alkali feldspathic rock | Mg-fg, moderate patchy hematite alteration, as above modal percentages. Fracture fill is blue-green chl/amph(?)(fentized?) |
| PGH-18-03B | 79.69 | 81.14 | SYE-BX | Alkali Breccia with carbonatite infill | CRBT; light pink-purple to light green, small rounded clasts of alkali up to 5mm, larger alkali clasts are angular with diffuse boundaries. Locally mottled, disseminated trace py + hem |
| PGH-18-03B | 81.14 | 84.48 | GRAN | Granite | Medium pink to light red, mg, 25% qtz, 60% k-fspar, 15% mafic. Moderate hematite alteration, crbt veins up to 5cm. |
| PGH-18-03B | 84.48 | 87.88 | SYE-BX | Carbonatite + Granite BX | Gran as above, up to 0.5m. CRBT; light pink-purple-grey-green, wispy bands, locally massive apatite(?), disseminated hem, trace disseminated py, fg black mineral (Fe-Nb Oxide?). Fg light grey bands contain vfg black mineral (pyrochlore) |
| PGH-18-03B | 87.88 | 95.42 | GRAN | Granite | Medium red-pink, fg, 30% qtz, 35% bt, 35% k-fspar. Abundance of bt changes across unit, commonly where bt is abundant k-fspar <15%. Minor crbt veining up to 3cm. Alteration halos around fractures of hem, infill is qtz, chl, blue amph(?) |
| PGH-18-03B | 95.42 | 95.95 | MDYKE | Mafic Dyke | Undulating upper contact, none magnetic, grey-green, hem/qtz/chl alteration |
| PGH-18-03B | 95.95 | 101.1 | GRAN | Granite | Gran pink-red, mg, chl/hem alt common, locally more abundant bt/qtz. CRBT veins up to 0.5m, bx contacts, light pink-purple, disseminated hem. |
| PGH-18-03B | 101.1 | 116.5 | GRAN | Granite | Light red to black green, qtz 20%, k-fspar 50%, mafics (bt/amph) 30%. Moderate selective pervasive chl alt (blue-green). Where more mafic minerals present there is less k-fspar. Minor CRBT veins up top 30cm |
| PGH-18-03B | 116.5 | 117 | SYE-BX | Granite breccia | Medium pink-red, sub-rounded clasts, CRBT infill, diffuse boundaries on some clasts. CRBT infill; massive, cream to light purple-pink-green, trace disseminated py + other fg black mineral. |
| PGH-18-03B | 117 | 122.04 | GRAN | Granite | Modal percentages as above. 120.9-121.15: massive infill of blue-green chl/amph(?fibrous to blades, fg, H5-6) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|-----------------------------------|--|
| PGH-18-03B | 122.04 | 157.83 | GRAN/FZ | Fault Zone, Granite | 122-126: Blocky heavily jointed GRAN, weakly weathered. 126-144.50: Strongly to completely weathered GRAN, Fe-stained, very weak material, massive core loss 144.50-157.83: Heavily jointed to locally strongly weathered GRAN. Massive core loss, locally cg GRAN, crystals up to 1cm, plag (30%), k-fspar (30%), Qtz(20%), Bt (20%). mafics alt to bright green clay (smectite?) |
| PGH-18-03B | 157.83 | 161.15 | CRBT-BX | Carbonatite with Alkali BX | Dominated by crbt, alkali clasts up to 15cm, diffuse boundaries. Crbt; light pink-purple-grey, massive, locally weakly weathered fracture (ferro-dolomite? Fe-ox staining), 5% disseminated hem, trace disseminated py + other fg, soft, black mineral (Fe-Nb OX?) |
| PGH-18-03B | 161.15 | 169.95 | GRAN | Granite | Mg-cg, crystals up to 2cm, qtz(20%), Kspar(40%), Plag(15%), bt/amp(25%), moderate to strong patchy hematite alteration, chl commonly replacing or rimming bt. Crbt veining up to 0.5m; light purple-pink, diss hem, massive Weakly weathered zones (encountered cavities while drilling) Core Loss 166.50-167.25m (0.75m) |
| PGH-18-03B | 169.95 | 173.65 | SYE-BX | Granitic breccia with Carbonatite | GRAN clasts up to 10cm, angular, diffuse boundaries/reaction rims altering to blue-grey fg amph? CRBT; fg, mottled to locally weakly banded, light purple-pink-green, diss hematite, diss py + fg black mineral strongly to completely weathered between 171.7-172.6 (0.3m Core Loss) |
| PGH-18-03B | 173.65 | 187.25 | GRAN | Granite | As above modal descriptions, rare crbt veins/bx up to 1m. Core loss: 175.5-176.00m (cavity) 177.00-177.55 (cavity) 181.30-182.60: CRBT BX; light purple-pink-green, apatite cumulates up to 2cm, locally massive, disseminated hem/py, trace disseminated other black mineral(?) |
| PGH-18-03B | 187.25 | 196 | CRBT | Carbonatite | Light pink-cream to grey, massive, local wispy bands defined by blue mineral fg mineral, apatite cumulates up to 1cm locally forming discontinuous bands. Moving towards lower contact apatite cumulates/bands become more continuous and uniform. Trace disseminated py. Disseminated other fg black mineral(Fe-Nb Ox?) |
| PGH-18-03B | 196 | 198.06 | GRAN | Granite | Mg-cg (up to 7mm), pink-cream, 30% qtz, 30% plag, 30% k-fspar, 10%bt. Minor crbt dykes up to 5cm |
| PGH-18-03B | 198.06 | 198.75 | CRBT | Carbonatite | Light pink-purple-green-cream, massive, locally wispy bands of blue mineral(chl?) also brimming veins. Apatite cumulate 'bands' nearing lower contact; bands ~3mm wide green-red. Trace disseminated py. |
| PGH-18-03B | 198.75 | 202 | SYE-BX | Granite breccia | Med red-pink, fg-mg, locally brecciated with clasts up to 5cm, sub-angular to sub rounded, patchy chl alteration, CRBT infill, |
| PGH-18-03B | 202 | 209.3 | PEG | Granitic Pegmatite | Vcg, xtals up to 6cm, 35% plag, 25% qtz, 25% k-fspar, 15% biot. Patchy weak-mod hematite alteration, green-blue chl replacing biot. Local crbt veins up to 10cm (light pink-cream, fg, massive, enveloped by vfg blue amph/chl?). |
| PGH-18-03B | 209.3 | 209.9 | CRBT | Carbonatite | Cg, cream-light pink, discontinuous wavy bands of blue mineral (amph?) near contacts. Trace disseminated py, disseminated hematite, vfg disseminated black mineral(?) |
| PGH-18-03B | 209.9 | 218.85 | GRAN | Granite | 209.9-214.6: fg, 20% qtz, 30% bt, 40% k-fspar, 10% plag. 214.60-218.85: locally pegmatitic (described above) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|---|---|
| PGH-18-03B | 218.85 | 223.28 | CRBT | Carbonatite | Fg-cg, locally weakly banded to mottled, light pink-purple-green-blue. apatite cumulates up to 5cm, forming weak bands, with fg black mineral inside cumulate (Fe-Nb Oxide, pyrochlore?). Trace disseminated py/hem. Brecciated lower contact for ~30cm. |
| PGH-18-03B | 223.28 | 238.6 | GRAN | Granite | Mg-cg, med pink-red, 25% qtz, 45% k-fspar, 15% plag, 15% bt. Bt commonly alt to chl. Minor crbt veins up to 10cm. |
| PGH-18-03B | 238.6 | 243.33 | CRBT | Carbonatite | Fg-cg, crystals up to 1cm, light pink-blue-purple-green, locally massive to mottled. Trace disseminated py, local apatite cumulates up to 4cm. |
| PGH-18-03B | 243.33 | 246.5 | GRAN | Granite | Mg-cg, 25% bt, 40% k-fspar, 25% qtz, 10% plag. Locally brecciated near crbt contacts, Bt alt to chl, locally up to 60% bt. |
| PGH-18-03B | 246.5 | 247.93 | CRBT | Carbonatite | Cg, light pink-cream-purple-green, elongate crystals up to 2cm (dolomite). Dark green apatite cumulated up to 5mm, form discontinuous bands. Brecciated upper contact, sharp lower contact |
| PGH-18-03B | 247.93 | 255.5 | SYE-BX | Granite breccia with carbonatite infill / carbonatite dykes | Gran pink-red (patchy hematite), mg, Qtz 30%, kspar (40%), 20% Bt, 10%plag Gran clasts up to 20cm, sub-angular, diffuse boundaries/reaction rims, commonly rimmed by blue fg chl/amph. CRBT; light pink-purple-green to cream, locally cg Dol (up to 3cm), locally massive, commonly diss hem, wispy discontinuous blue bands with apt cumulates <4mm. Locally fg black mineral (pyrochlore?) |
| PGH-18-03B | 255.5 | 263.27 | GRAN | Granite | Mg-vcg, locally crystals up to 3cm, 20%bt, 30%qtz, 40%kfldsp. BT commonly alt to blue-green chl. Local crbt veins up to 36cm, brecciated contacts. |
| PGH-18-03B | 263.27 | 267 | CRBT | Carbonatite | Carbonatite |
| PGH-18-03B | 267 | 269.18 | SYE-BX | Granite Breccia | Gran as above, sub-angular clasts up to 10cm with crbt infill. Breccia is only locally for zone up to 15cm and brecciated lower contact. |
| PGH-18-03B | 269.18 | 277.55 | CRBT | Carbonatite | Dominantly light pink-cream also light purple-green-blue/grey, fg-cg, dominantly massive, local fluorite. Trace disseminated py 274-276: mica rich, with up to 10% pyrochlore, xtals up to 3mm |
| PGH-18-03B | 277.55 | 284.38 | SYE-BX | Carbonatite and Granite | GRAN as above. CRBT: light pink-cream, grey, blue. Fg-cg, locally weakly banded(?), alternating between calcite rich and blue fg amph(?) +/- apatite. Locally fg (<2mm) black elongate crystals Trace disseminated hem. Largest crbt dyke 1.5m. Overall CRBT > GRAN |
| PGH-18-03B | 284.38 | 286.37 | MDYKE/CRBT | Mafic Dyke + Granite clasts. | Magnetic, fg, green-grey, minor clasts(?) of GRAN. Carbonate veins up to 3mm brecciated lower contact zone ~0.5m |
| PGH-18-03B | 286.37 | 296.67 | QTZ-SYE | Qtz Syenite with minor Carbonatite | Mg-cg, 20% qtz, 50% k-fldsp, 25% bt, 5% plag. Medium red-pink (Hem alteration), bt being replaced by chl. Local variation in abundances of plag & biot. Crbt dykes up to 1m (288.80-289.90: crbt, light pink to purple, trace apatite cumulates <7mm, disseminated hematite/pyrite, stylolitic veins of fg black mineral. Undulating contact with crbt @ 25/220. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|--|---|
| PGH-18-03B | 296.67 | 300.22 | CRBT | Carbonatite | Described as two distinct parts; 296.67-299.00: Light pink-cream with minor blue-green. Massive to locally diffuse banding defined by fg blue amph/chl(?) and apatite cumulates up to 4mm (sub-rounded, light green to opaque, H5, usually with light red alteration (hem?)) 299-300.22: Black to grey-blue, strongly magnetic, 10% po/py, steel grey to black mineral forming angular masses up to 1cm (up to 15%)(H 3.5-4, iridescent on freshly fractured surface, irregular to subconchoidal fracture), Cg calcite up to 3cm, fg slender elongate blue-green mineral (amph) xtals up to 2mm. Phlogopite crystals up to 5mm. Trace pyrochlore(?) Mag Sus up to 260 |
| PGH-18-03B | 300.22 | 311.25 | QTZ-SYE | Quartz Syenite with minor crbt dykes | Qtz 15%, K-fspar 50%, plag 10%, 15% bt. Mg-cg xtals up to 1cm, plag commonly more cg. Fenitization around crbt dykes, rimmed by blue chl/amph. Crbt veins up to 25cm, cream to light pink-purple-grey. Apatite cumulates up to 1.5cm. |
| PGH-18-03B | 311.25 | 311.76 | CRBT | Carbonatite | Pink, fg, apatite cumulates (green-red/brown) up to 4cm, concentrated near contacts. Irregular lower contact, planar upper contact. Rimmed by fg blue chl(?) reaction rims in qtz syn. |
| PGH-18-03B | 311.76 | 317.8 | QTZ-SYE | Quartz Syenite | Med red to pink, qtz (15%), k-fspar (60%), Plag (10%), Bt(15%). Mg to locally cg (plag up to 1.5cm. Bt being replaced by chl, partially to completely. Minor crbt veins, rimmed with fg chl. |
| PGH-18-03B | 317.8 | 319.77 | CRBT-BX | Carbonatite with clasts of quartz syenite. | Fg-cg locally calcite crystals up to 1.5cm, cream to light pink-purple-grey, cg calcite crystals rimmed by fg blue & black minerals (pyrochlore, phlogopite, amph?). Locally apatite cumulates up to 2cm. Trace disseminated py, disseminated hematite. Qtz syn clasts up to 20cm |
| PGH-18-03B | 319.77 | 322.6 | SYE-BX | Quartz syenite and carbonatite veins | Qtz syn as above. Light pink-purple-green-blue, fg-cg, locally weakly banded, apatite cumulates 1cm, fg black pyrochlore(?), commonly rimmed by blue chl(?) |
| PGH-18-03B | 322.6 | 331.28 | QTZ-SYE | Quartz Syenite with crbt veins | Qtz Sye as above; 325.45-325.70: CRBT vein, light pk, rimmed by blue chl, trace py up to 1cm blebs. 329.90-330.36: CRBT; wispy blue bands, apatite cumulates (up to 1.5cm, brown-green) forming discontinuous bands, disseminated hematite, trace dis py. |
| PGH-18-03B | 331.28 | 332.37 | CRBT | Carbonatite | Brecciated upper and lower contact, pink-purple, disseminated hematite, dark-brown apatite accumulates up to 1cm, syn clasts up to 6cm diffuse margins. Fg blue mineral disseminated |
| PGH-18-03B | 332.37 | 338 | QTZ-SYE | Quartz syenite | As above; Crbt veins up to 22cm, commonly fg, blueish to light pink, disseminated hematite, Trace disseminated euhedral pyrite up to 2mm, calcite dominated. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|--|---|
| PGH-18-03B | 338 | 347 | SYE-BX | Quartz syenite breccia with carbonatite infill / carbonatite dykes | Qtz syn as above, bt being replaced by chl, blue chl/amph rimming crbt veins. Clasts are angular to sub-angular with reaction rims up to 5mm. Crbt is mottled to locally massive, fg, light pink-purple-green-blue, trace disseminated py, apatite cumulates green-red/brown up to 1cm, commonly concentrated near contacts as wispy discontinuous bands. Breccia zones up to 1.0m with syn between breccia zones. |
| PGH-18-03B | 347 | 365 | QTZ-SYE | Quartz syenite | Sye as above, local increase in plag, locally cg (commonly plag) up to 1cm. Patchy selectively pervasive hematitic alteration varying from moderate to strong. CRBT veins up to 1m, described below. 353.42-354.20: light purple, fg, apatite cumulates up to 6cm (light green, H4-5, weak reaction with HCL when powdered, fluorescence under UV absent) with fg hem. 345.89-356.18: crbt; light pink, discontinuous bands of red-brown (apt?), bands commonly near contacts ~4mm wide, diss fg hem, fractures filled with vfg black mineral. irregular upper contact, sharp Lower contact @ 65 TCA 360.55-361: Mottled light green to purple, 60% apt, diss hem within both dol(?) and apt(?), trace diss py and blebs up to 7mm. Undulating contacts rimmed by fg blue-green chl. |
| PGH-18-03B | 365 | 369.74 | QTZ-SYE | quartz syenite | Pink-red, qtz(15%), k-fspar (65%), plag (10%), 10% Bt. Locally weakly banded alternating bands of bt rich. Moderate-strong pervasive hematite alteration, chl replacing bt. Crbt veins up to 14cm; cream pink, disseminated py. |
| PGH-18-03B | 369.74 | 371.46 | MDYKE/CRBT | Mafic Dyke + Carbonatite | Carbonatite intruding mafic dyke, brecciated mafic dyke. Carbonatite veins have hematite alteration halos. Mafic dyke alternating to chl/clay. Carbonatite is cream-white, containing 10% fg hematite giving it grey appearance. |
| PGH-18-03B | 371.46 | 374.8 | QTZ-SYE | Quartz Syenite | Med pink-red, mg, bt alt to chl, weak patchy hem alt commonly halos around carb vein. Carb veins +/- blue amph(?), chl, hem up to 1.5cm. Sharp lower contact t@ 60dTCA. |
| PGH-18-03B | 374.8 | 376.95 | CRBT | Carbonatite | Light pink to blue-black, disseminated hem elongated blades, trace disseminated py, semi-metallic grey-blue sulphide (columbite?) 5% |
| PGH-18-03B | 376.95 | 383.05 | QTZ-SYE | Quartz Syenite | Qtz (15%), k-fspar(60%), Plag (10%), Bt (15%). Fg-cg crystals up to 3cm, weak-mod patchy hem. 379.87-380.20: brecciated, calcite clasts up to 2cm, light pink to cream, vfg blue, trace disseminated py & stringers up to 5cm. Apatite cumulates up to 5mm, surrounded by blue amph. 381.49-382.09: CRBT + SYN bx; light purple, diss hem, apt cumulates up to 10mm, patchy fluorite, disseminated py, mottled. |
| PGH-18-03B | 383.05 | 383.9 | CRBT | Carbonatite | Light pink-purple, apatite cumulates up to 1cm, disseminated columbite (5%) up to 1cm. |
| PGH-18-03B | 383.9 | 395.15 | QTZ-SYE | Quartz Syenite | Pink-red-opaque, qtz 15%, kspar 50%, plag 20%, bt, 15%. Mg-cg crystals up to 7mm, plag in commonly coarser grained when present. Modal percentage vary across unit. Fractures with green-blue chl common between 30-60 dTCA. Weak patchy hematite alteration. Bt commonly alt to chl. Minor crbt veins up to 0.53m. 393.20-393.70: light pink-purple, calcite dominant, apt cum up to 3mm forming wispy blue-green. Diss hem, minor ferro-dol. sharp contacts rimmed by chl. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|---|--|
| PGH-18-03B | 395.15 | 397.68 | SYE-BX | Syenite Breccia with Carbonatite infill | Syenite(?) breccia zones up to 0.5m, strong pervasive hematitic alteration. Cream to Light pink-purple-grey, fg-mg, calcite dominant. locally massive to banded. Locally apt cumulate forming wispy bands (green-red-brown), disseminated py. Fg black-green elongate mineral, amph? CRBT is moderately banded 395.64-396.00 @ 40/350. Bands are defined by alternating colours light pink-purple, darker bands containing hematite, fg apatite and vfg black pyrochlore(?). |
| PGH-18-03B | 397.68 | 400.7 | QTZ-SYE | Quartz Syenite | Fg-mg, pink-light red, minor crbt, chl replacing bt. Diffuse contact with dyke. |
| PGH-18-03B | 400.7 | 401.54 | MDYKE | Mafic Dyke | Magnetic, porphyritic crystals up to 2mm (amph/pyx), green-grey, carbonate veins with alteration halos, vein up to 2mm wide, halos are lighter in colour (carb/chl/hem?). Strong hematitic alteration above and below contact. |
| PGH-18-03B | 401.54 | 411 | QTZ-SYE | Quartz Syenite | As above. With bt locally up to 30% and crbt veins up to 12cm. |
| PGH-18-03B | 411 | 418.55 | CRBT | Carbonatite | Light pink-cream to blue-green, fg-mg, apt increasing downhole up to 10% locally. Forming wispy bands of blue-green (30/020). Darker bands contain magnetite crystals up to 5mm and 10% abundance locally. Hematite commonly rimming apt cumulates. Apt cumulates up to 4mm, grey-brown. Trace disseminated py. Scint up to 350 cps. |
| PGH-18-03B | 418.55 | 445.79 | QTZ-SYE | Quartz Syenite | Fg-mg, 1-4mm, red-pink, patchy weak-mod hem alt, chl replacing bt locally. Alt halos around fractures and veins. Trace disseminated py. Rare crbt up to 7cm. |
| PGH-18-03B | 445.79 | 446.76 | CRBT | Carbonatite | Light purple, massive, fg, brecciated upper contact. Trace diss py, diss hem. Fg apt red-brown wispy, |
| PGH-18-03B | 446.76 | 461.05 | QTZ-SYE | Quartz syenite | Fg-mg, weak to strong pervasive to patchy hematite alteration. Qtz 15%, K-fspar 60%, plag 10%, bt 15%. Alt halos around fractures of hem, locally chl replacing bt, chl is blue-green. Strong hem alt increases towards end of unit but there isn't a gradational increase. |
| PGH-18-03B | 461.05 | 464.52 | CRBT | Carbonatite | Light pink to purple, fg-cg, calcite dominant, later phases ferro-dol rich (beige-grey), local clasts of syn up to 10cm. Trace diss py/blebs up to 3mm, diss hem. Locally apt cumulates up to 10 (<2% overall) |
| PGH-18-03B | 464.52 | 470.76 | QTZ-SYE | Quartz Syenite | Light red-pink, qtz 15%, k-fspar 65%, plag 10%, bt 10%. Fractures with alt halos <2mm hem. Patchy weak hematite alteration. Locally bt being replaced by chl. Minor crbt veins <1cm. |
| PGH-18-03B | 470.76 | 477.06 | CRBT | Carbonatite | Vuggy, light purple-red, hematite along fractures and locally filling vugs, weakly weathered. Apatite cumulates up to 5cm, visible pyrochlore crystals up to 5mm in vugs, euhedral py up to 4mm (2%). Trace barite. Vugs vary in size from 2mm to 4cm and locally containing very soft black mud. disseminated fg black mineral as elongated blades (amph?). Scint up to 420 cps. |
| PGH-18-03B | 477.06 | 480 | QTZ-SYE | Quartz Syenite | Fg-mg, red-pink, moderate patchy hem alt. Bt alt to chl (blue-green). |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|------------|--------|------|-----------|----------|-----------|------------------------------------|---|
| PGH-18-03B | 18.47 | CT | 70 | 70 | | Contact | Contact btw QTZ SYN and CRBT |
| PGH-18-03B | 25.89 | JNT | 75 | 20 | | Joint | Joint in QTZ SYN |
| PGH-18-03B | 26.23 | CT | 75 | 85 | | Contact | lower contact btw CRBT and SYN |
| PGH-18-03B | 31.31 | CT | 60 | 160 | | Contact | lower contact btw CRBT and SYN |
| PGH-18-03B | 76.85 | JNT | 40 | 10 | | Joint | planar, slightly rough, open, chl |
| PGH-18-03B | 78.5 | JNT | 40 | 200 | | Joint | planar, smooth, open, chl, |
| PGH-18-03B | 86.76 | FRAC | 55 | 175 | | Fracture | planar, open, slightly rough, chl(blue-green) |
| PGH-18-03B | 95.42 | CT | 35 | 160 | | Contact btw mafic dyke and GRAN | undulating, closed |
| PGH-18-03B | 99.04 | JNT | 15 | 25 | | Joint in GRAN | blue chl infill(?), planar, slightly rough |
| PGH-18-03B | 101.05 | CT | 15 | 20 | | Contact btw CRBT & GRAN | undulating, open, slightly rough, fe-ox infill weakly weathered |
| PGH-18-03B | 231.17 | JNT | 50 | 210 | | Joint in GRAN | rough, chl infill, |
| PGH-18-03B | 243.31 | CT | 40 | 280 | | Contact Crbt / GRAN | undulating, intact, |
| PGH-18-03B | 247.9 | CT | 40 | 50 | | Contact Crbt/GRAN | planar, closed |
| PGH-18-03B | 280 | CT | 35 | 120 | | Contact Crbt/Alkali | closed, undulating |
| PGH-18-03B | 283.67 | JNT | 50 | 300 | | Joint in Alkali | planar, rough, fresh, no fill, |
| PGH-18-03B | 290.74 | JNT | 55 | 300 | | Joint in Alkali | planar, rough, carb/chl in fill <1mm |
| PGH-18-03B | 292.8 | JNT | 55 | 160 | | Joint in Alkali | stepped, rough, infill chl <1mm, |
| PGH-18-03B | 293.37 | JNT | 40 | 165 | | Joint in Alkali | planar, rough, infill blue chl <1mm |
| PGH-18-03B | 296.7 | CT | 25 | 220 | | Contact btw gran and crbt | undulating, closed |
| PGH-18-03B | 356.18 | CT | 65 | 272 | | Contact btw CRBT and SYN | planar, closed |
| PGH-18-03B | 365.2 | BND | 30 | 210 | | weak banding in SYN | |
| PGH-18-03B | 374.8 | CT | 60 | 185 | | upper contact between Syn and CRBT | planar, closed |
| PGH-18-03B | 376.95 | CT | 55 | 140 | | lower contact of CRBT | planar, closed |
| PGH-18-03B | 415.8 | BND | 30 | 20 | | banding in crbt | wavy bands of apt? mgt?, amph? |
| PGH-18-03B | 470.75 | CT | 50 | 355 | | upper contact between CRBT and SYN | sharp, undulating, open, rough |
| PGH-18-03B | 477.06 | CT | 80 | 165 | | lower contact of CRBT | spun (questionable), rough |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|------------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-03B | 188.73 | 190.22 | 1.49 | 589408 | A18-04469 | 2.71 | 0.06 | 2.01 | 0.436 | 1.38 | 50.01 | 0.32 | 0.08 | 0.036 | 2.63 | 37.52 | 97.18 | 2 | < 1 | 43 | 1579 |
| PGH-18-03B | 190.22 | 191.72 | 1.5 | 589409 | A18-04469 | 0.86 | 0.04 | 2.01 | 0.501 | 0.96 | 51.57 | 0.22 | 0.04 | 0.023 | 1.78 | 39.03 | 97.03 | 2 | < 1 | 22 | 800 |
| PGH-18-03B | 191.72 | 193.21 | 1.49 | 589410 | A18-04469 | 0.73 | 0.04 | 1.59 | 0.507 | 0.83 | 51.33 | 0.16 | 0.02 | 0.021 | 1.5 | 40.03 | 96.76 | 1 | < 1 | 19 | 733 |
| PGH-18-03B | 193.21 | 194.7 | 1.49 | 589411 | A18-04469 | 0.86 | 0.08 | 2.36 | 0.413 | 0.84 | 52.75 | 0.1 | < 0.01 | 0.011 | 0.93 | 39.71 | 98.07 | 1 | < 1 | 23 | 592 |
| PGH-18-03B | 194.7 | 196 | 1.3 | 589412 | A18-04469 | 11.3 | 2.23 | 7.75 | 0.409 | 4.58 | 36.15 | 0.1 | 0.21 | 2.365 | 3.13 | 29.47 | 97.69 | 10 | 2 | 202 | 1746 |
| PGH-18-03B | 218.36 | 218.86 | 0.5 | 589413 | A18-04469 | 62.85 | 12.27 | 3.95 | 0.095 | 2.68 | 3.27 | 4.21 | 6.66 | 0.217 | 0.15 | 3.18 | 99.52 | 4 | 7 | 106 | 1465 |
| PGH-18-03B | 218.86 | 220 | 1.14 | 589414 | A18-04469 | 6.05 | 0.87 | 2.38 | 0.355 | 2.08 | 46.15 | 0.47 | 0.78 | 0.084 | 3.17 | 34.85 | 97.23 | 2 | 1 | 59 | 394 |
| PGH-18-03B | 220 | 221 | 1 | 589415 | A18-04469 | 1.39 | 0.08 | 2 | 0.417 | 1.13 | 50.87 | 0.11 | 0.02 | 0.024 | 1.46 | 39.78 | 97.27 | 2 | < 1 | 22 | 876 |
| PGH-18-03B | 221 | 222 | 1 | 589416 | A18-04469 | 3.36 | 0.1 | 2.05 | 0.358 | 1.51 | 49.55 | 0.33 | 0.09 | 0.062 | 5.28 | 34.54 | 97.22 | 2 | < 1 | 60 | 544 |
| PGH-18-03B | 222 | 222.7 | 0.7 | 589418 | A18-04469 | 0.9 | 0.05 | 2.7 | 0.482 | 1.16 | 51.12 | 0.08 | 0.03 | 0.03 | 0.62 | 40.15 | 97.32 | 2 | < 1 | 17 | 725 |
| PGH-18-03B | 222.7 | 223.3 | 0.6 | 589419 | A18-04469 | 30.33 | 5.55 | 6.65 | 0.345 | 7.48 | 19.81 | 1.97 | 4.21 | 0.255 | 2.26 | 19.42 | 98.27 | 6 | 5 | 186 | 1387 |
| PGH-18-03B | 223.3 | 223.8 | 0.5 | 589420 | A18-04469 | 65.33 | 14.32 | 2.44 | 0.065 | 1.84 | 4.2 | 5.67 | 2.25 | 0.158 | 0.11 | 3.45 | 99.84 | 3 | 4 | 55 | 573 |
| PGH-18-03B | 238.1 | 238.8 | 0.7 | 589421 | A18-04469 | 49.51 | 10.53 | 3.98 | 0.172 | 2.81 | 12.94 | 3.46 | 3.53 | 0.321 | 0.88 | 11.56 | 99.69 | 6 | 4 | 84 | 1311 |
| PGH-18-03B | 238.8 | 240 | 1.2 | 589422 | A18-04469 | 3.42 | 0.31 | 1.51 | 0.374 | 1.24 | 49.46 | 0.31 | 0.27 | 0.019 | 2.03 | 38.31 | 97.24 | 2 | < 1 | 26 | 482 |
| PGH-18-03B | 240 | 241 | 1 | 589423 | A18-04469 | 3.64 | 0.5 | 2.17 | 0.384 | 1.92 | 47.78 | 0.26 | 0.39 | 0.065 | 3.72 | 36.56 | 97.39 | 3 | < 1 | 43 | 1914 |
| PGH-18-03B | 241 | 242 | 1 | 589425 | A18-04469 | 3.06 | 0.54 | 2.88 | 0.327 | 2.17 | 47.41 | 0.37 | 0.32 | 0.31 | 1.64 | 38.53 | 97.57 | 6 | 2 | 55 | 651 |
| PGH-18-03B | 242 | 242.75 | 0.75 | 589426 | A18-04469 | 7.45 | 0.66 | 5.49 | 0.416 | 4.17 | 41.16 | 0.27 | 0.49 | 0.525 | 3.24 | 33.59 | 97.46 | 9 | 2 | 93 | 5587 |
| PGH-18-03B | 242.75 | 243.36 | 0.61 | 589427 | A18-04469 | 3.61 | 0.52 | 2.4 | 0.397 | 2.21 | 47.39 | 0.23 | 0.34 | 0.076 | 0.89 | 39.11 | 97.18 | 2 | < 1 | 24 | 1250 |
| PGH-18-03B | 246 | 246.5 | 0.5 | 589428 | A18-04469 | 53.17 | 12.4 | 5.74 | 0.153 | 4.05 | 7.68 | 5 | 3.96 | 0.486 | 0.88 | 6.33 | 99.83 | 10 | 6 | 123 | 1788 |
| PGH-18-03B | 246.5 | 247 | 0.5 | 589429 | A18-04469 | 1.85 | 0.31 | 1.19 | 0.35 | 1.08 | 51 | 0.24 | 0.26 | 0.026 | 1.59 | 39.92 | 97.8 | 1 | < 1 | 18 | 634 |
| PGH-18-03B | 247 | 248 | 1 | 589430 | A18-04469 | 8.34 | 1.74 | 1.88 | 0.326 | 1.16 | 45.65 | 0.74 | 0.65 | 0.077 | 1.16 | 36.03 | 97.75 | 3 | < 1 | 30 | 863 |
| PGH-18-03B | 248 | 249 | 1 | 589431 | A18-04469 | 48.92 | 11.14 | 5.01 | 0.153 | 3.67 | 11.9 | 4.9 | 3.68 | 0.458 | 0.98 | 10.03 | 100.8 | 9 | 6 | 122 | 853 |
| PGH-18-03B | 249 | 250 | 1 | 589432 | A18-04469 | 42.07 | 9.24 | 5.47 | 0.186 | 4.77 | 14.71 | 3.43 | 5.04 | 0.395 | 1.48 | 13.43 | 100.2 | 8 | 7 | 146 | 958 |
| PGH-18-03B | 250 | 251 | 1 | 589433 | A18-04469 | 32.78 | 7.28 | 4.61 | 0.213 | 4.19 | 23.25 | 2.65 | 3.95 | 0.333 | 1.26 | 19.83 | 100.3 | 6 | 5 | 123 | 880 |
| PGH-18-03B | 251 | 252 | 1 | 589434 | A18-04469 | 6.75 | 1.26 | 2.25 | 0.292 | 1.96 | 45.69 | 0.48 | 0.9 | 0.089 | 2.4 | 35.11 | 97.18 | 2 | 2 | 41 | 458 |
| PGH-18-03B | 252 | 253 | 1 | 589435 | A18-04469 | 39.06 | 8.64 | 5.58 | 0.208 | 5.77 | 15.51 | 3.01 | 4.6 | 0.443 | 1.8 | 14.67 | 99.29 | 8 | 6 | 136 | 913 |
| PGH-18-03B | 253 | 254 | 1 | 589436 | A18-04469 | 32.77 | 7.31 | 4.73 | 0.22 | 4.24 | 21.96 | 2.92 | 3.98 | 0.38 | 1.72 | 18.19 | 98.43 | 6 | 6 | 108 | 938 |
| PGH-18-03B | 254 | 255 | 1 | 589437 | A18-04469 | 29.58 | 6.53 | 4.3 | 0.226 | 4.88 | 23.97 | 2.23 | 4.11 | 0.319 | 1.78 | 21 | 98.92 | 4 | 6 | 89 | 742 |
| PGH-18-03B | 255 | 255.5 | 0.5 | 589438 | A18-04469 | 19.31 | 3.62 | 3.31 | 0.247 | 3.34 | 34.91 | 1.72 | 1.76 | 0.218 | 6.85 | 22.62 | 97.92 | 4 | 4 | 82 | 837 |
| PGH-18-03B | 256.82 | 257.63 | 0.81 | 589440 | A18-04469 | 22.9 | 4.35 | 4.94 | 0.271 | 4.12 | 30.82 | 1.55 | 2.88 | 0.22 | 1.75 | 24.75 | 98.56 | 5 | 4 | 107 | 785 |
| PGH-18-03B | 262.5 | 263.23 | 0.73 | 589441 | A18-04469 | 46.67 | 10.5 | 4.2 | 0.187 | 2.75 | 15.68 | 4.1 | 2.84 | 0.454 | 0.45 | 12.33 | 100.2 | 7 | 4 | 81 | 2061 |
| PGH-18-03B | 263.23 | 264 | 0.77 | 589442 | A18-04469 | 2.86 | 0.6 | 1.43 | 0.313 | 0.95 | 49.64 | 0.27 | 0.21 | 0.034 | 0.94 | 40.13 | 97.35 | 3 | < 1 | 19 | 485 |
| PGH-18-03B | 264 | 265 | 1 | 589443 | A18-04469 | 0.03 | 0.04 | 1.26 | 0.33 | 0.79 | 52.87 | 0.1 | 0.02 | 0.043 | 0.47 | 42.04 | 97.98 | 2 | < 1 | 12 | 447 |
| PGH-18-03B | 265 | 266 | 1 | 589444 | A18-04469 | 2.83 | 0.28 | 3.48 | 0.423 | 2.89 | 46.23 | 0.18 | 0.21 | 0.388 | 3.01 | 37.31 | 97.23 | 6 | < 1 | 57 | 2587 |
| PGH-18-03B | 266 | 267 | 1 | 589445 | A18-04469 | 5.92 | 1.38 | 2.12 | 0.354 | 1.54 | 46.57 | 0.58 | 0.54 | 0.072 | 1.15 | 37.16 | 97.37 | 4 | < 1 | 29 | 2388 |
| PGH-18-03B | 267 | 268 | 1 | 589446 | A18-04469 | 53.4 | 12.37 | 5.8 | 0.164 | 4.72 | 6.15 | 4.94 | 4.82 | 0.52 | 0.41 | 7.18 | 100.5 | 9 | 7 | 122 | 1740 |
| PGH-18-03B | 269 | 270 | 1 | 589447 | A18-04469 | 17.75 | 3.53 | 4.83 | 0.275 | 4.45 | 33.34 | 1.42 | 2 | 0.534 | 3.5 | 27.37 | 99.02 | 5 | 3 | 209 | 1026 |
| PGH-18-03B | 270 | 271 | 1 | 589448 | A18-04469 | 8.26 | 1.45 | 4.68 | 0.379 | 4.87 | 39.55 | 0.28 | 1.25 | 0.322 | 3.51 | 33.89 | 98.45 | 5 | 1 | 136 | 1957 |
| PGH-18-03B | 271 | 272 | 1 | 589449 | A18-04469 | 1.01 | 0.04 | 2.38 | 0.412 | 2.05 | 49.16 | 0.09 | 0.02 | 0.062 | 1.01 | 41.15 | 97.4 | 3 | < 1 | 38 | 2069 |
| PGH-18-03B | 272 | 273 | 1 | 589450 | A18-04469 | < 0.01 | 0.01 | 3.08 | 0.656 | 7.22 | 43.1 | 0.05 | 0.01 | 0.009 | 0.06 | 43.42 | 97.58 | 3 | < 1 | 32 | 1728 |
| PGH-18-03B | 273 | 274 | 1 | 589451 | A18-04469 | 0.49 | 0.06 | 2.03 | 0.31 | 1.21 | 51.15 | 0.22 | 0.05 | 0.032 | 0.81 | 41.28 | 97.65 | 1 | < 1 | 55 | 531 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | SiO2 (%) | Al2O3 (%) | Fe2O3(T) (%) | MnO (%) | MgO (%) | CaO (%) | Na2O (%) | K2O (%) | TiO2 (%) | P2O5 (%) | LOI (%) | Total (%) | Sc (ppm) | Be (ppm) | V (ppm) | Ba (ppm) |
|------------|--------|--------|-----------|----------|-----------|----------|-----------|--------------|---------|---------|---------|----------|---------|----------|----------|---------|-----------|----------|----------|---------|----------|
| PGH-18-03B | 461 | 462 | 1 | 589497 | A18-04469 | 8.93 | 1.89 | 4.19 | 0.507 | 2.92 | 42.45 | 0.27 | 1.28 | 0.071 | 3.23 | 31.97 | 97.71 | 7 | 2 | 67 | 1418 |
| PGH-18-03B | 462 | 463.5 | 1.5 | 589498 | A18-04469 | 1.27 | 0.13 | 3.31 | 0.607 | 3.24 | 47.2 | 0.1 | 0.1 | 0.08 | 4.41 | 36.83 | 97.29 | 5 | < 1 | 31 | 1027 |
| PGH-18-03B | 463.5 | 464.5 | 1 | 589499 | A18-04469 | 0.8 | 0.06 | 2.61 | 0.633 | 1.72 | 50.88 | 0.09 | 0.04 | 0.023 | 3.58 | 37.75 | 98.18 | 5 | < 1 | 22 | 713 |
| PGH-18-03B | 470.25 | 470.75 | 0.5 | 589500 | A18-04469 | 67.49 | 13.14 | 2.05 | 0.072 | 1.39 | 2.66 | 3.64 | 4.92 | 0.172 | 0.08 | 3.56 | 99.17 | 5 | 2 | 62 | 966 |
| PGH-18-03B | 470.75 | 472 | 1.25 | 589502 | A18-04469 | 7.37 | 1.59 | 3.67 | 0.405 | 3.38 | 43.02 | 0.14 | 0.93 | 0.036 | 1.3 | 35.89 | 97.72 | 7 | < 1 | 34 | 6170 |
| PGH-18-03B | 472 | 473 | 1 | 589503 | A18-04469 | 0.71 | 0.24 | 3.22 | 0.422 | 2.94 | 48.57 | 0.04 | 0.12 | 0.033 | 0.58 | 41.15 | 98.03 | 5 | < 1 | 16 | 4462 |
| PGH-18-03B | 473 | 474 | 1 | 589504 | A18-04469 | 3.24 | 0.43 | 3.03 | 0.388 | 2.69 | 47.81 | 0.05 | 0.16 | 0.03 | 0.15 | 39.95 | 97.92 | 6 | < 1 | 15 | 4312 |
| PGH-18-03B | 474 | 475 | 1 | 589505 | A18-04469 | 4.56 | 0.29 | 2.45 | 0.324 | 2.14 | 48.86 | 0.06 | 0.07 | 0.023 | 0.73 | 38.96 | 98.46 | 5 | < 1 | 9 | 3079 |
| PGH-18-03B | 475 | 476 | 1 | 589506 | A18-04469 | 1.64 | 0.2 | 2.22 | 0.299 | 1.6 | 51.55 | 0.03 | 0.1 | 0.004 | 0.33 | 41.55 | 99.52 | 5 | < 1 | 11 | 3225 |
| PGH-18-03B | 476 | 477.04 | 1.04 | 589507 | A18-04469 | 1.46 | 0.64 | 3.24 | 0.306 | 2.54 | 48.88 | 0.04 | 0.05 | 0.011 | < 0.01 | 40.85 | 98.01 | 5 | < 1 | 17 | 4176 |
| PGH-18-03B | 477.04 | 477.54 | 0.5 | 589508 | A18-04469 | 63.5 | 14.78 | 3.49 | 0.079 | 1.92 | 3.66 | 4.97 | 3.27 | 0.371 | 0.1 | 4.46 | 100.6 | 6 | 3 | 98 | 713 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|------------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 21.5 | 22 | 0.5 | 589364 | 951 | 3 | 92 | < 20 | 2 | < 20 | < 10 | < 30 | 18 | < 1 | < 5 | 42 | 9 | < 2 | 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 22 | 23 | 1 | 589365 | 2099 | 59 | 13 | < 20 | 2 | < 20 | < 10 | 100 | 8 | < 1 | < 5 | 23 | 409 | 5 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 23 | 23.8 | 0.8 | 589366 | 2699 | 73 | 19 | < 20 | 2 | < 20 | < 10 | 80 | 6 | < 1 | < 5 | 7 | > 1000 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 27.02 | 27.67 | 0.65 | 589367 | 1024 | 6 | 82 | < 20 | 3 | < 20 | < 10 | 40 | 18 | < 1 | < 5 | 48 | 25 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 27.67 | 28.5 | 0.83 | 589368 | 3291 | 88 | 23 | < 20 | 2 | < 20 | 10 | 90 | 10 | < 1 | < 5 | 36 | 592 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 28.5 | 30 | 1.5 | 589370 | 6813 | 72 | 8 | < 20 | 4 | < 20 | < 10 | 150 | 3 | < 1 | 7 | < 2 | 222 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 30 | 31.32 | 1.32 | 589372 | 3510 | 57 | 12 | < 20 | < 1 | < 20 | < 10 | < 30 | 3 | < 1 | < 5 | < 2 | 146 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 31.32 | 31.82 | 0.5 | 589373 | 1008 | 10 | 72 | < 20 | 3 | < 20 | 30 | 40 | 18 | < 1 | < 5 | 46 | 48 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 37 | 38.5 | 1.5 | 589374 | 1970 | 54 | 70 | < 20 | 4 | < 20 | < 10 | 100 | 12 | < 1 | 6 | 56 | 154 | 2 | < 0.5 | < 0.2 | 5 | < 0.5 |
| PGH-18-03B | 50.95 | 52.45 | 1.5 | 589375 | 1556 | 41 | 57 | 40 | 5 | 20 | < 10 | 80 | 13 | < 1 | < 5 | 59 | 291 | 25 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 52.45 | 53.5 | 1.05 | 589376 | 1863 | 28 | 23 | 50 | 4 | 30 | < 10 | 70 | 8 | < 1 | < 5 | 30 | 280 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 53.5 | 55 | 1.5 | 589377 | 1935 | 44 | 29 | < 20 | 2 | < 20 | < 10 | 80 | 8 | < 1 | < 5 | 20 | 252 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 55 | 56.5 | 1.5 | 589378 | 2352 | 72 | 131 | < 20 | 3 | < 20 | < 10 | 120 | 3 | < 1 | 8 | < 2 | 721 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 56.5 | 58 | 1.5 | 589379 | 1943 | 89 | 107 | < 20 | 3 | < 20 | < 10 | 140 | 4 | < 1 | 13 | < 2 | 530 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 58 | 59.5 | 1.5 | 589380 | 2341 | 43 | 210 | < 20 | 3 | < 20 | < 10 | 70 | 3 | < 1 | 7 | < 2 | 537 | < 2 | 0.8 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 59.5 | 60.5 | 1 | 589381 | 3938 | 68 | 273 | < 20 | 8 | < 20 | 20 | 150 | 7 | < 1 | 9 | 31 | 248 | 4 | 1.4 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 60.5 | 61.5 | 1 | 589382 | 2694 | 87 | 234 | < 20 | 12 | 30 | 60 | 80 | 6 | < 1 | 6 | 24 | 176 | 4 | 1.1 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 61.5 | 62.08 | 0.58 | 589383 | 1323 | 87 | 7 | < 20 | 4 | < 20 | 10 | 70 | 7 | 1 | 5 | 2 | 223 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 67.48 | 68.23 | 0.75 | 589384 | 2520 | 156 | 23 | < 20 | 4 | < 20 | < 10 | 60 | 8 | < 1 | 13 | 13 | 289 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 69.5 | 70.1 | 0.6 | 589385 | 1157 | 22 | 165 | 50 | 7 | 50 | < 10 | 80 | 18 | < 1 | < 5 | 127 | 116 | 7 | 0.8 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 70.1 | 71.5 | 1.4 | 589386 | 2311 | 66 | 52 | < 20 | 3 | < 20 | < 10 | 170 | 5 | < 1 | 7 | 5 | 198 | 10 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 71.5 | 73 | 1.5 | 589387 | 3286 | 62 | 605 | < 20 | 3 | < 20 | < 10 | 60 | 3 | < 1 | < 5 | < 2 | 452 | < 2 | 1.9 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 73 | 74.36 | 1.36 | 589388 | 3743 | 81 | 104 | < 20 | 3 | < 20 | < 10 | 70 | 3 | < 1 | 6 | < 2 | 350 | < 2 | 0.6 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 74.36 | 74.86 | 0.5 | 589389 | 1071 | 28 | 86 | < 20 | 2 | < 20 | < 10 | 120 | 18 | < 1 | < 5 | 94 | 101 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 79.66 | 80.42 | 0.76 | 589390 | 1771 | 112 | 36 | < 20 | 7 | 20 | < 10 | 90 | 10 | < 1 | 5 | 34 | 266 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 80.42 | 81.16 | 0.74 | 589391 | 2149 | 77 | 25 | < 20 | 11 | < 20 | 20 | 150 | 9 | < 1 | 7 | 43 | 263 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 84.22 | 85.22 | 1 | 589392 | 2237 | 60 | 222 | < 20 | 6 | < 20 | 20 | 60 | 9 | < 1 | < 5 | 29 | 172 | < 2 | 1 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 85.22 | 86.22 | 1 | 589393 | 1995 | 39 | 89 | < 20 | 3 | < 20 | < 10 | 80 | 10 | < 1 | < 5 | 60 | 289 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 86.22 | 87.07 | 0.85 | 589394 | 1817 | 42 | 110 | 30 | 6 | < 20 | < 10 | 50 | 13 | < 1 | < 5 | 45 | 153 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 87.07 | 87.9 | 0.83 | 589395 | 2577 | 125 | 57 | < 20 | 2 | < 20 | < 10 | 40 | 5 | < 1 | < 5 | 7 | 613 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 157.83 | 158.71 | 0.88 | 589396 | 1309 | 49 | 154 | 30 | 5 | < 20 | < 10 | 100 | 15 | < 1 | < 5 | 95 | 243 | 3 | 0.7 | < 0.2 | 5 | < 0.5 |
| PGH-18-03B | 158.71 | 159.71 | 1 | 589397 | 2884 | 124 | 10 | < 20 | 2 | < 20 | < 10 | 1090 | 7 | 1 | 7 | < 2 | 239 | 10 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 159.71 | 160.67 | 0.96 | 589398 | 2961 | 190 | 11 | < 20 | < 1 | < 20 | < 10 | 350 | 9 | 1 | 7 | < 2 | 202 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 160.67 | 161.13 | 0.46 | 589399 | 1043 | 49 | 141 | < 20 | 9 | < 20 | 30 | 140 | 18 | < 1 | < 5 | 143 | 112 | 3 | 0.6 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 170 | 171 | 1 | 589401 | 2283 | 61 | 91 | 20 | 5 | < 20 | < 10 | 90 | 14 | < 1 | < 5 | 101 | 547 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 171 | 172 | 1 | 589402 | 5082 | 74 | 410 | 30 | 10 | < 20 | 10 | 150 | 11 | < 1 | < 5 | 76 | 221 | 4 | 2 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 172 | 173.4 | 1.4 | 589403 | 6177 | 90 | 404 | < 20 | 5 | < 20 | 10 | 80 | 8 | < 1 | < 5 | 30 | 157 | < 2 | 2 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 181.31 | 182.61 | 1.3 | 589404 | 2959 | 68 | 49 | < 20 | 7 | < 20 | 20 | 100 | 12 | < 1 | < 5 | 70 | 379 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 185 | 186 | 1 | 589405 | 2752 | 59 | 81 | < 20 | 15 | < 20 | 20 | 140 | 12 | < 1 | 12 | 56 | 293 | 9 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 186.74 | 187.24 | 0.5 | 589406 | 903 | 17 | 178 | 30 | 4 | < 20 | < 10 | 50 | 18 | < 1 | < 5 | 110 | 216 | 3 | 0.8 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 187.24 | 188.73 | 1.49 | 589407 | 9538 | 74 | 27 | < 20 | 3 | < 20 | 10 | < 30 | 5 | < 1 | 11 | 11 | 142 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|------------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 188.73 | 190.22 | 1.49 | 589408 | 8463 | 72 | 42 | < 20 | 2 | < 20 | 10 | 40 | 3 | < 1 | < 5 | < 2 | 831 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 190.22 | 191.72 | 1.5 | 589409 | 9790 | 79 | 25 | < 20 | 4 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | < 2 | 464 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 191.72 | 193.21 | 1.49 | 589410 | > 10000 | 73 | 19 | < 20 | < 1 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | < 2 | 481 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 193.21 | 194.7 | 1.49 | 589411 | 8671 | 75 | 14 | < 20 | 5 | < 20 | < 10 | 60 | 4 | < 1 | 11 | < 2 | 154 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 194.7 | 196 | 1.3 | 589412 | 4234 | 65 | 236 | < 20 | 21 | 40 | 50 | 80 | 12 | < 1 | 9 | 3 | > 1000 | 3 | 1 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 218.36 | 218.86 | 0.5 | 589413 | 1057 | 13 | 121 | < 20 | 3 | < 20 | 10 | 80 | 17 | < 1 | < 5 | 116 | 41 | 4 | 0.6 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 218.86 | 220 | 1.14 | 589414 | 8318 | 75 | 29 | < 20 | 2 | < 20 | < 10 | 30 | 5 | < 1 | 6 | 17 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 220 | 221 | 1 | 589415 | 6949 | 69 | 11 | < 20 | 4 | < 20 | < 10 | 90 | 2 | < 1 | 10 | < 2 | 517 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 221 | 222 | 1 | 589416 | 8269 | 79 | 30 | < 20 | 1 | < 20 | < 10 | < 30 | 3 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 222 | 222.7 | 0.7 | 589418 | 6804 | 61 | 4 | < 20 | 7 | < 20 | 10 | 120 | 2 | < 1 | 9 | < 2 | 211 | 22 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 222.7 | 223.3 | 0.6 | 589419 | 2149 | 44 | 61 | < 20 | 7 | < 20 | 10 | 90 | 13 | < 1 | 6 | 81 | > 1000 | 4 | < 0.5 | < 0.2 | 6 | < 0.5 |
| PGH-18-03B | 223.3 | 223.8 | 0.5 | 589420 | 964 | 6 | 121 | < 20 | 3 | < 20 | < 10 | 30 | 18 | < 1 | < 5 | 45 | 52 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 238.1 | 238.8 | 0.7 | 589421 | 1208 | 34 | 141 | < 20 | 5 | < 20 | < 10 | 70 | 15 | < 1 | < 5 | 69 | 321 | < 2 | 0.6 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 238.8 | 240 | 1.2 | 589422 | 9427 | 80 | 32 | < 20 | < 1 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | 3 | 329 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 240 | 241 | 1 | 589423 | 8686 | 85 | 39 | < 20 | < 1 | < 20 | < 10 | 30 | 3 | < 1 | < 5 | 9 | 722 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 241 | 242 | 1 | 589425 | 8311 | 94 | 354 | < 20 | 2 | < 20 | 10 | < 30 | 5 | < 1 | < 5 | 7 | 72 | < 2 | 1.9 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 242 | 242.75 | 0.75 | 589426 | 3849 | 119 | 371 | < 20 | 9 | < 20 | 20 | 60 | 6 | < 1 | 7 | 7 | 238 | < 2 | 1.4 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 242.75 | 243.36 | 0.61 | 589427 | 6447 | 84 | 11 | < 20 | 4 | < 20 | < 10 | 50 | 3 | < 1 | < 5 | 6 | 142 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 246 | 246.5 | 0.5 | 589428 | 1227 | 30 | 247 | 90 | 13 | 50 | < 10 | 130 | 19 | < 1 | < 5 | 79 | 390 | 4 | 1.2 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 246.5 | 247 | 0.5 | 589429 | 9017 | 79 | 24 | < 20 | < 1 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | 6 | 220 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 247 | 248 | 1 | 589430 | 6464 | 75 | 22 | < 20 | 4 | < 20 | < 10 | 110 | 5 | < 1 | 7 | 12 | 231 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 248 | 249 | 1 | 589431 | 1970 | 35 | 229 | 80 | 11 | 50 | < 10 | 80 | 17 | < 1 | 9 | 69 | 247 | 3 | 1.1 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 249 | 250 | 1 | 589432 | 2054 | 37 | 210 | 70 | 8 | 40 | 20 | 90 | 16 | < 1 | 7 | 100 | 526 | < 2 | 0.9 | < 0.2 | 5 | < 0.5 |
| PGH-18-03B | 250 | 251 | 1 | 589433 | 4011 | 46 | 197 | 50 | 8 | 20 | 90 | 90 | 14 | < 1 | 7 | 77 | 334 | < 2 | 0.8 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 251 | 252 | 1 | 589434 | 8082 | 70 | 74 | < 20 | 3 | < 20 | 10 | 60 | 5 | < 1 | < 5 | 19 | 376 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 252 | 253 | 1 | 589435 | 2137 | 49 | 238 | 50 | 10 | 30 | 30 | 120 | 17 | < 1 | < 5 | 94 | 405 | 2 | 0.8 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 253 | 254 | 1 | 589436 | 3634 | 48 | 200 | 50 | 9 | 20 | 20 | 90 | 14 | < 1 | < 5 | 78 | 306 | 5 | 0.7 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 254 | 255 | 1 | 589437 | 3900 | 46 | 166 | 30 | 8 | < 20 | 20 | 80 | 14 | < 1 | < 5 | 84 | 667 | 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 255 | 255.5 | 0.5 | 589438 | 6176 | 99 | 156 | 20 | 5 | < 20 | 20 | 60 | 10 | < 1 | < 5 | 36 | > 1000 | 2 | 0.6 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 256.82 | 257.63 | 0.81 | 589440 | 4388 | 63 | 101 | 20 | 10 | < 20 | 30 | 80 | 9 | < 1 | 5 | 65 | 526 | < 2 | 0.5 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 262.5 | 263.23 | 0.73 | 589441 | 2657 | 46 | 268 | 60 | 11 | 30 | 40 | 100 | 16 | < 1 | < 5 | 62 | 65 | 8 | 1.3 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 263.23 | 264 | 0.77 | 589442 | 6294 | 92 | 29 | < 20 | < 1 | < 20 | < 10 | < 30 | 3 | < 1 | < 5 | 4 | 237 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 264 | 265 | 1 | 589443 | 8979 | 94 | 6 | < 20 | < 1 | < 20 | < 10 | < 30 | 2 | < 1 | < 5 | < 2 | 183 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 265 | 266 | 1 | 589444 | 5243 | 120 | 49 | 20 | 10 | 20 | 20 | 110 | 4 | < 1 | 8 | 3 | 552 | 11 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 266 | 267 | 1 | 589445 | 5337 | 87 | 60 | < 20 | 4 | < 20 | 20 | 60 | 4 | < 1 | 5 | 10 | 172 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 267 | 268 | 1 | 589446 | 840 | 22 | 210 | 80 | 12 | 40 | < 10 | 90 | 21 | < 1 | < 5 | 97 | 107 | 2 | 1.1 | < 0.2 | 4 | < 0.5 |
| PGH-18-03B | 269 | 270 | 1 | 589447 | 3374 | 66 | 309 | 30 | 9 | < 20 | 20 | 80 | 9 | < 1 | 6 | 34 | 367 | 4 | 1 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 270 | 271 | 1 | 589448 | 4141 | 93 | 200 | < 20 | 6 | < 20 | 20 | 180 | 4 | < 1 | 6 | 23 | 298 | 4 | 0.9 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 271 | 272 | 1 | 589449 | 7235 | 89 | 33 | < 20 | 3 | < 20 | < 10 | 100 | 2 | < 1 | 9 | < 2 | 245 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 272 | 273 | 1 | 589450 | 4441 | 54 | 3 | < 20 | < 1 | < 20 | < 10 | 50 | 3 | < 1 | < 5 | < 2 | 12 | 22 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 273 | 274 | 1 | 589451 | 9661 | 90 | 7 | < 20 | 1 | 30 | < 10 | < 30 | 4 | < 1 | < 5 | < 2 | 90 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Sr (ppm) | Y (ppm) | Zr (ppm) | Cr (ppm) | Co (ppm) | Ni (ppm) | Cu (ppm) | Zn (ppm) | Ga (ppm) | Ge (ppm) | As (ppm) | Rb (ppm) | Nb (ppm) | Mo (ppm) | Ag (ppm) | In (ppm) | Sn (ppm) | Sb (ppm) |
|------------|--------|--------|-----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 461 | 462 | 1 | 589497 | 3168 | 113 | 47 | < 20 | 10 | < 20 | < 10 | 110 | 7 | < 1 | 11 | 17 | 372 | 14 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 462 | 463.5 | 1.5 | 589498 | 5052 | 135 | 94 | < 20 | 4 | < 20 | < 10 | 70 | 2 | < 1 | 6 | < 2 | 236 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 463.5 | 464.5 | 1 | 589499 | 6106 | 113 | 16 | < 20 | 5 | < 20 | < 10 | 100 | 2 | < 1 | 5 | < 2 | 220 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 470.25 | 470.75 | 0.5 | 589500 | 670 | 7 | 122 | < 20 | 2 | < 20 | < 10 | 60 | 17 | < 1 | < 5 | 92 | 48 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 |
| PGH-18-03B | 470.75 | 472 | 1.25 | 589502 | 968 | 154 | 27 | < 20 | 4 | < 20 | < 10 | 50 | 11 | 2 | 15 | 14 | 394 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 |
| PGH-18-03B | 472 | 473 | 1 | 589503 | 846 | 116 | 34 | < 20 | 2 | < 20 | < 10 | < 30 | 5 | 1 | 7 | < 2 | 227 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 473 | 474 | 1 | 589504 | 791 | 76 | 12 | < 20 | 2 | < 20 | < 10 | < 30 | 6 | 2 | 10 | 2 | 409 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 474 | 475 | 1 | 589505 | 912 | 92 | 11 | < 20 | 2 | < 20 | 10 | < 30 | 8 | 2 | 12 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 |
| PGH-18-03B | 475 | 476 | 1 | 589506 | 773 | 75 | 3 | < 20 | < 1 | < 20 | < 10 | < 30 | 8 | 2 | 8 | < 2 | 347 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 476 | 477.04 | 1.04 | 589507 | 778 | 74 | 4 | < 20 | 1 | < 20 | 10 | 40 | 9 | 2 | 10 | < 2 | 232 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 |
| PGH-18-03B | 477.04 | 477.54 | 0.5 | 589508 | 566 | 12 | 167 | < 20 | 8 | < 20 | 70 | 190 | 20 | < 1 | < 5 | 61 | 75 | 5 | 0.8 | < 0.2 | 3 | < 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|------------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 21.5 | 22 | 0.5 | 589364 | 1.4 | 38.5 | 78.4 | 8.68 | 30.9 | 4.3 | 1.33 | 2 | 0.2 | 0.8 | 0.1 | 0.3 | < 0.05 | 0.3 | 0.05 | 2.2 | 0.2 |
| PGH-18-03B | 22 | 23 | 1 | 589365 | < 0.5 | 730 | 1360 | 151 | 536 | 82.2 | 21.6 | 46.3 | 4.9 | 21 | 2.8 | 6.1 | 0.73 | 3.8 | 0.46 | 0.5 | 1.4 |
| PGH-18-03B | 23 | 23.8 | 0.8 | 589366 | < 0.5 | 461 | 1100 | 137 | 545 | 91.7 | 24.7 | 54.5 | 5.6 | 23.5 | 3.3 | 7.3 | 0.81 | 4.7 | 0.62 | 0.4 | 4 |
| PGH-18-03B | 27.02 | 27.67 | 0.65 | 589367 | 0.7 | 38.1 | 80.7 | 9.48 | 36.2 | 6.4 | 2.33 | 4.4 | 0.5 | 1.9 | 0.3 | 0.6 | 0.07 | 0.4 | 0.05 | 2.3 | 0.2 |
| PGH-18-03B | 27.67 | 28.5 | 0.83 | 589368 | < 0.5 | 330 | 795 | 97.9 | 397 | 72.3 | 22.8 | 56 | 7 | 30.3 | 3.9 | 7.8 | 0.82 | 4.1 | 0.49 | 0.8 | 5.6 |
| PGH-18-03B | 28.5 | 30 | 1.5 | 589370 | < 0.5 | 302 | 709 | 86 | 339 | 60.8 | 17.5 | 42.3 | 4.9 | 21.7 | 3.2 | 7.2 | 0.91 | 4.8 | 0.63 | 0.3 | 1.5 |
| PGH-18-03B | 30 | 31.32 | 1.32 | 589372 | < 0.5 | 339 | 805 | 98.7 | 397 | 74.4 | 21.5 | 49.1 | 5.2 | 20.1 | 2.6 | 5.5 | 0.67 | 3.7 | 0.53 | 0.3 | < 0.1 |
| PGH-18-03B | 31.32 | 31.82 | 0.5 | 589373 | 1.1 | 48 | 109 | 13.8 | 57.9 | 12.6 | 4.14 | 8.4 | 0.9 | 3.5 | 0.4 | 0.9 | 0.1 | 0.5 | 0.07 | 1.7 | 0.4 |
| PGH-18-03B | 37 | 38.5 | 1.5 | 589374 | < 0.5 | 346 | 864 | 119 | 525 | 112 | 30.4 | 64.6 | 5.8 | 21.5 | 2.6 | 5.4 | 0.6 | 3 | 0.41 | 1.2 | 2.1 |
| PGH-18-03B | 50.95 | 52.45 | 1.5 | 589375 | < 0.5 | 238 | 524 | 62.5 | 249 | 44.9 | 13.5 | 30.5 | 3.4 | 13.9 | 1.9 | 3.8 | 0.42 | 2.2 | 0.27 | 1.9 | 1.1 |
| PGH-18-03B | 52.45 | 53.5 | 1.05 | 589376 | < 0.5 | 529 | 1210 | 144 | 552 | 85 | 21.7 | 40.3 | 3.3 | 11.2 | 1.5 | 3 | 0.32 | 1.6 | 0.23 | 0.8 | 0.2 |
| PGH-18-03B | 53.5 | 55 | 1.5 | 589377 | < 0.5 | 551 | 1300 | 156 | 596 | 86.9 | 22.3 | 44.1 | 3.9 | 15.5 | 2.2 | 4.7 | 0.51 | 2.7 | 0.34 | 0.6 | 0.5 |
| PGH-18-03B | 55 | 56.5 | 1.5 | 589378 | < 0.5 | 279 | 597 | 68.6 | 253 | 44.1 | 13.2 | 31.4 | 4.2 | 21 | 3.3 | 7.7 | 0.9 | 4.7 | 0.58 | 0.9 | 2.6 |
| PGH-18-03B | 56.5 | 58 | 1.5 | 589379 | < 0.5 | 565 | 1290 | 148 | 564 | 93.8 | 26.5 | 56.8 | 6.5 | 28.1 | 4 | 8.3 | 0.9 | 4.6 | 0.55 | 1.1 | 0.8 |
| PGH-18-03B | 58 | 59.5 | 1.5 | 589380 | < 0.5 | 310 | 628 | 71.3 | 264 | 43.4 | 12.5 | 26.7 | 3.2 | 14.6 | 2.2 | 4.8 | 0.55 | 3 | 0.42 | 1.5 | 3.2 |
| PGH-18-03B | 59.5 | 60.5 | 1 | 589381 | < 0.5 | 438 | 854 | 90.7 | 317 | 49.6 | 14.6 | 32 | 3.9 | 18.7 | 2.7 | 6.4 | 0.74 | 3.9 | 0.5 | 1.6 | 0.8 |
| PGH-18-03B | 60.5 | 61.5 | 1 | 589382 | < 0.5 | 309 | 639 | 73.1 | 285 | 50.7 | 15.5 | 36.8 | 4.8 | 23.5 | 3.5 | 8.1 | 0.95 | 4.9 | 0.63 | 3.4 | 0.7 |
| PGH-18-03B | 61.5 | 62.08 | 0.58 | 589383 | < 0.5 | 849 | 1850 | 226 | 883 | 142 | 39.7 | 84.9 | 8.7 | 33.7 | 4.3 | 8.8 | 0.96 | 4.4 | 0.56 | 0.4 | < 0.1 |
| PGH-18-03B | 67.48 | 68.23 | 0.75 | 589384 | < 0.5 | 1120 | 2030 | 213 | 723 | 99.5 | 28.2 | 62.8 | 8.9 | 45.9 | 7.1 | 15.8 | 1.73 | 8.5 | 0.99 | 0.5 | 0.4 |
| PGH-18-03B | 69.5 | 70.1 | 0.6 | 589385 | 1 | 603 | 965 | 91.1 | 289 | 31.1 | 7.46 | 14.7 | 1.5 | 6.4 | 1 | 2.3 | 0.25 | 1.4 | 0.18 | 4 | 0.6 |
| PGH-18-03B | 70.1 | 71.5 | 1.4 | 589386 | < 0.5 | 631 | 1280 | 141 | 508 | 67.4 | 18.3 | 38.2 | 4.3 | 20.4 | 2.8 | 6.6 | 0.8 | 4.2 | 0.53 | 0.6 | 1.6 |
| PGH-18-03B | 71.5 | 73 | 1.5 | 589387 | < 0.5 | 325 | 717 | 86.7 | 338 | 59.6 | 16.4 | 36.7 | 4.5 | 20.8 | 3 | 6.6 | 0.77 | 4.2 | 0.55 | 2.7 | 3.7 |
| PGH-18-03B | 73 | 74.36 | 1.36 | 589388 | < 0.5 | 279 | 625 | 73.8 | 292 | 53.9 | 16.6 | 39.8 | 5 | 22.6 | 3.2 | 7.2 | 0.85 | 4.6 | 0.6 | 0.8 | 1.2 |
| PGH-18-03B | 74.36 | 74.86 | 0.5 | 589389 | 0.7 | 208 | 422 | 47.5 | 181 | 30.8 | 8.92 | 20.2 | 2.2 | 9 | 1.2 | 2.6 | 0.29 | 1.4 | 0.19 | 2.2 | 0.8 |
| PGH-18-03B | 79.66 | 80.42 | 0.76 | 589390 | < 0.5 | 488 | 1050 | 129 | 526 | 98.6 | 29.2 | 68 | 7.7 | 33 | 4.7 | 10 | 1.15 | 5.6 | 0.63 | 1.1 | 7.1 |
| PGH-18-03B | 80.42 | 81.16 | 0.74 | 589391 | < 0.5 | 359 | 729 | 83.9 | 319 | 58.7 | 17.5 | 42.1 | 5 | 21.6 | 3 | 6.6 | 0.76 | 4 | 0.49 | 0.9 | 0.6 |
| PGH-18-03B | 84.22 | 85.22 | 1 | 589392 | < 0.5 | 226 | 493 | 59.2 | 236 | 42.7 | 13 | 31.1 | 3.7 | 17.3 | 2.5 | 5.7 | 0.65 | 3.4 | 0.45 | 2.5 | 3.2 |
| PGH-18-03B | 85.22 | 86.22 | 1 | 589393 | < 0.5 | 331 | 701 | 81.9 | 313 | 48.9 | 13.4 | 28 | 2.9 | 11.9 | 1.6 | 3.6 | 0.4 | 2.4 | 0.29 | 1.8 | 2 |
| PGH-18-03B | 86.22 | 87.07 | 0.85 | 589394 | 1.3 | 243 | 572 | 72.5 | 295 | 53.5 | 14.6 | 32.9 | 3.5 | 15.2 | 2 | 4.2 | 0.45 | 2.5 | 0.33 | 2.4 | 0.7 |
| PGH-18-03B | 87.07 | 87.9 | 0.83 | 589395 | < 0.5 | 378 | 888 | 111 | 436 | 75.4 | 22.3 | 53.8 | 8 | 39.7 | 5.9 | 12.3 | 1.37 | 7.1 | 0.86 | 1 | 0.9 |
| PGH-18-03B | 157.83 | 158.71 | 0.88 | 589396 | < 0.5 | 245 | 479 | 51.7 | 183 | 28.2 | 7.65 | 18.7 | 2.4 | 12.6 | 1.9 | 4.6 | 0.53 | 2.7 | 0.35 | 3.5 | 2.2 |
| PGH-18-03B | 158.71 | 159.71 | 1 | 589397 | < 0.5 | 842 | 1950 | 247 | 966 | 156 | 40.7 | 83.6 | 9.3 | 41.6 | 5.7 | 12.5 | 1.33 | 5.8 | 0.63 | 0.3 | 0.2 |
| PGH-18-03B | 159.71 | 160.67 | 0.96 | 589398 | < 0.5 | 1120 | 2540 | 313 | 1230 | 197 | 51.7 | 111 | 13.6 | 63 | 8.7 | 18.4 | 1.85 | 7.6 | 0.91 | 0.4 | < 0.1 |
| PGH-18-03B | 160.67 | 161.13 | 0.46 | 589399 | 1.5 | 135 | 306 | 37.5 | 146 | 26.7 | 7.39 | 19.6 | 2.7 | 13.6 | 2 | 4.3 | 0.47 | 2.4 | 0.29 | 3.6 | 1.1 |
| PGH-18-03B | 170 | 171 | 1 | 589401 | 0.8 | 168 | 383 | 45.5 | 175 | 31.1 | 9.32 | 23 | 3.1 | 15.5 | 2.4 | 5.8 | 0.63 | 3.3 | 0.41 | 2.2 | 3.2 |
| PGH-18-03B | 171 | 172 | 1 | 589402 | 1.5 | 289 | 656 | 79 | 311 | 54.3 | 15.6 | 37.3 | 4.4 | 20.4 | 3 | 6.8 | 0.79 | 4.3 | 0.54 | 3.3 | 5.7 |
| PGH-18-03B | 172 | 173.4 | 1.4 | 589403 | < 0.5 | 315 | 731 | 88 | 344 | 62.1 | 18.1 | 45.3 | 5.5 | 25.1 | 3.8 | 8.7 | 1.01 | 5.3 | 0.65 | 3.1 | 3.2 |
| PGH-18-03B | 181.31 | 182.61 | 1.3 | 589404 | < 0.5 | 218 | 499 | 60.7 | 236 | 42.6 | 11.8 | 29.1 | 4.1 | 20.3 | 3.1 | 7.1 | 0.89 | 4.7 | 0.58 | 1.4 | 1.3 |
| PGH-18-03B | 185 | 186 | 1 | 589405 | < 0.5 | 194 | 439 | 52.4 | 205 | 36.8 | 10.8 | 26.4 | 3.4 | 16.4 | 2.4 | 5.6 | 0.66 | 3.7 | 0.49 | 2 | 0.9 |
| PGH-18-03B | 186.74 | 187.24 | 0.5 | 589406 | 0.6 | 110 | 242 | 28.1 | 106 | 17.7 | 4.77 | 11.1 | 1.1 | 4.8 | 0.7 | 1.6 | 0.18 | 0.9 | 0.13 | 3.8 | 0.8 |
| PGH-18-03B | 187.24 | 188.73 | 1.49 | 589407 | < 0.5 | 231 | 551 | 69.2 | 258 | 44.7 | 13.3 | 33.3 | 4.3 | 19.8 | 3 | 7.4 | 0.8 | 5 | 0.72 | 0.6 | 0.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|------------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 188.73 | 190.22 | 1.49 | 589408 | < 0.5 | 239 | 575 | 71 | 278 | 50.6 | 14.4 | 34.3 | 4.2 | 19.4 | 2.9 | 7.1 | 0.85 | 4.8 | 0.62 | 0.7 | 5.7 |
| PGH-18-03B | 190.22 | 191.72 | 1.5 | 589409 | < 0.5 | 246 | 584 | 69.9 | 273 | 49.8 | 15.2 | 37.7 | 4.7 | 21.8 | 3.2 | 7.6 | 0.93 | 5.4 | 0.68 | 0.5 | 2.5 |
| PGH-18-03B | 191.72 | 193.21 | 1.49 | 589410 | < 0.5 | 233 | 549 | 65.9 | 253 | 45.5 | 13.1 | 31.9 | 4 | 19.4 | 2.9 | 7.4 | 0.87 | 5.1 | 0.66 | 0.4 | 2.5 |
| PGH-18-03B | 193.21 | 194.7 | 1.49 | 589411 | < 0.5 | 223 | 527 | 66.3 | 248 | 46.4 | 13 | 32 | 4.2 | 19.4 | 3 | 7.6 | 0.86 | 5.4 | 0.69 | 0.3 | 0.5 |
| PGH-18-03B | 194.7 | 196 | 1.3 | 589412 | < 0.5 | 302 | 689 | 84.1 | 323 | 57.2 | 15.7 | 37.5 | 4.8 | 21.3 | 3.1 | 7.1 | 0.84 | 4.4 | 0.54 | 5.1 | 11.4 |
| PGH-18-03B | 218.36 | 218.86 | 0.5 | 589413 | < 0.5 | 136 | 293 | 33.4 | 120 | 17.6 | 5.07 | 9.7 | 1.1 | 4.5 | 0.6 | 1.2 | 0.12 | 0.7 | 0.1 | 2.6 | 0.2 |
| PGH-18-03B | 218.86 | 220 | 1.14 | 589414 | < 0.5 | 261 | 618 | 74.7 | 290 | 49.3 | 14.3 | 33.1 | 4.1 | 20.8 | 3.3 | 7.8 | 0.85 | 5 | 0.63 | 0.6 | 4.8 |
| PGH-18-03B | 220 | 221 | 1 | 589415 | < 0.5 | 264 | 615 | 73.4 | 279 | 48.2 | 14.2 | 32.2 | 4 | 19 | 3.1 | 7.2 | 0.9 | 5 | 0.66 | 0.2 | 2.4 |
| PGH-18-03B | 221 | 222 | 1 | 589416 | < 0.5 | 310 | 745 | 91.3 | 354 | 60.2 | 17.6 | 40.7 | 5 | 22.5 | 3.4 | 8 | 0.95 | 5 | 0.67 | 0.6 | 9.8 |
| PGH-18-03B | 222 | 222.7 | 0.7 | 589418 | < 0.5 | 298 | 623 | 70.1 | 252 | 40.4 | 11.7 | 25.8 | 3.3 | 16.3 | 2.6 | 6.6 | 0.81 | 4.9 | 0.62 | < 0.2 | 0.3 |
| PGH-18-03B | 222.7 | 223.3 | 0.6 | 589419 | < 0.5 | 225 | 491 | 56 | 204 | 30.1 | 8.45 | 18.3 | 2.4 | 11.6 | 1.8 | 4.4 | 0.49 | 2.7 | 0.37 | 2 | 7.9 |
| PGH-18-03B | 223.3 | 223.8 | 0.5 | 589420 | 0.9 | 58.8 | 122 | 13.1 | 43.1 | 5.5 | 1.62 | 2.8 | 0.3 | 1.6 | 0.3 | 0.6 | 0.08 | 0.6 | 0.08 | 3 | 0.2 |
| PGH-18-03B | 238.1 | 238.8 | 0.7 | 589421 | 1.7 | 171 | 389 | 46.5 | 179 | 32.7 | 9.2 | 20.7 | 2.4 | 10 | 1.5 | 3.2 | 0.38 | 2 | 0.25 | 3.1 | 2.1 |
| PGH-18-03B | 238.8 | 240 | 1.2 | 589422 | < 0.5 | 254 | 590 | 70.2 | 270 | 47.6 | 14.1 | 33.4 | 4.3 | 21.4 | 3.4 | 8.1 | 0.94 | 5.5 | 0.7 | 0.5 | 5.6 |
| PGH-18-03B | 240 | 241 | 1 | 589423 | < 0.5 | 334 | 790 | 96 | 365 | 60.5 | 17.2 | 38.1 | 4.6 | 23 | 3.5 | 8.5 | 0.95 | 5.4 | 0.7 | 0.6 | 10.7 |
| PGH-18-03B | 241 | 242 | 1 | 589425 | < 0.5 | 321 | 741 | 90.2 | 353 | 64.1 | 18.7 | 44 | 5.4 | 25.8 | 3.8 | 9.2 | 1.02 | 5.5 | 0.7 | 7.2 | 3.1 |
| PGH-18-03B | 242 | 242.75 | 0.75 | 589426 | < 0.5 | 334 | 795 | 102 | 413 | 81.6 | 24 | 59.7 | 7.9 | 37.3 | 5.6 | 11.9 | 1.35 | 6.5 | 0.82 | 7.5 | 2.9 |
| PGH-18-03B | 242.75 | 243.36 | 0.61 | 589427 | < 0.5 | 362 | 768 | 87.9 | 329 | 54.3 | 16 | 36.6 | 4.6 | 22.3 | 3.4 | 8.4 | 1.04 | 5.7 | 0.69 | 0.3 | 1.2 |
| PGH-18-03B | 246 | 246.5 | 0.5 | 589428 | 0.9 | 115 | 261 | 31.2 | 118 | 19.9 | 5.1 | 12.1 | 1.5 | 7.3 | 1.2 | 3 | 0.36 | 2.1 | 0.3 | 5.5 | 9.4 |
| PGH-18-03B | 246.5 | 247 | 0.5 | 589429 | < 0.5 | 251 | 578 | 69.4 | 266 | 46.6 | 13.9 | 31.9 | 4 | 20 | 3.1 | 7.8 | 0.89 | 5.3 | 0.7 | 0.5 | 4.6 |
| PGH-18-03B | 247 | 248 | 1 | 589430 | < 0.5 | 216 | 497 | 59.6 | 230 | 42.1 | 12.4 | 30 | 3.8 | 19 | 3 | 7.5 | 0.91 | 5.1 | 0.69 | 0.6 | 2.7 |
| PGH-18-03B | 248 | 249 | 1 | 589431 | < 0.5 | 119 | 260 | 31.4 | 117 | 20.4 | 5.7 | 14.6 | 1.8 | 9 | 1.4 | 3.5 | 0.44 | 2.5 | 0.35 | 5 | 3.3 |
| PGH-18-03B | 249 | 250 | 1 | 589432 | 0.5 | 138 | 311 | 37.9 | 145 | 25.5 | 7.25 | 17 | 2 | 9.8 | 1.6 | 3.9 | 0.49 | 2.5 | 0.38 | 4.2 | 7.4 |
| PGH-18-03B | 250 | 251 | 1 | 589433 | < 0.5 | 157 | 355 | 42.6 | 163 | 28.3 | 7.98 | 18.3 | 2.3 | 11.4 | 1.8 | 4.5 | 0.54 | 3.1 | 0.43 | 4.1 | 4.3 |
| PGH-18-03B | 251 | 252 | 1 | 589434 | < 0.5 | 240 | 560 | 68.4 | 269 | 46.4 | 13.5 | 32.2 | 4.1 | 19.7 | 3.1 | 7.7 | 0.94 | 5.1 | 0.66 | 1.2 | 5 |
| PGH-18-03B | 252 | 253 | 1 | 589435 | 0.6 | 165 | 371 | 45.2 | 174 | 31.6 | 8.05 | 20.5 | 2.9 | 14 | 2.1 | 5.2 | 0.66 | 3.8 | 0.51 | 4.8 | 3.3 |
| PGH-18-03B | 253 | 254 | 1 | 589436 | < 0.5 | 154 | 349 | 43.5 | 170 | 32.2 | 8.82 | 22.8 | 3.2 | 14.1 | 2.1 | 5.1 | 0.63 | 3.7 | 0.49 | 4.2 | 3.5 |
| PGH-18-03B | 254 | 255 | 1 | 589437 | < 0.5 | 153 | 351 | 43.1 | 165 | 29 | 8.13 | 20.2 | 2.7 | 12.4 | 2 | 4.7 | 0.6 | 3.5 | 0.47 | 3.5 | 7.9 |
| PGH-18-03B | 255 | 255.5 | 0.5 | 589438 | < 0.5 | 293 | 696 | 87.7 | 349 | 63.7 | 17.6 | 43.8 | 5.7 | 27.7 | 4.4 | 10.1 | 1.21 | 6.3 | 0.77 | 2.4 | 19.7 |
| PGH-18-03B | 256.82 | 257.63 | 0.81 | 589440 | < 0.5 | 186 | 423 | 50.9 | 197 | 34.6 | 10.4 | 25.3 | 3.4 | 16.5 | 2.7 | 6.8 | 0.85 | 4.5 | 0.57 | 2.3 | 2.8 |
| PGH-18-03B | 262.5 | 263.23 | 0.73 | 589441 | 1 | 165 | 376 | 45.5 | 174 | 28.8 | 7.08 | 18.1 | 2.3 | 11.7 | 1.9 | 4.5 | 0.55 | 3 | 0.41 | 6.1 | 0.8 |
| PGH-18-03B | 263.23 | 264 | 0.77 | 589442 | < 0.5 | 273 | 625 | 74.6 | 287 | 51.5 | 15.4 | 36.5 | 4.9 | 24 | 3.7 | 9 | 1.04 | 5.8 | 0.78 | 0.6 | 1.3 |
| PGH-18-03B | 264 | 265 | 1 | 589443 | < 0.5 | 290 | 646 | 76.1 | 291 | 51.2 | 15.1 | 36.2 | 4.7 | 23.6 | 4 | 9.2 | 1.12 | 6 | 0.8 | < 0.2 | 1.1 |
| PGH-18-03B | 265 | 266 | 1 | 589444 | < 0.5 | 494 | 1010 | 115 | 434 | 71 | 20.5 | 47 | 6.1 | 30.9 | 4.9 | 11.3 | 1.26 | 6.6 | 0.82 | 1 | 5.2 |
| PGH-18-03B | 266 | 267 | 1 | 589445 | < 0.5 | 429 | 871 | 98.3 | 366 | 58.9 | 16.4 | 36.7 | 4.5 | 21.4 | 3.3 | 8.1 | 0.97 | 5.4 | 0.71 | 0.9 | 2.2 |
| PGH-18-03B | 267 | 268 | 1 | 589446 | 0.6 | 164 | 325 | 36.3 | 132 | 20.5 | 5.1 | 10.5 | 1.1 | 5.2 | 0.8 | 2 | 0.25 | 1.6 | 0.21 | 5.2 | 1.1 |
| PGH-18-03B | 269 | 270 | 1 | 589447 | < 0.5 | 261 | 487 | 55.3 | 203 | 35.1 | 10.1 | 24.1 | 3.4 | 17 | 2.8 | 7.1 | 0.82 | 4.5 | 0.55 | 3.8 | 2.6 |
| PGH-18-03B | 270 | 271 | 1 | 589448 | < 0.5 | 276 | 539 | 60.5 | 226 | 41 | 13.1 | 29.8 | 4.1 | 21.7 | 3.4 | 7.8 | 0.9 | 4.4 | 0.56 | 1.4 | 1.4 |
| PGH-18-03B | 271 | 272 | 1 | 589449 | < 0.5 | 375 | 774 | 87.6 | 315 | 49 | 14.2 | 31.3 | 4 | 20.6 | 3.2 | 8.1 | 0.99 | 5.3 | 0.69 | 0.3 | 0.7 |
| PGH-18-03B | 272 | 273 | 1 | 589450 | < 0.5 | 905 | 1620 | 166 | 564 | 66.7 | 16.5 | 28.2 | 3.1 | 14.3 | 2.2 | 5.5 | 0.68 | 3.6 | 0.48 | < 0.2 | < 0.1 |
| PGH-18-03B | 273 | 274 | 1 | 589451 | < 0.5 | 319 | 711 | 84 | 323 | 55.9 | 16.6 | 38 | 4.8 | 23.5 | 3.7 | 9.3 | 1.09 | 6 | 0.77 | 0.2 | 0.9 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|------------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 274 | 275 | 1 | 589452 | 0.9 | 171 | 411 | 50.5 | 203 | 35.9 | 10.4 | 23.9 | 3 | 14.4 | 2.4 | 5.3 | 0.64 | 3.4 | 0.45 | 11 | 14.5 |
| PGH-18-03B | 275 | 276 | 1 | 589454 | < 0.5 | 226 | 520 | 65.1 | 260 | 44.9 | 12.3 | 30.6 | 3.9 | 19.2 | 3.1 | 7.4 | 0.86 | 4.9 | 0.57 | 9.8 | 9.9 |
| PGH-18-03B | 276 | 277 | 1 | 589455 | < 0.5 | 325 | 762 | 96.8 | 402 | 76.4 | 21 | 39.4 | 3.6 | 16.3 | 2.5 | 5.6 | 0.6 | 3.3 | 0.43 | 2.7 | 4.9 |
| PGH-18-03B | 277 | 277.5 | 0.5 | 589456 | < 0.5 | 642 | 1490 | 195 | 833 | 171 | 40.6 | 72.3 | 6.2 | 17.4 | 2.5 | 4.9 | 0.52 | 2.7 | 0.32 | 0.5 | 3.1 |
| PGH-18-03B | 277.5 | 278 | 0.5 | 589457 | 0.6 | 220 | 451 | 46.9 | 154 | 20.8 | 5.46 | 10.4 | 1 | 4.2 | 0.6 | 1.4 | 0.16 | 0.8 | 0.12 | 3.6 | 0.5 |
| PGH-18-03B | 278 | 278.5 | 0.5 | 589458 | < 0.5 | 429 | 918 | 103 | 369 | 54.9 | 15.7 | 34.7 | 4.3 | 21.4 | 3.2 | 7.6 | 0.91 | 4.5 | 0.61 | 1.7 | 1 |
| PGH-18-03B | 280 | 281 | 1 | 589459 | < 0.5 | 249 | 594 | 72 | 269 | 44.7 | 12.6 | 29.8 | 3.8 | 18.2 | 2.8 | 6.8 | 0.82 | 4.4 | 0.6 | 0.9 | 3.1 |
| PGH-18-03B | 281 | 282 | 1 | 589460 | < 0.5 | 221 | 525 | 64.6 | 248 | 43.1 | 11.9 | 28.2 | 3.4 | 16.7 | 2.6 | 6.4 | 0.75 | 4.2 | 0.52 | 2.4 | 6.6 |
| PGH-18-03B | 282 | 283.2 | 1.2 | 589461 | < 0.5 | 214 | 499 | 60.8 | 231 | 40.6 | 11.1 | 26.8 | 3.6 | 17.2 | 2.7 | 6.4 | 0.74 | 4.4 | 0.6 | 1.8 | 7.3 |
| PGH-18-03B | 296.68 | 297.5 | 0.82 | 589462 | < 0.5 | 503 | 1180 | 150 | 618 | 131 | 38.8 | 90.1 | 9.7 | 39 | 4.9 | 10.4 | 1.1 | 5.1 | 0.65 | 0.9 | 5.5 |
| PGH-18-03B | 297.5 | 299 | 1.5 | 589463 | < 0.5 | 285 | 684 | 85.8 | 340 | 65.5 | 20.6 | 51.9 | 6.7 | 31.5 | 4.5 | 9.9 | 1.16 | 6 | 0.79 | 0.6 | 1.3 |
| PGH-18-03B | 299 | 300.22 | 1.22 | 589464 | 0.7 | 210 | 500 | 62.8 | 252 | 43.5 | 12.4 | 29.3 | 3.8 | 17.3 | 2.7 | 6.2 | 0.7 | 3.8 | 0.49 | 9.4 | 9.4 |
| PGH-18-03B | 317.79 | 318.45 | 0.66 | 589465 | < 0.5 | 149 | 346 | 42.5 | 168 | 34.8 | 10.9 | 29.1 | 4 | 17.6 | 2.5 | 5.4 | 0.6 | 3.2 | 0.43 | 1.6 | 22.1 |
| PGH-18-03B | 318.45 | 319.78 | 1.33 | 589466 | < 0.5 | 249 | 588 | 73.2 | 286 | 52 | 14.9 | 36.4 | 4.6 | 22.6 | 3.6 | 8.7 | 1.04 | 5.9 | 0.76 | 1.3 | 5.7 |
| PGH-18-03B | 320.38 | 321.06 | 0.68 | 589468 | < 0.5 | 330 | 1010 | 184 | 944 | 229 | 60.9 | 128 | 12.1 | 45.7 | 5.7 | 12.1 | 1.29 | 6.1 | 0.7 | 4.8 | 5.2 |
| PGH-18-03B | 331.27 | 332.53 | 1.26 | 589470 | < 0.5 | 223 | 510 | 63 | 253 | 53.3 | 18.4 | 52.9 | 7.9 | 37 | 5.2 | 10.2 | 1.07 | 5.2 | 0.6 | 1.7 | 3.5 |
| PGH-18-03B | 337.97 | 339 | 1.03 | 589471 | < 0.5 | 179 | 417 | 50.7 | 200 | 34 | 9.95 | 23.2 | 2.9 | 15.3 | 2.4 | 5.8 | 0.66 | 3.6 | 0.48 | 1.7 | 4.5 |
| PGH-18-03B | 339 | 340.5 | 1.5 | 589472 | < 0.5 | 87.3 | 197 | 24.1 | 95.6 | 17 | 5.22 | 12.1 | 1.7 | 8.3 | 1.3 | 3 | 0.34 | 2 | 0.27 | 2.8 | 2.7 |
| PGH-18-03B | 340.5 | 342 | 1.5 | 589473 | < 0.5 | 182 | 419 | 53 | 205 | 38.6 | 11.4 | 28.7 | 4.1 | 21.2 | 3.4 | 7.8 | 0.86 | 4.3 | 0.53 | 1.8 | 12.2 |
| PGH-18-03B | 342 | 343.5 | 1.5 | 589474 | < 0.5 | 114 | 247 | 29.5 | 115 | 19.2 | 5.4 | 12.4 | 1.5 | 7.3 | 1.1 | 2.5 | 0.25 | 1.4 | 0.19 | 3.1 | 5.4 |
| PGH-18-03B | 343.5 | 345 | 1.5 | 589475 | < 0.5 | 99.7 | 220 | 26.8 | 102 | 18 | 5.62 | 12.9 | 1.6 | 7.4 | 1.1 | 2.5 | 0.27 | 1.4 | 0.18 | 3.4 | 3.9 |
| PGH-18-03B | 345 | 346.5 | 1.5 | 589476 | < 0.5 | 106 | 239 | 29.1 | 116 | 20.8 | 6.53 | 16.1 | 2.1 | 9.9 | 1.5 | 3.3 | 0.35 | 1.9 | 0.3 | 3.4 | 9.1 |
| PGH-18-03B | 346.5 | 347.5 | 1 | 589477 | < 0.5 | 212 | 479 | 60.9 | 237 | 35.7 | 9.17 | 19.1 | 2.3 | 11 | 1.7 | 3.7 | 0.4 | 1.9 | 0.25 | 2.9 | 1.8 |
| PGH-18-03B | 353.41 | 354.27 | 0.86 | 589478 | < 0.5 | 421 | 1050 | 147 | 674 | 152 | 44.1 | 94.8 | 8.4 | 31.8 | 3.9 | 8.6 | 0.9 | 4.3 | 0.53 | 0.6 | 2.5 |
| PGH-18-03B | 360.54 | 361.04 | 0.5 | 589479 | < 0.5 | 307 | 749 | 103 | 450 | 95 | 24.8 | 50 | 5.1 | 19.3 | 2.4 | 4.4 | 0.44 | 2.1 | 0.25 | 2.1 | 2.2 |
| PGH-18-03B | 374.8 | 376 | 1.2 | 589480 | < 0.5 | 264 | 625 | 77.3 | 301 | 59.5 | 17.9 | 44.3 | 5.6 | 26.6 | 4 | 8.7 | 1 | 5.6 | 0.75 | 1.4 | 23.6 |
| PGH-18-03B | 376 | 377 | 1 | 589481 | < 0.5 | 243 | 577 | 74.2 | 287 | 55.8 | 17.9 | 46.9 | 6.3 | 29.4 | 4.3 | 9.8 | 1.03 | 5.7 | 0.72 | 1.1 | 7.4 |
| PGH-18-03B | 381.49 | 382.12 | 0.63 | 589482 | < 0.5 | 275 | 654 | 83.1 | 331 | 66.7 | 21.3 | 51.2 | 6.2 | 29.2 | 4 | 8.9 | 0.92 | 5.5 | 0.65 | 1.1 | 21.5 |
| PGH-18-03B | 383 | 384 | 1 | 589483 | < 0.5 | 275 | 655 | 82.4 | 323 | 58.1 | 17 | 40.1 | 4.9 | 22.6 | 3.2 | 7.2 | 0.8 | 4.5 | 0.6 | 0.7 | 18.1 |
| PGH-18-03B | 393.12 | 393.69 | 0.57 | 589484 | < 0.5 | 228 | 520 | 63 | 245 | 45.2 | 13.6 | 33 | 4.3 | 21.1 | 3.2 | 7.5 | 0.87 | 4.9 | 0.68 | 0.9 | 2.9 |
| PGH-18-03B | 395 | 395.5 | 0.5 | 589485 | < 0.5 | 108 | 241 | 28.9 | 111 | 20.7 | 6.58 | 15.8 | 2.1 | 10 | 1.6 | 3.6 | 0.41 | 2.1 | 0.26 | 1.8 | 12.1 |
| PGH-18-03B | 395.5 | 396.5 | 1 | 589486 | < 0.5 | 242 | 590 | 74.5 | 299 | 52 | 14.8 | 34.3 | 4.4 | 21 | 3.2 | 7.3 | 0.83 | 4.2 | 0.56 | 1.9 | 10.5 |
| PGH-18-03B | 396.5 | 397.68 | 1.18 | 589488 | < 0.5 | 231 | 549 | 69.1 | 277 | 56.1 | 18.7 | 50.5 | 7 | 33.6 | 4.9 | 10.5 | 1.19 | 6.1 | 0.78 | 1.2 | 32.2 |
| PGH-18-03B | 411 | 412.5 | 1.5 | 589489 | < 0.5 | 296 | 678 | 82.3 | 315 | 55 | 15.9 | 37.6 | 4.9 | 23.7 | 3.6 | 8.2 | 0.93 | 5.3 | 0.69 | 1.1 | 10.9 |
| PGH-18-03B | 412.5 | 414 | 1.5 | 589490 | < 0.5 | 288 | 671 | 80.8 | 310 | 55.9 | 16.1 | 39 | 4.7 | 22.2 | 3.4 | 8.1 | 0.99 | 5.3 | 0.7 | 0.9 | 20 |
| PGH-18-03B | 414 | 415.5 | 1.5 | 589491 | < 0.5 | 283 | 678 | 84 | 332 | 56.9 | 15.7 | 36.3 | 4.4 | 21.1 | 3.2 | 7.6 | 0.85 | 4.6 | 0.64 | 1.3 | 8.3 |
| PGH-18-03B | 415.5 | 417 | 1.5 | 589492 | < 0.5 | 247 | 576 | 70 | 270 | 48 | 13.9 | 32.4 | 4 | 19.8 | 3.1 | 7.6 | 0.92 | 5.2 | 0.67 | 1.3 | 5.5 |
| PGH-18-03B | 417 | 418.5 | 1.5 | 589493 | < 0.5 | 322 | 740 | 90 | 348 | 61.6 | 18.5 | 45.7 | 6 | 30.1 | 4.6 | 10.8 | 1.23 | 6.3 | 0.79 | 3.3 | 11.4 |
| PGH-18-03B | 418.5 | 419 | 0.5 | 589494 | 0.7 | 99.4 | 212 | 25 | 97.4 | 21.9 | 6.83 | 16.4 | 1.9 | 8.2 | 1.2 | 2.7 | 0.31 | 1.7 | 0.24 | 3.6 | 3.3 |
| PGH-18-03B | 419 | 419.5 | 0.5 | 589495 | < 0.5 | 143 | 337 | 44.1 | 195 | 75.9 | 33.9 | 112 | 18.4 | 94.1 | 15 | 31.3 | 3.09 | 14.4 | 1.52 | 1.8 | 6.3 |
| PGH-18-03B | 445.79 | 446.74 | 0.95 | 589496 | < 0.5 | 289 | 651 | 80.5 | 322 | 78.6 | 26.9 | 70.1 | 10.1 | 50.3 | 7.9 | 18.7 | 2.11 | 11 | 1.37 | 0.7 | 7.5 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Cs (ppm) | La (ppm) | Ce (ppm) | Pr (ppm) | Nd (ppm) | Sm (ppm) | Eu (ppm) | Gd (ppm) | Tb (ppm) | Dy (ppm) | Ho (ppm) | Er (ppm) | Tm (ppm) | Yb (ppm) | Lu (ppm) | Hf (ppm) | Ta (ppm) |
|------------|--------|--------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PGH-18-03B | 461 | 462 | 1 | 589497 | < 0.5 | 523 | 1220 | 158 | 639 | 121 | 34.7 | 81.2 | 9.3 | 40.1 | 5.3 | 11.6 | 1.24 | 6.1 | 0.73 | 1 | 0.7 |
| PGH-18-03B | 462 | 463.5 | 1.5 | 589498 | < 0.5 | 358 | 814 | 98.8 | 380 | 67.8 | 20 | 48.7 | 6.6 | 34.2 | 5.7 | 11.8 | 1.34 | 7.1 | 0.89 | 1.3 | 1.4 |
| PGH-18-03B | 463.5 | 464.5 | 1 | 589499 | < 0.5 | 338 | 789 | 95.9 | 373 | 65.9 | 19.9 | 48.3 | 6.3 | 31.1 | 4.6 | 9.7 | 1.19 | 6.8 | 0.89 | 0.3 | 0.3 |
| PGH-18-03B | 470.25 | 470.75 | 0.5 | 589500 | 0.8 | 40.8 | 88.2 | 10.5 | 40.3 | 8.8 | 2.68 | 5.9 | 0.8 | 3.5 | 0.5 | 1.2 | 0.15 | 0.9 | 0.14 | 2.9 | 0.2 |
| PGH-18-03B | 470.75 | 472 | 1.25 | 589502 | < 0.5 | 922 | 2290 | 306 | 1300 | 280 | 81.3 | 174 | 17.6 | 62.9 | 7.3 | 14.4 | 1.41 | 6.8 | 0.86 | 0.8 | 0.1 |
| PGH-18-03B | 472 | 473 | 1 | 589503 | < 0.5 | 923 | 2350 | 314 | 1360 | 273 | 74.8 | 149 | 12.8 | 44.3 | 5 | 9.1 | 0.94 | 4.9 | 0.61 | 0.7 | 0.6 |
| PGH-18-03B | 473 | 474 | 1 | 589504 | < 0.5 | 968 | 2350 | 303 | 1280 | 251 | 66 | 120 | 9.2 | 31.1 | 3.5 | 6.4 | 0.63 | 3.2 | 0.47 | 0.4 | < 0.1 |
| PGH-18-03B | 474 | 475 | 1 | 589505 | < 0.5 | 926 | 2250 | 297 | 1260 | 255 | 65.5 | 125 | 11.2 | 38.1 | 4.6 | 9.3 | 0.87 | 4.5 | 0.56 | 0.3 | 0.4 |
| PGH-18-03B | 475 | 476 | 1 | 589506 | < 0.5 | 875 | 2090 | 271 | 1130 | 225 | 58.1 | 113 | 9.9 | 33.3 | 4.1 | 7.7 | 0.77 | 3.9 | 0.54 | < 0.2 | 1.1 |
| PGH-18-03B | 476 | 477.04 | 1.04 | 589507 | < 0.5 | 941 | 2290 | 285 | 1180 | 241 | 66.9 | 130 | 10.7 | 32 | 3.7 | 7.2 | 0.72 | 3.5 | 0.43 | 0.2 | 0.9 |
| PGH-18-03B | 477.04 | 477.54 | 0.5 | 589508 | < 0.5 | 53.8 | 116 | 13.9 | 51.9 | 9.7 | 2.88 | 7 | 0.8 | 3.6 | 0.6 | 1.5 | 0.19 | 1.1 | 0.15 | 4.2 | 0.6 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|------------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|-------------------------------------|
| PGH-18-03B | 21.5 | 22 | 0.5 | 589364 | 4 | 0.7 | 12 | < 0.4 | 8.4 | 1.4 | < 0.003 | alkali |
| PGH-18-03B | 22 | 23 | 1 | 589365 | < 1 | < 0.1 | 56 | < 0.4 | 60.8 | 15.4 | 0.136 | CRBT, apatite cummulates up to 2cm |
| PGH-18-03B | 23 | 23.8 | 0.8 | 589366 | 2 | 0.1 | 41 | < 0.4 | 48.1 | 24.7 | 0.384 | CRBT, apatite cummulates up to 2cm |
| PGH-18-03B | 27.02 | 27.67 | 0.65 | 589367 | 3 | 0.3 | 10 | < 0.4 | 4.8 | 1.1 | 0.005 | alkali |
| PGH-18-03B | 27.67 | 28.5 | 0.83 | 589368 | 3 | 0.1 | 39 | < 0.4 | 37.6 | 13.3 | 0.143 | CRBT |
| PGH-18-03B | 28.5 | 30 | 1.5 | 589370 | 4 | < 0.1 | 57 | < 0.4 | 20.4 | 9.7 | 0.093 | CRBT |
| PGH-18-03B | 30 | 31.32 | 1.32 | 589372 | 1 | < 0.1 | 12 | < 0.4 | 39 | 4.6 | 0.047 | CRBT |
| PGH-18-03B | 31.32 | 31.82 | 0.5 | 589373 | 4 | 0.3 | 9 | < 0.4 | 7.5 | 1.4 | 0.011 | ALKALI |
| PGH-18-03B | 37 | 38.5 | 1.5 | 589374 | 5 | < 0.1 | 28 | < 0.4 | 56 | 17.3 | 0.032 | CRBT with BX |
| PGH-18-03B | 50.95 | 52.45 | 1.5 | 589375 | 5 | 0.2 | 39 | < 0.4 | 19 | 8.9 | 0.054 | CRBT with ALKALI BX |
| PGH-18-03B | 52.45 | 53.5 | 1.05 | 589376 | 3 | < 0.1 | 31 | < 0.4 | 33.5 | 7.9 | 0.058 | Alkali bx + crbt |
| PGH-18-03B | 53.5 | 55 | 1.5 | 589377 | 2 | < 0.1 | 35 | < 0.4 | 36 | 17.8 | 0.07 | CRBT |
| PGH-18-03B | 55 | 56.5 | 1.5 | 589378 | < 1 | < 0.1 | 56 | < 0.4 | 43.8 | 70.6 | 0.185 | CRBT |
| PGH-18-03B | 56.5 | 58 | 1.5 | 589379 | 5 | < 0.1 | 103 | < 0.4 | 49.1 | 27.2 | 0.229 | CRBT |
| PGH-18-03B | 58 | 59.5 | 1.5 | 589380 | < 1 | < 0.1 | 53 | < 0.4 | 40.9 | 68.5 | 0.117 | CRBT |
| PGH-18-03B | 59.5 | 60.5 | 1 | 589381 | 4 | < 0.1 | 42 | < 0.4 | 23.8 | 34.4 | 0.091 | CRBT |
| PGH-18-03B | 60.5 | 61.5 | 1 | 589382 | 8 | < 0.1 | 20 | < 0.4 | 26.5 | 10.7 | 0.043 | CRBT |
| PGH-18-03B | 61.5 | 62.08 | 0.58 | 589383 | 3 | < 0.1 | 40 | < 0.4 | 81.9 | 15.6 | 0.046 | CRBT |
| PGH-18-03B | 67.48 | 68.23 | 0.75 | 589384 | 4 | < 0.1 | 36 | < 0.4 | 44.3 | 27.4 | 0.108 | CRBT |
| PGH-18-03B | 69.5 | 70.1 | 0.6 | 589385 | 3 | 0.3 | 44 | < 0.4 | 12.9 | 6.9 | 0.021 | CRBT |
| PGH-18-03B | 70.1 | 71.5 | 1.4 | 589386 | 5 | < 0.1 | 57 | < 0.4 | 20.1 | 65 | 0.069 | CRBT |
| PGH-18-03B | 71.5 | 73 | 1.5 | 589387 | 24 | < 0.1 | 33 | < 0.4 | 21.1 | 83.7 | 0.093 | crbt x |
| PGH-18-03B | 73 | 74.36 | 1.36 | 589388 | 2 | < 0.1 | 38 | < 0.4 | 22.1 | 49.3 | 0.144 | crbt, banded |
| PGH-18-03B | 74.36 | 74.86 | 0.5 | 589389 | 4 | 0.2 | 16 | < 0.4 | 19.6 | 4.8 | 0.02 | ALKALI |
| PGH-18-03B | 79.66 | 80.42 | 0.76 | 589390 | 9 | < 0.1 | 23 | < 0.4 | 41.4 | 18.4 | 0.056 | Alkali bx with crbt |
| PGH-18-03B | 80.42 | 81.16 | 0.74 | 589391 | 3 | < 0.1 | 57 | < 0.4 | 27.8 | 10.1 | 0.044 | Alkali bx with crbt |
| PGH-18-03B | 84.22 | 85.22 | 1 | 589392 | 7 | < 0.1 | 19 | < 0.4 | 13.6 | 13.2 | 0.03 | even mix of alkali bx and crbt vein |
| PGH-18-03B | 85.22 | 86.22 | 1 | 589393 | 7 | < 0.1 | 24 | < 0.4 | 18.3 | 9.6 | 0.048 | crbt > alkali bx |
| PGH-18-03B | 86.22 | 87.07 | 0.85 | 589394 | < 1 | < 0.1 | 13 | < 0.4 | 19.9 | 5.1 | 0.036 | alkali bx > crbt |
| PGH-18-03B | 87.07 | 87.9 | 0.83 | 589395 | 6 | < 0.1 | 18 | < 0.4 | 52 | 22.2 | 0.162 | CRBT vein |
| PGH-18-03B | 157.83 | 158.71 | 0.88 | 589396 | 7 | 0.2 | 13 | < 0.4 | 18.3 | 10 | 0.042 | |
| PGH-18-03B | 158.71 | 159.71 | 1 | 589397 | 8 | < 0.1 | 39 | 0.6 | 75.8 | 19.1 | 0.039 | |
| PGH-18-03B | 159.71 | 160.67 | 0.96 | 589398 | < 1 | < 0.1 | 33 | 0.5 | 108 | 18.9 | 0.035 | |
| PGH-18-03B | 160.67 | 161.13 | 0.46 | 589399 | 3 | 0.4 | 15 | < 0.4 | 16.5 | 4.8 | 0.019 | |
| PGH-18-03B | 170 | 171 | 1 | 589401 | 6 | 0.2 | 12 | < 0.4 | 15.4 | 13.3 | 0.123 | ALKALI BX CRBT |
| PGH-18-03B | 171 | 172 | 1 | 589402 | 3 | 0.1 | 19 | < 0.4 | 9.2 | 12.8 | 0.046 | ALKALI BX CRBT |
| PGH-18-03B | 172 | 173.4 | 1.4 | 589403 | 2 | < 0.1 | 31 | < 0.4 | 7.3 | 18 | 0.043 | ALKALI BX CRBT |
| PGH-18-03B | 181.31 | 182.61 | 1.3 | 589404 | 5 | < 0.1 | 13 | < 0.4 | 31.6 | 13.2 | 0.08 | CRBT Alkali BX |
| PGH-18-03B | 185 | 186 | 1 | 589405 | 6 | 0.2 | 23 | < 0.4 | 20.2 | 10.8 | 0.046 | CRBT Alkali BX |
| PGH-18-03B | 186.74 | 187.24 | 0.5 | 589406 | 2 | 0.4 | 12 | < 0.4 | 11.6 | 4.1 | 0.037 | Alkali |
| PGH-18-03B | 187.24 | 188.73 | 1.49 | 589407 | 3 | < 0.1 | 8 | < 0.4 | 3.3 | 5.4 | 0.086 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|------------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|-------------------------|
| PGH-18-03B | 188.73 | 190.22 | 1.49 | 589408 | 1 | < 0.1 | 21 | < 0.4 | 7.5 | 21.8 | 0.337 | CRBT |
| PGH-18-03B | 190.22 | 191.72 | 1.5 | 589409 | 4 | < 0.1 | 15 | < 0.4 | 6.9 | 16.7 | 0.22 | CRBT |
| PGH-18-03B | 191.72 | 193.21 | 1.49 | 589410 | 4 | < 0.1 | 16 | < 0.4 | 4.1 | 14 | 0.228 | CRBT |
| PGH-18-03B | 193.21 | 194.7 | 1.49 | 589411 | < 1 | < 0.1 | 24 | < 0.4 | 3.2 | 9.6 | 0.105 | CRBT |
| PGH-18-03B | 194.7 | 196 | 1.3 | 589412 | 7 | < 0.1 | 17 | < 0.4 | 19.3 | 20.8 | 0.357 | CRBT bnd apt |
| PGH-18-03B | 218.36 | 218.86 | 0.5 | 589413 | 2 | 0.7 | 14 | < 0.4 | 20.3 | 0.9 | 0.008 | GRAN PG |
| PGH-18-03B | 218.86 | 220 | 1.14 | 589414 | 3 | 0.3 | 18 | < 0.4 | 6.1 | 19.2 | 0.355 | crbt |
| PGH-18-03B | 220 | 221 | 1 | 589415 | 3 | 0.2 | 30 | < 0.4 | 8.6 | 12.6 | 0.172 | crbt |
| PGH-18-03B | 221 | 222 | 1 | 589416 | 1 | 0.2 | 23 | < 0.4 | 10.4 | 28.4 | 0.807 | crbt |
| PGH-18-03B | 222 | 222.7 | 0.7 | 589418 | 4 | 0.3 | 27 | < 0.4 | 15.6 | 7.5 | 0.049 | CRBT |
| PGH-18-03B | 222.7 | 223.3 | 0.6 | 589419 | 6 | 0.4 | 23 | < 0.4 | 25.2 | 27.9 | 0.454 | GRAN BX |
| PGH-18-03B | 223.3 | 223.8 | 0.5 | 589420 | 4 | 0.3 | 8 | < 0.4 | 9.9 | 2.2 | 0.008 | GRAN |
| PGH-18-03B | 238.1 | 238.8 | 0.7 | 589421 | 9 | 0.3 | 13 | < 0.4 | 36.3 | 9.2 | 0.056 | GRAN |
| PGH-18-03B | 238.8 | 240 | 1.2 | 589422 | 3 | < 0.1 | 22 | < 0.4 | 6.7 | 23.6 | 0.098 | CRBT, cg, |
| PGH-18-03B | 240 | 241 | 1 | 589423 | 4 | < 0.1 | 29 | < 0.4 | 14.3 | 37.6 | 0.224 | CRBT, massive |
| PGH-18-03B | 241 | 242 | 1 | 589425 | 3 | < 0.1 | 7 | < 0.4 | 8 | 3.8 | 0.006 | CRBT |
| PGH-18-03B | 242 | 242.75 | 0.75 | 589426 | 2 | < 0.1 | 25 | < 0.4 | 53.8 | 20.7 | 0.048 | CRBT |
| PGH-18-03B | 242.75 | 243.36 | 0.61 | 589427 | 4 | < 0.1 | 14 | < 0.4 | 19.7 | 5.1 | 0.019 | CRBT |
| PGH-18-03B | 246 | 246.5 | 0.5 | 589428 | 2 | 0.3 | 21 | < 0.4 | 17.3 | 20.8 | 0.066 | GRAN |
| PGH-18-03B | 246.5 | 247 | 0.5 | 589429 | 2 | < 0.1 | 14 | < 0.4 | 4.9 | 14.7 | 0.055 | CRBT |
| PGH-18-03B | 247 | 248 | 1 | 589430 | 5 | < 0.1 | 53 | < 0.4 | 12.4 | 8.7 | 0.038 | CRBT |
| PGH-18-03B | 248 | 249 | 1 | 589431 | 7 | 0.2 | 16 | < 0.4 | 15.1 | 8.2 | 0.038 | GRAN minor CRBT |
| PGH-18-03B | 249 | 250 | 1 | 589432 | 4 | 0.3 | 20 | < 0.4 | 15 | 18.5 | 0.081 | GRAN BX |
| PGH-18-03B | 250 | 251 | 1 | 589433 | 6 | 0.2 | 16 | < 0.4 | 11.8 | 11.5 | 0.056 | GRAN BX + CRBT |
| PGH-18-03B | 251 | 252 | 1 | 589434 | 1 | < 0.1 | 41 | < 0.4 | 5.1 | 24.6 | 0.106 | CRBT |
| PGH-18-03B | 252 | 253 | 1 | 589435 | 4 | < 0.1 | 18 | < 0.4 | 18.5 | 17.2 | 0.098 | GRAN BX + CRBT |
| PGH-18-03B | 253 | 254 | 1 | 589436 | < 1 | < 0.1 | 24 | < 0.4 | 15.9 | 19.1 | 0.084 | GRAN BX + CRBT |
| PGH-18-03B | 254 | 255 | 1 | 589437 | 4 | < 0.1 | 25 | < 0.4 | 12.6 | 34.6 | 0.135 | GRAN BX + CRBT |
| PGH-18-03B | 255 | 255.5 | 0.5 | 589438 | 5 | < 0.1 | 66 | < 0.4 | 25.6 | 110 | 0.547 | GRAN BX + CRBT |
| PGH-18-03B | 256.82 | 257.63 | 0.81 | 589440 | 4 | 0.2 | 28 | < 0.4 | 13.8 | 9.5 | 0.102 | gran bx + crbt |
| PGH-18-03B | 262.5 | 263.23 | 0.73 | 589441 | 9 | 0.3 | 15 | < 0.4 | 21.3 | 2.3 | 0.009 | Gran + crbt |
| PGH-18-03B | 263.23 | 264 | 0.77 | 589442 | 3 | < 0.1 | 27 | < 0.4 | 19 | 5.9 | 0.053 | crbt motted |
| PGH-18-03B | 264 | 265 | 1 | 589443 | 4 | < 0.1 | 11 | < 0.4 | 5.6 | 2.2 | 0.027 | CRBT, light pk |
| PGH-18-03B | 265 | 266 | 1 | 589444 | 4 | < 0.1 | 20 | < 0.4 | 40.8 | 12.7 | 0.137 | CRBT, light pk, diss py |
| PGH-18-03B | 266 | 267 | 1 | 589445 | 3 | < 0.1 | 11 | < 0.4 | 17 | 8.5 | 0.024 | CRBT, massive, pink |
| PGH-18-03B | 267 | 268 | 1 | 589446 | 7 | 0.2 | 8 | < 0.4 | 13 | 3.1 | 0.016 | GRAN BX + CRBT |
| PGH-18-03B | 269 | 270 | 1 | 589447 | 3 | < 0.1 | 19 | < 0.4 | 14.8 | 29.8 | 0.059 | crbt, cg w/ gran bx |
| PGH-18-03B | 270 | 271 | 1 | 589448 | 3 | < 0.1 | 34 | < 0.4 | 19.5 | 29.6 | 0.065 | CRBT, minor gran |
| PGH-18-03B | 271 | 272 | 1 | 589449 | 3 | < 0.1 | 16 | < 0.4 | 10.9 | 11.4 | 0.05 | CRBT |
| PGH-18-03B | 272 | 273 | 1 | 589450 | 4 | < 0.1 | 8 | < 0.4 | 13.3 | 3.4 | < 0.003 | CRBT |
| PGH-18-03B | 273 | 274 | 1 | 589451 | 1 | < 0.1 | 5 | < 0.4 | 2.6 | 1 | 0.008 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|------------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|---------------------------------|
| PGH-18-03B | 274 | 275 | 1 | 589452 | 6 | < 0.1 | 26 | < 0.4 | 18.9 | 23.8 | 0.222 | CRBT, bt, pyrochlore |
| PGH-18-03B | 275 | 276 | 1 | 589454 | 6 | < 0.1 | 19 | < 0.4 | 11.7 | 36.5 | 0.1 | CRBT, bt, pyrochlore |
| PGH-18-03B | 276 | 277 | 1 | 589455 | 12 | < 0.1 | 32 | < 0.4 | 39.3 | 24.8 | 0.072 | Gran + CRBT |
| PGH-18-03B | 277 | 277.5 | 0.5 | 589456 | 5 | < 0.1 | 26 | < 0.4 | 98.5 | 84.4 | 0.044 | CRBT |
| PGH-18-03B | 277.5 | 278 | 0.5 | 589457 | 5 | 0.2 | 12 | < 0.4 | 14.3 | 3.8 | 0.006 | GRAN |
| PGH-18-03B | 278 | 278.5 | 0.5 | 589458 | 2 | 0.2 | 61 | < 0.4 | 19.7 | 7.4 | 0.043 | CRBT w/ GRAN |
| PGH-18-03B | 280 | 281 | 1 | 589459 | 5 | 0.3 | 17 | < 0.4 | 12.6 | 7.6 | 0.07 | CRBT + GRAN |
| PGH-18-03B | 281 | 282 | 1 | 589460 | 7 | 0.2 | 16 | < 0.4 | 10.8 | 15.9 | 0.068 | GRAN + crbt (fg pyrochlore) |
| PGH-18-03B | 282 | 283.2 | 1.2 | 589461 | 4 | < 0.1 | 42 | < 0.4 | 14.6 | 22 | 0.124 | CRBT (fg, pyrochlore) + GRAN |
| PGH-18-03B | 296.68 | 297.5 | 0.82 | 589462 | 3 | < 0.1 | 47 | < 0.4 | 45.9 | 46.7 | 0.209 | CRBT, massive, apt cum |
| PGH-18-03B | 297.5 | 299 | 1.5 | 589463 | 2 | < 0.1 | 21 | < 0.4 | 15.9 | 13.6 | 0.075 | CRBT, massive, apt cum |
| PGH-18-03B | 299 | 300.22 | 1.22 | 589464 | < 1 | < 0.1 | 15 | < 0.4 | 12.1 | 15.1 | 0.132 | crbt, cg, pyrochlore? |
| PGH-18-03B | 317.79 | 318.45 | 0.66 | 589465 | 5 | 0.1 | 42 | < 0.4 | 43.3 | 65.8 | 0.256 | CRBT, + GRAN |
| PGH-18-03B | 318.45 | 319.78 | 1.33 | 589466 | 3 | < 0.1 | 24 | < 0.4 | 15.6 | 41.1 | 0.148 | CRBT, cg, fg pyrochlore? |
| PGH-18-03B | 320.38 | 321.06 | 0.68 | 589468 | 5 | < 0.1 | 31 | < 0.4 | 154 | 26.1 | 0.063 | CRBT, weakly bnd, apt cumulates |
| PGH-18-03B | 331.27 | 332.53 | 1.26 | 589470 | 5 | < 0.1 | 20 | < 0.4 | 38.9 | 10.4 | 0.078 | wkly bnd crbt, fg pyrochlore? |
| PGH-18-03B | 337.97 | 339 | 1.03 | 589471 | 6 | < 0.1 | 20 | < 0.4 | 10.4 | 7.2 | 0.161 | CRBT + Syn BX |
| PGH-18-03B | 339 | 340.5 | 1.5 | 589472 | 5 | < 0.1 | 11 | < 0.4 | 12 | 4.2 | 0.053 | qtz syn BX + crbt |
| PGH-18-03B | 340.5 | 342 | 1.5 | 589473 | 5 | < 0.1 | 61 | < 0.4 | 29.9 | 46.6 | 0.194 | qtz syn BX + crbt |
| PGH-18-03B | 342 | 343.5 | 1.5 | 589474 | 4 | 0.1 | 21 | < 0.4 | 16.5 | 11.9 | 0.061 | qtz syn BX + crbt |
| PGH-18-03B | 343.5 | 345 | 1.5 | 589475 | 5 | 0.2 | 11 | < 0.4 | 12.5 | 9.2 | 0.039 | qtz syn BX + crbt |
| PGH-18-03B | 345 | 346.5 | 1.5 | 589476 | 5 | 0.2 | 22 | < 0.4 | 13.4 | 18.8 | 0.093 | qtz syn BX + crbt |
| PGH-18-03B | 346.5 | 347.5 | 1 | 589477 | 5 | 0.1 | 17 | < 0.4 | 23.4 | 5.5 | 0.02 | qtz syn BX + crbt |
| PGH-18-03B | 353.41 | 354.27 | 0.86 | 589478 | 10 | < 0.1 | 12 | < 0.4 | 91.8 | 13.5 | 0.06 | CRBT, apt up to 6cm |
| PGH-18-03B | 360.54 | 361.04 | 0.5 | 589479 | 2 | < 0.1 | 23 | < 0.4 | 53.5 | 4.4 | 0.029 | CRBT, mottled apt |
| PGH-18-03B | 374.8 | 376 | 1.2 | 589480 | 3 | < 0.1 | 67 | < 0.4 | 38.7 | 75.7 | 0.102 | CRBT, apt, columbite(?) |
| PGH-18-03B | 376 | 377 | 1 | 589481 | 4 | < 0.1 | 51 | < 0.4 | 32.1 | 59.2 | 0.125 | CRBT, apt, columbite(?) |
| PGH-18-03B | 381.49 | 382.12 | 0.63 | 589482 | 4 | < 0.1 | 39 | < 0.4 | 68.2 | 33.3 | 0.597 | CRBT BX, APT |
| PGH-18-03B | 383 | 384 | 1 | 589483 | 5 | < 0.1 | 21 | < 0.4 | 26.9 | 19.5 | 0.325 | CRBT, 10% APT |
| PGH-18-03B | 393.12 | 393.69 | 0.57 | 589484 | 3 | < 0.1 | 39 | < 0.4 | 20.4 | 4.3 | 0.042 | CRBT mnr SYN |
| PGH-18-03B | 395 | 395.5 | 0.5 | 589485 | 4 | 0.1 | 15 | < 0.4 | 8.5 | 9.1 | 0.089 | SYN BX CRBT infill |
| PGH-18-03B | 395.5 | 396.5 | 1 | 589486 | 4 | < 0.1 | 34 | < 0.4 | 13 | 24.1 | 0.098 | CRBT, bnd |
| PGH-18-03B | 396.5 | 397.68 | 1.18 | 589488 | 9 | < 0.1 | 30 | < 0.4 | 46.2 | 44.2 | 0.253 | SYN BX + CRBT, bnd, apt |
| PGH-18-03B | 411 | 412.5 | 1.5 | 589489 | < 1 | < 0.1 | 55 | < 0.4 | 28 | 34.7 | 0.226 | CRBT |
| PGH-18-03B | 412.5 | 414 | 1.5 | 589490 | 2 | < 0.1 | 39 | < 0.4 | 14.4 | 61.2 | 0.329 | CRBT |
| PGH-18-03B | 414 | 415.5 | 1.5 | 589491 | 4 | < 0.1 | 24 | < 0.4 | 10.3 | 30 | 0.151 | CRBT, bnd |
| PGH-18-03B | 415.5 | 417 | 1.5 | 589492 | 5 | < 0.1 | 36 | < 0.4 | 10.9 | 24.1 | 0.099 | CRBT, bnd |
| PGH-18-03B | 417 | 418.5 | 1.5 | 589493 | 8 | < 0.1 | 55 | < 0.4 | 32.7 | 25.1 | 0.34 | CRBT, mag |
| PGH-18-03B | 418.5 | 419 | 0.5 | 589494 | 6 | 0.1 | 19 | < 0.4 | 16.7 | 3.2 | 0.029 | SYN BX |
| PGH-18-03B | 419 | 419.5 | 0.5 | 589495 | 6 | < 0.1 | 22 | < 0.4 | 112 | 22 | 0.051 | SYN + CRBT |
| PGH-18-03B | 445.79 | 446.74 | 0.95 | 589496 | < 1 | < 0.1 | 29 | < 0.4 | 78.2 | 33.9 | 0.037 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | W (ppm) | Tl (ppm) | Pb (ppm) | Bi (ppm) | Th (ppm) | U (ppm) | Nb2O5 (%) | Description |
|------------|--------|--------|-----------|----------|---------|----------|----------|----------|----------|---------|-----------|------------------|
| PGH-18-03B | 461 | 462 | 1 | 589497 | < 1 | < 0.1 | 55 | < 0.4 | 61.6 | 8.5 | 0.092 | CRBT |
| PGH-18-03B | 462 | 463.5 | 1.5 | 589498 | 3 | < 0.1 | 23 | < 0.4 | 34.1 | 12 | 0.054 | CRBT |
| PGH-18-03B | 463.5 | 464.5 | 1 | 589499 | 2 | < 0.1 | 32 | < 0.4 | 29.8 | 6.4 | 0.045 | CRBT |
| PGH-18-03B | 470.25 | 470.75 | 0.5 | 589500 | 5 | < 0.1 | 27 | < 0.4 | 10.1 | 2.6 | 0.01 | QTZ SYN |
| PGH-18-03B | 470.75 | 472 | 1.25 | 589502 | 4 | < 0.1 | 22 | < 0.4 | 280 | 20.8 | 0.09 | CRBT, vuggy, pyc |
| PGH-18-03B | 472 | 473 | 1 | 589503 | 8 | < 0.1 | 9 | < 0.4 | 232 | 11.3 | 0.032 | CRBT, vuggy, pyc |
| PGH-18-03B | 473 | 474 | 1 | 589504 | 3 | < 0.1 | 14 | < 0.4 | 180 | 9.3 | 0.1 | CRBT, vuggy, pyc |
| PGH-18-03B | 474 | 475 | 1 | 589505 | < 1 | < 0.1 | 31 | < 0.4 | 176 | 21.7 | 0.253 | CRBT, vuggy, pyc |
| PGH-18-03B | 475 | 476 | 1 | 589506 | 2 | < 0.1 | 24 | < 0.4 | 169 | 12.5 | 0.053 | CRBT, vuggy, pyc |
| PGH-18-03B | 476 | 477.04 | 1.04 | 589507 | 4 | < 0.1 | 13 | < 0.4 | 197 | 14.7 | 0.045 | CRBT, vuggy, pyc |
| PGH-18-03B | 477.04 | 477.54 | 0.5 | 589508 | 3 | 0.2 | 14 | < 0.4 | 10.9 | 2.5 | 0.012 | QTZ SYN |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|------------|--------|--------|-----------|----------|-----------|-----------|--------------------|----------|-----------|
| PGH-18-03B | 28.5 | 28.5 | 0 | 589369 | A18-04469 | STANDARD | Oka 1 | 2.49 | 0.533 |
| PGH-18-03B | 28.5 | 30 | 1.5 | 589370 | A18-04469 | N/A | ORIGINAL SAMPLE | 2.05 | 0.093 |
| PGH-18-03B | 28.5 | 30 | 1.5 | 589371 | A18-04469 | DUPLICATE | DUPLICATE (589370) | 0.78 | 0.03 |
| PGH-18-03B | 161.13 | 161.13 | 0 | 589400 | A18-04469 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-03B | 222 | 222 | 0 | 589417 | A18-04469 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-03B | 241 | 241 | 0 | 589424 | A18-04469 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-03B | 255 | 255 | 0 | 589439 | A18-04469 | STANDARD | Oka 1 | 2.47 | 0.536 |
| PGH-18-03B | 275 | 275 | 0 | 589453 | A18-04469 | BLANK | Marble | 0.04 | < 0.003 |
| PGH-18-03B | 319.78 | 319.78 | 0 | 589467 | A18-04469 | STANDARD | Oka 1 | 2.42 | 0.54 |
| PGH-18-03B | 321.06 | 321.06 | 0 | 589469 | A18-04469 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-03B | 396.5 | 396.5 | 0 | 589487 | A18-04469 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-03B | 470.75 | 470.75 | 0 | 589501 | A18-04469 | STANDARD | Oka 1 | 2.42 | 0.543 |



| | | | |
|---------------------|------------------------------|---------------|-----------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 4-Apr-2018 |
| Township/Area: | Killala Lake Area | End Date: | 17-Apr-2018 |
| Claims (converted): | 262731, 332506, 230752 | Described by: | B. Clark, B.Sc. |
| Claims (legacy): | TB 4256251 | Log date: | 17-Apr-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 337.00° | | Easting: 519729 | | Core size: HQ | | Cemented: No | |
| Plunge: -60.00° | | Northing: 5432428 | | Casing: Pulled | | Stored: Yes | |
| Length: 672.0 m | | Elevation: 311.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-04 | Reflex | 39 | 335.8 | -61 | 57017 |
| PGH-18-04 | Reflex | 90 | 336.4 | -60.7 | 56790 |
| PGH-18-04 | Reflex | 141 | 336.1 | -60.3 | 56839 |
| PGH-18-04 | Reflex | 192 | 336.4 | -60.3 | 56774 |
| PGH-18-04 | Reflex | 243 | 337.2 | -60.1 | 56749 |
| PGH-18-04 | Reflex | 297 | 337.3 | -60.1 | 57048 |
| PGH-18-04 | Reflex | 348 | 338 | -60.1 | 57087 |
| PGH-18-04 | Reflex | 414 | 337.8 | -59.9 | 57467 |
| PGH-18-04 | Reflex | 468 | 340.2 | -59.8 | 57237 |
| PGH-18-04 | Reflex | 519 | 338.6 | -59.8 | 57139 |
| PGH-18-04 | Reflex | 570 | 339.1 | -59.8 | 57157 |
| PGH-18-04 | Reflex | 621 | 339.8 | -59.6 | 57061 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|---|--|
| PGH-18-04 | 0 | 24 | OVB | Overburden | Overburden |
| PGH-18-04 | 24 | 26.59 | SYE-BX | Syenite breccia with carbonatite infill | Pink-red, fg-mg, k-fspar 60%, bt 30%, qtz 5%, plag 5%. Crbt veining up to 2cm, erratic, stockwork(?). Syn clasts have reaction rims of black bt?, contacts are sharp to locally undulating. CRBT is fg-cg locally, light purple-pink, disseminated hem. Fg blue elongate crystals <1mm, amph(?). Upper contact approx. @ 15dTCA |
| PGH-18-04 | 26.59 | 43 | SYE-BX | Carbonatite Breccia | 26.59-39.75: Green-grey, fg, carbonate in groundmass, elongate green-black crystals (amph?) <1mm, mottled texture with carbonatite, noticeable zoning within more 'mafic' unit. Crbt; light green-red (hem), pale lighter coloured alteration halos around crbt (more carb in groundmass?). 3% sulphides disseminated and along contact. Brecciated contact (15/150) @ 39.75-40.15, low angle, undulating, maximum width of 2.5cm, pink-cream-black, calcite dominated, clasts up to 1.5cm (calcite clasts appear as two generations, different colours and textures). Pink and white calcite are infill with purple-red clasts are sub-angular with disseminated sulphides and patchy hem alt'n. 40.15-43.00: pink-red clasts, angular, bt>kspars>ep, dissolution along clast boundaries, hydrothermal breccia, infill crbt. Crbt massive 42.37-43.00, weakly banded (15/075), light blue-pink, fg blue amph(?) elongate crystals parallel to banding. |
| PGH-18-04 | 43 | 45.75 | SYE-BX | Syenite breccia with carbonatite infill | Moving away from contact bt decreases, crbt in groundmass, bt being alt to chl. Minor crbt veins with bb contacts (35/110). |
| PGH-18-04 | 45.75 | 48.56 | CRBT | Carbonatite | Two phases of CRBT, 1>2, 2 xc 1, 1) light blue-pink, undulating bands, pink-blue-cream, blue bands contain fg elongate blue mineral (amph?), pink is calc. Contain highly altered, angular, syn clasts(?). 80% bt with cc in groundmass, and diss sulphides. 2) light green-red, 5mm alt halo, radiating hem/cc from contact inwards, dol>calc (70/30). Diss sulphides. Two intersections, largest 10cm. Banding in 1 is between 10-25 / 045-020 (α/β) |
| PGH-18-04 | 48.56 | 54.96 | SYE | Syenite with minor crbt veins | Fg, mod-strong hem selectively pervasive through groundmass. Fibrous blue amph(?) near contact with crbt, chl replacing bt. Crbt veins <5cm. Sphalerite(?) @~53m Sharp LC. |
| PGH-18-04 | 54.96 | 55.85 | CRBT-BX | Carbonatite breccia SYN clasts | Light green-grey-red, dolomite>calcite>qtz, brecciated contacts, very weakly undulating diffuse banding, Upper 0.5m in bx 10% py. Clasts are highly altered syn, alt rims (bt, crbt groundmass, hem), |
| PGH-18-04 | 55.85 | 68.95 | SYE | Syenite | Fg-mg, red-black-green, groundmass hem patchy hem alt, bt being alt to chl blue-green. Crbt veins up to 5cm. |
| PGH-18-04 | 68.95 | 74.35 | CRBT-BX | Carbonatite veins/bx and Syenite | CRBT varies from 10-90cm, smaller (<20cm) are light blue-pink as described above. Veins >20cm are light green-red to grey-cream in colour, locally mottled to weakly banded. Disseminated hem in all veins. |
| PGH-18-04 | 74.35 | 74.96 | SYE-BX | Brecciated Syenite + CRBT | Syn clasts are moderately altered with diffuse boundaries, k-spar dominant w/chl. CRBT infill; grey-blue-pink, fg, diss sulphides. |
| PGH-18-04 | 74.96 | 80 | QTZ-SYE | Quartz Syenite | Fg-cg, xtals up to 4mm, Qtz 15%, k-fspar 60%, bt 15%, plag 10%. Bt being alt to chl (blue-green). Patchy moderate hematite alteration. Contact with BX 45/155. Crbt veins <2cm. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|--------|------------|---|---|
| PGH-18-04 | 80 | 80.87 | SYE-BX | Syenite breccia with carbonatite infill | Clasts are tabular to irregular, sub angular, up to 5cm, dissolution boundaries and fractures with crbt infill, alt to 80% bt (locally near UC) with carb groundmass. Crbt infill rimmed by blue amph(?) and blue-green chl. Syn fenitized, bt being replaces partially to completely by blue, fibrous, radiating amph(?). CRBT; dol >calc, blue-grey-light green, fg sugary texture locally, diss hem in light-green. UC @ 45/155 LC @ 60/160 |
| PGH-18-04 | 80.87 | 83.5 | QTZ-SYE | Quartz Syenite | Med red-pink, 60% k-fspar, 15% plag, 15%qtz, 10% bt. 81.57-81.83: dark green, sharp contacts, carb in groundmass with crbt @ LC. Possibly section of MD? Non-magnetic, chl rich. |
| PGH-18-04 | 83.5 | 83.88 | CRBT | Carbonatite | Light green-grey-blue, fg, diffuse wispy banding, dol>calc, bands defined by lighter colour (cream) are white under UV (apatite). Later stage as dol clasts within bands. Disseminated hem <1mm |
| PGH-18-04 | 83.88 | 84.6 | SYE-BX | Syenite breccia | Moderately-highly altered SYN with crbt infill, crbt infill < 2cm. Syn being altered to ~80% bt (+ blue amph?/chl). Syn has reaction rims where in contact with crbt veining. Trace disseminated py. |
| PGH-18-04 | 84.6 | 91.65 | QTZ-SYE | Quartz Syenite | 15% qtz, 70% k-fspar, 15% bt. Fg-vcg (locally k-fspar up to 2.5cm), patchy weak-mod hem alt. Fg, grey crbt dykes up to 1.5cm multiple orientations. Trace diss sulphides. LC sharp @ 35/200. |
| PGH-18-04 | 91.65 | 93.69 | CRBT-BX | Carbonatite + Syenite breccia | Syn clasts have heavily altered reaction rims to black-green chl, clasts are sub-angular, moderate patchy hem alt. Trace diss py/blebs up to 1cm. CRBT purple-grey, dark crbt has diffuse banding and fg weak bands of apt. light purple is penetrating contact with dark grey. Mafic clasts are dark green, fg, up to 4cm, rimmed by calcite. |
| PGH-18-04 | 93.69 | 95.7 | SYE | Syenite | Numerous fractures with chl fill, multiple orientations up to 8mm wide, fg syn <2mm. Bt alt to chl. Minor intersections of CRBT up to 3cm. Sharp lower contact with BX. |
| PGH-18-04 | 95.7 | 96.9 | SYE-BX | Brecciated contact w/ CRBT | Breccia zone ~0.5m wide, bt being replaced by chl, dissolution of clast boundaries and along contacts with crbt. CRBT cream fg-cg crystals up to 7mm, green-black (chl/bt rich?) zones with crbt in groundmass (altered MD?). |
| PGH-18-04 | 96.9 | 118.7 | MDYKE | Dyke | Red-black-green, magnetic, carb in groundmass, chl rich, hem, vfg local carb veining up to 4mm. Core is blocky and broken up. Fractures coated in chl, greasy, slickenslides visible but no orientation. BX vein @ 97.40: CRBT (cg)+ clasts of MD and blue amph(?)/chl. LC at 15d TCA, nearing contact vesicles filled with carb, and clasts(?) of dark grey crbt zone similar to ~93.50m |
| PGH-18-04 | 118.7 | 120.46 | MDYKE | Syenite + MD | Contact zone. Green-red, carbonate alt groundmass, locally unaltered neph syn, dominated by chl. Locally magnetic carb alt dyke. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------------------------|--|
| PGH-18-04 | 120.46 | 133.4 | QTZ-SYE | Quartz Syenite | Locally up to 10% qtz, fg-mg, hem/chl alt along grain boundaries, chl replacing bt? And along fractures. Minor crbt veining <20cm. 125.65-125.85: blue-green, fg, wavy discontinuous banding, 3% py. |
| PGH-18-04 | 133.4 | 136.5 | CRBT-BX | Carbonatite Breccia w/ Syenite clasts | CRBT light purple-blue-green, fg, containing amph?(1mm crystals, elongate, black, within blue-crbt), lighter purple crbt appears to be 'core' with blue crbt rimming/infilling smaller fractures (finitization). Light crbt contains diss hem / trace py. Syn clasts are highly altered with bt/chl+crb filling fractures/between fspar. |
| PGH-18-04 | 136.5 | 140.6 | SYE-BX | Carbonatite Breccia | Clast dominant (syn), zones of crbt up to 40cm. Clasts are from 5mm-5cm, diffuse boundaries, fractured, mod-strongly altered. CRBT; light purple-cream-green-blue. Fg, rimmed by blue amph/chl. Locally wispy banding, fg apt, diss trace py/hem + other fg black mineral. |
| PGH-18-04 | 140.6 | 143.35 | CRBT-BX | Carbonatite + Breccia | Dominated by massive CRBT, light blue-pink, weakly banded, 20% fg amph, trace diss py. Brecciated syn clast ~0.5m, angular clasts with rxn rims described above. Local small scale faulting at 140.80, normal antithetic faults, displacement 2cm LC brecciated |
| PGH-18-04 | 143.35 | 144.88 | SYE | Syenite | Pink-green-blue, fg, fractures filled with crbt, chl/amph, bt alt to chl. Qtz 10%. |
| PGH-18-04 | 144.88 | 145.4 | CRBT | Carbonatite | Light blue-purple fg CRBT, weak wavy banding defined by concentration of amph. BX UC, Sharp LC |
| PGH-18-04 | 145.4 | 148.2 | SYE-BX | Syenite + Carbonatite infill | Heavily fractured, clasts are angular with dissolution boundaries and relatively unaltered cores (halos <4mm). CRBT blue-pink-purple, fg amph(?)/ hem, wispy bands locally. |
| PGH-18-04 | 148.2 | 160 | SYE | Syenite | Modal % as above; minor CRBT veins <10cm, dissolution along boundaries. |
| PGH-18-04 | 160 | 160.7 | SYE-BX | Syenite Breccia | Clasts are angular to sub-rounded, 7mm-9cm, diffuse boundaries, locally 60% alt to bt/chl/blue amph. CRBT; light blue-pink, fg, interstitial apatite |
| PGH-18-04 | 160.7 | 163.3 | SYE | Syenite | Fg-cg, med red-pink, crystals 1-10mm, carb/chl/hem/amph alt. Locally blebs of py up to 1cm (Trace 2%) multiple crbt veins from 3mm-10mm |
| PGH-18-04 | 163.3 | 164.4 | CRBT | Carbonatite | BX upper contact with slickensides, silic-cal veins, grey-green, undulating to sharp planar contacts. Diss fg hem. Cross cut by small crbt vein (7mm) |
| PGH-18-04 | 164.4 | 166 | SYE-BX | Syenite Breccia | Fg-cg xtals up to 8mm, mod-str hem alt, multiple <3mm crbt veins (erratic). Bt being alt to chl (blue-green), blue amph(?). Lower contact bx. |
| PGH-18-04 | 166 | 167 | CRBT | Carbonatite | Wavy diffuse banding @ ~10-15d TCA, pink-blue, fg, bands defined by colour and % blue amph. Brecciated lower contact at ~10/255 |
| PGH-18-04 | 167 | 174 | SYE-BX | Syenite breccia with CRBT infill | SYE; med red-pink, fg-cg crystals up to 2cm, bt replaced by chl/blue amph. In bx clasts up to 10cm locally. CRBT; fg, blue-pink-light green, cores are pink rims are blue chl/amph. Locally weakly banded. Diss hem. CRBT zones up to 30cm. |
| PGH-18-04 | 174 | 177.91 | SYE | Syenite | As above; minor crbt bx 175.46-175.80 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------------|---|
| PGH-18-04 | 177.91 | 182.7 | SYE-BX | Syenite Breccia | Intermittent crbt dykes up to 30cm enclosed by syn bx zones up to 1.4m. 5-10% qtz, 10% plag, 15% chl/amph (alt bt), 50% k-fspar, 20% neph. CRBT; diffuse undulating banding defined by abundance of 3mm amph, trace diss py, diss hem. |
| PGH-18-04 | 182.7 | 202.05 | SYE | Syenite | SYE; med red-pink, fg-cg, Qtz 10%, plag 15%, bt, 10%, Neph 15% k-fspar 45%. Bt alt to chl/amph, fenitization near contacts with CRBT veins. 183.50-184.456: CRBT; light green-grey to purple, trace diss py, diss 5% hem. Sharp contacts. LC with 15/120. |
| PGH-18-04 | 202.05 | 206.55 | CRBT | Carbonatite with minor Mafic Dyke(?) | CRBT; light pink-blue-green, wavy wispy banding (x of amph?), two phases of CRBT 2xc1, 1) near upper contact, weakly banded pink-blue,-purple, fg trace diss py, trace hem. 2) unbanded, light green, 15% dis hem, dol>calc MD; xc phase 2 CRBT, bt/chl(70%), amph (15%), carb in groundmass, locally magnetic. Diffuse gradational contacts. |
| PGH-18-04 | 206.55 | 211 | SYE-BX | Syenite Breccia | SYE clasts up to 15cm, reaction rims 3mm-7mm (bt/chl), clasts are angular, core composed up 70% k-fspar, 10%qtz, 10% bt, 10% plag. Infill is CRBT; cream-light blue-pink, trace fluorite/bt/hem 210-211:crbt, light green-blue-pink, fg, undulating discontinuous banding, trace diss py/hem. Clasts as above, locally sub-rounded. |
| PGH-18-04 | 211 | 216.8 | SYE | Syenite | Med red-pink, mg-cg, qtz 10%, bt alt to chl/blue amph. 2 intersections of MD 211.40-211.90, 213.70-214; magnetic, grey-green, bt/chl dominated, carb in groundmass. |
| PGH-18-04 | 216.8 | 222.66 | CRBT | Carbonatite | Minor 0.5m Clast up SYN BX near upper contact. CRBT; locally mottled-weakly banded, mostly massive. Colour change progressing down hole, dependant on min(?), bottom m containing diss vfg black-blue metallic mineral. 217.3-218.70: brecciated UC, contact within crbt (2 phases bx contact). light pink-green, lg fg apt cum(?) up to 3mm locally forming weak bands. Rimmed by pale beige mineral REE-fluorocarbon? vfg along grain boundaries. Trace diss anhedral py. 218.70-219.17: dark green-grey, fg-mg, chl, pyx/amph, carb in groundmass. non-magnetic, bx LC w/ CRBT, diffuse planar UC. 219.17-220.00: light green-purple, diss red mineral (hem), pale beige vfg mineral along grain boundaries, wispy bands of black-red hem. 220-222.30: light pink-purple-green-blue, fg, massive, diss fg black-red(hem), pale beige mineral rimming crystals. trace diss py 222.30-222.60: grey-green, increase in hem, and 5% vfg black metallic mineral. |
| PGH-18-04 | 222.66 | 227 | SYE | Syenite | As above; 223.15-223.55: grey-green, crbt alt, non-magnetic, irregular contact. Crbt veins <10cm. |
| PGH-18-04 | 227 | 228.2 | CRBT | Carbonatite | Cream to light pink-green-purple-blue, calc/dol, massive, trace diss py, wispy bands of blue mineral, locally weakly banded brecciated UC sharp LC |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-04 | 228.2 | 230 | SYE | Syenite | As above. Sharp LC @ 55/075. |
| PGH-18-04 | 230 | 232.67 | CRBT | Carbonatite | Light pink-green, massive to weak irregular banding (colour change), trace diss anhedral py up to 8mm, diss hem. Pale beige/cream mineral along crystals. Apt cumulates up to 3cm, diffuse boundaries. |
| PGH-18-04 | 232.67 | 233.91 | SYE | Syenite | As above. Irregular LC with carbs. |
| PGH-18-04 | 233.91 | 234.45 | CRBT | Carbonatite | Cream to light green-pink-blue, wavy weak banding, trace diss py anh <3mm stringers, brecciated LC |
| PGH-18-04 | 234.45 | 235.9 | SYE | Syenite | As above. Undulating dissolution along contact. |
| PGH-18-04 | 235.9 | 237.85 | CRBT | Carbonatite | Two phases: Rims: light purple, fg, very diffuse banding, trace anh py up to 3mm, beige-red vfg mineral along weak bands. Core: light green-purple, light salmon-beige vfg mineral along weakly formed bands. Increased hem up to 10mm, brown staining (REE fluorocarb?). Apt cumulates up to 10mm |
| PGH-18-04 | 237.85 | 240.48 | SYE-BX | Syenite breccia w/ Carbonatite infill | Syenite as above. Breccia beginning at ~239m, syn clasts angular, mm displacement, strong reactions rims up to 7mm blue-green chl/bt? CRBT infill light pink-cream, diss red min (hem), calc>dol, patchy fluorite. |
| PGH-18-04 | 240.48 | 241.44 | CRBT | Carbonatite | Brecciated upper contact. Light pink-blue-green-grey, wispy bands, fg black mineral, diss hem up to 5mm, trace diss py, brown vfg mineral along grains (REE fluorocarb?), local 'bands' with apt (green-brown-red) |
| PGH-18-04 | 241.44 | 243.37 | SYE | Syenite | Brecciated locally, strongly chl/bt/carb alt, crbt infill in bx zones. CRBT cream to light pink-blue, fg, diss hem, clasts syn completely alt to bt? |
| PGH-18-04 | 243.37 | 244.9 | CRBT | Carbonatite | Brecciated upper contact Light green-red-pink-blue, fg, massive diss hem, fg trace diss black-blue metallic mineral, vfg salmon-beige along grain boundaries creating very weak wispy bands. |
| PGH-18-04 | 244.9 | 249.33 | SYE-BX | Syenite breccia w/ Carbonatite infill | Clasts up to 10cm, angular, reaction rims to completely altered clasts to bt/chl/amph. CRBT infill from 2mm-15cm, minimal movement of clasts (hydrothermal bx). CRBT; pink-cream, fg, locally weakly banded, |
| PGH-18-04 | 249.33 | 261.6 | MIX ZONE | Syenite with minor phases of Mafic Dyke and Carbonatite | SYE; light red-pink, bt up to 50%, qtz 10%, neph 20%, k-fspar 20%. Fg, bt alt to chl, patchy weak hem alt. MDYKE; 250.41-250.64; non-magnetic, light green, carb alt groundmass. & 255-255.78; magnetic, black, fg, amygdales filled with carb. CRBT; 252.28-252.96; cream-pink-blue, fg, wispy brown discontinuous pods near contacts (apt), trace diss py, interstitial REE fluorocarb(?), diss hem 256.40-256.67: cream to pink, massive, wispy bands of blue mineral + apt, diss hem, gradational contacts. |
| PGH-18-04 | 261.6 | 265.2 | CRBT | Carbonatite | Light blue-grey to cream-pink, massive, fg, local highly alt clasts of syn. 10% diss py (<2mm) + fg black mineral. Diss hem, elongate blue mineral (amph?). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---|---|
| PGH-18-04 | 265.2 | 279 | SYE | Syenite | Pink-red-black, fg-mg, chl/amph replacing bt up to 60% locally, qtz 20%. Minor crbt veins/bx up to 15cm, between 30-60 dtca. |
| PGH-18-04 | 279 | 281.2 | SYE-BX | Syenite breccia with carbonatite infill | Clasts up to 5cm, angular to sub-rounded, reactions rims up to 8mm, mosaic bx. Intruding low angle CRBT dyke; light green-pink-cream, fg, locally weakly banded, fg diss trace py, trace other fg black-blue metallic mineral. |
| PGH-18-04 | 281.2 | 283.1 | SYE-BX | Carbonatite with syenite breccia | Syenite as above. Crbt as multiple dykes increasing in size moving down hole. |
| PGH-18-04 | 283.1 | 286 | SYE | Syenite | SYE; pink to black-green, locally 40% bt/chl, fg to locally cg, bt alt to chl. |
| PGH-18-04 | 286 | 289.35 | SYE-BX | Syenite breccia with carbonatite infill | SYE black-green-red, clasts sub-angular to sub-rounded, rxn rims, clasts alt to bt qtz/carb. CRBT; cream to light pink-blue, fg, diss red hem. |
| PGH-18-04 | 289.35 | 290.5 | SYE | Syenite | As above. |
| PGH-18-04 | 290.5 | 291.7 | CRBT-BX | Carbonatite with syenite breccia | 0.5m CRBT; cream with patchy pink-blue, massive, calc>dol BX; syn clasts rxn rims, angular-sub, alt to bt, |
| PGH-18-04 | 291.7 | 294.8 | SYE | Syenite | Bt/chl 50%, qtz 15%, fspar 35%, crbt veining <1cm. |
| PGH-18-04 | 294.8 | 295.8 | SYE-BX | Syenite breccia with carbonatite infill | Clasts are sub-angular, rxn rims, from 5mm-4cm. CRBT; weak internal colour zonation, into 1cm fractures crbt is rimmed by blue-green amph/chl. X-cut qtz vein up to 6mm. |
| PGH-18-04 | 295.8 | 297 | SYE | Syenite | As above. |
| PGH-18-04 | 297 | 298.15 | CRBT-BX | Carbonatite breccia | Light green to cream-blue-pink, fg, mottled, locally massive hem, syn clasts have dissolution rims. Undulating lower contact. |
| PGH-18-04 | 298.15 | 307 | UNKN | Unknown / Glimmerite | 60-70% bt/chl, qtz 10%, fspar 10%, local batches of blue amph?, highly alt syenite? Minor crbt veins up to 15cm. |
| PGH-18-04 | 307 | 314.2 | SYE | Syenite | Patchy mod-strong hem alt, weakly fenitized, qtz 15%, k-fspar 60%, plag 10%, bt 15%. CRBT veins up to 40cm; light pink to green, fg, diss hem. Diffuse contacts. |
| PGH-18-04 | 314.2 | 315.8 | SYE-BX | Syenite Breccia with Carbonatite infill | Brecciated syn with crbt infill up to 90cm. Sye; red-black, patchy hem alt, 50% bt/chl, 40% fspar, 10%qtz. Clasts of syn are angular to sub with rxn rims of blk/green chl/bt? CRBT; light green-blue-grey-pink, fg, vfg wispy light beige along diffuse bands (REE Fluorocarb?), trace diss fg black mineral. diss fg hem, locally bright pink calc>dol. |
| PGH-18-04 | 315.8 | 318.35 | SYE | Syenite | Highly altered syn, bt/chl up to 60%, kspar 25%, qtz 10%, 5%plag. Pink-red-black-green, crystals up to 5mm. Multiple xc crbt veins <4mm locally up to 10cm. LC planar, sharp @ 50/235. |
| PGH-18-04 | 318.35 | 319.65 | SYE-BX | Syenite breccia with carbonatite infill | Clasts are black, moderately to completely altered, clast dominated, angular-sub, clasts are also fractured, mosaic bx. CRBT; infilling, locally massive, cream to light pink, diss hem, calc>dol, local wispy bands of fg apt (distinguishable under UV as white blue). 3% py as diss and stringers. LC gradational. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|---|
| PGH-18-04 | 319.65 | 331.1 | UNKN | Unknown / Glimmerite | Highly altered qtz syn(?), locally 70% bt/chl, locally vcg up to 2.5cm (plag with pink albite(?) rims), locally zones are qtz fspar rich with only trace bt/chl forming weak banding(?). Small crbt veins <5cm. Pervasive bt/chl/albite alteration |
| PGH-18-04 | 331.1 | 333.7 | SYE | Syenite (highly altered) + Carbonatite dykes | Syn(?) alt as above. CRBT as small veins<5cm and two larger described below. 331.10-331.42: cg, cream-light green, hem patches up to 2cm (10%). Diss trace py. Sharp UC/LC. 333.13-333.65: sharp UC undulating bx LC. Cream to light green, mg-cg, massive, trace patchy fluorite, diss hem w/ patches up to 1cm near LC. |
| PGH-18-04 | 333.7 | 342.75 | UNKN | Unknown / Glimmerite | Mod-completely alt syn(?), bt/chl/amph dominant >60%-80%. Locally cg sections original mineralogy, unit completely whipped out by alteration. Minor crbt intersections <20cm, local bx. Irregular LC. |
| PGH-18-04 | 342.75 | 346.5 | SYE | Syenite | Light pink-cream, neph syn. Patchy chl/bt alt as seen above/below. Fg-cg, crystals up to 3cm (plag, striated xtals, commonly rimed by pink (albite?)). Very weak patchy hem alt. LC gradational. |
| PGH-18-04 | 346.5 | 348.7 | UNKN | Unknown / Glimmerite | 60-70% bt/chl/amph, black to green, mg, 10% neph(?), <10% qtz. Minor crbt veins <5cm, cream-pink, 2-5% apt. Gradational contacts |
| PGH-18-04 | 348.7 | 353.9 | CRBT-BX | Carbonatite + Syenite | Weak-mod hem / albite alt(?), locally fractures with blue-green chl/amph. BX contact w/ CRBT, CRBT 349.0-353.70: inclusions of SYN up to 30cm. CRBT; light green-pink-purple, massive, locally wispy bands of apt cumulates, vfg pale pink mineral along bands/xtals (REE fluorocarb?). Trace diss euhedral-anhedral py + other black fg metallic sulphide(?). LC undulating/sharp, closed. |
| PGH-18-04 | 353.9 | 362.48 | SYE-BX | Altered Syenite/Glimmerite + Carbonatite | Highly alt syenite? as above (50-60% bt/chl). Intersections of Crbt up to 60cm with associated BX. CRBT; cream-white, patchy blue mineral along fractures, diss hem/py. |
| PGH-18-04 | 362.48 | 364.05 | CRBT | Carbonatite | Massive, mg, cream-white-blue, fg diss blue mineral, Trace diss py. UC bx, LC gradational |
| PGH-18-04 | 364.05 | 372.37 | SYE | Glimmerite(?) | 50% bt/chl, fenitized SYN? Sharp UC / LC Local intersections of crbt dyke with ass bx up to 40cm. |
| PGH-18-04 | 372.37 | 379.65 | MDYKE/CRBT | Mixed zone of multiple dykes, CRBT, Mafic, and Xeno dyke | UC is sharp 372.37-373.35: MD? fg, green-blue, carb alt groundmass, clasts of syn(?), amygdales filled with carb 373.35-374.15: ?, vfg groundmass, polymictic (syn, glim, patches of mgt up to 5mm, fg black mafic?), irregular wavy contacts xc crbt veins. 374.15-376.05: Altered syn @ upper and lower contact. CRBT; cream to light pink-purple, massive, 3% diss fg py + other fg black sulfide(?). vfg pale salmon REE fluorocarb?, Brecciated LC 376.05-379.65: MD?, carb alt, locally magnetic, bt up to 3mm, grey-green, fg-mg |
| PGH-18-04 | 379.65 | 380.7 | SYE | Syenite | Pink-red, cg-peg, xtals up to 3cm, kspar (60%), Plag (20%), qtz (10%), bt (10%). Bt alt to chl, patchy hem alt. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|---|
| PGH-18-04 | 380.7 | 381.8 | CRBT | Carbonatite | Light purple-pink to blue, fg, massive. Vfg diss black mineral (Fe-Nb Ox?), wispy banding(?). Local clasts of syn. LC sharp, planar |
| PGH-18-04 | 381.8 | 383.5 | SYE | SYN | Mg, red-pink, bt alt to chl/amph. |
| PGH-18-04 | 383.5 | 389.2 | SYE-BX | Syenite Breccia + Carbonatite | Breccia zones up to 0.4m, strongly-completely altered syn clasts to bt(?), clasts are rimmed by black fg bt. CRBT infill from <5mm - 0.5m. CRBT; light blue-purple-pink, fg, vfg pale beige mineral along weakly defined bands (REE fluorocarb?). Trace diss hem. fg bt/amph (blue). Bands defined by xc of bt/amph/py/fg black mineral (pyrochlore?). Locally weakly banded @25/335. |
| PGH-18-04 | 389.2 | 398.5 | QTZ-SYE | Syenite w/ minor Carbonatite | Fg-cg, xtals up to 3cm, light pink-red, chl alt bt, K-fspar (50%), plag (25%), qtz (15%), bt (10%), plag rimmed by hem? CRBT up to 0.5m; light green-grey, fg. |
| PGH-18-04 | 398.5 | 417.3 | SYE | Syenite? | Fg to locally cg zones xtals up to 3cm, pink-red to blue-green, patchy moderate to strong bt/chl/amph 60% of rock (alt). Locally unaltered neph syn (fg, pink, neph 40%, qtz 10%, k-fspar 40%, bt/chl 10%). Intersections of crbt <5cm, fenitization halos around veins. |
| PGH-18-04 | 417.3 | 418.33 | MDYKE/CRBT | Carbonatite + Mafic Dyke | Outer zones possibly carb alt mafic dyke?; bt/chl, carb throughout groundmass and filling amygdales, locally magnetic, gradational contact with CRBT. CRBT; pink-green-grey, fg, bt, diss hem, gradational contacts. |
| PGH-18-04 | 418.33 | 424 | SYE | Syenite | Fg -cg, k-fspar (40%), qtz (10%), plag (10%), neph (20%), bt (20%). Bt alt to chl, blue amph rimming crbt veins. 421.63-421.80: CRBT, fg, grey-green, patchy hem, sharp UC / LC. |
| PGH-18-04 | 424 | 424.98 | CRBT-BX | Carbonatite breccia | First 0.5m syn bx. 424.5-425: CRBT; cream to pink, trace blebs of py up to 1cm, local fg blue amph? |
| PGH-18-04 | 424.98 | 427.43 | PEG | Pegmatitic Alkali | Xtals up to 3cm, patchy albite alt?, chl along fractures, neph (60%), qtz(10%). Lower contact with fg SYN runs parallel TCA. |
| PGH-18-04 | 427.43 | 427.6 | CRBT | Carbonatite | Weakly banded, fg, light purple-grey-green, wispy bands of blue mineral. Sharp UC (50/120)/LC(60/115) |
| PGH-18-04 | 427.6 | 429.05 | SYE | Syenite | Fenitized syenite, as above. LC sharp @ 45/80. |
| PGH-18-04 | 429.05 | 432 | SYE-BX | Syenite Breccia + Carbonatite | Peg sye + sye clasts, rxn rims, angular to sub, from 5mm-5cm, rxn rims blk-blue (bt/amph/chl?). CRBT infill; light pink-blue-grey, fg, local wispy 'bands' defined by x of amph?. Trace fg diss black mineral pyrochlore? |
| PGH-18-04 | 432 | 435 | SYE | Syenite | Fenitized syn as above. Alt w/ blue amph/chl, patchy hem. |
| PGH-18-04 | 435 | 436.95 | CRBT-BX | Carbonatite + Breccia | Fg, light pink-blue-cream-purple, wispy ropy banding, fg black metallic mineral, trace diss py. Syn clasts up to 10cm, rxn rims as above. Ap concentrated around clasts. Gradational contact @ 45/40 |
| PGH-18-04 | 436.95 | 441.54 | SYE | Syenite | Fg, qtz 15%, k-fspar 40%, plag 30%, bt 15%. Bt alt to chl/amph, patchy ham alt along fractures. CRBT intersections <10cm. Chl/amph alt patchy and along fractures. White plag rimmed by pink albite(?). LC undulating @ 50/340. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-04 | 441.54 | 443.04 | CRBT | Carbonatite | Light purple-pink to cream, fg, massive, masses of fg py up to 5mm, vfg salmon apt(?) along fractures. Diss hem. Trace diss fg blk mineral. UC 50/340, undulating LC 50/315 gradational |
| PGH-18-04 | 443.04 | 449.65 | SYE | Syenite and Granite | Fg-mg syenite, cg granite, contact undulating sub-parallel TCA. SYE; red-pink, 40% amph/bt, 40% kspar, 5% plag, 15% neph. local CRBT bx/vein up to 40cm, frequency ~1 every 2m. Light pink-purple, cream, fg, patchy red (hem), wispy vfg apt? 447.10-447.70: MD?, light green, fg, carb alt, non-magnetic. |
| PGH-18-04 | 449.65 | 451 | CRBT-BX | Carbonatite Breccia | SYN clasts up to 20cm, sub-rounded, rxn rims of chl, clasts are chl/amph alt. 449.65-449.5: SYN BX 449.5-451: CRBT; light pink-cream-blue, wispy blue banding, massive, last 20cm 10% sulphides (py, po?) + wispy bands of apt. |
| PGH-18-04 | 451 | 454 | QTZ-SYE | Alkali Feldspathic | Fg-cg, 20% qtz, 40% kfldsp, 20% plag, 20% bt/amph. Patchy hem alt / along fractures. Green-blue chl/amph. |
| PGH-18-04 | 454 | 458 | CRBT-BX | Carbonatite + Alkali Feldspathic | CRBT sub-parallel TCA, undulating bx contact; fg light red-purple-grey, wispy bands, trace hem. Dissolution along clasts. SYN; clasts <1cm, chl/+ blue amph alt, fg, |
| PGH-18-04 | 458 | 470 | SYE | Alkali Feldspathic | Chl/bt/amph 40-60%, qtz 5-10%, k-fldsp 30%. Fg, local crbt <10cm; cream-light green-pink, fg, patchy hem, fg diss black mineral, apt cumulates up to 2cm |
| PGH-18-04 | 470 | 475.1 | CRBT-BX | Carbonatite + Alkali Breccia | SYE fg, red, rxn rims of bt, clasts up to 10cm, angular to sub-rounded, pink alt halos around fractures. Local masses of unknown orange mineral in syn clasts. CRBT; cream to light pink-green-grey, fg-cg up to 1cm. Massive to locally wispy bands. Patchy fluorite, trace diss py. |
| PGH-18-04 | 475.1 | 481 | SYE | Alkali Feldspathic | Locally up to 40% chl/bt/amph, 5% qtz. Syn fg-mg, pink-red, fractures with chl/amph (blue-green). Pink-red alt halos around fractures. |
| PGH-18-04 | 481 | 481.6 | SYE-BX | Alkali breccia with Carbonatite infill | 0.5m of BX, clasts with rxn rims up to 7mm. Clasts are fg, pink, weak chl alt of bt. CRBT infill; light pink-cream-green, fg, patchy hem up to 2mm. Trace fg black-blue metallic mineral. |
| PGH-18-04 | 481.6 | 484.1 | SYE | Alkali Feldspathic | As above. |
| PGH-18-04 | 484.1 | 485.4 | CRBT | Carbonatite | Cream to light pink-grey-green-blue, fg with cg calcite up to 2cm elongate xtals. Local alkali clasts up to 4cm, angular/tabular, no rxn rims. 3% py diss, up to 3mm. Patchy fg fluorite. Diss hem and along fractures. Locally wispy bands. UC (60/095)/LC (65/120) rimmed up 5mm black bt/amph?. |
| PGH-18-04 | 485.4 | 486.31 | SYE | Alkali Feldspathic | Neph syn?, fg-mg, qtz 5-10%, pink-red, patchy hem/chl (green-blue), UC/LC sharp. |
| PGH-18-04 | 486.31 | 487.6 | CRBT | Carbonatite | Light pink-green-grey-purple, greenish veins cross cutting ~3mm thick containing apt with inclusions of py/fg black mineral. Hematite disseminated and along fractures. Vfg light orange mineral along wispy bands. Calc>Dol. BX lower contact. |
| PGH-18-04 | 487.6 | 489.35 | QTZ-SYE | Alkali Feldspathic | Qtz 5-10%, bt 30%, k-fldsp 40%, neph 20%. Fg-mg, bt alt chl. Crbt veins <3cm |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|---|
| PGH-18-04 | 489.35 | 489.83 | CRBT | Carbonatite | Light pink-purple, massive, red-brown mineral forming wispy band, apt cumulates at UC and LC green-grey up to 2cm. Disseminated hem, trace diss py BX UC/LC |
| PGH-18-04 | 489.83 | 490.95 | QTZ-SYE | Alkali Feldspathic | As above. |
| PGH-18-04 | 490.95 | 492.25 | CRBT | Carbonatite | Light pink-blue-cream-grey, massive, concentrations of blue elongate mineral (amph?) increase near UC/LC. Trace disseminated anhedral py. |
| PGH-18-04 | 492.25 | 493.15 | QTZ-SYE | Alkali Feldspathic | As above, becoming cg in last 0.5m. |
| PGH-18-04 | 493.15 | 508.34 | CRBT-BX | Carbonatite + Breccia | Cream to light-pink-blue-green-grey-purple, fg-cg, massive to locally wispy bands. Local sections of alkali bx up to 1.5m. Wispy bands of apt, local cumulates up to 2cm, commonly near alkali clasts / rimming clasts. Blue fg amph(?) up to 3mm. trace diss py w/ local euohedral cubes up to 2mm. diss hem. trace fg black-blue metallic mineral. Patchy trace fluorite. Cal>Dol local bt/black amph, unknown white mineral <1mm in dark blue bands @ ~508m 496.30-500.30: BX zone, Clasts have rxn rims up to 7mm (bt/chl) Scint avg 300, locally up to 475 cps. |
| PGH-18-04 | 508.34 | 510.27 | QTZ-SYE | Alkali Feldspathic | Syenite?, fg-mg, 40% bt/chl, locally weakly banded? 5-10% qtz. <2mm veinlets of crbt. |
| PGH-18-04 | 510.27 | 510.9 | CRBT-BX | Carbonatite Breccia | Clasts are fractured, sub-rounded with diffuse boundaries, clasts from 1-10cm, completely replaced by bt. CRBT; light pink-purple-cream-blue, fg, apt cum rimming clasts/forming wispy bands. Diss hem. Local fg bt <1mm |
| PGH-18-04 | 510.9 | 513.75 | QTZ-SYE | Alkali Feldspathic | Fg to locally cg (up to 2cm), 40% chl/bt/amph, 10% qtz, 45% k-fldsp, 5% other. Minor crbt veins <2cm. |
| PGH-18-04 | 513.75 | 516.7 | CRBT-BX | Carbonatite Breccia | Angular clasts with rxn rims of black/brown up to 1cm, or if small enough completely altered to bt. Clasts are angular to sub, mosaic breccia, zones of massive crbt up to 0.5m. Unit dominated by breccia. CRBT; pink-blue, fg, local wispy bands of blue mineral (amph?), trace diss py UC @ 35/240, LC @ 35/250 |
| PGH-18-04 | 516.7 | 523.4 | QTZ-SYE | Alkali Feldspathic | Pink-red-brown-green, locally 10% qtz, fg-mg, bt being alt to chl. Locally fenitized (blue amph/chl in fractures and surrounding crbt veins). CRBT veins <3cm; pink-cream-blue-green-grey, local patchy fluorite |
| PGH-18-04 | 523.4 | 524.8 | CRBT | Carbonatite | Cream to light pink-blue, fg-cg, wispy bands of blue (amph?), bands up to 8cm. Clasts of syn, completely altered to bt. Trace diss py. Apt cumulates forming wispy bands. UC/LC sharp |
| PGH-18-04 | 524.8 | 527.5 | QTZ-SYE | Alkali Feldspathic | Locally 30-50% bt/chl/amph, fg to locally cg up to 2.5cm, qtz 5-10%, pink-orange-black/green. |
| PGH-18-04 | 527.5 | 537.75 | SYE-BX | Carbonatite Breccia + Alkali Feldspathic | Alkali as above, multiple breccia zones up to 0.5m, multiple crbt veins from 20-60cm. Clasts from 5mm-10cm angular to sub, rxn rims up to 7mm to completely altered clasts. Within clasts infill is crbt and blue amph/chl. CRBT; cream to light-blue-pink-green, fg-mg, massive to locally weakly banded / wispy bands of blue mineral (amph), patchy fluorite, local bt/amph. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-04 | 537.75 | 555.17 | CRBT | Carbonatite | Massive, fg-cg, cream to light pink-blue-green-purple, locally wispy bands. Blue/green amph up to 5mm, trace diss/stringer py/pyrrhotite (xtals up to 4mm), bt locally up to 5% (3mm). Apt cumulate up to 1cm as blobs and wispy bands. Patchy fg black-brown pyrochlore(?). Within blue patches is fg white (poorly formed, replacing?) mineral locally tetrahedral. Trace disseminated hematite. Weak association with apt occurring near zones with increase amph/bt. UC @ 50/110, LC @ |
| PGH-18-04 | 555.17 | 563.9 | QTZ-SYE | Alkali Feldspathic | Light grey-pink to black-brown, fg-mg (locally cg up to 2cm), locally weakly banded, local parasitic folding (tight, asymmetrical), lighter 'bands' qtz/ fldsp, darker are chl/bt. Qtz (15%), kfldsp (25%), Neph (25%), bt(30%), 5% other Minor CRBT <5cm. LC @40/40 |
| PGH-18-04 | 563.9 | 565.4 | CRBT | Carbonatite | Cream to light blue-pink to green, fg-cg, calcite up to 4cm (elongate crystals), locally up to 15% bt (up to 3mm), trace fg disseminated py. 564.4-564.75: 15% bt, apt 20% (green cumulates up to 5cm), fg black pyrochlore. LC @ 30/100, diffuse contact, undulating to irregular. |
| PGH-18-04 | 565.4 | 580.5 | QTZ-SYE | Alkali Feldspathic | Light grey-pink to black-brown, fg-mg (locally cg up to 2cm), locally weakly banded,, lighter 'bands' qtz/ fldsp, darker are chl/bt. Qtz (15%), kfldsp (25%), Neph (25%), bt(30%), 5% other. 568-568.80: CRBT; light purple-green-cream, massive, cross cutting undulating band of apt/dol rich crbt. diss hem fg, dissolution along UC/LC, vfg grey-grn crbt 10cm from LC. fg black pyrochlore. 575.70-576.76: CRBT; light purple-pink-green-blue, mottled, fg, diss hem, blue batches contain bt/amph, light green weak bands w/ apt, |
| PGH-18-04 | 580.5 | 592 | CRBT-BX | Carbonatite + Alkali Feldspathic Breccia | Mixed zone dominated by CRBT and breccia with minor sections of Alkali. Alkali; pink-red, fg-cg (locally), qtz 5-10%, k-fspar 40%, neph(20%), mafics 30% (bt/chl/pyx?). Clasts are angular to sub angular, minor rxn rims locally (dissolution, not like previous bx where rxn rims were black and bt/chl dominated). Locally blue fg, fibrous amph infilling fractures and along contacts with crbt. CRBT; light pink-blue-green-cream to grey, fg-cg, massive, local wispy bands of blue amph(?), trace diss anhedral masses up to 3mm of blue/black metallic sulphide?, trace disseminated pyrite. 582.75-584.10: cg, apt cumulates up to 5mm forming weak bands. fractures filled with vfg orange-brown mineral Local flow banding(?) near contacts and around larger clasts of Alkali. Locally increase in sulphides py/po up to 5% masses up to 5cm. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---|--|
| PGH-18-04 | 592 | 608 | SYE | Alkali Feldspathic with minor Carbonatite | Pink-red to black-green-grey, fg-cg(locally up to 15mm), qtz 15%, 20% bt, k-fldsp 40%, chl 5%, amph 10% (blue), plag 10%. Minor crbt veins < 2cm, local fenitization (blue fg amph, fibrous), chl rimming/replacing bt. Patchy weak to moderate pink-red alt (potassic?), rimming fldsp/penetrating xtals, seems to waxy/wane, areas where bt is more abundant alteration is very weak to non-existent. 596.88-597.86: CRBT; light purple-green, hem along fractures and patchy. trace diss py. diss fg metallic, blue mineral <1mm in proximity to hem. Light green -brown apt cumulate near contacts and surrounding clasts 605.3-606.10: CRBT + Minor Alkali; CRBT; light pink-blue, wispy bands of apt cumulate <4mm wide |
| PGH-18-04 | 608 | 611 | CRBT-BX | Carbonatite with Alkali | Light purple-pink, fg, massive, local wispy bands of blue amph and of br-grn apt(?) near UC/LC. Trace diss py + blk anhedral sulphide. Hematite along fractures. Dissolution along UC/LC, rimmed by blue amph(?). Locally bx alkali clasts? Up to 15cm, undulating low angle TCA contacts. |
| PGH-18-04 | 611 | 617 | CRBT-BX | Carbonatite + Alkali Feldspathic | Alkali; dark grey-green (611-613.5) more bt/chl rich, fg-cg locally, qtz 10%, k-fspar 50%, bt 20%, neph (10%), amph (10%). Multiple veins of CRBT from 1-50cm and local breccia zones and fenitized alkali. CRBT; light pink-purple-green-blue, fg, diss hem, apt cumulates locally green-brown, trace diss py local euhedral xtals up to 3mm, masses of grey-black metallic sulphide up to 4mm across (hem?) |
| PGH-18-04 | 617 | 620.7 | CRBT | Carbonatite | Light pink-purple-green, blue, fg, massive, local wispy bands of apt cumulate/amph (blue mineral), hem along fractures/diss, trace diss py up to 2mm. UC BX, LC BX w/ rxn rims |
| PGH-18-04 | 620.7 | 634.5 | QTZ-SYE | Alkali Feldspathic | Fenitized black-green-blue to grey, qtz 10%, bt/chl 30-40%, k-fldsp 30%, neph (20%), fg-mg, <5mm, veins of CRBT <5mm with alt halos of chl/amph. 622.35-622.65: light green-grey, fg, crbt alt MD?, non-magnetic 630.58-630.78: CRBT, green-purple-grey, fg, diss hem, planar UC/LC LC gradational (alteration decreasing). |
| PGH-18-04 | 634.5 | 650.1 | QTZ-SYE | Alkali Feldspathic | Fg-locally vcg, Qtz 15%, k-fldsp 40%, plag 25%, bt/chl 20% 636.80-640.84: Pegmatitic, fldsp crystals up to 8cm with perthitic texture 645.65-646.35: CRBT /BX zone, mottled, pink-green-blue, apt cumulate forming wispy bands |
| PGH-18-04 | 650.1 | 656.65 | MDYKE | Dyke | UC obscured by broken core fg, aphanitic at margins, grey-green, magnetic, patchy hem/chl alt. LC 40/335 |
| PGH-18-04 | 656.65 | 660.8 | QTZ-SYE | Alkali Feldspathic | 30% bt/chl, qtz 10%, k-fldsp 40%, neph (20%). Fg-cg locally, fenitized (blue amph rimming crbt veins). CRBT undulating veins up to 10cm, grey-cream to light purple, locally cg, black-blue rims on veins. |
| PGH-18-04 | 660.8 | 661.8 | CRBT | Carbonatite | Cream to light blue, massive, cg, LC crbt is pink-light green and fg, elongate xtals of calcite up to 3cm rimmed by blue amph(?). Trace diss py. Local diss hem near contacts. UC euhedral py up to 5mm. UC @ 70/50, undulating. LC undulating 80/90 |
| PGH-18-04 | 661.8 | 662.74 | SYE-BX | Alkali Feldspathic and breccia zone | Alkali fspar as above. BX 662.20-662.72: highly chl/bt/crbt altered, polymictic, angular crbt clasts, altered alkali clasts, 5% diss py |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|-----|------------|---|--|
| PGH-18-04 | 662.74 | 672 | QTZ-SYE | Alkali Feldspathic + minor Carbonatite | Alkali as above. CRBT veins/bx up to 30cm. Light green-grey to purple, diss hem, trace diss py, fg, |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|---|--|
| PGH-18-04 | 40 | CT | 15 | 150 | | | undulating brecciated contact btw crbt+MD / crbt+Syn |
| PGH-18-04 | 43.86 | CT | 35 | 110 | | | brecciated crbt vein |
| PGH-18-04 | 47.36 | CT | 25 | 180 | | | phase 2 dolo rich dyke, 10cm think |
| PGH-18-04 | 47.75 | CT | 45 | 140 | | | phase 2 dolo rich dyke, 3cm think |
| PGH-18-04 | 80 | CT | 45 | 155 | | | contact between SYN and BX |
| PGH-18-04 | 80.89 | CT | 60 | 160 | | CCT BX; lower contact between CRBT BX and SYN | sharp, rough, undulating, open, |
| PGH-18-04 | 81.83 | CT | 70 | 50 | | LC CRBT dyke and SYN | minor dissolution, planar, closed, chl |
| PGH-18-04 | 83.49 | CT | 70 | 130 | | UC btw CRBT/SYN | closed, undulating, dissolution/alt to chl |
| PGH-18-04 | 84.84 | BND | 60 | 70 | | diffuse banding in CRBT | |
| PGH-18-04 | 84.87 | CT | 75 | 55 | | LC CRBT dyke and SYN | undulating, closed |
| PGH-18-04 | 91.5 | JNT | 65 | 125 | | Joint in SYN | planar, slightly rough, chl infill |
| PGH-18-04 | 91.67 | CT | 35 | 200 | | Contact btw SYN/CRBT | planar, closed |
| PGH-18-04 | 119.57 | JNT | 45 | 20 | | joint in MD | undulating, chl, smooth |
| PGH-18-04 | 145.4 | CT | 40 | 55 | | LC CRBT dyke and SYN | planar, slightly rough, chl/amph infill |
| PGH-18-04 | 145.62 | JNT | 75 | 245 | | jnt in syn | planar, slightly rough, chl/amph infill |
| PGH-18-04 | 166.63 | CT | 10 | 255 | | lower contact of CRBT | undulating, closed |
| PGH-18-04 | 182.85 | JNT | 40 | 200 | | jnt in syn | planar, slightly rough, chl |
| PGH-18-04 | 184.36 | CT | 15 | 120 | | lower contact of CRBT and SYN | undulating, closed |
| PGH-18-04 | 184.7 | JNT | 75 | 320 | | jnt in syn | planar, slightly rough, chl |
| PGH-18-04 | 201.82 | JNT | 55 | 55 | | jnt in syn | planar, rough, chl infill |
| PGH-18-04 | 202.05 | CT | 50 | 300 | | Contact btw SYN/CRBT | planar, sharp, closed |
| PGH-18-04 | 202.4 | BND | 45 | 325 | | weak banding in CRBT | defined by amph x |
| PGH-18-04 | 214 | CT | 25 | 335 | | LC MD w/ SYN | undulating, closed |
| PGH-18-04 | 216.78 | CT | 70 | 220 | | LC SYN w/ CRBT BX | sharp, open, slightly roungh |
| PGH-18-04 | 230.05 | CT | 55 | 75 | | UC btw CRBT/SYN | shapr, planar, closed |
| PGH-18-04 | 235.9 | CT | 55 | 85 | | UC of cRBT w/ SYN | undulating |
| PGH-18-04 | 245 | CT | 25 | 30 | | LC CRBT BX | slickenslides, chl, unudlating |
| PGH-18-04 | 250.42 | CT | 50 | 270 | | UC MDYKE w/ SYN | sharp, planar, rough, open |
| PGH-18-04 | 250.64 | CT | 75 | 330 | | LC MDYKE w/ SYN | shap, planar, open |
| PGH-18-04 | 255.3 | CT | 30 | 55 | | UC MDYKE w/ SYN | sharp, undulating, closed |
| PGH-18-04 | 255.78 | CT | 40 | 60 | | LC MDYKE w/ SYN | sharp planar, closed |
| PGH-18-04 | 283.1 | CT | 20 | 55 | | LC CRBT w/ SYN | sharp planar, closed |
| PGH-18-04 | 285.05 | CT | 30 | 195 | | UC CRBT w/SYN | sharp, planar, closed |
| PGH-18-04 | 285.5 | CT | 35 | 265 | | LC CRBT w/ SYN | sharp, planar, closed |
| PGH-18-04 | 290.5 | CT | 60 | 160 | | UC CRBT w/SYN | shapr, planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|------------------------|---|
| PGH-18-04 | 318.35 | CT | 50 | 235 | | UC BX with SYN | sharp, planar, closed |
| PGH-18-04 | 364.1 | CT | 75 | 140 | | LC CRBT w/ SYN | undulating, closed |
| PGH-18-04 | 372.35 | CT | 40 | 65 | | LC SYN w/ MD | sharp, planar, closed |
| PGH-18-04 | 373.35 | CT | 15 | 330 | | MDYKE w/ Xeno dyke | irregular, closed |
| PGH-18-04 | 374.1 | CT | 20 | 345 | | Xeno Dyke w/ MDYKE | irregular, closed |
| PGH-18-04 | 387.4 | BND | 25 | 335 | | weak banding in CRBT | wavy bands defined by xc of fg black/blue mineral |
| PGH-18-04 | 412.7 | VN | 35 | 55 | | small CRBT vein | rough, crbt, chl, planar |
| PGH-18-04 | 417.3 | CT | 55 | 280 | | UC of MD? With SYN | undulating, closed |
| PGH-18-04 | 418.28 | CT | 55 | 290 | | LC of MD? w/ SYN | undulating |
| PGH-18-04 | 418.35 | CT | 40 | 290 | | CRBT vein below MD cct | planar, closed |
| PGH-18-04 | 421.62 | CT | 40 | 120 | | UC of CRBT w/ SYN | planar, closed |
| PGH-18-04 | 421.8 | CT | 40 | 40 | | LC CRBT w/ SYN | planar, closed |
| PGH-18-04 | 427.43 | CT | 50 | 120 | | UC CRBT w/SYN | planar, closed |
| PGH-18-04 | 427.55 | CT | 60 | 115 | | LC CRBT w/ SYN | planar, closed |
| PGH-18-04 | 429.05 | CT | 45 | 80 | | UC CRBT w/SYN | planar, closed |
| PGH-18-04 | 436.95 | CT | 45 | 40 | | LC CRBT w/ SYN | undulating, closed |
| PGH-18-04 | 441.45 | JNT | 30 | 325 | | jnt in syn | planar, rough, chl infill |
| PGH-18-04 | 441.55 | CT | 50 | 340 | | UC CRBT w/SYN | undulating, closed |
| PGH-18-04 | 443.05 | CT | 50 | 315 | | LC CRBT w/ SYN | gradational |
| PGH-18-04 | 458.6 | JNT | 70 | 270 | | jnt in syn | undulating, rough, |
| PGH-18-04 | 459.86 | JNT | 50 | 340 | | jnt in syn | planar, rough, chl infill |
| PGH-18-04 | 461.7 | JNT | 85 | 320 | | jnt in syn | planar, very rough, amph infil; |
| PGH-18-04 | 462.68 | CT | 40 | 190 | | LC CRBT w/ SYN | gradational |
| PGH-18-04 | 466.2 | VN | 35 | 220 | | CRBT vein LC | undulating, closed |
| PGH-18-04 | 466.65 | VN | 70 | 30 | | CRBT vein UC | planar, sharp, closed |
| PGH-18-04 | 466.8 | VN | 75 | 40 | | CRBT vein LC | planar, sharp, closed |
| PGH-18-04 | 470 | CT | 45 | 280 | | CRBT BX | planar, closed |
| PGH-18-04 | 478 | JNT | 50 | 10 | | jnt in syn | planar, rough, chl infill |
| PGH-18-04 | 481.45 | CT | 20 | 240 | | LC BX | planar, closed |
| PGH-18-04 | 484.1 | CT | 60 | 95 | | UC CRBT | planar, closed |
| PGH-18-04 | 485.4 | CT | 65 | 120 | | LC CRBT | planar, closed |
| PGH-18-04 | 492.25 | CT | 85 | 175 | | LC CRBT | undulating, open, cc/bt |
| PGH-18-04 | 493.13 | CT | 45 | 135 | | UC CRBT | irregular, closed |
| PGH-18-04 | 508.34 | CT | 75 | 140 | | LC CRBT | planar, rxn rim, closed |
| PGH-18-04 | 513.75 | CT | 35 | 240 | | UC CRBT BX | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------------|-----------------------------------|
| PGH-18-04 | 516.7 | CT | 35 | 250 | | LC CRBT BX | gradational, closed |
| PGH-18-04 | 523.4 | CT | 65 | 240 | | UC CRBT | planar, closed |
| PGH-18-04 | 524.75 | CT | 45 | 75 | | LC CRBT | planar, closed |
| PGH-18-04 | 528.3 | CT | 30 | 240 | | UC CRBT BX | planar, closed |
| PGH-18-04 | 533.28 | CT | 35 | 320 | | BX within CRBT | planar, BX zone 2cm wide. |
| PGH-18-04 | 534.76 | CT | 25 | 125 | | UC CRBT | planar, closed |
| PGH-18-04 | 535.3 | CT | 25 | 130 | | LC CRBT | planar, closed |
| PGH-18-04 | 536.6 | CT | 35 | 140 | | LC CRBT BX | planar, diffuse cct |
| PGH-18-04 | 537.78 | CT | 50 | 110 | | UC CRBT | planar, closed. |
| PGH-18-04 | 554.85 | CT | 15 | 280 | | LC CRBT BX | planar, bx, closed |
| PGH-18-04 | 562.3 | BND | 20 | 260 | | BND in ALKALI? | weak band? |
| PGH-18-04 | 562.86 | CT | 55 | 40 | | LC CRBT | undulating, closed |
| PGH-18-04 | 563.9 | CT | 40 | 40 | | UC CRBT w/ Alkali | undulating, gradational (rxn rim) |
| PGH-18-04 | 565.35 | CT | 30 | 100 | | LC CRBT w/ Alkali | undulating, gradational (rxn rim) |
| PGH-18-04 | 568.16 | CT | 55 | 100 | | UC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 575.67 | CT | 65 | 100 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-04 | 576.75 | CT | 70 | 120 | | LC CRBT w/ Alkali | undulating, closed |
| PGH-18-04 | 580.25 | CT | 50 | 180 | | UC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 585.67 | CT | 55 | 135 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 588.67 | CT | 80 | 80 | | LC CRBT w/ Alkali | undulating, closed |
| PGH-18-04 | 589.1 | CT | 20 | 230 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-04 | 591.15 | CT | 25 | 240 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 597.85 | CT | 50 | 150 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 605.42 | CT | 25 | 230 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 605.78 | CT | 70 | 255 | | UC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 608 | CT | 70 | 330 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-04 | 616.4 | CT | 60 | 180 | | UC CRBT w/ Alkali | planar, bx |
| PGH-18-04 | 620.55 | CT | 55 | 140 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-04 | 622.35 | CT | 25 | 265 | | UC Dyke | planar, closed |
| PGH-18-04 | 622.66 | CT | 35 | 280 | | LC Dyke | planar, closed |
| PGH-18-04 | 656.55 | CT | 40 | 335 | | LC DYKE | irregular, closed |
| PGH-18-04 | 657.9 | CT | 50 | 45 | | LC CRBT | undulating, closed |
| PGH-18-04 | 658.8 | CT | 25 | 100 | | LC CRBT | irregular, closed |
| PGH-18-04 | 660.8 | CT | 70 | 50 | | UC CRBT | planar, open, rough, py/amph |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|-------|-------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 26 | 26.5 | 0.5 | 589509 | A18-05281 | 0.014 | < 0.003 | < 0.005 | 0.005 | 0.033 | 7.54 | 0.32 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 26.5 | 28 | 1.5 | 589510 | A18-05281 | 0.029 | < 0.003 | 0.007 | 0.008 | 0.004 | 7.96 | 2.92 | < 0.003 | 0.016 | < 0.003 |
| PGH-18-04 | 28 | 29.5 | 1.5 | 589511 | A18-05281 | 0.109 | 0.003 | < 0.005 | 0.008 | 0.101 | 10.65 | 3.86 | < 0.003 | 0.02 | 0.004 |
| PGH-18-04 | 29.5 | 31 | 1.5 | 589513 | A18-05281 | 0.091 | 0.004 | < 0.005 | 0.007 | 0.126 | 11.52 | 2.22 | < 0.003 | 0.016 | < 0.003 |
| PGH-18-04 | 31 | 32.5 | 1.5 | 589514 | A18-05281 | 0.058 | 0.003 | < 0.005 | 0.007 | 0.071 | 9.4 | 4.05 | < 0.003 | 0.022 | < 0.003 |
| PGH-18-04 | 32.5 | 34 | 1.5 | 589515 | A18-05281 | 0.087 | 0.003 | < 0.005 | 0.005 | 0.137 | 11.05 | 3.21 | < 0.003 | 0.018 | 0.003 |
| PGH-18-04 | 34 | 35.5 | 1.5 | 589516 | A18-05281 | 0.112 | < 0.003 | < 0.005 | 0.007 | 0.11 | 11.66 | 2.2 | < 0.003 | 0.02 | < 0.003 |
| PGH-18-04 | 35.5 | 37 | 1.5 | 589517 | A18-05281 | 0.088 | 0.003 | 0.005 | 0.007 | 0.083 | 11.91 | 3.8 | < 0.003 | 0.019 | < 0.003 |
| PGH-18-04 | 37 | 38.5 | 1.5 | 589518 | A18-05281 | 0.097 | < 0.003 | < 0.005 | 0.007 | 0.114 | 11.41 | 4.23 | < 0.003 | 0.029 | 0.003 |
| PGH-18-04 | 38.5 | 40 | 1.5 | 589519 | A18-05281 | 0.085 | < 0.003 | 0.012 | 0.008 | 0.413 | 11.31 | 4.79 | < 0.003 | 0.026 | 0.005 |
| PGH-18-04 | 40 | 41.5 | 1.5 | 589520 | A18-05281 | 0.029 | < 0.003 | < 0.005 | 0.005 | 0.041 | 10.37 | 1.65 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 41.5 | 42.25 | 0.75 | 589521 | A18-05281 | 0.012 | 0.003 | < 0.005 | 0.005 | 0.06 | 8.42 | 0.59 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 42.25 | 43 | 0.75 | 589522 | A18-05281 | 0.135 | < 0.003 | 0.009 | 0.007 | < 0.003 | 3.43 | 2.72 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 43 | 44.5 | 1.5 | 589523 | A18-05281 | 0.023 | < 0.003 | < 0.005 | < 0.005 | 0.032 | 8.19 | 0.62 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 44.5 | 46 | 1.5 | 589524 | A18-05281 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 7.7 | 0.59 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 46 | 47 | 1 | 589525 | A18-05281 | 0.078 | 0.004 | 0.007 | 0.006 | 0.022 | 5.67 | 3.38 | < 0.003 | 0.017 | 0.004 |
| PGH-18-04 | 47 | 48 | 1 | 589526 | A18-05281 | 0.043 | 0.003 | 0.007 | 0.007 | 0.007 | 3.64 | 3.71 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 48 | 48.56 | 0.56 | 589527 | A18-05281 | 0.074 | 0.006 | 0.009 | 0.007 | < 0.003 | 2.5 | 3.85 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 48.56 | 49 | 0.44 | 589528 | A18-05281 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.032 | 7.13 | 0.49 | 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 54.64 | 55.03 | 0.39 | 589529 | A18-05281 | 0.016 | < 0.003 | < 0.005 | 0.005 | 0.007 | 10.34 | 0.76 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 55.03 | 55.4 | 0.37 | 589530 | A18-05281 | 0.054 | 0.005 | 0.007 | 0.007 | < 0.003 | 5.93 | 6.26 | < 0.003 | 0.012 | 0.008 |
| PGH-18-04 | 55.4 | 56 | 0.6 | 589531 | A18-05281 | 0.011 | < 0.003 | < 0.005 | 0.005 | 0.013 | 5.31 | 0.59 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 56 | 56.5 | 0.5 | 589532 | A18-05281 | 0.013 | < 0.003 | < 0.005 | 0.005 | 0.028 | 6.2 | 0.49 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 57.55 | 57.85 | 0.3 | 589533 | A18-05281 | 0.008 | < 0.003 | < 0.005 | 0.007 | 0.009 | 6.31 | 1.12 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 65.45 | 66 | 0.55 | 589534 | A18-05281 | 0.006 | 0.003 | < 0.005 | 0.005 | 0.024 | 5.83 | 1.04 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-04 | 68.96 | 69.53 | 0.57 | 589536 | A18-05281 | 0.006 | < 0.003 | < 0.005 | 0.005 | 0.026 | 5.98 | 0.45 | < 0.003 | 0.009 | 0.003 |
| PGH-18-04 | 69.53 | 70.72 | 1.19 | 589537 | A18-05281 | 0.019 | 0.006 | < 0.005 | < 0.005 | 0.047 | 6.46 | 1.56 | < 0.003 | 0.007 | 0.009 |
| PGH-18-04 | 70.72 | 71.65 | 0.93 | 589538 | A18-05281 | 0.025 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.64 | 2.61 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 73 | 74 | 1 | 589539 | A18-05281 | 0.019 | 0.003 | < 0.005 | 0.005 | 0.016 | 6.24 | 1.17 | < 0.003 | 0.007 | 0.006 |
| PGH-18-04 | 74 | 75 | 1 | 589541 | A18-05281 | 0.048 | < 0.003 | 0.005 | 0.007 | 0.003 | 6.84 | 2.41 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 75 | 75.5 | 0.5 | 589542 | A18-05281 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.28 | 0.16 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 80 | 81 | 1 | 589543 | A18-05281 | 0.264 | 0.005 | < 0.005 | 0.007 | 0.007 | 6.81 | 1.04 | < 0.003 | 0.006 | 0.003 |
| PGH-18-04 | 83.48 | 84 | 0.52 | 589544 | A18-05281 | 0.053 | < 0.003 | 0.006 | 0.009 | < 0.003 | 5.49 | 2.99 | < 0.003 | 0.01 | 0.004 |
| PGH-18-04 | 84 | 85 | 1 | 589545 | A18-05281 | 0.06 | < 0.003 | < 0.005 | 0.006 | 0.013 | 6.42 | 0.72 | < 0.003 | 0.006 | 0.005 |
| PGH-18-04 | 91 | 91.5 | 0.5 | 589546 | A18-05281 | 0.013 | 0.003 | < 0.005 | 0.005 | 0.024 | 6.1 | 0.56 | 0.003 | 0.005 | 0.004 |
| PGH-18-04 | 91.5 | 93 | 1.5 | 589547 | A18-05281 | 0.027 | < 0.003 | < 0.005 | 0.005 | 0.004 | 8.33 | 0.83 | < 0.003 | 0.008 | 0.004 |
| PGH-18-04 | 93 | 94 | 1 | 589548 | A18-05281 | 0.073 | 0.01 | 0.006 | 0.013 | < 0.003 | 6.43 | 3.06 | < 0.003 | 0.018 | 0.005 |
| PGH-18-04 | 132.9 | 133.4 | 0.5 | 589549 | A18-05281 | 0.009 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.62 | 0.27 | < 0.003 | 0.004 | 0.003 |
| PGH-18-04 | 133.4 | 134.9 | 1.5 | 589550 | A18-05281 | 0.053 | < 0.003 | < 0.005 | 0.005 | 0.011 | 6.79 | 1.75 | 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 134.9 | 136.4 | 1.5 | 589551 | A18-05281 | 0.041 | 0.003 | < 0.005 | < 0.005 | 0.012 | 6.07 | 0.71 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 136.4 | 137.9 | 1.5 | 589552 | A18-05281 | 0.044 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 6.43 | 0.92 | 0.003 | 0.012 | 0.004 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 137.9 | 139.4 | 1.5 | 589553 | A18-05281 | 0.123 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.08 | 2.24 | < 0.003 | 0.018 | 0.003 |
| PGH-18-04 | 139.4 | 140.64 | 1.24 | 589554 | A18-05281 | 0.094 | < 0.003 | < 0.005 | < 0.005 | 0.037 | 7.54 | 0.82 | < 0.003 | 0.008 | 0.006 |
| PGH-18-04 | 140.64 | 141.63 | 0.99 | 589555 | A18-05281 | 0.055 | 0.004 | 0.005 | < 0.005 | < 0.003 | 2.26 | 1.03 | < 0.003 | 0.019 | 0.006 |
| PGH-18-04 | 141.63 | 142.17 | 0.54 | 589556 | A18-05281 | 0.134 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 6.81 | 1.25 | 0.004 | 0.013 | < 0.003 |
| PGH-18-04 | 142.17 | 143.32 | 1.15 | 589558 | A18-05281 | 0.062 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 3.73 | 2.34 | < 0.003 | 0.02 | 0.003 |
| PGH-18-04 | 144.87 | 145.47 | 0.6 | 589559 | A18-05281 | 0.416 | < 0.003 | < 0.005 | < 0.005 | 0.03 | 3.69 | 3.88 | < 0.003 | 0.024 | < 0.003 |
| PGH-18-04 | 150.2 | 150.76 | 0.56 | 589560 | A18-05281 | 0.04 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 4.95 | 3.79 | < 0.003 | 0.025 | 0.006 |
| PGH-18-04 | 159.94 | 160.81 | 0.87 | 589561 | A18-05281 | 0.043 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.19 | 1.51 | < 0.003 | 0.012 | 0.003 |
| PGH-18-04 | 163.27 | 164.43 | 1.16 | 589562 | A18-05281 | 0.068 | < 0.003 | < 0.005 | < 0.005 | 0.059 | 8.9 | 2.33 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-04 | 165.21 | 166 | 0.79 | 589563 | A18-05281 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.103 | 4.63 | 0.45 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 166 | 167 | 1 | 589564 | A18-05281 | 0.13 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 4.26 | 4.56 | < 0.003 | 0.026 | < 0.003 |
| PGH-18-04 | 167 | 167.5 | 0.5 | 589565 | A18-05281 | 0.19 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.73 | 3.97 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-04 | 170.25 | 171 | 0.75 | 589566 | A18-05281 | 0.135 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.4 | 1.85 | < 0.003 | 0.01 | 0.004 |
| PGH-18-04 | 171 | 172.5 | 1.5 | 589569 | A18-05281 | 0.079 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.83 | 1.26 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 172.5 | 174 | 1.5 | 589570 | A18-05281 | 0.046 | < 0.003 | < 0.005 | < 0.005 | 0.026 | 7.44 | 1.12 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 178.45 | 179.62 | 1.17 | 589571 | A18-05281 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.65 | 0.35 | < 0.003 | 0.014 | 0.003 |
| PGH-18-04 | 179.62 | 180.78 | 1.16 | 589572 | A18-05281 | 0.106 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 7.25 | 1.15 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 182.14 | 182.64 | 0.5 | 589573 | A18-05281 | 0.035 | < 0.003 | < 0.005 | < 0.005 | 0.063 | 6.83 | 2.71 | < 0.003 | 0.015 | 0.003 |
| PGH-18-04 | 202 | 203.5 | 1.5 | 589574 | A18-05281 | 0.082 | < 0.003 | 0.007 | < 0.005 | 0.005 | 5.57 | 4.03 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-04 | 203.5 | 205 | 1.5 | 589575 | A18-05281 | 0.07 | < 0.003 | < 0.005 | < 0.005 | 0.048 | 9.25 | 3.49 | < 0.003 | 0.017 | 0.003 |
| PGH-18-04 | 205 | 206.5 | 1.5 | 589576 | A18-05281 | 0.059 | < 0.003 | < 0.005 | < 0.005 | 0.064 | 8.81 | 5.39 | < 0.003 | 0.025 | < 0.003 |
| PGH-18-04 | 206.5 | 207.5 | 1 | 589577 | A18-05281 | 0.086 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 6.64 | 0.88 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 209.75 | 211.05 | 1.3 | 589578 | A18-05281 | 0.063 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 6.65 | 1.01 | < 0.003 | 0.006 | 0.009 |
| PGH-18-04 | 216.71 | 217.3 | 0.59 | 589579 | A18-05281 | 0.076 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.6 | 1.2 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 217.3 | 218.69 | 1.39 | 589580 | A18-05281 | 0.157 | 0.003 | 0.007 | < 0.005 | < 0.003 | 4.01 | 3.03 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 218.69 | 219.16 | 0.47 | 589581 | A18-05281 | 0.03 | < 0.003 | < 0.005 | < 0.005 | 0.055 | 13.47 | 0.64 | < 0.003 | 0.008 | 0.003 |
| PGH-18-04 | 219.16 | 220.64 | 1.48 | 589582 | A18-05281 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 6.15 | 1 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 220.64 | 222 | 1.36 | 589583 | A18-05281 | 0.147 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 3.41 | 2.41 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 222 | 222.65 | 0.65 | 589584 | A18-05281 | 0.089 | < 0.003 | 0.005 | < 0.005 | 0.049 | 5.6 | 7.67 | < 0.003 | 0.014 | 0.003 |
| PGH-18-04 | 227 | 228.19 | 1.19 | 589585 | A18-05281 | 0.07 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 3.73 | 2.25 | < 0.003 | 0.022 | < 0.003 |
| PGH-18-04 | 230 | 231 | 1 | 589586 | A18-05281 | 0.038 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 4.86 | 0.33 | < 0.003 | 0.024 | < 0.003 |
| PGH-18-04 | 231 | 232 | 1 | 589588 | A18-05281 | 0.071 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 4.68 | 2.69 | < 0.003 | 0.025 | < 0.003 |
| PGH-18-04 | 232 | 232.67 | 0.67 | 589589 | A18-05281 | 0.051 | < 0.003 | < 0.005 | < 0.005 | 0.049 | 10.13 | 1.95 | < 0.003 | 0.013 | 0.004 |
| PGH-18-04 | 235.9 | 236.89 | 0.99 | 589590 | A18-05281 | 0.022 | < 0.003 | 0.012 | 0.012 | 0.017 | 4.29 | 3.9 | < 0.003 | 0.023 | 0.003 |
| PGH-18-04 | 236.89 | 237.87 | 0.98 | 589591 | A18-05281 | 0.027 | < 0.003 | 0.008 | 0.012 | 0.04 | 5.16 | 3.47 | < 0.003 | 0.021 | < 0.003 |
| PGH-18-04 | 240.48 | 241.45 | 0.97 | 589592 | A18-05281 | 0.102 | 0.003 | 0.013 | < 0.005 | < 0.003 | 3.21 | 2.7 | < 0.003 | 0.025 | < 0.003 |
| PGH-18-04 | 243.35 | 244.1 | 0.75 | 589593 | A18-05281 | 0.049 | < 0.003 | < 0.005 | 0.007 | 0.014 | 7.57 | 2.56 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 244.1 | 244.9 | 0.8 | 589594 | A18-05281 | 0.019 | < 0.003 | < 0.005 | 0.012 | 0.009 | 6.82 | 3.42 | < 0.003 | 0.021 | < 0.003 |
| PGH-18-04 | 244.9 | 246 | 1.1 | 589595 | A18-05281 | 0.063 | < 0.003 | < 0.005 | 0.006 | 0.013 | 8.73 | 1.27 | < 0.003 | 0.018 | < 0.003 |
| PGH-18-04 | 247.5 | 249 | 1.5 | 589596 | A18-05281 | 0.062 | < 0.003 | < 0.005 | < 0.005 | 0.022 | 8.56 | 1.58 | < 0.003 | 0.016 | 0.003 |
| PGH-18-04 | 252.35 | 252.97 | 0.62 | 589597 | A18-05281 | 0.161 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 5.11 | 2.42 | < 0.003 | 0.023 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 256.3 | 256.8 | 0.5 | 589598 | A18-05281 | 0.253 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.35 | 2.05 | < 0.003 | 0.016 | < 0.003 |
| PGH-18-04 | 258.19 | 258.69 | 0.5 | 589599 | A18-05281 | 0.125 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 8.11 | 1.66 | 0.007 | 0.012 | < 0.003 |
| PGH-18-04 | 261.5 | 262 | 0.5 | 589600 | A18-05281 | 0.04 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 6.72 | 1.22 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-04 | 262 | 263.5 | 1.5 | 589601 | A18-05281 | 0.057 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 5.03 | 2.88 | < 0.003 | 0.024 | 0.003 |
| PGH-18-04 | 263.5 | 264.38 | 0.88 | 589602 | A18-05281 | 0.094 | 0.003 | 0.009 | < 0.005 | < 0.003 | 2.23 | 2.46 | < 0.003 | 0.021 | < 0.003 |
| PGH-18-04 | 264.38 | 265.25 | 0.87 | 589603 | A18-05281 | 0.174 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 5.16 | 3.86 | < 0.003 | 0.021 | < 0.003 |
| PGH-18-04 | 279 | 280.5 | 1.5 | 589604 | A18-05281 | 0.138 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.54 | 2.45 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-04 | 280.5 | 282 | 1.5 | 589605 | A18-05281 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 6.48 | 0.93 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 282 | 283.1 | 1.1 | 589606 | A18-05281 | 0.066 | < 0.003 | 0.007 | 0.007 | 0.044 | 6.56 | 6.28 | < 0.003 | 0.033 | 0.003 |
| PGH-18-04 | 285 | 285.54 | 0.54 | 589608 | A18-05281 | 0.25 | < 0.003 | < 0.005 | < 0.005 | 0.007 | 3 | 1.21 | < 0.003 | 0.02 | 0.004 |
| PGH-18-04 | 286.62 | 287.22 | 0.6 | 589609 | A18-05281 | 0.02 | < 0.003 | < 0.005 | 0.01 | 0.026 | 7.18 | 1.34 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 288 | 289.5 | 1.5 | 589610 | A18-05281 | 0.064 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 6.99 | 0.71 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 290.5 | 291.68 | 1.18 | 589611 | A18-05281 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 5.36 | 0.56 | < 0.003 | 0.019 | < 0.003 |
| PGH-18-04 | 296.91 | 298.12 | 1.21 | 589612 | A18-05281 | 0.175 | < 0.003 | < 0.005 | 0.006 | 0.018 | 6.81 | 2.24 | < 0.003 | 0.026 | < 0.003 |
| PGH-18-04 | 314.53 | 315.43 | 0.9 | 589614 | A18-05281 | 0.071 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 7.01 | 1.24 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 318.4 | 319.65 | 1.25 | 589615 | A18-05281 | 0.062 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 7.61 | 1.3 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 333.12 | 333.72 | 0.6 | 589616 | A18-05281 | 0.01 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 7.12 | 0.03 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 349.75 | 351.25 | 1.5 | 589617 | A18-05281 | 0.023 | < 0.003 | 0.011 | 0.007 | < 0.003 | 4.37 | 0.84 | < 0.003 | 0.024 | < 0.003 |
| PGH-18-04 | 351.25 | 352.75 | 1.5 | 589618 | A18-05281 | 0.086 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 3.04 | 1.58 | 0.003 | 0.023 | 0.011 |
| PGH-18-04 | 352.75 | 353.75 | 1 | 589619 | A18-05281 | 0.032 | < 0.003 | < 0.005 | < 0.005 | 0.054 | 5.95 | 4.41 | < 0.003 | 0.022 | 0.003 |
| PGH-18-04 | 353.75 | 354.33 | 0.58 | 589620 | A18-05281 | 0.039 | < 0.003 | < 0.005 | < 0.005 | 0.041 | 7.08 | 2.54 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 360 | 361 | 1 | 589622 | A18-05281 | 0.1 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.58 | 0.62 | < 0.003 | 0.015 | 0.003 |
| PGH-18-04 | 362.65 | 364.05 | 1.4 | 589623 | A18-05281 | 0.005 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 1.63 | 0.48 | < 0.003 | 0.02 | < 0.003 |
| PGH-18-04 | 374.55 | 376.05 | 1.5 | 589624 | A18-05281 | 0.131 | 0.003 | 0.007 | 0.005 | < 0.003 | 3.79 | 1.82 | < 0.003 | 0.024 | < 0.003 |
| PGH-18-04 | 380.58 | 381.82 | 1.24 | 589625 | A18-05281 | 0.095 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.45 | 4.51 | < 0.003 | 0.024 | 0.003 |
| PGH-18-04 | 385 | 386 | 1 | 589626 | A18-05281 | 0.174 | 0.003 | 0.009 | 0.007 | < 0.003 | 6.91 | 2.58 | < 0.003 | 0.028 | 0.005 |
| PGH-18-04 | 387 | 388 | 1 | 589627 | A18-05281 | 0.084 | < 0.003 | 0.005 | 0.005 | < 0.003 | 5.95 | 1.77 | 0.005 | 0.008 | 0.003 |
| PGH-18-04 | 389.73 | 391.23 | 1.5 | 589628 | A18-05281 | 0.029 | 0.004 | < 0.005 | 0.008 | 0.01 | 6.01 | 2.29 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-04 | 417.1 | 418.39 | 0.5 | 589629 | A18-05281 | 0.04 | < 0.003 | < 0.005 | 0.005 | 0.11 | 9.94 | 1.9 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-04 | 423.84 | 424.5 | 1.5 | 589630 | A18-05281 | 0.083 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6 | 0.92 | < 0.003 | 0.005 | 0.003 |
| PGH-18-04 | 424.5 | 425 | 1.5 | 589631 | A18-05281 | 0.057 | < 0.003 | 0.009 | 0.009 | < 0.003 | 1.69 | 1.5 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 429 | 430.5 | 1 | 589632 | A18-05281 | 0.146 | 0.003 | 0.005 | 0.008 | 0.021 | 5.38 | 2.76 | 0.005 | 0.012 | < 0.003 |
| PGH-18-04 | 430.5 | 432 | 1.5 | 589633 | A18-05281 | 0.117 | 0.003 | < 0.005 | 0.006 | < 0.003 | 4.23 | 1.7 | < 0.003 | 0.011 | 0.004 |
| PGH-18-04 | 435 | 436 | 1.15 | 589634 | A18-05281 | 0.682 | 0.003 | 0.006 | 0.008 | < 0.003 | 4.74 | 3.86 | < 0.003 | 0.01 | 0.003 |
| PGH-18-04 | 436 | 437 | 1.14 | 589635 | A18-05281 | 0.143 | < 0.003 | 0.01 | 0.008 | < 0.003 | 4.2 | 2 | < 0.003 | 0.012 | 0.004 |
| PGH-18-04 | 441.54 | 443.04 | 1.47 | 589636 | A18-05281 | 0.004 | 0.004 | < 0.005 | 0.008 | < 0.003 | 1.95 | 0.65 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 444.46 | 445.03 | 0.57 | 589637 | A18-05281 | 0.044 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 6.19 | 3.04 | < 0.003 | 0.012 | 0.003 |
| PGH-18-04 | 449.65 | 450.41 | 0.76 | 589638 | A18-05281 | 0.199 | < 0.003 | < 0.005 | 0.007 | 0.026 | 5.7 | 3.4 | < 0.003 | 0.017 | 0.003 |
| PGH-18-04 | 450.41 | 451 | 0.59 | 589639 | A18-05281 | 0.231 | 0.003 | 0.008 | 0.008 | < 0.003 | 4.26 | 3.21 | < 0.003 | 0.016 | 0.004 |
| PGH-18-04 | 453.5 | 454 | 0.5 | 589640 | A18-05281 | 0.027 | 0.003 | < 0.005 | 0.005 | 0.008 | 6.58 | 0.28 | < 0.003 | 0.003 | 0.01 |
| PGH-18-04 | 454 | 455.5 | 1.5 | 589641 | A18-05281 | 0.022 | < 0.003 | 0.007 | 0.01 | < 0.003 | 6.91 | 0.72 | < 0.003 | 0.005 | 0.005 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 455.5 | 457 | 1.5 | 589642 | A18-05281 | 0.068 | < 0.003 | 0.007 | 0.008 | < 0.003 | 7.01 | 0.3 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 457 | 458 | 1 | 589643 | A18-05281 | 0.027 | < 0.003 | 0.006 | 0.011 | < 0.003 | 6.77 | 2.53 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 462.34 | 462.84 | 0.5 | 589644 | A18-05281 | 0.2 | < 0.003 | < 0.005 | 0.005 | 0.026 | 7.63 | 1.37 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-04 | 470.28 | 471.43 | 1.15 | 589645 | A18-05281 | 0.081 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 6.5 | 1.67 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 471.43 | 472.58 | 1.14 | 589646 | A18-05281 | 0.218 | < 0.003 | 0.013 | 0.013 | < 0.003 | 7.29 | 2.11 | < 0.003 | 0.013 | 0.003 |
| PGH-18-04 | 472.58 | 473.72 | 1.47 | 589647 | A18-05281 | 0.473 | 0.003 | 0.006 | 0.008 | < 0.003 | 5.86 | 5.59 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 473.72 | 475.19 | 1.33 | 589648 | A18-05281 | 0.042 | < 0.003 | < 0.005 | 0.005 | 0.041 | 7.71 | 0.88 | < 0.003 | 0.007 | 0.003 |
| PGH-18-04 | 484.1 | 485.43 | 1.5 | 589649 | A18-05281 | 0.229 | < 0.003 | 0.009 | 0.009 | < 0.003 | 3.23 | 4.24 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 486.3 | 487.8 | 0.52 | 589650 | A18-05281 | 0.076 | 0.003 | 0.009 | 0.008 | < 0.003 | 4.91 | 1.83 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 489.34 | 489.86 | 1.31 | 589651 | A18-05281 | 0.148 | 0.003 | 0.008 | 0.009 | < 0.003 | 2.93 | 3.03 | < 0.003 | 0.014 | 0.003 |
| PGH-18-04 | 489.86 | 490.94 | 1.08 | 351501 | A18-09217 | 0.033 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.32 | 0.39 | 0.01 | 0.003 | 0.003 |
| PGH-18-04 | 490.94 | 492.25 | 0.93 | 589652 | A18-05281 | 0.023 | 0.003 | 0.007 | 0.007 | < 0.003 | 1.91 | 1.2 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 492.25 | 493.18 | 0.93 | 589653 | A18-05281 | 0.027 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 4.94 | 0.74 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 493.18 | 494 | 0.82 | 589654 | A18-05281 | 0.313 | 0.006 | 0.018 | 0.01 | 0.003 | 3.17 | 4.27 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-04 | 494 | 495.5 | 1.5 | 589655 | A18-05281 | 0.119 | 0.005 | 0.013 | 0.01 | < 0.003 | 2.47 | 2.91 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-04 | 495.5 | 496.25 | 0.75 | 589656 | A18-05281 | 0.122 | 0.003 | 0.007 | 0.011 | 0.038 | 9.03 | 4.67 | < 0.003 | 0.023 | < 0.003 |
| PGH-18-04 | 496.25 | 497.34 | 1.09 | 589657 | A18-05281 | 0.178 | 0.004 | 0.006 | 0.008 | 0.103 | 10.89 | 5.57 | < 0.003 | 0.01 | 0.003 |
| PGH-18-04 | 497.34 | 498.84 | 1.5 | 589659 | A18-05281 | 0.177 | < 0.003 | < 0.005 | 0.007 | 0.084 | 5.86 | 2.24 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-04 | 498.84 | 500.34 | 1.5 | 589660 | A18-05281 | 0.454 | 0.008 | 0.011 | 0.006 | 0.02 | 5.68 | 4.17 | < 0.003 | 0.01 | 0.008 |
| PGH-18-04 | 500.34 | 501.84 | 1.5 | 589661 | A18-05281 | 0.26 | 0.004 | 0.006 | 0.011 | < 0.003 | 4.24 | 2.38 | < 0.003 | 0.017 | 0.003 |
| PGH-18-04 | 501.84 | 503.34 | 1.5 | 589662 | A18-05281 | 0.134 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.66 | 2.9 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 503.34 | 504.84 | 1.5 | 589663 | A18-05281 | 0.284 | 0.004 | < 0.005 | 0.009 | 0.035 | 4.55 | 3.18 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-04 | 504.84 | 506.34 | 1.5 | 589664 | A18-05281 | 0.198 | 0.004 | < 0.005 | 0.008 | 0.015 | 8.26 | 1.96 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 506.34 | 507.59 | 1.25 | 589665 | A18-05281 | 0.436 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 2.89 | 3.11 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 507.59 | 508.4 | 0.81 | 589666 | A18-05281 | 0.075 | 0.004 | 0.006 | 0.005 | 0.012 | 2.95 | 2.31 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 508.4 | 509.29 | 0.89 | 351502 | A18-09217 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 6.91 | 0.52 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 509.29 | 510.25 | 0.96 | 351503 | A18-09217 | 0.011 | 0.004 | < 0.005 | < 0.005 | 0.028 | 6.57 | 0.44 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 510.25 | 510.98 | 0.73 | 589667 | A18-05281 | 0.148 | 0.003 | < 0.005 | 0.006 | 0.008 | 8.23 | 1.67 | < 0.003 | 0.009 | 0.003 |
| PGH-18-04 | 510.98 | 511.91 | 0.93 | 351504 | A18-09217 | 0.017 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 7.23 | 0.57 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 511.91 | 512.88 | 0.97 | 351505 | A18-09217 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.037 | 5.5 | 0.45 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 512.88 | 513.77 | 0.89 | 351506 | A18-09217 | 0.027 | 0.004 | < 0.005 | < 0.005 | 0.021 | 6.48 | 0.66 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 513.77 | 515.27 | 1.5 | 589668 | A18-05281 | 0.126 | < 0.003 | < 0.005 | 0.005 | 0.017 | 6.49 | 1.63 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-04 | 515.27 | 516.77 | 1.5 | 589669 | A18-05281 | 0.177 | 0.003 | < 0.005 | 0.005 | 0.015 | 8.81 | 1.06 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 516.77 | 517.8 | 1.03 | 351507 | A18-09217 | 0.014 | 0.003 | < 0.005 | < 0.005 | 0.023 | 5.61 | 0.13 | < 0.003 | < 0.003 | < 0.003 |
| PGH-18-04 | 517.8 | 519 | 1.2 | 351508 | A18-09217 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.034 | 6.26 | 0.37 | 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 519 | 520.19 | 1.19 | 351509 | A18-09217 | 0.011 | 0.003 | < 0.005 | < 0.005 | 0.056 | 6.59 | 0.4 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 520.19 | 521.37 | 1.18 | 351510 | A18-09217 | 0.035 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 6.9 | 0.96 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 521.37 | 522.4 | 1.03 | 351511 | A18-09217 | 0.012 | 0.004 | < 0.005 | < 0.005 | 0.027 | 5.99 | 0.98 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 522.4 | 523.62 | 1.22 | 351512 | A18-09217 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 7.6 | 0.48 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 523.62 | 524.8 | 1.18 | 589670 | A18-05281 | 0.4 | 0.004 | 0.007 | 0.007 | < 0.003 | 3.45 | 3.13 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 524.8 | 525.98 | 1.18 | 351513 | A18-09217 | 0.01 | 0.006 | < 0.005 | < 0.005 | 0.015 | 6.43 | 0.15 | < 0.003 | 0.003 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 525.98 | 527.22 | 1.24 | 351514 | A18-09217 | 0.007 | 0.004 | < 0.005 | < 0.005 | 0.008 | 5.66 | 0.24 | < 0.003 | < 0.003 | < 0.003 |
| PGH-18-04 | 527.22 | 528.24 | 1.02 | 589671 | A18-05281 | 0.054 | 0.003 | < 0.005 | < 0.005 | 0.01 | 6.12 | 0.62 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 528.24 | 529.49 | 1.25 | 589673 | A18-05281 | 0.341 | 0.003 | 0.007 | 0.006 | 0.068 | 5.53 | 4.22 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-04 | 529.49 | 530.59 | 1.1 | 589674 | A18-05281 | 0.022 | 0.004 | < 0.005 | < 0.005 | 0.017 | 6.71 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 530.59 | 531.39 | 0.8 | 589675 | A18-05281 | 0.326 | 0.003 | < 0.005 | 0.005 | 0.02 | 5.51 | 0.72 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 531.39 | 532.89 | 1.5 | 589676 | A18-05281 | 0.276 | < 0.003 | 0.005 | 0.006 | 0.017 | 6.39 | 3.23 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 532.89 | 534 | 1.11 | 589677 | A18-05281 | 0.018 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 6.07 | 0.79 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 534 | 534.75 | 0.75 | 589679 | A18-05281 | 0.024 | 0.004 | < 0.005 | < 0.005 | 0.012 | 6.57 | 0.41 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 534.75 | 535.45 | 0.7 | 589680 | A18-05281 | 0.472 | 0.004 | 0.005 | 0.009 | < 0.003 | 4.36 | 2.25 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-04 | 535.45 | 536.25 | 0.8 | 589681 | A18-05281 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.15 | 0.47 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 536.25 | 537.75 | 1.5 | 589682 | A18-05281 | 0.007 | 0.004 | < 0.005 | < 0.005 | 0.013 | 5.61 | 0.32 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 537.75 | 539.25 | 1.5 | 589683 | A18-05281 | 0.691 | 0.003 | 0.006 | 0.008 | < 0.003 | 3.11 | 6.51 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 539.25 | 540.75 | 1.5 | 589684 | A18-05281 | 0.847 | 0.004 | 0.008 | 0.01 | < 0.003 | 2.83 | 5.23 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 540.75 | 542.25 | 1.5 | 589685 | A18-05281 | 0.405 | 0.003 | 0.01 | 0.008 | < 0.003 | 2.06 | 3.31 | < 0.003 | 0.011 | 0.003 |
| PGH-18-04 | 542.25 | 543.75 | 1.5 | 589686 | A18-05281 | 0.134 | < 0.003 | 0.008 | 0.007 | < 0.003 | 1.51 | 2.11 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 543.75 | 545.25 | 1.5 | 589687 | A18-05281 | 0.125 | < 0.003 | 0.008 | 0.007 | < 0.003 | 1.97 | 1.59 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 545.25 | 546.75 | 1.5 | 589688 | A18-05281 | 0.052 | < 0.003 | 0.007 | 0.007 | < 0.003 | 4.07 | 0.5 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 546.75 | 548.25 | 1.5 | 589689 | A18-05281 | 0.219 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.92 | 4.09 | < 0.003 | 0.012 | 0.003 |
| PGH-18-04 | 548.25 | 549.75 | 1.5 | 589690 | A18-05281 | 0.678 | 0.009 | 0.013 | 0.008 | < 0.003 | 5.32 | 7.27 | < 0.003 | 0.012 | 0.011 |
| PGH-18-04 | 549.75 | 551.25 | 1.5 | 589692 | A18-05281 | 0.196 | < 0.003 | 0.007 | 0.008 | < 0.003 | 3.28 | 2.39 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 551.25 | 552.75 | 1.5 | 589693 | A18-05281 | 0.064 | 0.003 | 0.007 | 0.007 | < 0.003 | 1.41 | 0.93 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 552.75 | 554.25 | 1.5 | 589694 | A18-05281 | 0.084 | < 0.003 | 0.009 | 0.007 | < 0.003 | 1.99 | 1.37 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-04 | 554.25 | 555.19 | 0.94 | 589695 | A18-05281 | 0.139 | < 0.003 | 0.005 | 0.007 | < 0.003 | 3.49 | 2.98 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 555.19 | 556 | 0.81 | 589696 | A18-05281 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.01 | 0.42 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 556 | 557.25 | 1.25 | 351515 | A18-09217 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 4.91 | 0.25 | < 0.003 | < 0.003 | < 0.003 |
| PGH-18-04 | 557.25 | 558.45 | 1.2 | 351516 | A18-09217 | 0.006 | 0.003 | < 0.005 | < 0.005 | 0.018 | 5.25 | 0.31 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 558.45 | 559.49 | 1.04 | 351517 | A18-09217 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.3 | 0.45 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 559.49 | 560.49 | 1 | 351518 | A18-09217 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 5.75 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 560.49 | 561.5 | 1.01 | 351519 | A18-09217 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.028 | 5.49 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 561.5 | 562.48 | 0.98 | 351520 | A18-09217 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.73 | 0.33 | 0.004 | 0.003 | < 0.003 |
| PGH-18-04 | 562.48 | 563.68 | 1.2 | 351521 | A18-09217 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 5.58 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 563.68 | 563.85 | 0.17 | 351522 | A18-09217 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 2.57 | 0.31 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 563.85 | 564.86 | 1.01 | 589698 | A18-05281 | 0.538 | 0.003 | 0.015 | 0.007 | < 0.003 | 4.94 | 5.92 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 564.86 | 565.46 | 0.6 | 589699 | A18-05281 | 0.151 | < 0.003 | 0.007 | 0.007 | < 0.003 | 3.46 | 2.21 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-04 | 565.46 | 566 | 0.54 | 589700 | A18-05281 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.51 | 0.25 | 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 566 | 567.04 | 1.04 | 351523 | A18-09217 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.62 | 0.34 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 567.04 | 567.91 | 0.87 | 351524 | A18-09217 | 0.01 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.09 | 0.21 | 0.003 | < 0.003 | < 0.003 |
| PGH-18-04 | 567.91 | 568.8 | 0.89 | 589701 | A18-05281 | 0.236 | < 0.003 | 0.009 | 0.01 | < 0.003 | 5.32 | 2.8 | < 0.003 | 0.013 | 0.003 |
| PGH-18-04 | 568.8 | 569.87 | 1.07 | 351525 | A18-09217 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.87 | 0.29 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 569.87 | 570.92 | 1.05 | 351526 | A18-09217 | 0.006 | 0.003 | < 0.005 | < 0.005 | 0.01 | 5.17 | 0.25 | < 0.003 | 0.003 | 0.003 |
| PGH-18-04 | 570.92 | 572 | 1.08 | 351527 | A18-09217 | 0.004 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.07 | 0.37 | < 0.003 | 0.003 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 572 | 573.07 | 1.07 | 351528 | A18-09217 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 6.03 | 0.42 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 573.07 | 574.1 | 1.03 | 351529 | A18-09217 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.51 | 0.54 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 574.1 | 575.1 | 1 | 351530 | A18-09217 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.86 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 575.1 | 575.66 | 0.56 | 589702 | A18-05281 | 0.02 | 0.003 | < 0.005 | < 0.005 | 0.013 | 5.4 | 0.68 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 575.66 | 576.76 | 1.1 | 589704 | A18-05281 | 0.072 | 0.004 | 0.009 | 0.008 | 0.019 | 4.88 | 3.49 | < 0.003 | 0.015 | 0.004 |
| PGH-18-04 | 576.76 | 578.1 | 1.34 | 351531 | A18-09217 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 6.79 | 0.56 | 0.004 | 0.004 | 0.003 |
| PGH-18-04 | 578.1 | 579.39 | 1.29 | 351532 | A18-09217 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.68 | 0.25 | < 0.003 | < 0.003 | < 0.003 |
| PGH-18-04 | 579.39 | 580.24 | 0.85 | 589705 | A18-05281 | 0.009 | 0.003 | < 0.005 | < 0.005 | 0.011 | 6.59 | 0.28 | < 0.003 | < 0.003 | 0.003 |
| PGH-18-04 | 580.24 | 581.75 | 1.51 | 589706 | A18-05281 | 0.097 | < 0.003 | 0.005 | 0.007 | < 0.003 | 6.1 | 3.02 | < 0.003 | 0.013 | 0.005 |
| PGH-18-04 | 581.75 | 583.25 | 1.5 | 589707 | A18-05281 | 0.066 | < 0.003 | 0.008 | 0.022 | 0.021 | 4.5 | 7.14 | < 0.003 | 0.05 | 0.006 |
| PGH-18-04 | 583.25 | 584.75 | 1.5 | 589709 | A18-05281 | 0.085 | < 0.003 | 0.007 | 0.022 | 0.042 | 5.37 | 8.4 | < 0.003 | 0.046 | < 0.003 |
| PGH-18-04 | 584.75 | 585.7 | 0.95 | 589710 | A18-05281 | 0.102 | < 0.003 | < 0.005 | 0.006 | 0.005 | 10.7 | 0.14 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 585.7 | 586.62 | 0.92 | 589711 | A18-05281 | 0.014 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.32 | 0.2 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 586.62 | 588.12 | 1.5 | 589712 | A18-05281 | 0.052 | 0.003 | < 0.005 | 0.007 | 0.007 | 7.44 | 0.81 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-04 | 588.12 | 589.62 | 1.5 | 589713 | A18-05281 | 0.207 | 0.003 | < 0.005 | 0.01 | 0.009 | 6.23 | 2.72 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 589.62 | 591.15 | 1.53 | 589714 | A18-05281 | 0.139 | < 0.003 | < 0.005 | 0.015 | < 0.003 | 8.13 | 5.23 | < 0.003 | 0.025 | 0.003 |
| PGH-18-04 | 591.15 | 592.66 | 1.51 | 589715 | A18-05281 | 0.056 | < 0.003 | 0.006 | 0.008 | < 0.003 | 6.29 | 1.32 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-04 | 592.66 | 593.41 | 0.75 | 589716 | A18-05281 | 0.029 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.36 | 0.43 | 0.009 | 0.004 | 0.003 |
| PGH-18-04 | 593.92 | 594.8 | 0.88 | 351533 | A18-09217 | 0.008 | 0.004 | < 0.005 | < 0.005 | 0.01 | 6.83 | 0.36 | < 0.003 | 0.004 | 0.003 |
| PGH-18-04 | 594.8 | 595.85 | 1.05 | 351534 | A18-09217 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 4.49 | 0.24 | < 0.003 | 0.004 | 0.003 |
| PGH-18-04 | 595.85 | 596.88 | 1.03 | 351535 | A18-09217 | 0.019 | < 0.003 | < 0.005 | 0.005 | 0.01 | 7.37 | 0.12 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 596.88 | 597.88 | 1 | 589717 | A18-05281 | 0.094 | < 0.003 | < 0.005 | 0.013 | 0.003 | 5.95 | 1.39 | < 0.003 | 0.01 | 0.005 |
| PGH-18-04 | 597.88 | 599.06 | 1.18 | 351536 | A18-09217 | 0.004 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.11 | 0.25 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 599.06 | 600.25 | 1.19 | 351537 | A18-09217 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 4.8 | 0.13 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 600.25 | 601.47 | 1.22 | 351538 | A18-09217 | 0.005 | 0.003 | < 0.005 | < 0.005 | 0.024 | 4.34 | 0.24 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 601.47 | 602.68 | 1.21 | 351539 | A18-09217 | 0.004 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.62 | 0.28 | < 0.003 | 0.004 | 0.003 |
| PGH-18-04 | 602.68 | 603.91 | 1.23 | 351540 | A18-09217 | 0.009 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 6.11 | 0.27 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 603.91 | 605 | 1.09 | 351541 | A18-09217 | 0.01 | < 0.003 | < 0.005 | < 0.005 | 0.026 | 5.35 | 0.18 | 0.003 | 0.003 | < 0.003 |
| PGH-18-04 | 605 | 606.13 | 1.13 | 589718 | A18-05281 | 0.053 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 5.43 | 0.5 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 606.13 | 607 | 0.87 | 589719 | A18-05281 | 0.018 | 0.003 | < 0.005 | < 0.005 | 0.014 | 6.36 | 0.1 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 607 | 607.97 | 0.97 | 589720 | A18-05281 | 0.023 | 0.005 | < 0.005 | 0.005 | 0.014 | 7.11 | 0.15 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 607.97 | 609.35 | 1.38 | 589721 | A18-05281 | 0.181 | 0.006 | 0.01 | 0.011 | < 0.003 | 3.07 | 3.31 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-04 | 609.35 | 610.85 | 1.5 | 589722 | A18-05281 | 0.048 | 0.005 | < 0.005 | 0.006 | 0.008 | 5.82 | 0.23 | < 0.003 | 0.004 | 0.003 |
| PGH-18-04 | 610.85 | 612.35 | 1.5 | 589723 | A18-05281 | 0.056 | 0.004 | 0.005 | 0.009 | < 0.003 | 6.7 | 0.42 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-04 | 612.35 | 613.67 | 1.32 | 589724 | A18-05281 | 0.032 | 0.004 | < 0.005 | 0.005 | 0.007 | 6.22 | 0.41 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 613.67 | 615 | 1.33 | 589725 | A18-05281 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 6.39 | 0.22 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 615 | 616 | 1 | 589726 | A18-05281 | 0.037 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 7.38 | 0.19 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 616 | 617 | 1 | 589727 | A18-05281 | 0.191 | 0.005 | < 0.005 | 0.007 | 0.016 | 6.15 | 2.3 | 0.004 | 0.013 | < 0.003 |
| PGH-18-04 | 617 | 618.5 | 1.5 | 589729 | A18-05281 | 0.125 | 0.004 | < 0.005 | 0.008 | 0.013 | 2.48 | 2.17 | < 0.003 | 0.015 | 0.011 |
| PGH-18-04 | 618.5 | 620 | 1.5 | 589730 | A18-05281 | 0.097 | < 0.003 | 0.008 | 0.008 | < 0.003 | 1.88 | 1.77 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 620 | 620.7 | 0.7 | 589731 | A18-05281 | 0.034 | < 0.003 | 0.006 | 0.008 | < 0.003 | 2.06 | 0.7 | < 0.003 | 0.011 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-04 | 620.7 | 621.7 | 1 | 589732 | A18-05281 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.04 | 5.83 | 0.56 | 0.011 | 0.005 | < 0.003 |
| PGH-18-04 | 657 | 658.5 | 1.5 | 589733 | A18-05281 | 0.034 | < 0.003 | < 0.005 | 0.005 | 0.018 | 5.23 | 1.07 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 658.5 | 660 | 1.5 | 589734 | A18-05281 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 6.3 | 0.85 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-04 | 660 | 660.82 | 0.82 | 589736 | A18-05281 | 0.02 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 6.1 | 0.39 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-04 | 660.82 | 661.81 | 0.99 | 589737 | A18-05281 | 0.025 | < 0.003 | 0.006 | 0.005 | < 0.003 | 2.4 | 1.16 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-04 | 661.81 | 663 | 1.19 | 589738 | A18-05281 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 9.23 | 0.82 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 663 | 664 | 1 | 589739 | A18-05281 | 0.022 | < 0.003 | < 0.005 | 0.005 | 0.011 | 6.66 | 0.9 | < 0.003 | 0.006 | 0.003 |
| PGH-18-04 | 664 | 665.5 | 1.5 | 589740 | A18-05281 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 7.69 | 0.81 | 0.003 | 0.005 | < 0.003 |
| PGH-18-04 | 665.5 | 667 | 1.5 | 589742 | A18-05281 | 0.022 | < 0.003 | < 0.005 | 0.006 | 0.008 | 6.65 | 0.74 | < 0.003 | 0.007 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|-------|-------|-----------|----------|---------------------|
| PGH-18-04 | 26 | 26.5 | 0.5 | 589509 | SYN BX |
| PGH-18-04 | 26.5 | 28 | 1.5 | 589510 | CRBT + MD? |
| PGH-18-04 | 28 | 29.5 | 1.5 | 589511 | CRBT + MD? |
| PGH-18-04 | 29.5 | 31 | 1.5 | 589513 | CRBT + MD? |
| PGH-18-04 | 31 | 32.5 | 1.5 | 589514 | CRBT + MD? |
| PGH-18-04 | 32.5 | 34 | 1.5 | 589515 | CRBT + MD? |
| PGH-18-04 | 34 | 35.5 | 1.5 | 589516 | CRBT + MD? |
| PGH-18-04 | 35.5 | 37 | 1.5 | 589517 | CRBT + MD? |
| PGH-18-04 | 37 | 38.5 | 1.5 | 589518 | CRBT + MD? |
| PGH-18-04 | 38.5 | 40 | 1.5 | 589519 | CRBT + MD? |
| PGH-18-04 | 40 | 41.5 | 1.5 | 589520 | CRBT SYN BX |
| PGH-18-04 | 41.5 | 42.25 | 0.75 | 589521 | SYN BX |
| PGH-18-04 | 42.25 | 43 | 0.75 | 589522 | CRNT + minor SYN BX |
| PGH-18-04 | 43 | 44.5 | 1.5 | 589523 | SYN bx, minor CRBT |
| PGH-18-04 | 44.5 | 46 | 1.5 | 589524 | SYN bx, minor CRBT |
| PGH-18-04 | 46 | 47 | 1 | 589525 | CRBT , BX/bnd |
| PGH-18-04 | 47 | 48 | 1 | 589526 | CRB, bnd |
| PGH-18-04 | 48 | 48.56 | 0.56 | 589527 | CRBT, bnd |
| PGH-18-04 | 48.56 | 49 | 0.44 | 589528 | SYN |
| PGH-18-04 | 54.64 | 55.03 | 0.39 | 589529 | SYN BX CRBT |
| PGH-18-04 | 55.03 | 55.4 | 0.37 | 589530 | CRBT, bnd |
| PGH-18-04 | 55.4 | 56 | 0.6 | 589531 | SYN BX |
| PGH-18-04 | 56 | 56.5 | 0.5 | 589532 | SYN BX + CRBT |
| PGH-18-04 | 57.55 | 57.85 | 0.3 | 589533 | CRBT bnd |
| PGH-18-04 | 65.45 | 66 | 0.55 | 589534 | alt qtz syn + crbt |
| PGH-18-04 | 68.96 | 69.53 | 0.57 | 589536 | CRBT + SYN |
| PGH-18-04 | 69.53 | 70.72 | 1.19 | 589537 | CRBT bnd + SYN |
| PGH-18-04 | 70.72 | 71.65 | 0.93 | 589538 | CRBT bnd > SYN |
| PGH-18-04 | 73 | 74 | 1 | 589539 | CRBT bx + SYN |
| PGH-18-04 | 74 | 75 | 1 | 589541 | SYN BX + CRBT |
| PGH-18-04 | 75 | 75.5 | 0.5 | 589542 | SYN |
| PGH-18-04 | 80 | 81 | 1 | 589543 | CRBT bx + SYN |
| PGH-18-04 | 83.48 | 84 | 0.52 | 589544 | CRbt bnd |
| PGH-18-04 | 84 | 85 | 1 | 589545 | SYN BX |
| PGH-18-04 | 91 | 91.5 | 0.5 | 589546 | SYN BX |
| PGH-18-04 | 91.5 | 93 | 1.5 | 589547 | SYN BX + CRBT |
| PGH-18-04 | 93 | 94 | 1 | 589548 | CRBT bx + SYN |
| PGH-18-04 | 132.9 | 133.4 | 0.5 | 589549 | SYN minor CRBT |
| PGH-18-04 | 133.4 | 134.9 | 1.5 | 589550 | SYN bx + CRBT + MD? |
| PGH-18-04 | 134.9 | 136.4 | 1.5 | 589551 | SYN BX |
| PGH-18-04 | 136.4 | 137.9 | 1.5 | 589552 | CRBT + SYN BX |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---------------------------------------|
| PGH-18-04 | 137.9 | 139.4 | 1.5 | 589553 | CRNT + minor SYN BX |
| PGH-18-04 | 139.4 | 140.64 | 1.24 | 589554 | SYN BX |
| PGH-18-04 | 140.64 | 141.63 | 0.99 | 589555 | CRBT |
| PGH-18-04 | 141.63 | 142.17 | 0.54 | 589556 | SYN BX |
| PGH-18-04 | 142.17 | 143.32 | 1.15 | 589558 | CRBT |
| PGH-18-04 | 144.87 | 145.47 | 0.6 | 589559 | CRBT |
| PGH-18-04 | 150.2 | 150.76 | 0.56 | 589560 | CRBT, lg, wkly bnd |
| PGH-18-04 | 159.94 | 160.81 | 0.87 | 589561 | CRBT |
| PGH-18-04 | 163.27 | 164.43 | 1.16 | 589562 | crbt, grey, fg |
| PGH-18-04 | 165.21 | 166 | 0.79 | 589563 | SYN BX + CRBT |
| PGH-18-04 | 166 | 167 | 1 | 589564 | CRBT blu-pink, bnd |
| PGH-18-04 | 167 | 167.5 | 0.5 | 589565 | SYN |
| PGH-18-04 | 170.25 | 171 | 0.75 | 589566 | SYN BX CRBT |
| PGH-18-04 | 171 | 172.5 | 1.5 | 589569 | SYN + CRBT BX |
| PGH-18-04 | 172.5 | 174 | 1.5 | 589570 | SYN BX |
| PGH-18-04 | 178.45 | 179.62 | 1.17 | 589571 | CRBT SYN BX |
| PGH-18-04 | 179.62 | 180.78 | 1.16 | 589572 | CRBT SYN BX |
| PGH-18-04 | 182.14 | 182.64 | 0.5 | 589573 | CRBT |
| PGH-18-04 | 202 | 203.5 | 1.5 | 589574 | CRBt |
| PGH-18-04 | 203.5 | 205 | 1.5 | 589575 | CRBT + MD? |
| PGH-18-04 | 205 | 206.5 | 1.5 | 589576 | CRBT + MD? |
| PGH-18-04 | 206.5 | 207.5 | 1 | 589577 | CRBT SYN BX |
| PGH-18-04 | 209.75 | 211.05 | 1.3 | 589578 | CRBT bx + SYN |
| PGH-18-04 | 216.71 | 217.3 | 0.59 | 589579 | CRBT SYN BX |
| PGH-18-04 | 217.3 | 218.69 | 1.39 | 589580 | CRBT |
| PGH-18-04 | 218.69 | 219.16 | 0.47 | 589581 | MD (?) |
| PGH-18-04 | 219.16 | 220.64 | 1.48 | 589582 | CRBT |
| PGH-18-04 | 220.64 | 222 | 1.36 | 589583 | CRBT |
| PGH-18-04 | 222 | 222.65 | 0.65 | 589584 | CRBT |
| PGH-18-04 | 227 | 228.19 | 1.19 | 589585 | CRBT |
| PGH-18-04 | 230 | 231 | 1 | 589586 | CRBT |
| PGH-18-04 | 231 | 232 | 1 | 589588 | CRBT |
| PGH-18-04 | 232 | 232.67 | 0.67 | 589589 | CRBT SYN BX |
| PGH-18-04 | 235.9 | 236.89 | 0.99 | 589590 | CRBT, lt gn-pk, REE-flcrb? |
| PGH-18-04 | 236.89 | 237.87 | 0.98 | 589591 | CRBT, lt gn-pk, REE-flcrb? |
| PGH-18-04 | 240.48 | 241.45 | 0.97 | 589592 | CRBT, wk bnd, green-blue |
| PGH-18-04 | 243.35 | 244.1 | 0.75 | 589593 | CRBT, wk bnd, green-blue |
| PGH-18-04 | 244.1 | 244.9 | 0.8 | 589594 | CRBT, wk bnd, green-blue |
| PGH-18-04 | 244.9 | 246 | 1.1 | 589595 | syn bx w/ crbt infill, locl mssv crbt |
| PGH-18-04 | 247.5 | 249 | 1.5 | 589596 | CRBT bx + SYN |
| PGH-18-04 | 252.35 | 252.97 | 0.62 | 589597 | CRBT, weakly bnd |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|--------------------------|
| PGH-18-04 | 256.3 | 256.8 | 0.5 | 589598 | CRBT, abdnt apt near UC? |
| PGH-18-04 | 258.19 | 258.69 | 0.5 | 589599 | CRBT bx + SYN |
| PGH-18-04 | 261.5 | 262 | 0.5 | 589600 | SYN BX w/ cRBT |
| PGH-18-04 | 262 | 263.5 | 1.5 | 589601 | msv CRBT |
| PGH-18-04 | 263.5 | 264.38 | 0.88 | 589602 | msv CRBT |
| PGH-18-04 | 264.38 | 265.25 | 0.87 | 589603 | msv CRBT |
| PGH-18-04 | 279 | 280.5 | 1.5 | 589604 | syn bx + CRBT |
| PGH-18-04 | 280.5 | 282 | 1.5 | 589605 | SYN bx + CRBT |
| PGH-18-04 | 282 | 283.1 | 1.1 | 589606 | CRBT, wkly bnd |
| PGH-18-04 | 285 | 285.54 | 0.54 | 589608 | CRBT |
| PGH-18-04 | 286.62 | 287.22 | 0.6 | 589609 | BX + CRBT |
| PGH-18-04 | 288 | 289.5 | 1.5 | 589610 | CRBT bx + SYN |
| PGH-18-04 | 290.5 | 291.68 | 1.18 | 589611 | CRBT |
| PGH-18-04 | 296.91 | 298.12 | 1.21 | 589612 | CRBT |
| PGH-18-04 | 314.53 | 315.43 | 0.9 | 589614 | CRBT |
| PGH-18-04 | 318.4 | 319.65 | 1.25 | 589615 | CRBT BX |
| PGH-18-04 | 333.12 | 333.72 | 0.6 | 589616 | CRBT |
| PGH-18-04 | 349.75 | 351.25 | 1.5 | 589617 | CRBT minor SYN BX |
| PGH-18-04 | 351.25 | 352.75 | 1.5 | 589618 | CRBT |
| PGH-18-04 | 352.75 | 353.75 | 1 | 589619 | CRBT |
| PGH-18-04 | 353.75 | 354.33 | 0.58 | 589620 | CRBT + SYN BX |
| PGH-18-04 | 360 | 361 | 1 | 589622 | CRBT + SYN BX |
| PGH-18-04 | 362.65 | 364.05 | 1.4 | 589623 | CRBT |
| PGH-18-04 | 374.55 | 376.05 | 1.5 | 589624 | CRBT |
| PGH-18-04 | 380.58 | 381.82 | 1.24 | 589625 | CRBT + BX SYN |
| PGH-18-04 | 385 | 386 | 1 | 589626 | CRBT + BX SYN |
| PGH-18-04 | 387 | 388 | 1 | 589627 | CRBT + BX SYN |
| PGH-18-04 | 389.73 | 391.23 | 1.5 | 589628 | CRBT + BX SYN |
| PGH-18-04 | 417.1 | 418.39 | 0.5 | 589629 | |
| PGH-18-04 | 423.84 | 424.5 | 1.5 | 589630 | |
| PGH-18-04 | 424.5 | 425 | 1.5 | 589631 | |
| PGH-18-04 | 429 | 430.5 | 1 | 589632 | |
| PGH-18-04 | 430.5 | 432 | 1.5 | 589633 | |
| PGH-18-04 | 435 | 436 | 1.15 | 589634 | |
| PGH-18-04 | 436 | 437 | 1.14 | 589635 | |
| PGH-18-04 | 441.54 | 443.04 | 1.47 | 589636 | |
| PGH-18-04 | 444.46 | 445.03 | 0.57 | 589637 | |
| PGH-18-04 | 449.65 | 450.41 | 0.76 | 589638 | |
| PGH-18-04 | 450.41 | 451 | 0.59 | 589639 | |
| PGH-18-04 | 453.5 | 454 | 0.5 | 589640 | SYN BX + CRBT |
| PGH-18-04 | 454 | 455.5 | 1.5 | 589641 | SYN BX + CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-04 | 455.5 | 457 | 1.5 | 589642 | SYN BX + CRBT |
| PGH-18-04 | 457 | 458 | 1 | 589643 | SYN BX + CRBT |
| PGH-18-04 | 462.34 | 462.84 | 0.5 | 589644 | BX + CRBT |
| PGH-18-04 | 470.28 | 471.43 | 1.15 | 589645 | CRBT + BX |
| PGH-18-04 | 471.43 | 472.58 | 1.14 | 589646 | CRBT + BX |
| PGH-18-04 | 472.58 | 473.72 | 1.47 | 589647 | BX + CRBT |
| PGH-18-04 | 473.72 | 475.19 | 1.33 | 589648 | |
| PGH-18-04 | 484.1 | 485.43 | 1.5 | 589649 | crbt |
| PGH-18-04 | 486.3 | 487.8 | 0.52 | 589650 | CRBT |
| PGH-18-04 | 489.34 | 489.86 | 1.31 | 589651 | CRBT |
| PGH-18-04 | 489.86 | 490.94 | 1.08 | 351501 | deep purplish gran, min carb veins |
| PGH-18-04 | 490.94 | 492.25 | 0.93 | 589652 | CRBT |
| PGH-18-04 | 492.25 | 493.18 | 0.93 | 589653 | ALKALI |
| PGH-18-04 | 493.18 | 494 | 0.82 | 589654 | CRBT + BX |
| PGH-18-04 | 494 | 495.5 | 1.5 | 589655 | CRBT |
| PGH-18-04 | 495.5 | 496.25 | 0.75 | 589656 | CRBT |
| PGH-18-04 | 496.25 | 497.34 | 1.09 | 589657 | CRBT + BX |
| PGH-18-04 | 497.34 | 498.84 | 1.5 | 589659 | CRBT + BX |
| PGH-18-04 | 498.84 | 500.34 | 1.5 | 589660 | CRBT + BX |
| PGH-18-04 | 500.34 | 501.84 | 1.5 | 589661 | CRBT |
| PGH-18-04 | 501.84 | 503.34 | 1.5 | 589662 | CRBT |
| PGH-18-04 | 503.34 | 504.84 | 1.5 | 589663 | CRBT |
| PGH-18-04 | 504.84 | 506.34 | 1.5 | 589664 | CRBT |
| PGH-18-04 | 506.34 | 507.59 | 1.25 | 589665 | CRBT |
| PGH-18-04 | 507.59 | 508.4 | 0.81 | 589666 | CRBT |
| PGH-18-04 | 508.4 | 509.29 | 0.89 | 351502 | gran gneiss (biot faric), carb micro veinlets |
| PGH-18-04 | 509.29 | 510.25 | 0.96 | 351503 | gran gneiss (biot faric), carb micro veinlets |
| PGH-18-04 | 510.25 | 510.98 | 0.73 | 589667 | CRBT BX |
| PGH-18-04 | 510.98 | 511.91 | 0.93 | 351504 | grgn, anastomising very fine (<mm) ribbonary carb veins |
| PGH-18-04 | 511.91 | 512.88 | 0.97 | 351505 | grgn, 2cm carb at end |
| PGH-18-04 | 512.88 | 513.77 | 0.89 | 351506 | grgn, <10cm wide bx zone + 3cm wide carb vein |
| PGH-18-04 | 513.77 | 515.27 | 1.5 | 589668 | BX CRBT |
| PGH-18-04 | 515.27 | 516.77 | 1.5 | 589669 | BX CRBT |
| PGH-18-04 | 516.77 | 517.8 | 1.03 | 351507 | grgn, <1% carb veins |
| PGH-18-04 | 517.8 | 519 | 1.2 | 351508 | grgn, <1% carb veins |
| PGH-18-04 | 519 | 520.19 | 1.19 | 351509 | grgn |
| PGH-18-04 | 520.19 | 521.37 | 1.18 | 351510 | grgn, 7cm carb vein |
| PGH-18-04 | 521.37 | 522.4 | 1.03 | 351511 | grgn, 2x5cm carb veins |
| PGH-18-04 | 522.4 | 523.62 | 1.22 | 351512 | grgn, tr carb |
| PGH-18-04 | 523.62 | 524.8 | 1.18 | 589670 | CRBT |
| PGH-18-04 | 524.8 | 525.98 | 1.18 | 351513 | grgn, 8cm carb vein |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|--|
| PGH-18-04 | 525.98 | 527.22 | 1.24 | 351514 | grgn w/ 30cm pegmatite |
| PGH-18-04 | 527.22 | 528.24 | 1.02 | 589671 | ALKALI + CRBT |
| PGH-18-04 | 528.24 | 529.49 | 1.25 | 589673 | CRBT BX |
| PGH-18-04 | 529.49 | 530.59 | 1.1 | 589674 | ALKALI |
| PGH-18-04 | 530.59 | 531.39 | 0.8 | 589675 | ALKALI |
| PGH-18-04 | 531.39 | 532.89 | 1.5 | 589676 | CRBT BX |
| PGH-18-04 | 532.89 | 534 | 1.11 | 589677 | ALKALI + CRBT] |
| PGH-18-04 | 534 | 534.75 | 0.75 | 589679 | ALKALI |
| PGH-18-04 | 534.75 | 535.45 | 0.7 | 589680 | CRBT |
| PGH-18-04 | 535.45 | 536.25 | 0.8 | 589681 | ALKALI |
| PGH-18-04 | 536.25 | 537.75 | 1.5 | 589682 | CRBT |
| PGH-18-04 | 537.75 | 539.25 | 1.5 | 589683 | CRBT |
| PGH-18-04 | 539.25 | 540.75 | 1.5 | 589684 | CRBT |
| PGH-18-04 | 540.75 | 542.25 | 1.5 | 589685 | CRBT |
| PGH-18-04 | 542.25 | 543.75 | 1.5 | 589686 | CRBT |
| PGH-18-04 | 543.75 | 545.25 | 1.5 | 589687 | CRBT |
| PGH-18-04 | 545.25 | 546.75 | 1.5 | 589688 | CRBT |
| PGH-18-04 | 546.75 | 548.25 | 1.5 | 589689 | CRBT |
| PGH-18-04 | 548.25 | 549.75 | 1.5 | 589690 | CRBT |
| PGH-18-04 | 549.75 | 551.25 | 1.5 | 589692 | CRBT |
| PGH-18-04 | 551.25 | 552.75 | 1.5 | 589693 | CRBT |
| PGH-18-04 | 552.75 | 554.25 | 1.5 | 589694 | CRBT |
| PGH-18-04 | 554.25 | 555.19 | 0.94 | 589695 | CRBT |
| PGH-18-04 | 555.19 | 556 | 0.81 | 589696 | ALKALI |
| PGH-18-04 | 556 | 557.25 | 1.25 | 351515 | grgn |
| PGH-18-04 | 557.25 | 558.45 | 1.2 | 351516 | grgn |
| PGH-18-04 | 558.45 | 559.49 | 1.04 | 351517 | grgn w/ 2x5cm carb |
| PGH-18-04 | 559.49 | 560.49 | 1 | 351518 | grgn, very min carb veining |
| PGH-18-04 | 560.49 | 561.5 | 1.01 | 351519 | grgn , no carb |
| PGH-18-04 | 561.5 | 562.48 | 0.98 | 351520 | grgn, 2x <1cm carb veins |
| PGH-18-04 | 562.48 | 563.68 | 1.2 | 351521 | grgn w/ 6cm pink carb vein w/ ap |
| PGH-18-04 | 563.68 | 563.85 | 0.17 | 351522 | pegmatite (up to 3cm xtals w/ ep alt'n & py blebs) |
| PGH-18-04 | 563.85 | 564.86 | 1.01 | 589698 | CRBT |
| PGH-18-04 | 564.86 | 565.46 | 0.6 | 589699 | CRBT w/bt+pyrochlore? |
| PGH-18-04 | 565.46 | 566 | 0.54 | 589700 | CRBT |
| PGH-18-04 | 566 | 567.04 | 1.04 | 351523 | grgn, no carb |
| PGH-18-04 | 567.04 | 567.91 | 0.87 | 351524 | grgn, 4cm carb vein |
| PGH-18-04 | 567.91 | 568.8 | 0.89 | 589701 | CRBT |
| PGH-18-04 | 568.8 | 569.87 | 1.07 | 351525 | grgn |
| PGH-18-04 | 569.87 | 570.92 | 1.05 | 351526 | grgn, 1-5cm carb veins |
| PGH-18-04 | 570.92 | 572 | 1.08 | 351527 | grgn, 3cm wide carb vein w/ mica rims |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-04 | 572 | 573.07 | 1.07 | 351528 | grgn, min x-cut carb veins (<1cm) |
| PGH-18-04 | 573.07 | 574.1 | 1.03 | 351529 | grgn, 6cm carb-bx vein + min mm-cm carb veins |
| PGH-18-04 | 574.1 | 575.1 | 1 | 351530 | grgn |
| PGH-18-04 | 575.1 | 575.66 | 0.56 | 589702 | ALKALI |
| PGH-18-04 | 575.66 | 576.76 | 1.1 | 589704 | CRBT |
| PGH-18-04 | 576.76 | 578.1 | 1.34 | 351531 | grgn w/ multiple <1.5cm carb veins (<<5% overall) |
| PGH-18-04 | 578.1 | 579.39 | 1.29 | 351532 | same, increasing at end of sample |
| PGH-18-04 | 579.39 | 580.24 | 0.85 | 589705 | Alkali, trace crbt |
| PGH-18-04 | 580.24 | 581.75 | 1.51 | 589706 | crbt + bx |
| PGH-18-04 | 581.75 | 583.25 | 1.5 | 589707 | crbt, cg + bx |
| PGH-18-04 | 583.25 | 584.75 | 1.5 | 589709 | crbt, cg + bx |
| PGH-18-04 | 584.75 | 585.7 | 0.95 | 589710 | crbt bx + alkali |
| PGH-18-04 | 585.7 | 586.62 | 0.92 | 589711 | Alkali |
| PGH-18-04 | 586.62 | 588.12 | 1.5 | 589712 | bx + crbt |
| PGH-18-04 | 588.12 | 589.62 | 1.5 | 589713 | crbt + bx |
| PGH-18-04 | 589.62 | 591.15 | 1.53 | 589714 | crbt |
| PGH-18-04 | 591.15 | 592.66 | 1.51 | 589715 | alkali + crbt |
| PGH-18-04 | 592.66 | 593.41 | 0.75 | 589716 | alkali + crbt |
| PGH-18-04 | 593.92 | 594.8 | 0.88 | 351533 | grgn |
| PGH-18-04 | 594.8 | 595.85 | 1.05 | 351534 | grgn, carb veins increasing |
| PGH-18-04 | 595.85 | 596.88 | 1.03 | 351535 | grgn w/ <10% x-cut carb veins (w/ deep pink kspar alt'n envl) |
| PGH-18-04 | 596.88 | 597.88 | 1 | 589717 | CRBT, minro alkali |
| PGH-18-04 | 597.88 | 599.06 | 1.18 | 351536 | grgn (pale pink) |
| PGH-18-04 | 599.06 | 600.25 | 1.19 | 351537 | grgn (deep pink-red kspar alt'n over last 30cm), min calc |
| PGH-18-04 | 600.25 | 601.47 | 1.22 | 351538 | kspar/fen alt'd top 20cm to grgn w/ min carb |
| PGH-18-04 | 601.47 | 602.68 | 1.21 | 351539 | grgn, no carb, locally pegmatitic |
| PGH-18-04 | 602.68 | 603.91 | 1.23 | 351540 | grgn, 1.5cm carb vein |
| PGH-18-04 | 603.91 | 605 | 1.09 | 351541 | grgn, vvcg over 50cm |
| PGH-18-04 | 605 | 606.13 | 1.13 | 589718 | Alkali + minor CRBT |
| PGH-18-04 | 606.13 | 607 | 0.87 | 589719 | Alkali |
| PGH-18-04 | 607 | 607.97 | 0.97 | 589720 | Alkali + minor CRBT |
| PGH-18-04 | 607.97 | 609.35 | 1.38 | 589721 | CRBT |
| PGH-18-04 | 609.35 | 610.85 | 1.5 | 589722 | Alkali BX + CRBT |
| PGH-18-04 | 610.85 | 612.35 | 1.5 | 589723 | CRBT + Alkali |
| PGH-18-04 | 612.35 | 613.67 | 1.32 | 589724 | CRBT + Alkali |
| PGH-18-04 | 613.67 | 615 | 1.33 | 589725 | CRBT + Alkali |
| PGH-18-04 | 615 | 616 | 1 | 589726 | Alkali + CRBT |
| PGH-18-04 | 616 | 617 | 1 | 589727 | Alkali + minor CRBT |
| PGH-18-04 | 617 | 618.5 | 1.5 | 589729 | CRBT |
| PGH-18-04 | 618.5 | 620 | 1.5 | 589730 | CRBT |
| PGH-18-04 | 620 | 620.7 | 0.7 | 589731 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---------------------|
| PGH-18-04 | 620.7 | 621.7 | 1 | 589732 | Alkali |
| PGH-18-04 | 657 | 658.5 | 1.5 | 589733 | Alkali + minor CRBT |
| PGH-18-04 | 658.5 | 660 | 1.5 | 589734 | Alkali + minor CRBT |
| PGH-18-04 | 660 | 660.82 | 0.82 | 589736 | Alkali + minor CRBT |
| PGH-18-04 | 660.82 | 661.81 | 0.99 | 589737 | CRBT |
| PGH-18-04 | 661.81 | 663 | 1.19 | 589738 | alklai + minor crbt |
| PGH-18-04 | 663 | 664 | 1 | 589739 | alklai + minor crbt |
| PGH-18-04 | 664 | 665.5 | 1.5 | 589740 | alklai + minor crbt |
| PGH-18-04 | 665.5 | 667 | 1.5 | 589742 | |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|---------------------|----------|-----------|
| PGH-18-04 | 29.5 | 29.5 | 0 | 589512 | A18-05281 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-04 | 66 | 66 | 0 | 589535 | A18-05281 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-04 | 74 | 74 | 0 | 589540 | A18-05281 | STANDARD | Oka 1 | 2.48 | 0.524 |
| PGH-18-04 | 142.17 | 142.17 | 0 | 589557 | A18-05281 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-04 | 171 | 171 | 0 | 589567 | A18-05281 | STANDARD | Oka 1 | 2.49 | 0.532 |
| PGH-18-04 | 171 | 171 | 0 | 589568 | A18-05281 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-04 | 231 | 231 | 0 | 589587 | A18-05281 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-04 | 283.1 | 283.1 | 0 | 589607 | A18-05281 | BLANK | Marble | 0.02 | 0.007 |
| PGH-18-04 | 298.12 | 298.12 | 0 | 589613 | A18-05281 | STANDARD | Oka 1 | 2.51 | 0.539 |
| PGH-18-04 | 354.33 | 354.33 | 0 | 589621 | A18-05281 | BLANK | Marble | 0.02 | 0.006 |
| PGH-18-04 | 497.34 | 497.34 | 0 | 589658 | A18-05281 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-04 | 528.24 | 528.24 | 0 | 589672 | A18-05281 | STANDARD | Oka 1 | 2.51 | 0.536 |
| PGH-18-04 | 534 | 534 | 0 | 589678 | A18-05281 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-04 | 548.25 | 549.75 | 1.5 | 589690 | A18-05281 | N/A | ORIGINAL SAMPLE | 7.27 | 0.678 |
| PGH-18-04 | 548.25 | 549.75 | 1.5 | 589691 | A18-05281 | DUPLICATE | DUPLICATE of 589690 | 6.34 | 0.516 |
| PGH-18-04 | 556 | 556 | 0 | 589697 | A18-05281 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-04 | 575.66 | 575.66 | 0 | 589703 | A18-05281 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-04 | 583.25 | 583.25 | 0 | 589708 | A18-05281 | STANDARD | Oka 1 | 2.51 | 0.544 |
| PGH-18-04 | 617 | 617 | 0 | 589728 | A18-05281 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-04 | 660 | 660 | 0 | 589735 | A18-05281 | STANDARD | Oka 1 | 2.5 | 0.538 |
| PGH-18-04 | 665.5 | 665.5 | 0 | 589741 | A18-05281 | BLANK | Marble | 0.02 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|-----------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 17-Apr-2018 |
| Township/Area: | Killala Lake Area | End Date: | 18-Apr-2018 |
| Claims (converted): | 307858 | Described by: | B. Clark, B.Sc. |
| Claims (legacy): | TB 4256251 | Log date: | 21-Apr-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 337.00° | | Easting: 519618 | | Core size: HQ | | Cemented: No | |
| Plunge: -60.00° | | Northing: 5432342 | | Casing: Pulled | | Stored: Yes | |
| Length: 60.0 m | | Elevation: 308.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-05 | Reflex | 21 | 326.5 | -62.4 | 57420 |

Description

Hole abandoned at 60m to correct azimuth after the drill shifted when casing reamed.

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|------|------|------------|---|---|
| PGH-18-05 | 0 | 3 | OVB | Overburden | Overburden |
| PGH-18-05 | 3 | 4.4 | CRBT | Carbonatite | Cream to light pink-blue, massive, slightly weathered with Fe-Ox along fractures. Wispy bands of blue amph, 2% pyrrhotite blebs up to 5cm, trace fg black mineral (pyrochlore?). LC obscured by broken core |
| PGH-18-05 | 4.4 | 6.75 | CRBT-BX | Carbonatite with Alkali Breccia | Mosaic breccia, clasts are angular to sub, rxn rims from 3mm to completely altered small clasts <3cm. Clasts red-pink, chl alt bt, k-fspar dominated CRBT infill; cream to light blue-grey, patchy fg fluorite, rimmed by blue amph, diss hem, local anhedral py up to 5mm. |
| PGH-18-05 | 6.75 | 16.1 | QTZ-SYE | Alkali Feldspathic with minor Carbonatite | Alkali; red-pink, qtz 10%, k-fspars 50%, bt 20%, neph 20%. Fg-cg (locally cg up to 1.5cm), patchy moderate hematite alteration, bt being alt to chl, fracture fill CRBT, veins up to 40cm locally BX. CRBT; light pink-green-blue-purple, fg, massive, local wispy banding of fg apt(? light orange), veins rimmed by blue amph(?), trace diss hem, Contacts are locally bx, commonly undulating with dissolution. Apt more concentrated near contacts/clasts. |
| PGH-18-05 | 16.1 | 24.5 | CRBT-BX | Carbonatite with Alkali Breccia | CRBT; light pink-grey-green to cream, fg, massive, contacts are undulating to brecciated, commonly rimmed with blue amph. Trace diss py/hem. Apt(?) vfg forming wispy bands near contacts (light orange), also cumulates up to 5mm. crbt zones up to 1.5m Alkali clasts; as above modal percentages, rxn rims up to 7mm, angular to sub. |
| PGH-18-05 | 24.5 | 29.1 | SYE | Alkali Feldspathic | Modal percentages as above; CRBT; cream to light grey-green-pink, rimmed by black-blue amph, patchy light orange apt, trace diss hem |
| PGH-18-05 | 29.1 | 34.8 | CRBT-BX | Carbonatite with Alkali Breccia | Alkali; red-pink, modal % as above. Rxn rims of clasts to locally completely altered (black bt), clasts from 5mm-5cm, sub-angular to sub rounded, diffuse clast boundaries. CRBT; light pink-blue-green-cream, fg, wispy bands of apt cumulates and amph in higher concentration near clasts and contacts, trace diss py/hem |
| PGH-18-05 | 34.8 | 38.8 | SYE | Alkali Feldspathic | Modal as above; 35.80-36.50: crbt alt MD(?) light green, fg, highly alt clasts of alkali up to 4cm, trace diss py, weakly carb alt groundmass |
| PGH-18-05 | 38.8 | 39.8 | CRBT | Carbonatite | Cream to light pink-blue-grey, fg, massive, wispy bands/masses of blue amph, wavy 'bands' of apt near contacts and cumulate up to 5mm. Trace diss py / hem. UC undulating, diffuse LC brecciated, obscured |
| PGH-18-05 | 39.8 | 50.6 | SYE-BX | Alkali Feldspathic Breccia with Carbonatite | Alkali; pervasive hem alt (weak-mod), chl alt bt. Clasts locally have rxn rims up to 5mm and completely alt. crbt veins from 5mm - 40cm, veins are sub-parallel, tension veins(?). CRBT; light pink-blue-green-grey, fg, massive, trace diss py local euohedral crystals up to 7mm. fg blue-black sulphide trace diss, fg apt light orange(?) and to light green along wispy bands and near contacts. Locally bt rich (up to 30%) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|---------------------------------|---|
| PGH-18-05 | 50.6 | 53.9 | CRBT-BX | Carbonatite with Alkali Breccia | Alkali as above 50.60-51.30: light pink-cream, fg apt light green-brn near contacts. UC/LC bx clasts rimmed by bt. Diss hem, trace diss py. 53.00-53.75: CRBT + bx, light pink-blue-cream-green, fg, rxn rims around clasts <7mm, clasts are sub-angular, apt brn-green up to 7mm as wispy masses, bx UC/LC |
| PGH-18-05 | 53.9 | 54.4 | MDYKE | Mafic Dyke | Aphanitic, black, magnetic, amygdales filled with carb. |
| PGH-18-05 | 54.4 | 55 | SYE-BX | Alkali Feldspathic | Alkali as above, with minor crbt veins up to 2cm, clasts/veins with rxn rims of black bt. CRBT; cream to light pink-blue, fg, diss hem, trace py diss. |
| PGH-18-05 | 55 | 56.35 | SYE | Alkali Feldspathic | As above. |
| PGH-18-05 | 56.35 | 57.7 | CRBT | Carbonatite | Cream to light purple to light brown, slightly weathered, diss hem, trace diss py, very weakly weathered/staining along fractures. Weak wispy bands with more hem(?) light purple in colour. |
| PGH-18-05 | 57.7 | 60 | QTZ-SYE | Alkali Feldspathic | fg-cg, qtz 15%, k-fldsp 40%, plag 15%, bt 20%, 10% plag |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|-------|------|-----------|----------|-----------|-------------------|------------------------------|
| PGH-18-05 | 16.15 | CT | 55 | 70 | | UC CRBT w/ Alkali | undulating, closed, amph |
| PGH-18-05 | 18.73 | CT | 65 | 100 | | LC CRBT w/ alkali | planar, closed |
| PGH-18-05 | 21.65 | JNT | 40 | 250 | | JNT in alkali | amph fill, planar, rough |
| PGH-18-05 | 29.07 | CT | 20 | 220 | | UC BX w/ alkali | undulating, closed |
| PGH-18-05 | 34.82 | CT | 65 | 100 | | LC crbt w/ alkali | planar, closed |
| PGH-18-05 | 38.8 | CT | 70 | 70 | | UC CRBT w/ Alkali | undulating, dissolution, |
| PGH-18-05 | 46.44 | JNT | 30 | 275 | | JNT in alkali | rough, amph infill |
| PGH-18-05 | 53.1 | CT | 45 | 190 | | BX CRBT | planar, closed |
| PGH-18-05 | 53.9 | CT | 40 | 110 | | UC MDYKE | planar, closed |
| PGH-18-05 | 54.4 | CT | 40 | 120 | | LC MDYKE | planar, rough, open, no fill |
| PGH-18-05 | 56.34 | CT | 70 | 30 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-05 | 57.67 | CT | 75 | 75 | | LC CRBT w/ alkali | undulating, closed |
| PGH-18-05 | 58.28 | JNT | 60 | 90 | | JNT in alkali | planar, open |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) | Description |
|-----------|-------|-------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|---------------------|
| PGH-18-05 | 2.98 | 4.34 | 1.36 | 589743 | A18-06091 | < 0.003 | < 0.003 | 0.007 | 0.007 | < 0.003 | 5.33 | 0.25 | 0.003 | 0.012 | 0.003 | CRBT |
| PGH-18-05 | 4.34 | 5.8 | 1.46 | 589744 | A18-06091 | 0.08 | < 0.003 | < 0.005 | 0.007 | 0.007 | 9.81 | 0.78 | < 0.003 | 0.005 | 0.004 | CRBT BX |
| PGH-18-05 | 5.8 | 7 | 1.2 | 589745 | A18-06091 | 0.047 | < 0.003 | < 0.005 | 0.006 | 0.01 | 7.05 | 1.82 | 0.003 | 0.008 | < 0.003 | ALKALI BX + CRBT |
| PGH-18-05 | 7 | 8.4 | 1.4 | 589746 | A18-06091 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 5.55 | 0.49 | < 0.003 | 0.005 | 0.003 | ALKALI BX + CRBT |
| PGH-18-05 | 11.36 | 12.85 | 1.49 | 589747 | A18-06091 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.21 | 2.03 | < 0.003 | 0.007 | 0.004 | Alkali + CRBT |
| PGH-18-05 | 12.85 | 14.33 | 1.48 | 589748 | A18-06091 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 6.15 | 0.79 | < 0.003 | 0.004 | 0.005 | Alkali minor CRBT |
| PGH-18-05 | 14.33 | 14.83 | 0.5 | 589749 | A18-06091 | 0.062 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 5.03 | 2.61 | < 0.003 | 0.004 | 0.004 | CRBT |
| PGH-18-05 | 14.83 | 16.11 | 1.28 | 589750 | A18-06091 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.11 | 0.26 | < 0.003 | 0.003 | 0.003 | cg Alkali |
| PGH-18-05 | 16.11 | 17.6 | 1.49 | 589751 | A18-06091 | 0.063 | 0.004 | < 0.005 | 0.005 | < 0.003 | 4.41 | 2.38 | < 0.003 | 0.008 | 0.004 | CRBT BX |
| PGH-18-05 | 17.6 | 19 | 1.4 | 589752 | A18-06091 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.27 | 1.14 | < 0.003 | 0.005 | 0.003 | crbt + alklaï bx |
| PGH-18-05 | 19 | 20.5 | 1.5 | 589753 | A18-06091 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.022 | 5.53 | 2.24 | < 0.003 | 0.007 | 0.003 | alkali + crbt |
| PGH-18-05 | 20.5 | 22 | 1.5 | 589754 | A18-06091 | 0.031 | 0.004 | < 0.005 | < 0.005 | 0.017 | 5.62 | 0.86 | < 0.003 | < 0.003 | 0.003 | alklaï bx + crbt |
| PGH-18-05 | 22 | 23 | 1 | 589755 | A18-06091 | 0.03 | < 0.003 | < 0.005 | 0.006 | < 0.003 | 4.48 | 3.55 | < 0.003 | 0.009 | 0.005 | crbt |
| PGH-18-05 | 23 | 24 | 1 | 589756 | A18-06091 | 0.045 | < 0.003 | < 0.005 | 0.006 | 0.005 | 3.89 | 3.55 | < 0.003 | 0.011 | 0.004 | crbt |
| PGH-18-05 | 24 | 24.5 | 0.5 | 589757 | A18-06091 | 0.013 | 0.003 | < 0.005 | < 0.005 | 0.021 | 5.57 | 1.56 | < 0.003 | 0.005 | 0.004 | alklaï bx + crbt |
| PGH-18-05 | 26.89 | 28 | 1.11 | 589758 | A18-06091 | 0.014 | < 0.003 | < 0.005 | < 0.005 | 0.027 | 6.32 | 1 | 0.004 | 0.006 | < 0.003 | alkali bx + crbt |
| PGH-18-05 | 28 | 29 | 1 | 589759 | A18-06091 | 0.029 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 6.46 | 0.37 | < 0.003 | 0.003 | < 0.003 | alkali |
| PGH-18-05 | 29 | 30.5 | 1.5 | 589760 | A18-06091 | 0.209 | 0.003 | < 0.005 | < 0.005 | 0.013 | 7.4 | 1.85 | < 0.003 | 0.007 | 0.004 | crbt bx + alkali |
| PGH-18-05 | 30.5 | 32 | 1.5 | 589761 | A18-06091 | 0.075 | < 0.003 | < 0.005 | 0.005 | 0.009 | 6.85 | 0.96 | < 0.003 | 0.007 | < 0.003 | crbt bx + alkali |
| PGH-18-05 | 32 | 33.5 | 1.5 | 589762 | A18-06091 | 0.04 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.75 | 0.54 | < 0.003 | 0.005 | 0.005 | crbt bx + alkali |
| PGH-18-05 | 33.5 | 35 | 1.5 | 589763 | A18-06091 | 0.064 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 7.11 | 1.86 | < 0.003 | 0.007 | 0.004 | crbt bx + alkali |
| PGH-18-05 | 35 | 36.5 | 1.5 | 589764 | A18-06091 | 0.051 | 0.004 | < 0.005 | < 0.005 | 0.026 | 8.47 | 0.51 | < 0.003 | 0.004 | 0.004 | Alkali + MD + crbt |
| PGH-18-05 | 36.5 | 38 | 1.5 | 589765 | A18-06091 | 0.01 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.16 | 0.37 | < 0.003 | 0.003 | 0.004 | alkali |
| PGH-18-05 | 38 | 38.8 | 0.8 | 589766 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 5.07 | 0.28 | < 0.003 | 0.004 | 0.003 | alkali |
| PGH-18-05 | 38.8 | 40.3 | 1.5 | 589767 | A18-06091 | 0.482 | 0.003 | 0.007 | 0.007 | < 0.003 | 4.38 | 4.28 | < 0.003 | 0.012 | 0.004 | CRBT |
| PGH-18-05 | 40.3 | 41 | 0.7 | 589769 | A18-06091 | 0.102 | 0.003 | < 0.005 | 0.005 | 0.007 | 7.12 | 0.77 | < 0.003 | 0.006 | 0.003 | crbt bx |
| PGH-18-05 | 41 | 42 | 1 | 589770 | A18-06091 | 0.038 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.5 | 1.18 | < 0.003 | 0.006 | < 0.003 | alkali bx + crbt |
| PGH-18-05 | 42 | 43.5 | 1.5 | 589771 | A18-06091 | 0.052 | < 0.003 | < 0.005 | 0.005 | 0.004 | 7.93 | 1.32 | < 0.003 | 0.008 | 0.003 | ALKALI BX + CRBT |
| PGH-18-05 | 43.5 | 45 | 1.5 | 589772 | A18-06091 | 0.039 | 0.003 | < 0.005 | < 0.005 | 0.003 | 7.9 | 0.03 | < 0.003 | 0.003 | < 0.003 | alkali bx + crbt |
| PGH-18-05 | 45 | 46.5 | 1.5 | 589773 | A18-06091 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 5.97 | 0.21 | < 0.003 | 0.004 | < 0.003 | alkali bx + crbt |
| PGH-18-05 | 46.5 | 48 | 1.5 | 589774 | A18-06091 | 0.025 | < 0.003 | < 0.005 | 0.005 | 0.017 | 5.86 | 0.68 | < 0.003 | 0.005 | < 0.003 | alkali bx + crbt |
| PGH-18-05 | 48 | 49 | 0 | 589776 | A18-06091 | 0.015 | < 0.003 | < 0.005 | 0.005 | 0.025 | 6.01 | 0.2 | < 0.003 | 0.003 | 0.003 | alkali + minor crbt |
| PGH-18-05 | 49 | 50.5 | 1.5 | 589777 | A18-06091 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.039 | 5.77 | 0.33 | < 0.003 | 0.004 | < 0.003 | alklaï |
| PGH-18-05 | 50.5 | 52 | 1.5 | 589778 | A18-06091 | 0.226 | < 0.003 | < 0.005 | 0.005 | 0.015 | 5.13 | 1.72 | < 0.003 | 0.009 | < 0.003 | crbt + alklaï bx |
| PGH-18-05 | 52 | 53 | 1 | 589779 | A18-06091 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.045 | 5.91 | 0.34 | < 0.003 | 0.004 | < 0.003 | alkali |
| PGH-18-05 | 53 | 54 | 1 | 589780 | A18-06091 | 0.038 | 0.004 | < 0.005 | 0.005 | 0.026 | 6.61 | 1.73 | < 0.003 | 0.008 | 0.003 | crbt bx + alkali |
| PGH-18-05 | 54 | 54.5 | 0.5 | 589781 | A18-06091 | 0.01 | 0.005 | < 0.005 | < 0.005 | 0.026 | 11.72 | 0.58 | < 0.003 | 0.004 | 0.009 | MD |
| PGH-18-05 | 54.5 | 55.4 | 0.9 | 589782 | A18-06091 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.03 | 6.8 | 0.38 | < 0.003 | 0.004 | < 0.003 | alkali |
| PGH-18-05 | 55.4 | 56.35 | 0.95 | 589783 | A18-06091 | 0.014 | 0.003 | < 0.005 | < 0.005 | 0.038 | 5.94 | 0.47 | < 0.003 | 0.005 | 0.004 | alkali + minor crbt |
| PGH-18-05 | 56.35 | 57.7 | 1.35 | 589784 | A18-06091 | 0.091 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 5.21 | 1.68 | < 0.003 | 0.009 | 0.004 | CRBT |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|------|------|-----------|----------|-----------|-----------|------------------|----------|-----------|
| PGH-18-05 | 40.3 | 40.3 | 0 | 589768 | A18-06091 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-05 | 48 | 48 | 0 | 589775 | A18-06091 | STANDARD | Oka 1 | 2.44 | 0.53 |



| | | | |
|---------------------|------------------------------|---------------|-----------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 18-Apr-2018 |
| Township/Area: | Killala Lake Area | End Date: | 19-Apr-2018 |
| Claims (converted): | 307858 | Described by: | B. Clark, B.Sc. |
| Claims (legacy): | TB 4256251 | Log date: | 21-Apr-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 337.00° | | Easting: 519618 | | Core size: HQ | | Cemented: No | |
| Plunge: -60.00° | | Northing: 5432342 | | Casing: Pulled | | Stored: Yes | |
| Length: 72.0 m | | Elevation: 308.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-05B | Reflex | 21 | 325.7 | -60.3 | 57571 |
| PGH-18-05B | Reflex | 72 | 326.1 | -60.5 | 57067 |

Description

Second attempt a hole #5. Hole abandoned again due to issues with azimuth/shifting of drill. Hole moved ~30m and drilled as PGH-18-06.

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|------|------|------------|--|---|
| PGH-18-05B | 0 | 3.38 | OVB | Overburden | Casing / Overburden |
| PGH-18-05B | 3.38 | 6.7 | SYE-BX | Alkali Feldspathic Breccia with Carbonatite Infill | Mosaic breccia, clasts are angular to sub, rxn rims from 3mm to completely altered small clasts <3cm. Clasts red-pink, chl alt bt, k-fspar dominated CRBT infill; cream to light blue-grey, patchy fg fluorite, rimmed by blue amph, diss hem, local anhedral py up to 5mm. Trace pyrrhotite |
| PGH-18-05B | 6.7 | 7.25 | CRBT | Carbonatite | Light green-grey-pink, fg, massive, patchy fluorite (2%), trace diss hem/py, UC/LC bx, Fe-Ox staining along fractures. |
| PGH-18-05B | 7.25 | 11.7 | QTZ-SYE | Alkali Feldspathic | Pink-med red, fg- peg locally up to 3.5cm. Qtz (10%), k-fldsp (40%), plag (30%), 20% bt/amph. Bt being alt to chl, blue fg radiating amph filling fractures and patchy. Weak to moderate selectively pervasive hematite alt, |
| PGH-18-05B | 11.7 | 24.5 | SYE-BX | Alkali Feldspathic breccia with Carbonatite | Multiple crbt veins from 5cm-175cm, contacts are rimmed by black bt/amph and are undulating to brecciated. Alkali clasts are sub-angular and locally have rxn rims up to 1cm. Alkali; fg, modal % as above, higher degree of fenitization (more prominent blue amph) CRBT; cream to light gre-pink-purple-blue, fg-cg locally, massive to weakly banded(?), patchy trace fluorite, calc>dol, locally Calc>Sil>Dol. Trace diss py fg to anhedral. Apt cumulates up to 4mm forming weak bands |
| PGH-18-05B | 24.5 | 32 | SYE | Alkali Feldspathic | Alkali as above, clasts sub angular 5mm-8cm, rxn rims of bt/blue amph from 5mm to completely alt. CRBT; light pink-green-grey-blue, rimmed by blue amph/infilling smaller fractures. Massive with wispy bands of blue-green, 2% pyrrhotite as masses up to 3cm across surrounded by blue amph, trace diss py local crystals up to 3mm. Trace diss hematite. Local bt within CRBT xtals <3mm Contacts are commonly brecciated |
| PGH-18-05B | 32 | 33.8 | CRBT-BX | Carbonatite Breccia with Alkali Clasts | Alkali as above, clasts sub angular, rxn rims from 5mm to locally completely alt, clasts from 5mm- |
| PGH-18-05B | 33.8 | 36 | SYE | Alkali Feldspathic | As above, minor CRBT 34.8-35:light pink-purple-green, fg, massive, vfg apt (light orange-cream) forming wispy bands. UC/LC undulating & rimmed by blue amph |
| PGH-18-05B | 36 | 36.5 | MDYKE | Carbonate altered Mafic Dyke | Light green-grey, non-magnetic, carb alt groundmass, trace diss py, brecciated UC/LC |
| PGH-18-05B | 36.5 | 50.8 | QTZ-SYE | Alkali Feldspathic with Carbonatite | Alkali is jointed with crbt infilling joints @ ~ 10cm spacing, veins range from 1mm to 60cm, not all veins along same orientation but there is dominant joint set at 35/300. Alkali light red-pink, moderate-strong selectively pervasive hematite alteration, mg, Qtz 10%, K-fldsp 70%, bt 20%. Locally clasts/veins have rxn rims up to 1cm CRBT; cream to light grey-pink-green-blue-purple, fg, massive, calc-silicate > Dol, local apt cumulates commonly rimming veins and clasts of alkali. Trace diss/blebs of py/pyrrhotite with cubes up to 7mm locally. Trace diss hem, trace patchy fluorite. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|-------|-------|------------|--|--|
| PGH-18-05B | 50.8 | 53.9 | CRBT-BX | Carbonatite breccia with Alkali clasts | Alkali as above with CRBT breccia zones, and veining throughout. 50.8-51.4: CRBT; cream to light pink-purple-blue, massive, wispy blue mineral (amph), trace diss anhedral py/po, vfg beige mineral <1mm. UC @ 50/130, planar. LC brecciated 51.8-52: alkali breccia, crbt in fill, angular clasts 5mm-5cm, rxn rims of bt up to 5mm. 53.50-53.9: Breccia, clasts sub-angular, 5mm-5cm, rxn rims <7mm, some clasts completely replaced. CRBT; light pink-purple, mottled, diss hem, fg, stringers of py/po 2% |
| PGH-18-05B | 53.9 | 54.46 | MDYKE | Mafic Dyke | Green-grey, fg margins, core has amygdales <1mm filled with carb, magnetic, chl masses <3mm, planar closed UC& LC @ 30/130 |
| PGH-18-05B | 54.46 | 55.92 | SYE | Alkali Feldspathic | Intermittent crbt veins <1cm, green-grey-red/pink, mg. Qtz 10%, k-fldsp 50%, bt 20%, neph 20%. |
| PGH-18-05B | 55.92 | 57 | CRBT | Carbonatite | Cream to light purple-grey, massive, fg, diss hem within light purple patches, vfg light orange mineral forming wispy bands, trace diss py. LC bx |
| PGH-18-05B | 57 | 65 | SYE-BX | Alkali breccia with carbonatite infill | Alkali as above; locally pegmatitic xtals up to 2.5cm, highly fenitized (masses of fibrous blue amph up to 2cm) breccia zones up to 40cm, between zones evenly spaced crbt veins <2cm wide. CRBT in fill is light pink-purple-grey-cream, massive, fg, diss hem, local stringers of py/pyrrhotite, patchy fluorite, apt cumulates near contacts/clasts. Veins / clasts commonly rxn rims of bt/blue amph |
| PGH-18-05B | 65 | 66 | CRBT-BX | Carbonatite with breccia | Cream-blue to light pink, fg, massive, wispy bands of fg blue mineral (amph?) + diss py, apt cumulates up to 5mm near contacts, irregular blebs of py/po up to 2cm brecciated LC |
| PGH-18-05B | 66 | 66.85 | SYE | Alkali Feldspathic | Alkali as above, mod-strong selectively pervasive hem alt, crbt veining <5mm, patchy blue amph, bt being alt the chl |
| PGH-18-05B | 66.85 | 72 | CRBT-BX | Carbonatite Breccia | CRBT; light pink-purple-blue-green, fg massive, local discontinuous wavy bands with apt cumulates occurring near contacts and surrounding clasts. 5% po/py irregular masses up to 4cm. |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|------------|-------|------|-----------|----------|-----------|--------------------|-------------------------------------|
| PGH-18-05B | 11.68 | VN | 55 | 35 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-05B | 19.73 | VN | 60 | 65 | | LC CRBT w/ Alkali | undulating, closed |
| PGH-18-05B | 19.81 | JNT | 60 | 250 | | JNT in Alkali | open, rough, amph fill |
| PGH-18-05B | 19.93 | JNT | 70 | 60 | | JNT in Alkali | open, rough, amph fill |
| PGH-18-05B | 20.82 | VN | 50 | 60 | | UC CRBT w/ Alkali | planar, closed |
| PGH-18-05B | 23.95 | VN | 60 | 85 | | LC CRBT w/ Alkali | planar, closed |
| PGH-18-05B | 24.64 | JNT | 50 | 110 | | JNT in Alkali | planar, open, rough, amph infill |
| PGH-18-05B | 25.4 | VN | 60 | 105 | | LC CRBT w/ Alkali | undulating, closed |
| PGH-18-05B | 25.76 | JNT | 70 | 285 | | JNT in Alkali | rough, open, amph infill |
| PGH-18-05B | 29.46 | CT | 55 | 120 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-05B | 34.95 | CT | 65 | 60 | | LC CRBT w/ Alkali | undulating, closed |
| PGH-18-05B | 42.1 | VN | 35 | 310 | | CRBT vein | planar, closed |
| PGH-18-05B | 42.4 | VN | 35 | 300 | | CRBT vein | planar, closed |
| PGH-18-05B | 50 | VN | 23 | 290 | | LC CRBT vein | planar, closed |
| PGH-18-05B | 50.4 | JNT | 20 | 220 | | JNT in Alkali | undulating, rough, open, chl infill |
| PGH-18-05B | 50.8 | CT | 50 | 130 | | UC CRBT w/ Alkali | undulating, planar, rxn rim |
| PGH-18-05B | 53.5 | CT | 40 | 265 | | UC crbt bx | irregular, closed |
| PGH-18-05B | 54.43 | CT | 30 | 130 | | LC MDYKE w/ Alkali | undulating, closed |
| PGH-18-05B | 58 | CT | 50 | 45 | | UC crbt bx | planar, closed |



| | | | |
|---------------------|------------------------------|---------------|---------------------------------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 19-Apr-2018 |
| Township/Area: | Killala Lake Area | End Date: | 30-Apr-2018 |
| Claims (converted): | 262731, 307858, 230752 | Described by: | L.A. Giroux, MSc, PGeo, B. Clark, BSc |
| Claims (legacy): | TB 4256251 | Log date: | 4-May-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 338.00° | | Easting: 519644 | | Core size: HQ | | Cemented: No | |
| Plunge: -60.00° | | Northing: 5432360 | | Casing: Pulled | | Stored: Yes | |
| Length: 633.0 m | | Elevation: 311.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-06 | Reflex | 24 | 336.5 | -59.3 | 57351 |
| PGH-18-06 | Reflex | 72 | 337.4 | -59.3 | 57706 |
| PGH-18-06 | Reflex | 126 | 337.4 | -59.3 | 57202 |
| PGH-18-06 | Reflex | 180 | 338.1 | -59.1 | 57064 |
| PGH-18-06 | Reflex | 231 | 338.2 | -59.2 | 57080 |
| PGH-18-06 | Reflex | 288 | 339.1 | -59.2 | 57005 |
| PGH-18-06 | Reflex | 339 | 339.5 | -59.3 | 57275 |
| PGH-18-06 | Reflex | 387 | 339.6 | -59.3 | 57007 |
| PGH-18-06 | Reflex | 441 | 339.5 | -59.3 | 57210 |
| PGH-18-06 | Reflex | 489 | 339.8 | -59.3 | 57153 |
| PGH-18-06 | Reflex | 552 | 341.2 | -59.2 | 56787 |
| PGH-18-06 | Reflex | 603 | 340.1 | -59.3 | 57039 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|--|---|
| PGH-18-06 | 0 | 7.75 | OVB | Overburden | Overburden / CASING |
| PGH-18-06 | 7.75 | 8.33 | QTZ-SYE | Alkali Feldspathic | Med red to pink, slightly weathered, mg, qtz 10%, k-fldsp 50%, bt 20%, 20% neph (20%). Moderate selective pervasive hematite alteration. |
| PGH-18-06 | 8.33 | 9.15 | CRBT | Carbonatite | Light grey to brown-green, fg, massive, brecciated LC, vfg beige mineral forming weak wispy bands, trace fg diss hem. |
| PGH-18-06 | 9.15 | 12.75 | SYE | Alkali Feldspathic | As above. 9.15-9.85: pegmatitic, xtals up to 3cm |
| PGH-18-06 | 12.75 | 15.4 | SYE | Polymictic Dyke | Matrix supported, clasts from 1mm-50mm, polymictic, clasts are sub-rounded to sub-angular, clasts of fg alkali (pink, minor chl alt), cg alkali (finitized, blue amph), some clasts pure fspar. UC/LC @ low angle TCA <10, undulating, brecciated contacts. |
| PGH-18-06 | 15.4 | 16.43 | CRBT | Carbonatite | Pink to cream to light green-blue, fg, massive, local wispy bands of blue-green (amph + apt + py), trace diss py, diss hem. BX UC & LC |
| PGH-18-06 | 16.43 | 25.9 | SYE | Alkali Feldspathic + Carbonatite veining | Alkali as above, local blue amph near contact & rimming CRBT CRBT; up to 20cm, locally bx contact, light pink-cream-blue, fg, massive, trace diss py, apt cumulates forming wispy bands near contacts. Fg black mineral, diss hem. |
| PGH-18-06 | 25.9 | 30.1 | CRBT | Carbonatite | Cream to light pink-blue-green-purple, fg, massive, wispy bands of blue amph and apt cum (dark br-grn) up to 2cm, local alkali clasts up to 4cm and commonly completely altered. Cross cut but lighter coloured dyke (later phase, more dol rich). Apt near clasts & contacts. LC undulating |
| PGH-18-06 | 30.1 | 41.5 | CRBT-BX | Carbonatite + Alkali Feldspathic | Alkali as above, CRBT bx zones up to 1.5m CRBT; light purple-grey-cream, fg, massive, locally weakly vuggy, patchy fg fluorite, apt cumulates up to 2cm along contacts/clasts, diss hem, trace diss py. Contacts are planar-undulating, locally brecciated, commonly with dissolution/rxn rims along contacts. |
| PGH-18-06 | 41.5 | 48.18 | SYE | Alkali Feldspathic | Med red to pink, qtz 10%, k-fldsp 50%, bt 10%, amph 10%, chl 10%, plag 10%. Fg-mg, selectively pervasive chl/hem/amph alt. Thin crbt veins <1cm (3per m) |
| PGH-18-06 | 48.18 | 48.65 | CRBT | Carbonatite | Light pink-cream, cg, massive, trace diss/blebs of py, diss hem, apt cumulate near LC (green-brown, <4mm) |
| PGH-18-06 | 48.65 | 52.32 | SYE | Alkali Feldspathic minor CRBT BX | Alkali as above. CBRT veins up to 3cm, light pink-blue, fg, wispy blue, diss hem. |
| PGH-18-06 | 52.32 | 53.56 | CRBT | Carbonatite | Light pink-blue to green-grey, locally 25% bt/chl (2mm), fg, massive, diss hem, trace diss py |
| PGH-18-06 | 53.56 | 58.1 | SYE | Alkali Feldspathic + Carbonatite | Alkali as above. CRBT up to 0.5m; light pink-purple-cream, patchy fg blue amph, forming wispy bands and rimming crbt vein/clasts locally. Diss hem, trace diss py up to 5mm, apt cumulates up to 5mm locally near contacts. |
| PGH-18-06 | 58.1 | 80.3 | SYE | Alkali Feldspathic | Alkali; med red-grey-pink, fg-cg, pegmatitic locally (2cm), qtz 10-15%, k-fldsp 60%, bt/chl 10-30% locally), amph 10%. 65.5-67: CRBT BX; grey to green-beige-purple, fg, diss/blebs py, 69.80-70: low angle crbt veining containing 3cm bx with clasts of crbt. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-06 | 80.3 | 86.3 | CRBT | Carbonatite | Light pink-green-beige to grey-green locally, fg, massive. 80.3-82.3: fg, local vugs, patchy fluorite, trace diss py, apt cumulates up to 4cm, fg light beige mineral, 82.3-85: grey-green-blue, magnetic, locally mottled, mafic dyke that has been intensely altered?, amph up to 3mm 85-86.3: light pink-purple, fg diss black mineral, planar LC, patchy fluorite, diss hem |
| PGH-18-06 | 86.3 | 90.5 | SYE-BX | Alkali Feldspathic Breccia with Carbonatite infill | Alkali as above. Clasts from 5mm-80mm, rxn rims up to 8mm, smaller clasts being completely altered to bt, crbt/local qtz infill. CRBT; light pink-purple-green, fg, mottled, patchy fluorite locally, blue amph rimming clasts, local apt cum up to 3mm (brn-red, wispy) |
| PGH-18-06 | 90.5 | 91.25 | MDYKE | Mafic Dyke | Black, fg, magnetic planar UC@45/275& LC 10/310 |
| PGH-18-06 | 91.25 | 97.9 | QTZ-SYE | Alkali Feldspathic | Grey-green-pink, bt 30% (being replaced by chl), local veins with alt halos up to 1cm (albite?, pink halo). Qtz 10%, k-fldsp 40%, amph 15%, albite? (5%). |
| PGH-18-06 | 97.9 | 108 | SYE-BX | Alkali Feldspathic Breccia with Carbonatite infill | Breccia zones up to 0.5, massive CRBT up to 1.5m. Alkali as above, clasts up to 8cm, angular to sub-angular, local rxn rims up to 1cm (bt/amph), clasts are fractured (mosaic) CRBT; light pink-cream-blue-green-purple, locally weakly banded, wispy bands of apt cum surround clasts/contacts, diss hem with apt, trace diss py & masses up to 1cm. Locally weakly vuggy, vugs up to 5mm, staining around vugs, hem infill. 102.4-105: Unbrecciated |
| PGH-18-06 | 108 | 109.55 | SYE-BX | Alkali Feldspathic + minor breccia | Alkali; med red-pink, fg-mg, selective pervasive chl/hem alt (moderate). Qtz 10%, bt/chl 15%, k-fldsp 50%, amph 15%, neph 10%. LC sharp, planar @20/122 |
| PGH-18-06 | 109.55 | 110.8 | MDYKE | Mafic Dyke | Black, fg, magnetic, amygdales filled with carb/chl <3mm. UC & LC sharp, planar, chilled margins ~5cm. |
| PGH-18-06 | 110.8 | 117.2 | SYE | Alkali Fekldspathic | Alkali as above, locally cg up to 1cm. Crbt veins <5cm rimmed by blue amph. |
| PGH-18-06 | 117.2 | 124.85 | SYE-BX | Alkali Feldspathic Breccia with Carbonatite infill | Alkali as above, clasts up to 8cm, angular to sub-angular, local rxn rims of bt/amph. CRBT; light pink-cream-blue-green-purple, fg, mottled, fg diss py, diss hem, apt cum forming wispy bands near contact/clasts, local fg bt <2mm. Fg black diss mineral pyrochlore(?) |
| PGH-18-06 | 124.85 | 134 | MIX ZONE | Quartz-Syenite + Carbonatite Breccia | Mixed zone of Carbonatite-Breccia and Quartz-Syenite to Syenite with Carbonatite veining. Carbonatite breccia subsections up to 70cm consisting of densely packed angular syenitic clasts with reaction rims up to 5mm of brownish-black mica/amph. Occasional fluorite patches 0.5-3cm wide noted in carbonatite matrix from ~126.5-132m. Locally up to 10-20% fg pale yellow-green epidote (replacing pyx?) in syenite as well as matrix of breccia. Up to 10-15% quartz only locally. 132.2-132.4m: CRBT vein banded with cumulates of rounded deep red hematized clasts (1-5mm). Banding at 50/180. Contacts sharp & brecciated, ~// to banding. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------------|---|
| PGH-18-06 | 134 | 141.44 | QTZ-SYE | Quartz-Syenite | Mg to cg massive quartz-syenite to granite with minor carbonate veining and up to 30% qtz locally (typically <10%). Locally somewhat gneissic in appearance (where faintly banded by up to 20% cg dark brown to green mica/amph/chl). <5% carb veining, typically <0.5cm. Wide veins have biot/amph rxn rims. Single 6cm wide white vein at 135.5m (UCT at 60/210, LCT highly irregular ~perp to CA) spotted by 1% blebby sulph + hem. 30+% ep/chl or blue amph patches and veins locally. |
| PGH-18-06 | 141.44 | 149.32 | MIX ZONE | Quartz-Syenite + Carbonatite Breccia | Similar to interval from 124.85-134m. Approximately 40% Carbonatite Breccia, 60% Quartz-Syenite. Thick mica/amph rxn rims typically associated with crbt veining. Occasional fg purple fluorite patches in carbonatite veins. From 142.92-143.1m: Massive fg white Carbonatite vein spotted by vfg hematite. Bands of fg apatite (UV) and coarse blebs of py+/-pyrochlore. Contacts at 55-60/240, near planar, sharp. No reaction rim. From 148.56-149.3m: Micaceous interval with 80% fg to cg dark brown to black mica + fg amph? ribboned w/ 20% carbonate. Single 4cm wide syenite clast. |
| PGH-18-06 | 149.32 | 156 | CRBT | Carbonatite | Carbonatite with minor brecciated syenite. Massive typically fg-mg light grey to pink CRBT. Ip to 10% fg apatite under UV locally. UCT at ~70/(beta couldn't be determined due to bx'tn), sharp, irregular, bx'td. LCT bx'td and gradational. From ~150.7-151.4m: Crosscutting irregular bands up to 3cm wide of later yellowish-brown Fe-carbonate? At 151.25m: ~15cm zone with 10-15% mm-sized blebs of py + black pyrochlore (or pyroxene???) From 152.2-153.1m: Subinterval of mg pink syenite. Brecciated at contacts. From ~154-154.4m, wispy bands of blueish-grey amph in Crbt. From 155.3m to LCT, inclusions of chl-mica-amph? altered material. Some <1cm wide rounded 'cores' of syenitic material preserved within. |
| PGH-18-06 | 156 | 165 | SYE | Syenite to Qtz-Syenite | Typical syenite with micaceous rich zones. X-cut by 5-10% carbonate veining (up to 6cm wide, typically <1cm) with patches of hematite and fluorite and occasionally blebby pyrite. From 162.6m to end of interval, vcg near pegmatitic QTZ-SYE interval with upwards of 30% cg white feldspar plus qtz locally. With crosscutting dark blue-black amph veins and up to 20% patches of fg dark green acicular secondary mineral (+/-ep,chl). |
| PGH-18-06 | 165 | 165.95 | CRBT | Carbonatite | From 165.0-165.3m: Vfg med green micaceous mafic dyke? At transition into Carbonatite. Abundant fluorite (+kspar and possible neph) in carbonate veins. From 165.3m: Cg light pink carbonatite cut by later stage yellowish-brown carbonate veining (65/080). <1% blebs py a/o pych, 10-20% fg kspar (absorbed clasts). LCT at 65/230 (sharp, planar, open). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------------------------|--|
| PGH-18-06 | 165.95 | 181.77 | SYE | Syenite to Qtz-Syenite w/ lesser CRBT | A medium to coarse grained syenitic interval. Mafic rich zones (>60%, mica-rich). Local ep-chl and sodic (blue amph) alteration. From 174.7-175.0m: Massive vfg white CRBT. Fine apatite under UV. Otherwise barren. At 50/010. From 178.12-178.5m: CRBT. With abundant vfg kspar throughout. At 15/210. From 178.5-179.1m: Coarsely brecciated syenite (angular clasts) w/ weakly developed reaction rims. From 179.1-179.72m: CRBT. At 60/020. Slightly coarser grained. Spotted by few % deep red hematite. <1% disseminated py. |
| PGH-18-06 | 181.77 | 184.4 | CRBT | Carbonatite | Pale pinkish Carbonatite. Faint to moderate banding defined by fine red-purple spotting. UCT at 50-55/310, near planar, bx'td. LCT in breccia. Banding at 50-60/320. Tr-1% disseminated to blebby py+/- pych. 7cm wide mafic band spotted with up to 1mm plag grains starting at 182.8m (50/315) - DIAB dyke?. |
| PGH-18-06 | 184.4 | 193.13 | SYE | Syenite | Med to coarse grained med pink spotted with green, blue and black (amph/pyx). <5% faint ribbonary carbonate veins producing a faint zebra like extensional feature in spots. From 185.18-185.23m: Mica-chl rich CRBT zone. Irregular bx'td contacts. Broken on chlorite coated fractures. Weakly developed slickensides on fract. From 188.2-~188.7m: Heavily bx'td. Brittle FZ. Chl coated slickensides fract. 07/360 (uncertain if angle representative). From 191.2-191.4m: CRBT vein. Bx'td contacts, primary banding overprinted - no angle determined. Spotted by rusty red alt'n. No sulph/pych observed. |
| PGH-18-06 | 193.13 | 195.97 | CRBT-BX | Carbonatite Breccia | Coarsely brecciated angular purplish-pink syenite clasts up to 20cm wide (typically <5-10cm). Well developed biot-chl reaction rims and chlorite coated slickensides fractures. Fluorite patches noted in carbonate veins. Upper ~40cm contains semi-massive py+mt+/-po (strongly magnetic) with carbonate in matrix around SYE clasts. Mag susc up to 14. Fg sugary apatite noted on fracture surfaces (with and without UV). More sulphides in breccia matrix immediately below dyke. From 194.13-194.53m: Fg medium blueish-grey dyke. Ijolite? Chl-coated fract. Spotted with fine biotite, green and black pyx?, 10% pale pink neph? + carb? Very fine ribbonary carb veins. UCT at 70/340. LCT at 55/320 |
| PGH-18-06 | 195.97 | 206.08 | CRBT | Carbonatite | Light grey to pink, medium to very coarse grained CRBT. Moderately banded except where vcg. Wispy dark blue-black chl-amph bandings. Patches and bands of apatite noted under UV. Blebs of pyrrhotite+magnetite (strongly magnetic) in up to 2cm wide bands ~perp to CA. Pych possibly associated with sulphides. Banding at 196.0m (60/180), 199.1m (40/160), 204.8m (40/260). UCT bx'td, LCT at 35/280 (sharp, planar). |
| PGH-18-06 | 206.08 | 209 | SYE | Syenite w/ lesser CRBT veining | Unbrecciated syenitic interval with <10% carbonate veining. Clay alt'n noted on open fractures. From 206.1-206.7m: Banded by up to 6cm wide fg dark green-grey mafic (or ijolitic) veins with up to 1.5cm wide reactions envelopes (carb+clay+chl?) From 206.77-206.96m: Carbonatite vein at 50/325. Similar to upper CRBT unit. |
| PGH-18-06 | 209 | 210 | CRBT | Carbonatite | Light pink, mg carbonatite. Spotted by deep orangy red kspar. 1-2% disseminated to blebby sulph (+pych?). |
| PGH-18-06 | 210 | 211.3 | DIAB | Diabase Dyke | Very fined grained dark grey-black diabase dyke. 5% light grey plag phenocrysts/laths. Chlorite coated slickensided fractures. UCT at 20/160, undulating, sharp, chlorite slickensides. LCT at 15/060, similar to UCT. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------|---|
| PGH-18-06 | 211.3 | 212.05 | CRBT | Carbonatite | Similar to unit above DIAB dyke. |
| PGH-18-06 | 212.05 | 220.42 | SYE | Syenite | A typical syenitic unit with more mafic rich zones. ~10% crosscutting carbonate veins define a weak extensional brecciation (strengthening slightly downhole). 30-40% po+mt in 7cm wide carbonate vein from 216.76m (30/150). Lower contact open, chloritic. |
| PGH-18-06 | 220.42 | 221.5 | CRBT | Carbonatite | Fine grained carbonatite with light yellowish-green tint. Colour due to irregular undulating later stage Fe-carb veins? Up to 5cm wide patches and bands of vfg purplish-red alteration mineral with apatite(?) (fluoresces light blue to white). Single fine ribbon of fluorite. |
| PGH-18-06 | 221.5 | 230.1 | SYE | Syenite/Syenite Breccia | Similar to previous SYE interval but with increasing carbonate (20-25%) and more strongly brecciated locally. Extensional fracturing results in zebra-like stripes in places. Apatite patches and bands noted in carbonate veins under UV. |
| PGH-18-06 | 230.1 | 231.34 | CRBT | Carbonatite | Fg, sugary, massive, light grey Carbonatite. Up to 1% py (cubic), <0.5% pych? UCT at 50/340, sharp, stepped, open. LCT at 65/360, sharp, near planar, open, clay coated. |
| PGH-18-06 | 231.34 | 237.8 | SYE | Syenite | Generally unbrecciated syenitic interval. Typically medium grained and deep pink in colour. Some banding defined by cg biotite plates. From 236.0-236.2m: Mg Carbonatite spotted by deep red hem at 30/300. |
| PGH-18-06 | 237.8 | 247.4 | SYE-BX | Syenite/Syenite Breccia | Mix of unbrecciated and brecciated syenite. Syenite similar to previous intervals. <20% Crbt overall. Fluorite noted in veins. Occasional blueish-amph and greenish-chl-ep veins in unbx'td sections. From 240.7-241.9m: Carbonatite. Fg, yellowish brown to grey. UCT bx'td. LCT at 30/310 (irregular, sharp). |
| PGH-18-06 | 247.4 | 250.9 | DIAB | Diabase Dyke | Massive, vfg dark grey dyke. Up to 1cm long plag laths and coarse magnetite grains (up to 2mm). UCT at 15/065, sharp, planar. LCT at 20/050, sharp, planar, closed. |
| PGH-18-06 | 250.9 | 252.6 | QTZ-SYE | Syenite/Quartz-Syenite | Massive, unbrecciated, mg, deep pink alkalic interval w/ <10% mafic component. Locally only (towards centre of interval) 20-30% quartz. From 241.1 to 241.44m, vfg greenish-grey mafic dyke(?) banded by very fine carb stringers. Non magnetic. |
| PGH-18-06 | 252.6 | 254.2 | CRBT | Carbonatite | Massive, unbanded, white to light yellowish coloured, fg sugary Carbonatite. Spotted by 1-2% fg disseminated hem, sulph +/-pych? UCT at 20/330 (sharp, irregular, 7cm syenite at top of interval). LCT at 90/000 (banded). |
| PGH-18-06 | 254.2 | 257.5 | SYE-BX | Syenite Breccia | Typical Syenite Breccia where syenite >> carbonatite. Mafic reaction rims around sub rounded sye clasts. Fluorite noted in carb veining. |
| PGH-18-06 | 257.5 | 276.33 | QTZ-SYE | Syenite/Quartz-Syenite | A med to coarse grained (locally vcg) Syenite to Quartz-Syenite with only minimal carbonate veining. Banded by 20-40cm wide mafic zones (40-50% dark green to black biot+pyx). Mafic minerals define weak gneissic texture locally (generally subparallel to CA). Fractures filled by blue amph +/- carb and bright green ep+/-chl. Both also occur as patches replacing pyx? |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------|---|
| PGH-18-06 | 276.33 | 296.6 | SYE-BX | Syenite/Syenite Breccia | To 281.7m, pinkish red alkali feldspar is moderately brecciated by 30-40% white carbonate veining. Angular to sub rounded kspar clasts have dark brown micaceous rxn rims up to 1cm thick. All mafics have been replaced by secondary sodic amph, ep, chl. Tr sulph +/- pych noted in carb veining. Clasts are ~80% kspar. 281.7-287.8m, includes intervals up to 1m long of unbx'td syenite with only minor carb veining. 287.8-289.0m, back to syenite-breccia (sy>carb). 289.0-292.6m, only minor brecciation & lesser carb veining. 292.6-293.9m, Sye-Bx with 30cm banded CRBT vein at 65/230. 293.9-296.6m, unbrecciated syenite. 0.5-10cm wide crbt veins. |
| PGH-18-06 | 296.6 | 298.26 | CRBT | Carbonatite | Blueish-grey low angle fg Carbonatite to Silicocarbonatite vein (fine mica). Irregular, undulating banding at ~10/080. 2cm wide cg pink carbonate vein near parallel to banding. Minor syenitic clasts with thick (0.5-1cm) reaction rims at contacts. Both contacts strongly brecciated (angle undeterminable). |
| PGH-18-06 | 298.26 | 311.3 | SYE | Syenite | A medium to coarse grained massive syenite w/ <5% qtz. Predominantly pink kspar with up to 40% mafics variable altered to epidote/chlorite. Generally devoid of fabric. Common x-cutting carb veins, typically <3mm wide. 301.55-302.0m: Fg salt & pepper textured Silicocarbonatite (carb+biot+1-3% fine sulphides). 302.0-~304.2m: Unusual breccia zone with patches of silicocarbonatite, mg to vcg kspar, pistachio green ep+/-chl in a dark brown-black micaceous matrix with only minor carb. Matrix is moderately magnetic. 307.66-308.1m: Zebra striped zone (micaceous bands with fine ribbony carb veining) ending with 4cm wide carbonatite vein at 50/310 with 5-10% hematite patches. |
| PGH-18-06 | 311.3 | 317.47 | SYE-BX | Syenite Breccia | Continuation of upper unit but variably brecciated by up to 30% carbonatite. Reaction rims up to equivalent thickness of sye clasts. |
| PGH-18-06 | 317.47 | 323.69 | SYE | Syenite | Transitions back to unbrecciated syenite. Mafics define a faint gneissic fabric ~// to CA. Carbonate veining up to ~2cm thick also runs parallel to CA from 320.1-323m. |
| PGH-18-06 | 323.69 | 325.34 | MDYKE/CRBT | Carbonatite/Mafic Dyke? | Mixed zone with alternating bands of greyish Carbonatite and green to black Mafic Dyke? Banded at 10-50cm intervals. Mafic zones exhibit undulating banding at ~35/280. Locally moderately magnetic. Mafic bands consist of coarser grained biot+pyx?+orangy pink neph?+<10% carb - ljolite? Crbt contains up to 30% mafics locally. Possible apatite bands at LCT. |
| PGH-18-06 | 325.34 | 328.08 | QTZ-SYE | Quartz-Syenite | Coarse grained Quartz-Syenite to Granite (>30% qtz locally). Minor carb veining (<5%). At 327.4m, 3cm wide patch of blue amph and ep+/-chl in veins. Weak gneissic fabric //-to CA developed over top ~1m of interval (defined by biot+green pyx). |
| PGH-18-06 | 328.08 | 329.12 | DIAB | Diabase Dyke | Very fine grained, massive dark grey to black dyke with 3-5% white plag? phenocrysts. UCT at 45/220 (sharp, irregular, chilled). LCT at 45/220 (sharp, planar, chilled). |
| PGH-18-06 | 329.12 | 331.35 | CRBT | Carbonatite | Light grey to pink (wet) fg-mg Carbonatite. mm-sized pych aligned in band at 329.36m. Otherwise <1% fine disseminated pych? With lesser sulph (py). Spotted by vfg deep orangy red hem+carb alt'n? 15cm wide gran clast from 330.23m. UCT at 45/220. LCT highly irregular (could not get angle). |
| PGH-18-06 | 331.35 | 355.2 | SYE-BX | Quartz-Syenite/Syenite Breccia | Mixed zone, variably brecciated with up to 3m unbrecciated intervals. Syenite>>Carbonatite. 336.8-337.5m: Cg light pink granite transitioning into vcg pegmatite. 30-40% quartz+plag with lesser kspar, <10% mafics. X-cut by fine epidote+/-chl and blue amph+carb veins (10-20%). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------|--|
| PGH-18-06 | 355.2 | 357.08 | CRBT | Carbonatite | Light greyish-pink Carbonatite. Typically cg-vfg. Irregular wispy blueish-grey banding at 35/220 (amph?). UCT is brecciated. Top 40cm contains clasts and patches of syenitic material and is highly irregularly banded by up to 30-40% apatite. LCT is sharper and near planar (w/ typical alt'n rim) at 65/230. Fine to coarse blebs (1cm) of py+po. |
| PGH-18-06 | 357.08 | 360.9 | SYE | Syenite/Carbonatite | Fine to medium grained, ranging from spotted purple-green-blue mafic rich (qtz-sye to sye to deep reddish-pink (mafic poor) syenite. Banded by ~30% Carbonatite veins up to 35cm wide. Crbts all at moderate to high angles to CA. Sye also ribboned by fine carb veining (mod CA). |
| PGH-18-06 | 360.9 | 362 | CRBT | Carbonatite | Mg-cg pink Carbonatite. UCT bx'td, irregular. LCT at ~75/190 (near planar, bx'td). Locally up to 10% blebs 1-20mm wide of py+po+mt. |
| PGH-18-06 | 362 | 364.9 | UNKN | Mafic/ljolite??? | Fine grained dark blueish-green micaceous interval with dark brown mica (biot/phlogopite) + blue amph?, green pyx?, neph+kspar?. Very fine ribbony carb veining //-CA. |
| PGH-18-06 | 364.9 | 372.56 | SYE-BX | Syenite/Syenite Breccia | Typical fine to medium grained syenite. Occasional 1-2cm carb veins. Typical sodic amph and epidote veining. From 369.0-369.69m: Syenite-Breccia (30-40% Crbt matrix) 369.69-370.16m: Carbonatite. LCT at 80/080 (planar). From 370.16m to end, increasing carb veining, weakly bx'td, increasingly cg, increasing blue amph veining. LCT at 25-35/130 (banded, bx'td), fluorite noted in carb veining. |
| PGH-18-06 | 372.56 | 377.63 | CRBT | Carbonatite | White to light pink Carbonatite. Barren white from top to ~374.5m. From 374.6-375.3m, remnant texture of radiating tabular vcg xtals (replaced by finer grained carbonates?) with interstitial vfg reddish brown hem? LCT at 75-80/040 (sharp, near planar). |
| PGH-18-06 | 377.63 | 381.85 | SYE | Syenite | From 377.63-378.24m: Medium pink fg-mg alkalic rocks weakly brecciated by x-cutting carbonate veins up to 2cm wide. From 378.24-378.53m: Carbonatite. Light grey to pink, wispy blue (amph) and brown (carb?) veins ~// to contacts. Apatite bands and elongated py-po blebs both // to banding. UCT at ~80/350 (irregular/bx'td, sharp, rxn rim on sye). LCT at ~75/230 (banded, near planar, alt'n of sye). Below is typical of more mafic-rich syenitic/quartz-syenite intervals. Variably grain size (fg-cg). Biot+pyx? (up to 30% locally) defines a weak foliation ~// to CA. ~5% x-cutting carb veining up to 2cm wide. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------|--|
| PGH-18-06 | 381.85 | 407.47 | CRBT | Carbonatite | <p>A light pink Carbonatite varying from fg to vcg. Locally banded by apatite +/- wispy blue amphiboles. Py blebs and cubes often associated with patches of blue amph.</p> <p>UCT at ~70/110, bx'td and irregular, banded with apatite. CPS <200.</p> <p>At 387.65m, 4cm wide bx/fz at 45/010. Angular crbt clasts (up to 2.5cm) in black chloritic matrix. Open chlorite coated contacts.</p> <p>From ~389-389.68m, ~50% carb : 50% wispy blue-grey bands of acicular blue amph + apatite w/ lesser mica. Fluorite noted in carbonate.</p> <p>At 392.3m, pych + cubic py+ po (brownish coloured sulph) in faint bands with fg apatite.</p> <p>From 395.6 to ~398m, cg light yellowish-green apatite crystals up to 2cm (also visible without UV). Up to 20% locally. Also bands of vfg apatite with very fine disseminated pych? and coarse sulphide blebs.</p> <p>From 399.31-400.2 and 402.67-53m: Micaceous bands up to 40cm wide. Fg with coarser 'books' of micas. Greenish-grey to dark brownish-grey. Pyroxenite??</p> <p>From 400.2-400.5: Very coarse grained, pegmatitic elongated bladed white carbonate xtals up to 6cm long. Xtals unaligned.</p> <p>From 401.33-401.9m: Up to 20% pyrrhotite+magnetite (strong magnetic, somewhat net textured) in vcg carb.</p> <p>LCT strongly irregular, brecciated. Approx. 45dtca.</p> |
| PGH-18-06 | 407.47 | 414.4 | DIAB | Diabase Dyke | <p>Very dark grey aphanitic Diabase dyke. Strongly magnetic. Core frequently broken up, with greasy slickensided chlorite coated fractures.</p> <p>Single 2.5x2.5cm 'clast' with light grey carb?+mt at 410.07m. From 411-412m, 1-2% plag laths. LCT at 30/340 (sharp, planar).</p> |
| PGH-18-06 | 414.4 | 441.13 | CRBT | Carbonatite | <p>Continuation of Carbonatite interval above Diabase Dyke. Wispy apatite (+/- blue-grey acicular amph) bands 20-30% overall of unit.</p> <p>From 416.77-417.1m: Orbicules developed up to 6mm in size in a carbonatite matrix within a low angle irregular band. Orbicules are strongly magnetic (loose ones can be picked up with magnet). Typically elongated oval/egg shape. Cores resemble matrix (carb spotted with black mineral), 1st rim green, 2nd rim black/micaceous.</p> <p>From 429.4-430.4m: Cumulates of fine to coarse grained magnetites associated with vfg green apatite-rich bands. 2-4% mt, <1% sulph blebs.</p> <p>From 437.8-438.34m and 439.88-440.17m: Inclusions of strongly fenitized syenitic material x-cut by amph+carb veins.</p> <p>Banding at 418m (60dtca), 430m (50/300), 431.3m (55/270).</p> <p>At 428.15m, open fracture coated with well formed white carb xtals with brownish coating at 15/270.</p> <p>Very coarse grained bladed carb xtals again 432.5-437m.</p> <p>LCT at 55/200 (banded, planar).</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|-------|------------|----------------------------|---|
| PGH-18-06 | 441.13 | 465.8 | SYE | Syenite to Granite | <p>Massive, unbrecciated light to medium pink rock generally dominated by alkali feldspar. Carbonate veining decreases downhole, with almost no carbonate veining occurring below ~453m. Mafic component also increases downhole from 5 to 20% (biot+green pyx). Below ~455m, white feldspar (plag) & quartz become more dominant with kspar absent in places, magnetite noted (mag susc - up to 7.69).</p> <p>From ~445-445.6m: Low angle carbonatite vein at 20/250 (UCT). UCT banded with coarse py. LCT at ~10dtca (truncated by amph-carb vein).</p> <p>From 446.6-447.25m: Carbonatite vein with 2x15cm wide dark green-black micaceous bands (biot+pyx+carb w/ chlorite coated fractures). UCT at 50/240 (sharp, planar). LCT at 50/200 (sharp, planar). Banding // to contacts. Single mm-wide magnetite vein in 2nd band.</p> <p>From 456.79-457.0m: Fg massive yellow-green epidotized mafic dyke?</p> <p>From 465.57-465.95m: Pegmatite. Orangy kspar + white plag (up to 6cm) with biotite 'books'. Finer interstitial dark green pyx + blue amph</p> |
| PGH-18-06 | 465.8 | 468.7 | SYE-BX | Syenite/Syenite Breccia | <p>Zones of weakly developed breccia with carb+apatite+blue amph veining x-cutting the syenite. Micaceous reacting enveloped to carb veins. Breccia zones 30-40cm wide. Otherwise continuation of unit above.</p> |
| PGH-18-06 | 468.7 | 488.8 | QTZ-SYE | Quartz-Syenite to Granite | <p>Massive unbrecciated medium to dark pink mg alkalic rich interval with 20-30% quartz locally. <10% mafic component. Minor carb veining up to 2cm wide. Dark blue amph+carb veins and coating on fractures.</p> <p>From 479.75-480m: 7cm wide carbonatite vein with 2cm fluorite patch. 5cm wide reaction envelopes (vfg). Brecciated, irregular contacts.</p> <p>From 480.7-481.0m: White, fg Carbonatite vein. UCT at ~60/080 - apatite banded. LCT at 25/120, near planar.</p> |
| PGH-18-06 | 488.8 | 510.4 | SYE-BX | Syenite to Granite Breccia | <p>Mixed zone of Quartz-Sye/Gran and altered alkalic clasts (>80% kspar) brecciated by Carbonatite veins up to 80cm wide (typically <20cm). Alkalic clasts range from angular to sub rounded and are variable enveloped by fg dark brown-black reaction rims. Occasional coarser grained clasts include white feldspars. Abundant fg apatite veining in carbonatite sections under UV. Unit includes unbrecciated alkalic sections up to 1.5m wide (30% of unit overall). Bands of fg magnetite noted at 490m.</p> <p>From 494.4-494.75m: FZ/Breccia Zone at 25/070. 2cm wide zone of heavily chloritized material followed by a 20cm wide breccia dyke.</p> <p>Mixed litho angular clasts in a very bright orange fg alkalic matrix</p> <p>From 497.26-497.42m: Dark grey to black fg mafic band/dyke. With coarser grained biot 'books' - Pyroxenite?</p> <p>From 497.7-498.15m: Vfg greyish breccia dyke with <0.5cm mixed clasts incl alkalic. UCT at 25/090, planar, sharp. LCT at 25/030, bx'td.</p> <p>From 500.95-501.66m: Cg white to light pink Carbonatite. Wispy banding at contacts.</p> <p>From 502.95-503.8m: Carbonatite vein.</p> <p>From 504.2-504.4m: Carbonatite vein with 1cm wide pyrite band // to contacts. At 50/170.</p> <p>From 510.1-510.37m: Fg aphanitic bright greenish-grey dyke? Sugary. At 50/130.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------------------|---|
| PGH-18-06 | 510.4 | 530.62 | GRAN | Granite | A medium pink coarse grained Granite with kspar, up to 30% quartz, < 10% mafics, and 10% white plagioclase locally. Massive and unbrecciated. Typically only minor carbonate veining (<1cm wide). Moderate epidote + blue amph veining throughout. From 513.4-513.67m and 516.0-517.3m: Dark grey sections of >90 fg mafics (predominantly biot) plus <10% carb. From 515.0-515.64m: Carbonatite dyke. Coarse grained, light pink. Minor wispy amph+ap banding. UCT at 55/280 (sharp, planar). LCT approx. perp to CA, highly irregular, sharp. From 524.6-524.75m: Banded Carbonatite vein at 30/240. |
| PGH-18-06 | 530.62 | 533 | CRBT | Carbonatite | A strongly banded fg Carbonatite changing from light pink to med grey at 531.2m. Wispy ap+amph banding at ~35/300. UCT at 70/210 (banded, near planar). LCT approx. perp to CA, bx'td |
| PGH-18-06 | 533 | 542.3 | GRAN | Granite | Similar to upper GRAN unit. Deep reddish-pink colour over top few metres immediately below upper CRBT and again over last 3m above lower CRBT - more intensely fenitized (alkalic plus sodic -(blue amphis)). |
| PGH-18-06 | 542.3 | 543.95 | CRBT | Carbonatite | grading from cream to pink-blue moving down hole. Fg crbt with wispy ap+ blue amph, trace diss py/pyrrhotite, diss hem. LCT @ 60/160 |
| PGH-18-06 | 543.95 | 546 | GRAN | Granite | Pink to opaque-green-brown, altered granite (fenitized))15% qtz, 30% bt, alkali fspar 50%, 5% neph. Local very weak foliation(?) with pods of massive qtz. Fractures have pink-red alt halo and filled with blue vfg amph/chl. |
| PGH-18-06 | 546 | 547.5 | CRBT-BX | Carbonatite + Granite Breccia | 546-546.3: fg, light pink, weakly banded hem +/- ap 546.3-546.7: cg, purple to cream, diss hem 5%, vugs up to 2mm filled with hem/cc, vfg ap rimming xtals. 546.7-547.5: crbt bx, light pink-purple-green-cream, trace diss py up to 2mm, diss hem, vfg apt(?). Gran; light pink, gradational clasts boundaries, rxn rims up to 5mm, clasts are sub rounded. |
| PGH-18-06 | 547.5 | 556.56 | GRAN | Granite | 10-20% qtz, bt 10-20%, kspar 40%, plag, 10%, amph 10%, chl 10%. Light pink-red to cream-brown (where bt more abundant). Locally veins filled with blue amph, wall rock fenitized. Local crbt veins up to 20cm, typically <5cm. CRBT; grey-pink-purple, fg to cg locally, darker zones have more abundant amph up to 2mm elongate xtals. steel blue fg submetallic mineral, H4, anhedral masses up to 4mm. |
| PGH-18-06 | 556.56 | 557.45 | CRBT | Carbonatite | Light pink-purple-green, fg, undulating UC & LC, fg diss hem, apt cumulates up to 1cm. Trace diss py |
| PGH-18-06 | 557.45 | 565.2 | GRAN | Granite + minor Carbonatite | Light pink to med red, fg-peg locally, qtz 20%, k-fspar 40%, plag 20%, bt/chl/amph 20%. Light pink alt halos around fractures, commonly filled with blue amph. Chl replacing biot. 559.5-560: CRBT bx; light green, cg, silo-calc, by gran clasts, sub rounded, no rxn rims. Moving down hole crbt veins sub-parallel TCA up to 2cm. light purple-pink to blue, fg, diss py. |
| PGH-18-06 | 565.2 | 569.3 | CRBT-BX | Carbonatite with Granite clasts | GRAN; mg-cg, fenitized, red-pink, 15% qtz, kspar 60%, plag 10%, bt/chl/amph 15%. Gran clasts rounded-sub, no rxn rims, from 5mm-10cm CRBT; light olive green-pink-grey, at low angle TCA, contacts undulating, fg, weakly banded sub-parallel to contacts with GRAN. fg diss hem. |
| PGH-18-06 | 569.3 | 577 | GRAN | Granite | Qtz 20%, k-fspar 60%, plag 20%. pink-red-cream, fg, fenitized granite, veins of crbt + amph up to 3cm, alt halos of red hem(?), chl replacing bt locally. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------|---|
| PGH-18-06 | 577 | 578.15 | CRBT | Carbonatite | Light pink-cream-blue-green, fg magnetite increasing down hole. Wispy blue amph, ap cum surrounding gran clasts and concentrated above LC forming discontinuous band. Trace diss py, patchy fluorite |
| PGH-18-06 | 578.15 | 582 | GRAN | Granite + minor Carbonatite | Pink-red, fg-mg, qtz 15%, kspar 60%, hem/chl alt crbt veins up to 35cm, commonly <1cm, crbt light green to pink, patchy fluorite, trace diss py, |
| PGH-18-06 | 582 | 587.3 | GRAN | Granite(?) | Highly fenitized granite? Dominated by qtz / bt, fractures filled with amph/chl with light pink-red alt halos. Fg-mg, silica flooded wiping out originals grains. Trace diss sulphides, local white plag up to 3mm. |
| PGH-18-06 | 587.3 | 589.3 | CRBT | Carbonatite with minor Granite | UC brecciated, fg-cg, fg zones are grey-olive green, cg zones light purple-olive green, both have diss hem. Cg zone has ap up to 3mm, trace diss py up to 3mm anhedral. Cg zones appears weakly banded b/c fg py along wavy discontinuous planes. Planar LC @ 75/340 |
| PGH-18-06 | 589.3 | 595.3 | GRAN | Granite | Qtz 50%, bt, 20%, kspar 20%, plag 10%,fg-cg, bt locally being replaced by blue amph or chl. Trace diss py and moly(?). Unit cross cut by multiple <5mm veins of silico-carb + amph, with alt halo (pink-green). LC is gradational |
| PGH-18-06 | 595.3 | 597.5 | CRBT-BX | Carbonatite + Granite | Three different CRBT veins, 12-33cm intruding fg-locally pegmatitic (up to 5cm) granite. Contacts are planar to brecciated commonly with alt halo <7mm giving the appearance of an undulating contact. 595.30-595.67: light pink-purple to cream, diss hem, wispy bands of brown-green apt near contacts and in middle of vein, trace diss py, calc>dol. LC @ 70/160 595.9-569.10: fg-cg, light green to brown, pyrochlore <2mm(?), brown staining possibly REE fluorocarbonate. LC @ 60/110 596.28-956.46: cg, light purple-grey-brown, fg light green-brown apt surrounding carb, with diss hem. LC @ 40/195 |
| PGH-18-06 | 597.5 | 603 | GRAN | Granite | Pink-red to white, qtz 40%, bt 25%, kspar 35%, fg-mg, intersecting crbt veins <3cm with fractures/veins having rxn rims pink/green (hem/chl) with blue amph. |
| PGH-18-06 | 603 | 608.3 | GRAN | Granite + minor Carbonatite | CRBT veins <30cm, fg-cg, light purple-olive green-pink, in cg purple crbt <3mm patches of beige mineral, diss hem. Contacts undulating to planar with minor rxn rims. GRAN; fg-cg, pink-red, 40% qtz, kspar 30%, bt 20%, 10% plag. LC is crbt vein ~18 cm with planar contacts UC @ 20/140, LC @ 40/180 |
| PGH-18-06 | 608.3 | 609.2 | UNKN | Unknown | Strongly to complete selective pervasive hem alt, sharp UC/LC, plag xtals up to 3mm, vfg green-grey mafic (?)groundmass, non-magnetic. Trace diss py up to 4mm. Possibly mafic dyke that has been strongly hem alt? also appears further down hole with CRBT at upper contact. UC@ 40/180, LC @ 30/125. |
| PGH-18-06 | 609.2 | 611.5 | GRAN | Granite + minor Carbonatite | Qtz 20%, kspar 40%, plag 20%, bt 20%, fg-cg, pink-red, intersecting crbt veins rimmed with blue amph, moving down becoming more brecciated. CCt end in CRBT with UC @ 35/180 CRBT; grey to light purple-pink-green, fg, diss py, diss hem |
| PGH-18-06 | 611.5 | 612.1 | UNKN | Unknown | Similar to UK unit described above. Strongly to complete selective pervasive hem alt, sharp UC/LC, plag xtals up to 3mm, vfg green-grey mafic (?)groundmass, non-magnetic. Trace diss py up to 4mm. Possibly mafic dyke that has been strongly hem alt? UC@ ~ 60/180, LC @ 20/145 |
| PGH-18-06 | 612.1 | 618.6 | GRAN | Granite | Qtz 20%, kspar 40%, bt 20%, chl 5%, plag 15%, fg-mg, bt/chl abundances vary across unit. Locally fenitized halos around crbt veins <10cm. Locally cg plag. LC sharp, closed, planar. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|--|
| PGH-18-06 | 618.6 | 619.83 | CRBT | Carbonatite | Cream to light pink-purple-green, cg, blue amph near UC/LC, green-brown apt wispy bands near UC and irregularly through dyke. Diss trace py and blebs up to 5mm. Fg blue amph riming calcite |
| PGH-18-06 | 619.83 | 623.75 | GRAN | Granite + minor Carbonatite | Mg-cg, pink-red, bt alt to chl modal percentages as above, trace diss py, blue amph/chl rimming crbt veins <15cm. Selective pervasive moderate to strong hem alt. CRBT; cream to light pink-purple-green, rimmed by blue amph, with diss hem, wispy bands amph, local fg ap cumulate. |
| PGH-18-06 | 623.75 | 625.4 | SYE-BX | Carbonatite + Granite breccia | Gran as above; fenitized surrounding crbt. CRBT at ~10 TCA, undulating contact, forest green-purple, fg, over ~1m before massive CRBT with Gran clasts. Cg light purple-blue-pink, fg, blue amph, trace diss py, gran clasts sub rounded with minor rxn rims. LC planar and along consecutive joints (similar orientation). |
| PGH-18-06 | 625.4 | 631 | GRAN | Granite + minor Carbonatite | Med red-pink, fg-mg, qtz 20%, kspar 40%, bt 15%, amph 5%, chl 5%, plag 15%. Green-blue crbt veins 1cm wide running ~ parallel TCA. Fractures filled with blue amph or green chl, bt partially to completely alt to chl or amph. locally cg/peg zones with crystals up to 4cm. 627.20-627.30: CRBT; cream to light pink, cg, rimmed by blue amph, diffuse boundaries, trace diss py. Cross cut by low angle crbt vein mentioned above. 629-629.24: chl/bt dominated, neph syenite? |
| PGH-18-06 | 631 | 632.5 | CRBT | Carbonatite | UC low angle ~ 10 TCA, undulating/brecciated, closed. Light pink-cream to grey-green, fg-cg, local clasts of granite 3cm, completely alt to bt. Brown-green apt cum as wispy blebs and forming weak bands near contacts. Trace diss py. Fg patches of blue amph. Locally disseminated hematite and fracture fill. Top of CRBT unit cross cut by low angle fg green-grey crbt with more hem. LC irregular, closed |
| PGH-18-06 | 632.5 | 633 | GRAN | Granite | Qtz 20%, kspar 40%, plag 10%, chl 10%, amph 10%, bt 10%. med red to pink, mg-cg, chl/hem alt, fractures filled with blue amph and alt halos of red (hem?), bt being replaced bt chl/amph. |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|-------|------|-----------|----------|-----------|----------------------|--|
| PGH-18-06 | 13 | CT | 10 | 110 | | UC polymictic dyke | undulating, closed, bx |
| PGH-18-06 | 16.4 | CT | 50 | 130 | | LC CRBT w/ Alklai | bx, closed |
| PGH-18-06 | 16.87 | JNT | 50 | 70 | | JNT in ALKALI | planar, rough, blue amph infill |
| PGH-18-06 | 17.47 | CT | 60 | 150 | | LC CRBT w/ Alklai | bx, closed |
| PGH-18-06 | 19.42 | CT | 45 | 140 | | LC CRBT w/ Alklai | bx, closed |
| PGH-18-06 | 21.96 | CT | 85 | 160 | | LC CRBT w/ Alklai | undulating, open, slightly rough |
| PGH-18-06 | 23.68 | CT | 45 | 260 | | LC CRBT w/ Alklai | undulating, closed |
| PGH-18-06 | 23.85 | CT | 45 | 250 | | LC CRBT w/ Alklai | bx, closed |
| PGH-18-06 | 25.9 | CT | 55 | 320 | | UC CRBT w/ Alkali | planar, closed, rxn rim blue amph |
| PGH-18-06 | 30.08 | CT | 55 | | | LC CRBT w/ Alklai | no orientation |
| PGH-18-06 | 38.4 | JNT | 45 | 280 | | JNT in ALKALI | rough, open, chl/amph infill |
| PGH-18-06 | 38.73 | JNT | 55 | 180 | | JNT in ALKALI | rough, open, chl/amph infill |
| PGH-18-06 | 38.83 | CT | 45 | 80 | | UC CRBT w/ Alkali | undulating, closed |
| PGH-18-06 | 41.72 | JNT | 40 | 200 | | JNT in ALKALI | slightly rough, slightly weathered, open, chl infill |
| PGH-18-06 | 42.43 | JNT | 30 | 210 | | JNT in ALKALI | slightly rough, open, chl infill |
| PGH-18-06 | 44.87 | JNT | 45 | 290 | | JNT in ALKALI | undulating, rough, amph/chl infill |
| PGH-18-06 | 45.05 | VN | 30 | 25 | | CRBT vein | open, slightly weathered, crbt infill 3cm |
| PGH-18-06 | 46.5 | JNT | 50 | 280 | | JNT in ALKALI | open, planar, slightly rough, chl/amph infill |
| PGH-18-06 | 48.2 | CT | 50 | 70 | | UC CRBT w/ Alkali | open, planar, very rough, bt/crbt |
| PGH-18-06 | 49.62 | JNT | 40 | 225 | | JNT in ALKALI | open, slightly rough, chl/amph infill |
| PGH-18-06 | 66.6 | JNT | 52 | 260 | | JNT in ALKALI | opne, slightly rough, amph infill 3mm |
| PGH-18-06 | 70 | VN | 25 | 5 | | CRBT vein | LC crbt vein, 20cm wide |
| PGH-18-06 | 70.36 | JNT | 30 | 340 | | JNT in ALKALI | planar, slightly rough, chl infill |
| PGH-18-06 | 74.85 | CT | 20 | 100 | | LC CRBT w/ Alklai | undulating, closed |
| PGH-18-06 | 75.58 | CT | 50 | 260 | | LC CRBT w/ Alklai | planar, closed |
| PGH-18-06 | 77.5 | JNT | 65 | 240 | | JNT in ALKALI | planar, slightly rough, chl infill |
| PGH-18-06 | 79.5 | JNT | 50 | 50 | | JNT in ALKALI | planar, slightly rough, chl infill |
| PGH-18-06 | 80.04 | JNT | 65 | 220 | | JNT in ALKALI | planar, rough, chl infill |
| PGH-18-06 | 80.3 | CT | 70 | 230 | | UC CRBT w/ Alkali | undulating, gradational, closed |
| PGH-18-06 | 86.3 | CT | 80 | 10 | | LC CRBT w/ Alklai | planar, closed |
| PGH-18-06 | 88.9 | CT | 25 | 260 | | UC CRBT bx w/ alkali | undulating, closed |
| PGH-18-06 | 89.3 | CT | 60 | 150 | | UC CRBT bc w/ alkali | planar, closed |
| PGH-18-06 | 90.49 | CT | 42 | 275 | | UC MDYKE | planar, closed |
| PGH-18-06 | 91.2 | CT | 10 | 310 | | LC MDYKE | planar, closed |
| PGH-18-06 | 97.9 | CT | 55 | 200 | | UC CRBT bx w/ alkali | closed, planar |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------------------------|--|
| PGH-18-06 | 98.2 | CT | 30 | 180 | | UC CRBT bx w/ alkali | closed, planar |
| PGH-18-06 | 100.25 | VN | 35 | 180 | | UC CRBT w/ Alkali | closed, planar |
| PGH-18-06 | 103 | VN | 35 | 310 | | LC crbt vn | closed, planar |
| PGH-18-06 | 109.6 | CT | 20 | 122 | | UC MDYKE w/alkali | planar, closed |
| PGH-18-06 | 110.7 | CT | 20 | 130 | | LC MDYKE w/ alkali | planar, closed |
| PGH-18-06 | 111.38 | JNT | 65 | 65 | | JNT in ALKALI | planar, rough, chl/amph infill |
| PGH-18-06 | 115.88 | JNT | 65 | 180 | | JNT in ALKALI | planar, slightly rough, chl infill |
| PGH-18-06 | 124.85 | CT | 45 | 180 | | LCT w/ SYE (UCT into CRBT-BX) | undulating, closed, bx |
| PGH-18-06 | 550.15 | CT | 30 | 80 | | LC bx crbt w/ alkali | bx, closed |
| PGH-18-06 | 550.54 | JNT | 50 | 65 | | JNT in ALKALI | slightly rough, blue amph fill, planar |
| PGH-18-06 | 595.67 | CT | 70 | 160 | | LC crbt | planar |
| PGH-18-06 | 596.06 | CT | 30 | 110 | | LC CRBT | planar |
| PGH-18-06 | 596.46 | CT | 40 | 195 | | LC CRBT | planar |
| PGH-18-06 | 608.15 | CT | 20 | 140 | | UC CRBT | planar |
| PGH-18-06 | 608.29 | CT | 40 | 180 | | UC IJO(?) | undulating |
| PGH-18-06 | 611.4 | CT | 35 | 180 | | UC CRBT with GRAN | planar, closed |
| PGH-18-06 | 612.1 | CT | 20 | 145 | | LC IJO with GRAN | undulating, closed |
| PGH-18-06 | 625.05 | CT | 40 | 260 | | LC CRBT | planar, open, blue amph |
| PGH-18-06 | 6219.8 | CT | 55 | 60 | | LC CRBT with GRAN | diffuse |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 15.27 | 16.5 | 1.23 | 589785 | A18-06091 | 0.309 | 0.005 | < 0.005 | 0.008 | < 0.003 | 7.31 | 4.2 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 16.5 | 17 | 0.5 | 589786 | A18-06091 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.045 | 6.12 | 0.39 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 17 | 18 | 1 | 589787 | A18-06091 | 0.137 | < 0.003 | < 0.005 | 0.005 | 0.018 | 6.2 | 1.44 | 0.004 | 0.008 | 0.003 |
| PGH-18-06 | 25.9 | 27.4 | 1.5 | 589788 | A18-06091 | 0.159 | 0.004 | < 0.005 | 0.007 | < 0.003 | 4.82 | 3.53 | < 0.003 | 0.013 | 0.003 |
| PGH-18-06 | 27.4 | 28.9 | 1.5 | 589789 | A18-06091 | 0.177 | < 0.003 | 0.006 | 0.008 | < 0.003 | 2.03 | 2.37 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 28.9 | 30.1 | 1.2 | 589790 | A18-06091 | 0.088 | 0.004 | 0.005 | 0.007 | < 0.003 | 3.44 | 1.75 | < 0.003 | 0.012 | 0.004 |
| PGH-18-06 | 30.1 | 31 | 0.9 | 589791 | A18-06091 | 0.039 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 6.76 | 0.5 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 31 | 32.5 | 1.5 | 589793 | A18-06091 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.008 | 6.19 | 1.61 | < 0.003 | 0.007 | 0.003 |
| PGH-18-06 | 32.5 | 34 | 1.5 | 589794 | A18-06091 | 0.014 | < 0.003 | < 0.005 | 0.006 | 0.003 | 5.48 | 2.8 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 34 | 35.5 | 1.5 | 589795 | A18-06091 | 0.06 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.89 | 2.28 | < 0.003 | 0.008 | 0.003 |
| PGH-18-06 | 35.5 | 37 | 1.5 | 589796 | A18-06091 | 0.045 | 0.003 | 0.005 | 0.009 | < 0.003 | 5.18 | 3.89 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 37 | 38.5 | 1.5 | 589797 | A18-06091 | 0.024 | 0.003 | < 0.005 | < 0.005 | 0.018 | 6.07 | 1.07 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 38.5 | 40 | 1.5 | 589798 | A18-06091 | 0.013 | < 0.003 | < 0.005 | 0.005 | 0.012 | 5.54 | 1.83 | < 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 40 | 41.5 | 1.5 | 589799 | A18-06091 | 0.021 | < 0.003 | < 0.005 | 0.005 | 0.019 | 6.36 | 1.52 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-06 | 48.2 | 48.7 | 0.5 | 589800 | A18-06091 | 0.104 | 0.004 | 0.005 | 0.007 | < 0.003 | 3.06 | 1.04 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-06 | 49.63 | 50.34 | 0.71 | 589801 | A18-06091 | 0.079 | 0.003 | < 0.005 | < 0.005 | 0.013 | 5.6 | 0.79 | 0.004 | 0.005 | < 0.003 |
| PGH-18-06 | 51.52 | 52.68 | 1.16 | 589802 | A18-06091 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 4.89 | 0.48 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 52.68 | 53.56 | 0.88 | 589803 | A18-06091 | 0.052 | < 0.003 | < 0.005 | 0.006 | 0.052 | 7.31 | 4.31 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-06 | 53.56 | 54.32 | 0.76 | 589804 | A18-06091 | 0.017 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.01 | 0.64 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 54.32 | 55.38 | 1.06 | 589805 | A18-06091 | 0.019 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 5.96 | 0.54 | 0.007 | 0.005 | 0.003 |
| PGH-18-06 | 55.38 | 55.9 | 0.52 | 589806 | A18-06091 | 0.027 | < 0.003 | < 0.005 | 0.01 | < 0.003 | 4.07 | 4.14 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-06 | 55.9 | 57.32 | 1.42 | 589807 | A18-06091 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 5.32 | 0.26 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 57.32 | 58.09 | 0.77 | 589808 | A18-06091 | 0.038 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 6.67 | 0.58 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 73.83 | 74.88 | 1.05 | 589809 | A18-06091 | 0.019 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.86 | 2.38 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-06 | 80.28 | 81.78 | 1.5 | 589811 | A18-06091 | 0.092 | < 0.003 | 0.005 | 0.007 | < 0.003 | 3.78 | 2.45 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 81.78 | 83.28 | 1.5 | 589812 | A18-06091 | 0.035 | < 0.003 | < 0.005 | 0.007 | 0.022 | 5.89 | 3.18 | < 0.003 | 0.013 | 0.003 |
| PGH-18-06 | 83.28 | 84.78 | 1.5 | 589813 | A18-06091 | 0.052 | < 0.003 | 0.005 | 0.007 | 0.051 | 10.64 | 5.37 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 84.78 | 86.3 | 1.52 | 589814 | A18-06091 | 0.237 | < 0.003 | 0.008 | 0.009 | < 0.003 | 5.1 | 3.25 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 86.3 | 87.8 | 1.5 | 589815 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.49 | 0.33 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 87.8 | 89.2 | 1.4 | 589816 | A18-06091 | 0.022 | 0.003 | < 0.005 | 0.005 | < 0.003 | 7.31 | 0.98 | < 0.003 | 0.006 | 0.01 |
| PGH-18-06 | 89.2 | 90.26 | 1.06 | 589817 | A18-06091 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.84 | 1.2 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-06 | 97.56 | 98.26 | 0.7 | 589819 | A18-06091 | 0.052 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 7.05 | 2.05 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 98.26 | 99.76 | 1.5 | 589820 | A18-06091 | 0.037 | < 0.003 | 0.009 | 0.007 | < 0.003 | 7.09 | 3.37 | 0.004 | 0.008 | 0.003 |
| PGH-18-06 | 99.76 | 100.26 | 0.5 | 589821 | A18-06091 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 6.71 | 0.47 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 100.26 | 101.76 | 1.5 | 589822 | A18-06091 | 0.109 | 0.004 | 0.013 | 0.008 | < 0.003 | 7.43 | 3.86 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 101.76 | 103.17 | 1.41 | 589823 | A18-06091 | 0.036 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 7.85 | 0.8 | < 0.003 | 0.006 | 0.004 |
| PGH-18-06 | 103.17 | 104.65 | 1.48 | 589824 | A18-06091 | 0.034 | 0.004 | < 0.005 | < 0.005 | 0.004 | 7.93 | 0.25 | < 0.003 | < 0.003 | 0.005 |
| PGH-18-06 | 104.65 | 105.86 | 1.21 | 589825 | A18-06091 | 0.047 | < 0.003 | 0.008 | 0.007 | < 0.003 | 7.47 | 2.88 | 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 105.86 | 106.84 | 0.98 | 589826 | A18-06091 | 0.034 | < 0.003 | < 0.005 | 0.005 | 0.003 | 8.94 | 0.91 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 106.84 | 107.85 | 1.01 | 589827 | A18-06091 | 0.046 | < 0.003 | 0.006 | 0.007 | < 0.003 | 5.61 | 0.74 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 107.85 | 109.3 | 1.45 | 589828 | A18-06091 | 0.032 | < 0.003 | < 0.005 | 0.005 | 0.006 | 7.35 | 0.38 | < 0.003 | 0.004 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 117 | 118 | 1 | 589829 | A18-06091 | 0.062 | < 0.003 | 0.008 | 0.007 | 0.011 | 6.69 | 3.27 | < 0.003 | 0.013 | 0.003 |
| PGH-18-06 | 118 | 119.34 | 1.34 | 589831 | A18-06091 | 0.046 | 0.003 | < 0.005 | < 0.005 | 0.019 | 6.95 | 0.38 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 119.34 | 120.82 | 1.48 | 589832 | A18-06091 | 0.046 | < 0.003 | 0.009 | 0.01 | < 0.003 | 7.27 | 1.58 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 120.82 | 122.29 | 1.47 | 589833 | A18-06091 | 0.066 | 0.003 | 0.007 | 0.01 | < 0.003 | 8.27 | 1.24 | 0.004 | 0.008 | < 0.003 |
| PGH-18-06 | 122.29 | 123.53 | 1.24 | 589834 | A18-06091 | 0.133 | 0.003 | 0.008 | 0.007 | 0.005 | 8.4 | 1.72 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 123.53 | 124.2 | 0.67 | 589835 | A18-06091 | 0.035 | < 0.003 | 0.006 | 0.006 | 0.006 | 6.69 | 0.08 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 124.2 | 124.9 | 0.7 | 589837 | A18-06091 | 0.129 | < 0.003 | 0.01 | 0.011 | < 0.003 | 7.91 | 0.86 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 126.44 | 127.54 | 1.1 | 589838 | A18-06091 | 0.085 | < 0.003 | < 0.005 | 0.008 | 0.003 | 8.03 | 1.05 | < 0.003 | 0.008 | 0.005 |
| PGH-18-06 | 127.54 | 128.65 | 1.11 | 589839 | A18-06091 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 7.09 | 0.75 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 128.65 | 129.63 | 0.98 | 589840 | A18-06091 | 0.255 | 0.004 | 0.005 | 0.007 | < 0.003 | 9.36 | 1.95 | 0.005 | 0.008 | 0.003 |
| PGH-18-06 | 129.63 | 130.82 | 1.19 | 589841 | A18-06091 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.54 | 0.49 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 130.82 | 132 | 1.18 | 589842 | A18-06091 | 0.041 | < 0.003 | < 0.005 | 0.005 | 0.018 | 8.82 | 1.24 | < 0.003 | 0.007 | 0.003 |
| PGH-18-06 | 132 | 133 | 1 | 589843 | A18-06091 | 0.276 | < 0.003 | 0.008 | 0.005 | 0.007 | 6.65 | 4.02 | < 0.003 | 0.013 | 0.006 |
| PGH-18-06 | 133 | 134 | 1 | 589844 | A18-06091 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 5.31 | 0.52 | < 0.003 | 0.004 | 0.005 |
| PGH-18-06 | 141.44 | 142.68 | 1.24 | 589845 | A18-06091 | 0.038 | < 0.003 | < 0.005 | 0.005 | 0.008 | 9 | 1.95 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 142.68 | 144 | 1.32 | 589846 | A18-06091 | 0.062 | < 0.003 | 0.005 | 0.005 | 0.004 | 8.32 | 1.19 | < 0.003 | 0.006 | 0.006 |
| PGH-18-06 | 144 | 145.2 | 1.2 | 589847 | A18-06091 | 0.036 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.5 | 0.79 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 145.2 | 146.43 | 1.23 | 589848 | A18-06091 | 0.033 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.79 | 0.51 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 146.43 | 147.57 | 1.14 | 589849 | A18-06091 | 0.063 | < 0.003 | < 0.005 | 0.005 | 0.014 | 7.21 | 1.56 | < 0.003 | 0.006 | 0.005 |
| PGH-18-06 | 147.57 | 148.55 | 0.98 | 589850 | A18-06091 | 0.035 | < 0.003 | < 0.005 | 0.005 | 0.01 | 6.28 | 0.73 | 0.008 | 0.005 | 0.004 |
| PGH-18-06 | 148.55 | 149.32 | 0.77 | 589851 | A18-06091 | 0.038 | 0.003 | < 0.005 | 0.005 | 0.014 | 12.77 | 1.48 | < 0.003 | 0.007 | 0.004 |
| PGH-18-06 | 149.32 | 150.4 | 1.08 | 589852 | A18-06091 | 0.063 | < 0.003 | 0.01 | 0.007 | 0.006 | 4.84 | 2.74 | < 0.003 | 0.011 | 0.004 |
| PGH-18-06 | 150.4 | 151.54 | 1.14 | 589853 | A18-06091 | 0.148 | < 0.003 | 0.009 | 0.008 | < 0.003 | 5.56 | 1.78 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 151.54 | 152.15 | 0.61 | 589855 | A18-06091 | 0.08 | < 0.003 | 0.009 | 0.009 | 0.013 | 6.8 | 5.47 | < 0.003 | 0.018 | 0.004 |
| PGH-18-06 | 152.15 | 153.14 | 0.99 | 589856 | A18-06091 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.12 | 0.85 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 153.14 | 154.24 | 1.1 | 589857 | A18-06091 | 0.041 | < 0.003 | 0.009 | 0.007 | < 0.003 | 4.32 | 2.87 | < 0.003 | 0.012 | 0.004 |
| PGH-18-06 | 154.24 | 155.28 | 1.04 | 589858 | A18-06091 | 0.007 | < 0.003 | 0.005 | 0.007 | < 0.003 | 2.29 | 0.32 | < 0.003 | 0.011 | 0.003 |
| PGH-18-06 | 155.28 | 156.1 | 0.82 | 589859 | A18-06091 | 0.092 | 0.003 | < 0.005 | 0.005 | 0.006 | 9.75 | 1.08 | < 0.003 | 0.006 | 0.004 |
| PGH-18-06 | 156.1 | 157.55 | 1.45 | 589860 | A18-06091 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 7.11 | 0.54 | < 0.003 | 0.003 | 0.004 |
| PGH-18-06 | 157.55 | 159 | 1.45 | 589861 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 7.9 | 0.29 | 0.005 | 0.004 | 0.005 |
| PGH-18-06 | 159 | 159.94 | 0.94 | 589862 | A18-06091 | 0.027 | < 0.003 | < 0.005 | 0.005 | 0.006 | 6.71 | 0.04 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 165 | 165.94 | 0.94 | 589863 | A18-06091 | 0.11 | < 0.003 | 0.008 | 0.007 | < 0.003 | 8.38 | 1.63 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-06 | 178.1 | 179.1 | 1 | 589864 | A18-06091 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 7.35 | 1.67 | < 0.003 | 0.007 | 0.003 |
| PGH-18-06 | 179.1 | 179.73 | 0.63 | 589865 | A18-06091 | < 0.003 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 7.58 | 1.18 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-06 | 179.73 | 180.6 | 0.87 | 589866 | A18-06091 | 0.035 | < 0.003 | < 0.005 | < 0.005 | 0.028 | 7.1 | 0.73 | 0.006 | 0.006 | < 0.003 |
| PGH-18-06 | 180.6 | 181.77 | 1.17 | 589867 | A18-06091 | 0.013 | 0.003 | < 0.005 | < 0.005 | 0.027 | 5.98 | 0.36 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 181.77 | 183 | 1.23 | 589868 | A18-06091 | 0.069 | 0.003 | 0.005 | 0.009 | 0.011 | 5.72 | 4.88 | < 0.003 | 0.018 | 0.004 |
| PGH-18-06 | 183 | 184.23 | 1.23 | 589869 | A18-06091 | 0.045 | < 0.003 | 0.005 | 0.009 | < 0.003 | 5.17 | 3.06 | < 0.003 | 0.019 | 0.003 |
| PGH-18-06 | 184.23 | 185.34 | 1.11 | 589870 | A18-06091 | 0.031 | < 0.003 | 0.006 | 0.005 | 0.009 | 7.88 | 0.99 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 185.34 | 186.8 | 1.46 | 589871 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.77 | 0.5 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 186.8 | 188.18 | 1.38 | 589872 | A18-06091 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.82 | 1.07 | < 0.003 | 0.006 | 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 188.18 | 188.89 | 0.71 | 589873 | A18-06091 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 8.81 | 0.9 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 188.89 | 190.34 | 1.45 | 589874 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.24 | 0.44 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 190.34 | 191.8 | 1.46 | 589875 | A18-06091 | 0.041 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 6.69 | 0.76 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 191.8 | 193.13 | 1.33 | 589876 | A18-06091 | 0.021 | 0.003 | < 0.005 | < 0.005 | 0.011 | 7.13 | 0.37 | < 0.003 | < 0.003 | 0.003 |
| PGH-18-06 | 193.13 | 193.6 | 0.47 | 589877 | A18-06091 | 0.14 | 0.003 | < 0.005 | 0.005 | < 0.003 | 22.15 | 3.02 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 193.6 | 194.63 | 1.03 | 589878 | A18-06091 | 0.033 | 0.004 | < 0.005 | < 0.005 | 0.028 | 12.83 | 0.97 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 194.63 | 195.95 | 1.32 | 589879 | A18-06091 | 0.048 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 8.25 | 1.43 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 195.95 | 197.2 | 1.25 | 589881 | A18-06091 | 0.057 | 0.003 | 0.012 | 0.009 | < 0.003 | 3.2 | 1.65 | < 0.003 | 0.012 | 0.003 |
| PGH-18-06 | 197.2 | 198.46 | 1.26 | 589882 | A18-06091 | 0.176 | 0.005 | 0.012 | 0.007 | < 0.003 | 3.16 | 3.54 | < 0.003 | 0.014 | 0.004 |
| PGH-18-06 | 198.46 | 199.7 | 1.24 | 589883 | A18-06091 | 0.122 | 0.004 | 0.012 | 0.007 | < 0.003 | 2.54 | 2.17 | < 0.003 | 0.012 | 0.004 |
| PGH-18-06 | 199.7 | 200.93 | 1.23 | 589884 | A18-06091 | 0.053 | < 0.003 | 0.011 | 0.008 | < 0.003 | 2.25 | 1.67 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-06 | 200.93 | 202.18 | 1.25 | 589885 | A18-06091 | 0.043 | < 0.003 | 0.009 | 0.008 | < 0.003 | 3.74 | 2.06 | < 0.003 | 0.012 | 0.003 |
| PGH-18-06 | 202.18 | 203.42 | 1.24 | 589886 | A18-06091 | 0.024 | 0.004 | 0.006 | 0.009 | < 0.003 | 3.34 | 1.83 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 203.42 | 204.58 | 1.16 | 589888 | A18-06091 | 0.103 | 0.003 | < 0.005 | 0.005 | 0.008 | 6.72 | 1.77 | < 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 204.58 | 206.05 | 1.47 | 589889 | A18-06091 | 0.039 | < 0.003 | 0.006 | 0.009 | < 0.003 | 5.19 | 1.84 | < 0.003 | 0.013 | 0.004 |
| PGH-18-06 | 206.05 | 207.47 | 1.42 | 589890 | A18-06091 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 8.17 | 0.43 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 207.47 | 209 | 1.53 | 589891 | A18-06091 | 0.036 | < 0.003 | 0.005 | 0.005 | 0.017 | 6.35 | 2.19 | < 0.003 | 0.008 | 0.003 |
| PGH-18-06 | 209 | 210 | 1 | 589892 | A18-06091 | 0.07 | < 0.003 | 0.013 | 0.007 | < 0.003 | 3.01 | 2.45 | < 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 211.3 | 212.05 | 0.75 | 589893 | A18-06091 | 0.041 | 0.004 | 0.011 | 0.007 | < 0.003 | 4.04 | 3.23 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-06 | 212.05 | 213.44 | 1.39 | 589894 | A18-06091 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.26 | 0.68 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 213.44 | 214.86 | 1.42 | 589895 | A18-06091 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 8.75 | 0.41 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 214.86 | 216.26 | 1.4 | 589896 | A18-06091 | 0.074 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 7.24 | 0.7 | < 0.003 | 0.006 | 0.004 |
| PGH-18-06 | 216.26 | 217.66 | 1.4 | 589897 | A18-06091 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 8.18 | 0.37 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 217.66 | 219.06 | 1.4 | 589898 | A18-06091 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 8.29 | 0.66 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 219.06 | 220.4 | 1.34 | 589899 | A18-06091 | 0.049 | 0.004 | 0.005 | < 0.005 | < 0.003 | 9.61 | 0.64 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 220.4 | 221.55 | 1.15 | 589900 | A18-06091 | 0.029 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.98 | 1.57 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 221.55 | 223.05 | 1.5 | 589901 | A18-06091 | 0.036 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 9.8 | 0.51 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 223.05 | 224.25 | 1.2 | 589902 | A18-06091 | 0.078 | 0.003 | < 0.005 | 0.005 | 0.007 | 8.33 | 1.5 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-06 | 224.25 | 225.44 | 1.19 | 589903 | A18-06091 | 0.112 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 8.56 | 0.74 | 0.005 | 0.007 | 0.004 |
| PGH-18-06 | 225.44 | 226.65 | 1.21 | 589904 | A18-06091 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 9.66 | 0.19 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 226.65 | 227.84 | 1.19 | 589905 | A18-06091 | 0.044 | 0.004 | 0.005 | 0.005 | < 0.003 | 10.09 | 0.66 | 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 227.84 | 228.9 | 1.06 | 589906 | A18-06091 | 0.011 | < 0.003 | < 0.005 | 0.005 | 0.003 | 8.34 | 0.62 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 228.9 | 230.1 | 1.2 | 589907 | A18-06091 | 0.016 | < 0.003 | 0.005 | < 0.005 | 0.016 | 5.96 | 2.12 | < 0.003 | 0.008 | 0.003 |
| PGH-18-06 | 230.1 | 231.35 | 1.25 | 589908 | A18-06091 | 0.003 | < 0.003 | 0.005 | 0.008 | < 0.003 | 6.56 | 0.05 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 231.35 | 232.3 | 0.95 | 589909 | A18-06091 | 0.012 | 0.003 | < 0.005 | < 0.005 | 0.007 | 5.63 | 0.19 | < 0.003 | 0.003 | 0.003 |
| PGH-18-06 | 237.8 | 238.7 | 0.9 | 589910 | A18-06091 | 0.034 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 7 | 0.24 | < 0.003 | 0.004 | 0.005 |
| PGH-18-06 | 238.7 | 239.7 | 1 | 589911 | A18-06091 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.77 | 0.23 | 0.005 | 0.004 | 0.005 |
| PGH-18-06 | 239.7 | 240.7 | 1 | 589913 | A18-06091 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.28 | 0.23 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 240.7 | 241.97 | 1.27 | 589914 | A18-06091 | 0.05 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.42 | 0.73 | < 0.003 | 0.01 | 0.004 |
| PGH-18-06 | 241.97 | 243.14 | 1.17 | 589915 | A18-06091 | 0.056 | < 0.003 | < 0.005 | 0.006 | 0.038 | 10.04 | 1.71 | < 0.003 | 0.008 | 0.004 |
| PGH-18-06 | 243.14 | 244.38 | 1.24 | 589916 | A18-06091 | 0.105 | < 0.003 | < 0.005 | 0.006 | 0.009 | 9.16 | 0.88 | < 0.003 | 0.006 | 0.004 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 252.6 | 253.4 | 0.8 | 589917 | A18-06091 | 0.047 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 3.51 | 0.29 | < 0.003 | 0.004 | 0.004 |
| PGH-18-06 | 253.4 | 254.2 | 0.8 | 589918 | A18-06091 | 0.015 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 4.03 | 0.89 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 254.2 | 255.3 | 1.1 | 589919 | A18-06091 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.32 | 0.1 | < 0.003 | < 0.003 | 0.003 |
| PGH-18-06 | 255.3 | 256.4 | 1.1 | 589921 | A18-06091 | 0.072 | < 0.003 | < 0.005 | 0.006 | 0.011 | 5.57 | 1.31 | < 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 256.4 | 257.5 | 1.1 | 589922 | A18-06091 | 0.079 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.16 | 0.58 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 276.34 | 277.66 | 1.32 | 589924 | A18-06091 | 0.045 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.34 | 0.14 | < 0.003 | 0.003 | 0.003 |
| PGH-18-06 | 277.6 | 279 | 1.4 | 589925 | A18-06091 | 0.032 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.43 | 0.99 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 279 | 280.25 | 1.25 | 589926 | A18-06091 | 0.022 | < 0.003 | < 0.005 | 0.005 | 0.004 | 7.93 | 0.11 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 280.25 | 281.74 | 1.49 | 589927 | A18-06091 | 0.064 | 0.005 | < 0.005 | 0.007 | < 0.003 | 7.3 | 0.69 | < 0.003 | 0.007 | 0.013 |
| PGH-18-06 | 284.8 | 286.24 | 1.44 | 589928 | A18-06091 | 0.049 | < 0.003 | < 0.005 | 0.006 | 0.004 | 7.17 | 0.49 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 286.24 | 287.62 | 1.38 | 589929 | A18-06091 | 0.043 | < 0.003 | < 0.005 | 0.005 | 0.004 | 6.89 | 0.89 | < 0.003 | 0.007 | 0.003 |
| PGH-18-06 | 287.62 | 288.87 | 1.25 | 589930 | A18-06091 | 0.157 | < 0.003 | < 0.005 | 0.005 | 0.012 | 8.03 | 1.72 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 288.87 | 290.22 | 1.35 | 589931 | A18-06091 | 0.048 | < 0.003 | 0.006 | 0.005 | < 0.003 | 5.85 | 1.29 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-06 | 292.6 | 293.9 | 1.3 | 589932 | A18-06091 | 0.037 | < 0.003 | < 0.005 | 0.006 | < 0.003 | 7.68 | 1.57 | < 0.003 | 0.008 | 0.003 |
| PGH-18-06 | 296.6 | 297.42 | 0.82 | 589933 | A18-06091 | 0.089 | 0.004 | 0.008 | 0.007 | 0.004 | 4.88 | 3.81 | < 0.003 | 0.01 | 0.003 |
| PGH-18-06 | 297.42 | 298.26 | 0.84 | 589934 | A18-06091 | 0.125 | 0.003 | 0.008 | 0.009 | < 0.003 | 3.67 | 4.51 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 301.51 | 302.05 | 0.54 | 589935 | A18-06091 | 0.034 | < 0.003 | 0.006 | 0.005 | < 0.003 | 9.32 | 3.27 | < 0.003 | 0.008 | 0.005 |
| PGH-18-06 | 302.05 | 303.21 | 1.16 | 589936 | A18-06091 | 0.03 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 11.66 | 1.66 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 303.21 | 304.2 | 0.99 | 589937 | A18-06091 | 0.026 | 0.003 | 0.005 | 0.005 | 0.008 | 8.56 | 0.9 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 313.75 | 315 | 1.25 | 589938 | A18-06091 | 0.042 | 0.003 | 0.005 | 0.005 | 0.008 | 7.34 | 1.76 | < 0.003 | 0.008 | 0.004 |
| PGH-18-06 | 315 | 316.24 | 1.24 | 589939 | A18-06091 | 0.044 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 7.67 | 2.68 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 316.24 | 317.45 | 1.21 | 589940 | A18-06091 | 0.066 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 8.06 | 0.69 | < 0.003 | 0.003 | 0.004 |
| PGH-18-06 | 323.69 | 324.64 | 0.95 | 589941 | A18-06091 | 0.039 | < 0.003 | 0.006 | 0.005 | 0.087 | 8.98 | 2.19 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 324.64 | 325.32 | 0.68 | 589942 | A18-06091 | 0.084 | 0.003 | < 0.005 | 0.005 | 0.181 | 12.81 | 2.01 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 329.13 | 330.11 | 0.98 | 589943 | A18-06091 | 0.061 | < 0.003 | 0.006 | 0.007 | 0.035 | 5.71 | 3.24 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 330.11 | 331.37 | 1.26 | 589944 | A18-06091 | 0.046 | 0.003 | < 0.005 | 0.008 | 0.016 | 5.94 | 1.95 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 331.37 | 332.76 | 1.39 | 589946 | A18-06091 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 6.36 | 0.76 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 332.76 | 334.06 | 1.3 | 589947 | A18-06091 | 0.139 | 0.003 | < 0.005 | 0.005 | 0.009 | 7.31 | 1.02 | 0.01 | 0.006 | < 0.003 |
| PGH-18-06 | 334.06 | 335.4 | 1.34 | 589948 | A18-06091 | 0.064 | < 0.003 | < 0.005 | 0.005 | 0.004 | 6.9 | 1.5 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 338.88 | 340.32 | 1.44 | 589949 | A18-06091 | 0.057 | < 0.003 | < 0.005 | 0.006 | 0.007 | 6.93 | 1.17 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 340.32 | 341.73 | 1.41 | 589950 | A18-06091 | 0.165 | < 0.003 | < 0.005 | 0.005 | 0.013 | 7.78 | 0.79 | 0.004 | 0.006 | 0.006 |
| PGH-18-06 | 341.73 | 343.16 | 1.43 | 589951 | A18-06091 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 6.9 | 0.44 | 0.007 | 0.005 | < 0.003 |
| PGH-18-06 | 343.16 | 344.54 | 1.38 | 589952 | A18-06091 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 6.07 | 0.34 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 344.54 | 345.98 | 1.44 | 589953 | A18-06091 | 0.434 | 0.003 | 0.007 | 0.007 | 0.007 | 7.28 | 3.04 | 0.005 | 0.011 | 0.004 |
| PGH-18-06 | 345.98 | 347.38 | 1.4 | 589954 | A18-06091 | 0.017 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 6.7 | 1.01 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 347.38 | 348.83 | 1.45 | 589955 | A18-06091 | 0.076 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 7.09 | 1.2 | 0.004 | 0.005 | < 0.003 |
| PGH-18-06 | 348.83 | 350.28 | 1.45 | 589956 | A18-06091 | 0.046 | 0.003 | < 0.005 | 0.005 | 0.004 | 7.35 | 0.93 | < 0.003 | 0.004 | 0.004 |
| PGH-18-06 | 354.18 | 355.22 | 1.04 | 589957 | A18-06091 | 0.065 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 7.42 | 0.3 | < 0.003 | 0.003 | 0.003 |
| PGH-18-06 | 355.22 | 356.12 | 0.9 | 589958 | A18-06091 | 0.601 | 0.004 | 0.007 | 0.009 | < 0.003 | 5.54 | 4.8 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 356.12 | 357.09 | 0.97 | 589959 | A18-06091 | 0.462 | < 0.003 | 0.008 | 0.009 | < 0.003 | 2.51 | 2.78 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 357.09 | 358.44 | 1.35 | 589960 | A18-06091 | 0.061 | 0.003 | < 0.005 | < 0.005 | 0.007 | 5.68 | 1.14 | < 0.003 | 0.008 | 0.005 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 358.44 | 359.8 | 1.36 | 589961 | A18-06091 | 0.06 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.87 | 1.24 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-06 | 359.8 | 360.92 | 1.12 | 589962 | A18-06091 | 0.096 | < 0.003 | < 0.005 | 0.006 | 0.016 | 7.59 | 1.38 | < 0.003 | 0.01 | 0.01 |
| PGH-18-06 | 360.92 | 362 | 1.08 | 589963 | A18-06091 | 0.097 | 0.004 | 0.006 | 0.008 | < 0.003 | 3.09 | 2.63 | < 0.003 | 0.018 | 0.004 |
| PGH-18-06 | 369 | 369.69 | 0.69 | 589964 | A18-06091 | 0.15 | < 0.003 | < 0.005 | 0.005 | 0.008 | 7.82 | 1.12 | < 0.003 | 0.008 | 0.004 |
| PGH-18-06 | 369.69 | 370.16 | 0.47 | 589965 | A18-06091 | 0.329 | < 0.003 | 0.008 | 0.01 | < 0.003 | 3.09 | 6.81 | < 0.003 | 0.02 | 0.004 |
| PGH-18-06 | 370.16 | 371.34 | 1.18 | 589966 | A18-06091 | 0.028 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 5.85 | 0.52 | < 0.003 | 0.005 | 0.004 |
| PGH-18-06 | 371.34 | 372.56 | 1.22 | 589968 | A18-06091 | 0.139 | 0.003 | < 0.005 | 0.005 | 0.012 | 5.49 | 1.27 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-06 | 372.56 | 373.83 | 1.27 | 589969 | A18-06091 | 0.113 | < 0.003 | 0.007 | 0.007 | < 0.003 | 1.31 | 0.66 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-06 | 373.83 | 375 | 1.17 | 589970 | A18-06091 | 0.139 | 0.003 | 0.007 | 0.008 | < 0.003 | 2.13 | 2.31 | < 0.003 | 0.011 | 0.003 |
| PGH-18-06 | 375 | 376.31 | 1.31 | 589971 | A18-06091 | 0.255 | 0.005 | < 0.005 | 0.01 | < 0.003 | 4.01 | 3.99 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 376.31 | 377.63 | 1.32 | 589972 | A18-06091 | 0.264 | 0.003 | < 0.005 | 0.01 | 0.006 | 3.61 | 3.34 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-06 | 377.63 | 378.24 | 0.61 | 589973 | A18-06091 | 0.045 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.56 | 0.58 | < 0.003 | 0.007 | 0.005 |
| PGH-18-06 | 378.24 | 378.53 | 0.29 | 589974 | A18-06091 | 0.136 | 0.003 | 0.005 | 0.007 | < 0.003 | 2.72 | 2.63 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 378.53 | 379.64 | 1.11 | 589975 | A18-06091 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 6.16 | 0.37 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 379.64 | 380.8 | 1.16 | 589976 | A18-06091 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.02 | 5.92 | 0.53 | 0.007 | 0.006 | < 0.003 |
| PGH-18-06 | 380.8 | 381.85 | 1.05 | 589977 | A18-06091 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 5.07 | 0.63 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 381.85 | 382.94 | 1.09 | 589978 | A18-06091 | 0.067 | < 0.003 | 0.007 | 0.007 | < 0.003 | 1.16 | 1.14 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-06 | 382.94 | 384.04 | 1.1 | 589980 | A18-06091 | 0.95 | 0.006 | 0.01 | 0.011 | 0.003 | 2.25 | 6.2 | < 0.003 | 0.016 | < 0.003 |
| PGH-18-06 | 384.04 | 385.15 | 1.11 | 589981 | A18-06091 | 0.289 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 2.62 | 2.87 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 385.15 | 386.24 | 1.09 | 589982 | A18-06091 | 0.169 | 0.003 | < 0.005 | 0.008 | < 0.003 | 2.85 | 2.46 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 386.24 | 387.37 | 1.13 | 589983 | A18-06091 | 0.05 | < 0.003 | 0.005 | 0.007 | < 0.003 | 1.93 | 1.58 | 0.007 | 0.013 | < 0.003 |
| PGH-18-06 | 387.37 | 388.55 | 1.18 | 589984 | A18-06091 | 0.654 | 0.003 | 0.007 | 0.011 | < 0.003 | 2.55 | 3.03 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 388.55 | 389.68 | 1.13 | 589985 | A18-06091 | 0.577 | 0.005 | 0.007 | 0.011 | 0.015 | 3.45 | 4.82 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 389.68 | 390.84 | 1.16 | 589987 | A18-06091 | 0.253 | < 0.003 | 0.007 | 0.009 | < 0.003 | 1.51 | 2.17 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 390.84 | 392 | 1.16 | 589989 | A18-06091 | 0.102 | < 0.003 | 0.006 | 0.01 | < 0.003 | 1.63 | 1.57 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 392 | 393.1 | 1.1 | 589990 | A18-06091 | 0.38 | 0.003 | 0.008 | 0.01 | < 0.003 | 2.09 | 3.21 | < 0.003 | 0.016 | < 0.003 |
| PGH-18-06 | 393.1 | 394.4 | 1.3 | 589991 | A18-06091 | 0.302 | < 0.003 | 0.007 | 0.01 | < 0.003 | 2.13 | 2.5 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-06 | 394.4 | 395.6 | 1.2 | 589992 | A18-06091 | 0.009 | 0.003 | 0.006 | 0.008 | < 0.003 | 2.37 | 0.57 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 395.6 | 396.5 | 0.9 | 589993 | A18-06091 | 0.699 | 0.004 | 0.009 | 0.012 | 0.009 | 3.2 | 5.56 | < 0.003 | 0.019 | < 0.003 |
| PGH-18-06 | 396.5 | 397.45 | 0.95 | 589995 | A18-06091 | 0.023 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 2.14 | 0.89 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 397.45 | 398.4 | 0.95 | 589996 | A18-06091 | 0.712 | 0.005 | 0.007 | 0.011 | 0.024 | 2.26 | 3.93 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-06 | 398.4 | 399.31 | 0.91 | 589997 | A18-06091 | 0.43 | 0.012 | 0.011 | 0.008 | 0.03 | 4.15 | 3.1 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 399.31 | 400.2 | 0.89 | 589998 | A18-06091 | 0.639 | 0.009 | 0.005 | 0.009 | 0.066 | 9.19 | 4.67 | < 0.003 | 0.013 | 0.117 |
| PGH-18-06 | 400.2 | 401.33 | 1.13 | 589999 | A18-06091 | 0.298 | 0.005 | 0.007 | 0.009 | 0.006 | 2.93 | 1.97 | < 0.003 | 0.014 | 0.005 |
| PGH-18-06 | 401.33 | 401.9 | 0.57 | 590000 | A18-06091 | 0.126 | 0.004 | 0.005 | 0.006 | < 0.003 | 14.68 | 0.94 | < 0.003 | 0.012 | 0.005 |
| PGH-18-06 | 401.9 | 402.67 | 0.77 | 590001 | A18-06091 | 0.316 | 0.004 | 0.009 | 0.008 | 0.01 | 2.3 | 2.36 | < 0.003 | 0.013 | 0.004 |
| PGH-18-06 | 402.67 | 403.85 | 1.18 | 590002 | A18-06091 | 0.084 | 0.003 | 0.005 | 0.006 | 0.047 | 8.72 | 2.88 | 0.004 | 0.012 | 0.004 |
| PGH-18-06 | 403.85 | 405.02 | 1.17 | 590003 | A18-06091 | 0.036 | 0.004 | < 0.005 | 0.005 | 0.023 | 8.71 | 1.38 | < 0.003 | 0.013 | 0.003 |
| PGH-18-06 | 405.02 | 406.23 | 1.21 | 590004 | A18-06091 | 0.036 | 0.003 | 0.005 | 0.007 | 0.014 | 6.1 | 2.08 | < 0.003 | 0.013 | 0.006 |
| PGH-18-06 | 406.23 | 407.48 | 1.25 | 590005 | A18-06091 | 0.025 | 0.004 | 0.007 | 0.011 | < 0.003 | 3.11 | 0.66 | < 0.003 | 0.013 | 0.005 |
| PGH-18-06 | 407.48 | 407.98 | 0.5 | 590006 | A18-06091 | 0.049 | < 0.003 | < 0.005 | 0.007 | 0.045 | 14.56 | 1.83 | < 0.003 | 0.01 | 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 414 | 414.38 | 0.38 | 590008 | A18-06091 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 14.9 | 1.69 | < 0.003 | 0.008 | 0.004 |
| PGH-18-06 | 414.38 | 415.48 | 1.1 | 590009 | A18-06091 | 0.703 | 0.007 | 0.008 | 0.009 | 0.056 | 2.88 | 4.99 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 415.48 | 416.68 | 1.2 | 590010 | A18-06091 | 0.306 | 0.004 | 0.008 | 0.009 | 0.018 | 3.14 | 4.78 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-06 | 416.68 | 417.1 | 0.42 | 590011 | A18-06091 | 0.186 | < 0.003 | < 0.005 | 0.007 | 0.08 | 18.45 | 3.61 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-06 | 417.1 | 418.28 | 1.18 | 590012 | A18-06091 | 0.038 | < 0.003 | 0.005 | 0.009 | 0.05 | 6.52 | 3.75 | < 0.003 | 0.016 | 0.005 |
| PGH-18-06 | 418.28 | 419.47 | 1.19 | 590014 | A18-06091 | 0.109 | < 0.003 | 0.01 | 0.008 | 0.019 | 3.25 | 3.04 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 419.47 | 420.66 | 1.19 | 590015 | A18-06091 | 0.065 | 0.003 | 0.007 | 0.009 | < 0.003 | 2.15 | 1.95 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 420.66 | 421.87 | 1.21 | 590016 | A18-06091 | 0.208 | 0.003 | 0.009 | 0.008 | < 0.003 | 2.29 | 3.21 | < 0.003 | 0.016 | 0.003 |
| PGH-18-06 | 421.87 | 422.98 | 1.11 | 590017 | A18-06091 | 0.093 | 0.003 | 0.01 | 0.007 | 0.016 | 2.26 | 2.71 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 422.98 | 424.18 | 1.2 | 590018 | A18-06091 | 0.139 | 0.005 | 0.014 | 0.008 | 0.013 | 2.26 | 2.63 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 424.18 | 425.3 | 1.12 | 590019 | A18-06091 | 0.313 | 0.003 | 0.009 | 0.01 | 0.076 | 5.28 | 5.2 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-06 | 425.3 | 426.45 | 1.15 | 590020 | A18-06091 | 0.086 | 0.003 | 0.006 | 0.007 | < 0.003 | 2.37 | 1.67 | < 0.003 | 0.013 | 0.005 |
| PGH-18-06 | 426.45 | 427.75 | 1.3 | 590021 | A18-06091 | 0.006 | < 0.003 | 0.01 | 0.008 | < 0.003 | 1.24 | 0.18 | < 0.003 | 0.014 | 0.004 |
| PGH-18-06 | 427.75 | 429.1 | 1.35 | 590022 | A18-06091 | 0.015 | 0.003 | 0.006 | 0.006 | < 0.003 | 1.44 | 0.43 | < 0.003 | 0.011 | 0.005 |
| PGH-18-06 | 429.1 | 430.25 | 1.15 | 590023 | A18-06091 | 0.422 | 0.007 | 0.012 | 0.008 | 0.1 | 8.99 | 6.24 | < 0.003 | 0.012 | 0.004 |
| PGH-18-06 | 430.25 | 431.4 | 1.15 | 590025 | A18-06091 | 0.297 | 0.004 | 0.007 | 0.016 | 0.005 | 6.14 | 3.76 | < 0.003 | 0.037 | 0.005 |
| PGH-18-06 | 431.4 | 432.45 | 1.05 | 590026 | A18-06091 | 0.292 | 0.004 | 0.01 | 0.022 | < 0.003 | 6.09 | 3.79 | < 0.003 | 0.047 | 0.003 |
| PGH-18-06 | 432.45 | 433.5 | 1.05 | 590027 | A18-06091 | 0.422 | 0.003 | 0.01 | 0.011 | 0.017 | 2.4 | 2.61 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 433.5 | 434.58 | 1.08 | 590028 | A18-06091 | 0.145 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.19 | 1.45 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 434.58 | 435.66 | 1.08 | 590029 | A18-06091 | 0.194 | 0.003 | 0.009 | 0.007 | < 0.003 | 1.56 | 1.87 | < 0.003 | 0.013 | 0.003 |
| PGH-18-06 | 435.66 | 436.73 | 1.07 | 590030 | A18-06091 | 0.793 | 0.004 | 0.009 | 0.011 | 0.011 | 2.3 | 4.73 | < 0.003 | 0.014 | 0.005 |
| PGH-18-06 | 436.73 | 437.78 | 1.05 | 590031 | A18-06091 | 0.9 | < 0.003 | 0.008 | 0.012 | < 0.003 | 2.27 | 4.68 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 437.78 | 438.33 | 0.55 | 590033 | A18-06091 | 0.146 | 0.004 | < 0.005 | < 0.005 | 0.014 | 5.96 | 0.52 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 438.33 | 439.77 | 1.44 | 590034 | A18-06091 | 0.206 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 2.46 | 1.4 | < 0.003 | 0.013 | 0.004 |
| PGH-18-06 | 439.77 | 440.18 | 0.41 | 590035 | A18-06091 | 0.279 | < 0.003 | < 0.005 | 0.006 | 0.018 | 7.55 | 1.25 | < 0.003 | 0.006 | 0.003 |
| PGH-18-06 | 440.18 | 441.14 | 0.96 | 590036 | A18-06091 | 0.239 | < 0.003 | 0.008 | 0.008 | < 0.003 | 2.15 | 2.58 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 441.14 | 441.9 | 0.76 | 590037 | A18-06091 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.7 | 0.69 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 441.9 | 442.45 | 0.55 | 590038 | A18-06091 | 0.077 | < 0.003 | 0.006 | 0.006 | < 0.003 | 3.27 | 2.78 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 442.45 | 443.59 | 1.14 | 590039 | A18-06091 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.98 | 0.76 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 443.59 | 444.8 | 1.21 | 590040 | A18-06091 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 4.3 | 0.12 | < 0.003 | 0.003 | < 0.003 |
| PGH-18-06 | 444.8 | 445.68 | 0.88 | 590041 | A18-06091 | 0.109 | 0.004 | 0.005 | 0.008 | 0.011 | 5.12 | 1.8 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 445.68 | 446.6 | 0.92 | 590042 | A18-06091 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 4.91 | 0.19 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-06 | 446.6 | 447.26 | 0.66 | 590043 | A18-06091 | 0.076 | < 0.003 | < 0.005 | 0.007 | 0.131 | 10.69 | 2.27 | < 0.003 | 0.011 | 0.003 |
| PGH-18-06 | 468.34 | 468.7 | 0.36 | 590045 | A18-06091 | 0.108 | < 0.003 | < 0.005 | 0.007 | 0.007 | 8.73 | 2.2 | < 0.003 | 0.012 | 0.008 |
| PGH-18-06 | 479.8 | 481.07 | 1.27 | 590046 | A18-06091 | 0.045 | 0.003 | < 0.005 | 0.007 | 0.003 | 5.72 | 1.88 | < 0.003 | 0.014 | 0.004 |
| PGH-18-06 | 488.77 | 490.04 | 1.27 | 590047 | A18-06091 | 0.293 | 0.009 | < 0.005 | 0.007 | 0.011 | 4.6 | 2.72 | 0.003 | 0.011 | 0.003 |
| PGH-18-06 | 490.04 | 491.25 | 1.21 | 590048 | A18-06091 | 0.136 | 0.003 | < 0.005 | 0.007 | 0.005 | 5.96 | 1.34 | 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 491.25 | 492.46 | 1.21 | 590049 | A18-06091 | 0.03 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.82 | 0.31 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 492.46 | 493.66 | 1.2 | 590050 | A18-06091 | 0.055 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 5.32 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 493.66 | 494.76 | 1.1 | 590051 | A18-06091 | 0.035 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.34 | 0.81 | < 0.003 | 0.009 | 0.004 |
| PGH-18-06 | 494.76 | 496 | 1.24 | 590052 | A18-06091 | 0.264 | < 0.003 | < 0.005 | 0.009 | 0.004 | 5.67 | 2.19 | < 0.003 | 0.015 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Nb2O5 (%) | Ta2O5 (%) | U3O8 (%) | ThO2 (%) | ZrO2 (%) | Fe2O3(T) (%) | P2O5 (%) | SnO2 (%) | Y2O3 (%) | WO3 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|--------------|----------|----------|----------|---------|
| PGH-18-06 | 496 | 497.25 | 1.25 | 590053 | A18-06091 | 0.32 | 0.003 | < 0.005 | 0.008 | 0.008 | 6.26 | 3.22 | < 0.003 | 0.018 | < 0.003 |
| PGH-18-06 | 497.25 | 498.45 | 1.2 | 590054 | A18-06091 | 0.117 | 0.004 | < 0.005 | 0.008 | 0.041 | 8.62 | 0.79 | < 0.003 | 0.007 | 0.004 |
| PGH-18-06 | 498.45 | 499.67 | 1.22 | 590055 | A18-06091 | 0.114 | 0.003 | < 0.005 | 0.006 | 0.009 | 6.86 | 0.61 | 0.008 | 0.008 | < 0.003 |
| PGH-18-06 | 499.67 | 500.94 | 1.27 | 590056 | A18-06091 | 0.095 | 0.004 | < 0.005 | 0.005 | 0.016 | 6.7 | 0.98 | < 0.003 | 0.006 | 0.005 |
| PGH-18-06 | 500.94 | 501.67 | 0.73 | 590058 | A18-06091 | 0.066 | < 0.003 | 0.007 | 0.009 | < 0.003 | 1.71 | 1.9 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-06 | 501.67 | 502.93 | 1.26 | 590059 | A18-06091 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.15 | 0.31 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-06 | 502.93 | 503.79 | 0.86 | 590060 | A18-06091 | 0.126 | < 0.003 | 0.008 | 0.01 | < 0.003 | 2.49 | 2.36 | < 0.003 | 0.018 | < 0.003 |
| PGH-18-06 | 503.79 | 504.86 | 1.07 | 590061 | A18-06091 | 0.036 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 5.33 | 0.63 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-06 | 504.86 | 506.1 | 1.24 | 590062 | A18-06091 | 0.058 | 0.005 | < 0.005 | 0.005 | 0.024 | 7.23 | 0.94 | < 0.003 | 0.006 | 0.005 |
| PGH-18-06 | 506.1 | 507.33 | 1.23 | 590063 | A18-06091 | 0.056 | < 0.003 | < 0.005 | 0.007 | 0.016 | 6.35 | 2.6 | < 0.003 | 0.016 | 0.003 |
| PGH-18-06 | 507.33 | 508.56 | 1.23 | 590065 | A18-06091 | 0.079 | 0.005 | < 0.005 | 0.006 | 0.009 | 7.86 | 0.69 | < 0.003 | 0.005 | 0.003 |
| PGH-18-06 | 508.56 | 509.78 | 1.22 | 590066 | A18-06091 | 0.069 | < 0.003 | < 0.005 | 0.006 | 0.007 | 8.08 | 1.02 | < 0.003 | 0.006 | 0.004 |
| PGH-18-06 | 509.78 | 510.54 | 0.76 | 590067 | A18-06091 | 0.067 | < 0.003 | < 0.005 | 0.005 | 0.042 | 9.78 | 1.04 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-06 | 515 | 515.64 | 0.64 | 590068 | A18-06091 | 0.01 | < 0.003 | 0.005 | 0.007 | < 0.003 | 2.46 | 1.27 | 0.003 | 0.013 | 0.004 |
| PGH-18-06 | 530.6 | 531.75 | 1.15 | 590069 | A18-06091 | 0.232 | 0.004 | 0.005 | 0.008 | < 0.003 | 2.03 | 2.73 | 0.004 | 0.014 | < 0.003 |
| PGH-18-06 | 531.75 | 533 | 1.25 | 590070 | A18-06091 | 0.226 | 0.004 | 0.009 | 0.009 | < 0.003 | 1.41 | 2.48 | < 0.003 | 0.014 | 0.003 |
| PGH-18-06 | 542.3 | 543.3 | 1 | 590071 | A18-06091 | 0.066 | < 0.003 | 0.009 | 0.006 | < 0.003 | 1.96 | 1.41 | < 0.003 | 0.012 | 0.005 |
| PGH-18-06 | 543.3 | 544.1 | 0.8 | 590073 | A18-06091 | 0.193 | < 0.003 | 0.005 | 0.008 | < 0.003 | 4.3 | 3.2 | < 0.003 | 0.015 | 0.003 |
| PGH-18-06 | 546 | 547.5 | 1.5 | 590074 | A18-06091 | 0.099 | < 0.003 | 0.005 | 0.011 | 0.028 | 5.46 | 3.55 | < 0.003 | 0.019 | 0.005 |
| PGH-18-06 | 549.6 | 550.7 | 1.1 | 590075 | A18-06091 | 0.038 | < 0.003 | < 0.005 | < 0.005 | 0.01 | 6.12 | 1.16 | 0.004 | 0.008 | < 0.003 |
| PGH-18-06 | 552.07 | 553 | 0.93 | 590076 | A18-06091 | 0.066 | 0.003 | 0.005 | 0.014 | 0.024 | 6.35 | 4.3 | < 0.003 | 0.034 | 0.004 |
| PGH-18-06 | 556.54 | 557.48 | 0.94 | 590077 | A18-06091 | 0.1 | 0.004 | < 0.005 | 0.014 | < 0.003 | 3.59 | 2.38 | < 0.003 | 0.018 | 0.003 |
| PGH-18-06 | 559.39 | 560.3 | 0.91 | 590078 | A18-06091 | 0.033 | 0.003 | < 0.005 | 0.009 | 0.004 | 9.37 | 0.27 | < 0.003 | 0.004 | 0.003 |
| PGH-18-06 | 565.2 | 566.7 | 1.5 | 590079 | A18-06091 | 0.04 | < 0.003 | < 0.005 | 0.014 | < 0.003 | 5.94 | 2.68 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-06 | 566.7 | 568.2 | 1.5 | 590080 | A18-06091 | 0.04 | 0.004 | < 0.005 | 0.012 | < 0.003 | 6.23 | 2.75 | < 0.003 | 0.016 | 0.003 |
| PGH-18-06 | 568.2 | 569.33 | 1.13 | 590081 | A18-06091 | 0.017 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.44 | 1.51 | < 0.003 | 0.011 | 0.003 |
| PGH-18-06 | 576.84 | 578.12 | 1.28 | 590082 | A18-06091 | 0.279 | < 0.003 | 0.006 | 0.007 | < 0.003 | 5.52 | 2.54 | < 0.003 | 0.012 | 0.01 |
| PGH-18-06 | 587.31 | 588 | 0.69 | 590083 | A18-06091 | 0.067 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 7.07 | 1.18 | < 0.003 | 0.009 | 0.003 |
| PGH-18-06 | 588 | 589.32 | 1.32 | 590084 | A18-06091 | 0.202 | 0.004 | 0.007 | 0.017 | 0.036 | 5.24 | 1.13 | < 0.003 | 0.015 | 0.004 |
| PGH-18-06 | 595.29 | 596.64 | 1.35 | 590085 | A18-06091 | 0.07 | < 0.003 | < 0.005 | 0.013 | < 0.003 | 5.55 | 1.61 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-06 | 618.58 | 620 | 1.42 | 590086 | A18-06091 | 0.118 | < 0.003 | 0.009 | 0.008 | < 0.003 | 2.43 | 1.37 | < 0.003 | 0.012 | 0.004 |
| PGH-18-06 | 623.96 | 625.45 | 1.49 | 590087 | A18-06091 | 0.041 | < 0.003 | < 0.005 | 0.005 | 0.027 | 5.93 | 2.07 | < 0.003 | 0.01 | 0.004 |
| PGH-18-06 | 630.9 | 631.65 | 0.75 | 590088 | A18-06091 | 0.272 | 0.003 | < 0.005 | 0.012 | 0.018 | 5.35 | 2.66 | < 0.003 | 0.018 | 0.004 |
| PGH-18-06 | 631.65 | 632.5 | 0.85 | 590090 | A18-06091 | 0.272 | 0.003 | < 0.005 | 0.011 | < 0.003 | 2.42 | 2.85 | < 0.003 | 0.015 | 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|--------------------------|
| PGH-18-06 | 15.27 | 16.5 | 1.23 | 589785 | CRBT BX |
| PGH-18-06 | 16.5 | 17 | 0.5 | 589786 | ALKALI |
| PGH-18-06 | 17 | 18 | 1 | 589787 | Alkali + CRBT |
| PGH-18-06 | 25.9 | 27.4 | 1.5 | 589788 | CRBT |
| PGH-18-06 | 27.4 | 28.9 | 1.5 | 589789 | CRBT |
| PGH-18-06 | 28.9 | 30.1 | 1.2 | 589790 | CRBT |
| PGH-18-06 | 30.1 | 31 | 0.9 | 589791 | Alkali + crbt bx |
| PGH-18-06 | 31 | 32.5 | 1.5 | 589793 | Alkali + crbt bx |
| PGH-18-06 | 32.5 | 34 | 1.5 | 589794 | Alkali + crbt bx |
| PGH-18-06 | 34 | 35.5 | 1.5 | 589795 | Alkali + crbt bx |
| PGH-18-06 | 35.5 | 37 | 1.5 | 589796 | Alkali + crbt bx |
| PGH-18-06 | 37 | 38.5 | 1.5 | 589797 | Alkali + crbt bx |
| PGH-18-06 | 38.5 | 40 | 1.5 | 589798 | Alkali + crbt bx |
| PGH-18-06 | 40 | 41.5 | 1.5 | 589799 | Alkali + crbt bx |
| PGH-18-06 | 48.2 | 48.7 | 0.5 | 589800 | CRBT |
| PGH-18-06 | 49.63 | 50.34 | 0.71 | 589801 | alkali bx crbt |
| PGH-18-06 | 51.52 | 52.68 | 1.16 | 589802 | alklai bx |
| PGH-18-06 | 52.68 | 53.56 | 0.88 | 589803 | crbt |
| PGH-18-06 | 53.56 | 54.32 | 0.76 | 589804 | alkali + crbt |
| PGH-18-06 | 54.32 | 55.38 | 1.06 | 589805 | alkali |
| PGH-18-06 | 55.38 | 55.9 | 0.52 | 589806 | crbt |
| PGH-18-06 | 55.9 | 57.32 | 1.42 | 589807 | cg alkali |
| PGH-18-06 | 57.32 | 58.09 | 0.77 | 589808 | crbt |
| PGH-18-06 | 73.83 | 74.88 | 1.05 | 589809 | CRBT |
| PGH-18-06 | 80.28 | 81.78 | 1.5 | 589811 | CRBT |
| PGH-18-06 | 81.78 | 83.28 | 1.5 | 589812 | CRBT |
| PGH-18-06 | 83.28 | 84.78 | 1.5 | 589813 | CRBT dark grey-green, bt |
| PGH-18-06 | 84.78 | 86.3 | 1.52 | 589814 | CRBT |
| PGH-18-06 | 86.3 | 87.8 | 1.5 | 589815 | Alkali bx w/ CRBT |
| PGH-18-06 | 87.8 | 89.2 | 1.4 | 589816 | Alkali bx w/ CRBT |
| PGH-18-06 | 89.2 | 90.26 | 1.06 | 589817 | Alkali bx w/ CRBT |
| PGH-18-06 | 97.56 | 98.26 | 0.7 | 589819 | alkali + crbt bx |
| PGH-18-06 | 98.26 | 99.76 | 1.5 | 589820 | bx + crbt |
| PGH-18-06 | 99.76 | 100.26 | 0.5 | 589821 | alkali |
| PGH-18-06 | 100.26 | 101.76 | 1.5 | 589822 | crbt |
| PGH-18-06 | 101.76 | 103.17 | 1.41 | 589823 | alklai bx |
| PGH-18-06 | 103.17 | 104.65 | 1.48 | 589824 | alklai bx |
| PGH-18-06 | 104.65 | 105.86 | 1.21 | 589825 | crbt |
| PGH-18-06 | 105.86 | 106.84 | 0.98 | 589826 | crbt bx |
| PGH-18-06 | 106.84 | 107.85 | 1.01 | 589827 | crbt |
| PGH-18-06 | 107.85 | 109.3 | 1.45 | 589828 | alklai bx |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-06 | 117 | 118 | 1 | 589829 | crbt bx + alk lai |
| PGH-18-06 | 118 | 119.34 | 1.34 | 589831 | alk lai bx + crbt |
| PGH-18-06 | 119.34 | 120.82 | 1.48 | 589832 | crbt bx |
| PGH-18-06 | 120.82 | 122.29 | 1.47 | 589833 | crbt bx |
| PGH-18-06 | 122.29 | 123.53 | 1.24 | 589834 | CRBT BX |
| PGH-18-06 | 123.53 | 124.2 | 0.67 | 589835 | alk lai |
| PGH-18-06 | 124.2 | 124.9 | 0.7 | 589837 | CRBT BX |
| PGH-18-06 | 126.44 | 127.54 | 1.1 | 589838 | SYE W/ CRBT VEIN HEM+MICA/AMPH |
| PGH-18-06 | 127.54 | 128.65 | 1.11 | 589839 | SYE, CRBT VEINING W/ FLUORITE |
| PGH-18-06 | 128.65 | 129.63 | 0.98 | 589840 | CRBT BX, FLUORITE IN MATRIX |
| PGH-18-06 | 129.63 | 130.82 | 1.19 | 589841 | MASSIVE SYE, OCCASSIONAL MM-SCALE CRBT VEINS, NO RXN RIMS |
| PGH-18-06 | 130.82 | 132 | 1.18 | 589842 | SYE W/ 30CM CRBT-BX |
| PGH-18-06 | 132 | 133 | 1 | 589843 | VCG GRAN W/ MULTIPLE 10-20CM CRBT VEINS |
| PGH-18-06 | 133 | 134 | 1 | 589844 | CG SYE/QTZ-SYE W/ UP TO 6CM CRBT VEINS |
| PGH-18-06 | 141.44 | 142.68 | 1.24 | 589845 | SYE/CRBT-BX (MICA/AMPH BANDS) |
| PGH-18-06 | 142.68 | 144 | 1.32 | 589846 | SAME W/ 16CM CRBT VEIN |
| PGH-18-06 | 144 | 145.2 | 1.2 | 589847 | SYE W/ LESSER CRBT VEINS/BX |
| PGH-18-06 | 145.2 | 146.43 | 1.23 | 589848 | SYE W/ 20CM CRBT-BX |
| PGH-18-06 | 146.43 | 147.57 | 1.14 | 589849 | MIXED SYE/CRBT-BX |
| PGH-18-06 | 147.57 | 148.55 | 0.98 | 589850 | SAME, VCG AT END |
| PGH-18-06 | 148.55 | 149.32 | 0.77 | 589851 | mica-carb-rock +amph? |
| PGH-18-06 | 149.32 | 150.4 | 1.08 | 589852 | crbt |
| PGH-18-06 | 150.4 | 151.54 | 1.14 | 589853 | crbt, 10cm zone py+pych?? |
| PGH-18-06 | 151.54 | 152.15 | 0.61 | 589855 | crbt |
| PGH-18-06 | 152.15 | 153.14 | 0.99 | 589856 | sy, bx at UCT |
| PGH-18-06 | 153.14 | 154.24 | 1.1 | 589857 | crbt, wispy blue amph over last 30cm |
| PGH-18-06 | 154.24 | 155.28 | 1.04 | 589858 | crbt, blebs py+/-pych |
| PGH-18-06 | 155.28 | 156.1 | 0.82 | 589859 | bx lower contact of zone |
| PGH-18-06 | 156.1 | 157.55 | 1.45 | 589860 | sy, fluorite in carb vein |
| PGH-18-06 | 157.55 | 159 | 1.45 | 589861 | sy, minimal carb veining |
| PGH-18-06 | 159 | 159.94 | 0.94 | 589862 | sy, py + poss pych in carb veins |
| PGH-18-06 | 165 | 165.94 | 0.94 | 589863 | mica-rock/dyke w/ fluorite in crbt vein near end |
| PGH-18-06 | 178.1 | 179.1 | 1 | 589864 | crbt + crbt-bx |
| PGH-18-06 | 179.1 | 179.73 | 0.63 | 589865 | crbt |
| PGH-18-06 | 179.73 | 180.6 | 0.87 | 589866 | sy w/ 10cm crbt |
| PGH-18-06 | 180.6 | 181.77 | 1.17 | 589867 | cg sye |
| PGH-18-06 | 181.77 | 183 | 1.23 | 589868 | crbt |
| PGH-18-06 | 183 | 184.23 | 1.23 | 589869 | crbt |
| PGH-18-06 | 184.23 | 185.34 | 1.11 | 589870 | sy w/ crbt-bx zones |
| PGH-18-06 | 185.34 | 186.8 | 1.46 | 589871 | sy, fine ribbonary carb veins |
| PGH-18-06 | 186.8 | 188.18 | 1.38 | 589872 | sy, very little carb |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-06 | 188.18 | 188.89 | 0.71 | 589873 | fz |
| PGH-18-06 | 188.89 | 190.34 | 1.45 | 589874 | sy, very fine ribboney carb stringers only |
| PGH-18-06 | 190.34 | 191.8 | 1.46 | 589875 | sy w/ ~15cm crbt |
| PGH-18-06 | 191.8 | 193.13 | 1.33 | 589876 | sy |
| PGH-18-06 | 193.13 | 193.6 | 0.47 | 589877 | 10cm crbt to smss+mt+carb matrix to strongly reacted sy clasts |
| PGH-18-06 | 193.6 | 194.63 | 1.03 | 589878 | sy w/ carb veins then ijo??? Dyke, fluorite in carb vein |
| PGH-18-06 | 194.63 | 195.95 | 1.32 | 589879 | sy > crbt-bx |
| PGH-18-06 | 195.95 | 197.2 | 1.25 | 589881 | crbt, po+mt bands |
| PGH-18-06 | 197.2 | 198.46 | 1.26 | 589882 | crbt |
| PGH-18-06 | 198.46 | 199.7 | 1.24 | 589883 | crbt, wispy blue amph bands, bands of sulph blebs |
| PGH-18-06 | 199.7 | 200.93 | 1.23 | 589884 | crbt |
| PGH-18-06 | 200.93 | 202.18 | 1.25 | 589885 | crbt w/ 6cm ap-rich patch |
| PGH-18-06 | 202.18 | 203.42 | 1.24 | 589886 | crbt, 15cm vfg sy clast |
| PGH-18-06 | 203.42 | 204.58 | 1.16 | 589888 | sy-bx w/ rxn rims |
| PGH-18-06 | 204.58 | 206.05 | 1.47 | 589889 | crbt, ap-sulph bands, yellowish fe-carb? Bands |
| PGH-18-06 | 206.05 | 207.47 | 1.42 | 589890 | sy w/ mafic-chl bands |
| PGH-18-06 | 207.47 | 209 | 1.53 | 589891 | sy w/ 6cm carb vein, clay-chl alt'n |
| PGH-18-06 | 209 | 210 | 1 | 589892 | crbt, diab dyke below not sampled |
| PGH-18-06 | 211.3 | 212.05 | 0.75 | 589893 | crbt |
| PGH-18-06 | 212.05 | 213.44 | 1.39 | 589894 | sy w/ carb veining, sulph+pych? In veins |
| PGH-18-06 | 213.44 | 214.86 | 1.42 | 589895 | sy w/ mafic biot-chl rich zones |
| PGH-18-06 | 214.86 | 216.26 | 1.4 | 589896 | sy w/ carb veining (rxn rims) |
| PGH-18-06 | 216.26 | 217.66 | 1.4 | 589897 | sy w/ mafic banding, 6cm carb w/ po+mt |
| PGH-18-06 | 217.66 | 219.06 | 1.4 | 589898 | sy w/ mafic (biot+chl) zones, carb veining |
| PGH-18-06 | 219.06 | 220.4 | 1.34 | 589899 | sy w/ carb veining |
| PGH-18-06 | 220.4 | 221.55 | 1.15 | 589900 | crbt w/ ap+reddish-purple(?) patches/bands |
| PGH-18-06 | 221.55 | 223.05 | 1.5 | 589901 | sy w/zebra striped, 16cm crbt w/ sulph |
| PGH-18-06 | 223.05 | 224.25 | 1.2 | 589902 | sy-bx, ap masses |
| PGH-18-06 | 224.25 | 225.44 | 1.19 | 589903 | sy-bx, ap masses |
| PGH-18-06 | 225.44 | 226.65 | 1.21 | 589904 | sy, extensional carb veining (less bx'td) |
| PGH-18-06 | 226.65 | 227.84 | 1.19 | 589905 | similar w/ 17cm crbt vein, py+poss vfg pych cumulates |
| PGH-18-06 | 227.84 | 228.9 | 1.06 | 589906 | similar w/ 25cm crbt |
| PGH-18-06 | 228.9 | 230.1 | 1.2 | 589907 | sy, 20cm crbt at start (w/ fluorite) |
| PGH-18-06 | 230.1 | 231.35 | 1.25 | 589908 | crbt only |
| PGH-18-06 | 231.35 | 232.3 | 0.95 | 589909 | massive sy (amph veins, very little carb veining) |
| PGH-18-06 | 237.8 | 238.7 | 0.9 | 589910 | sy bx |
| PGH-18-06 | 238.7 | 239.7 | 1 | 589911 | sy --> sy-bx |
| PGH-18-06 | 239.7 | 240.7 | 1 | 589913 | sy, v. little carb veining |
| PGH-18-06 | 240.7 | 241.97 | 1.27 | 589914 | crbt |
| PGH-18-06 | 241.97 | 243.14 | 1.17 | 589915 | sy-bx, fluo in carb veins, 30cm mafic dyke? (vfg grey-green) |
| PGH-18-06 | 243.14 | 244.38 | 1.24 | 589916 | sy, weakly bx'td by carb (rxn rims), single sulph band perp to CA |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-06 | 252.6 | 253.4 | 0.8 | 589917 | crbt |
| PGH-18-06 | 253.4 | 254.2 | 0.8 | 589918 | crbt w/ 4cm ap-rich band perp to CA |
| PGH-18-06 | 254.2 | 255.3 | 1.1 | 589919 | sy |
| PGH-18-06 | 255.3 | 256.4 | 1.1 | 589921 | sy transitions into sye-bx |
| PGH-18-06 | 256.4 | 257.5 | 1.1 | 589922 | sye-bx |
| PGH-18-06 | 276.34 | 277.66 | 1.32 | 589924 | sye-bx |
| PGH-18-06 | 277.6 | 279 | 1.4 | 589925 | sye-bx |
| PGH-18-06 | 279 | 280.25 | 1.25 | 589926 | sye-bx |
| PGH-18-06 | 280.25 | 281.74 | 1.49 | 589927 | sye-bx |
| PGH-18-06 | 284.8 | 286.24 | 1.44 | 589928 | sye-bx |
| PGH-18-06 | 286.24 | 287.62 | 1.38 | 589929 | sye w/ crbt veins (fluorite patches) |
| PGH-18-06 | 287.62 | 288.87 | 1.25 | 589930 | sye-bx |
| PGH-18-06 | 288.87 | 290.22 | 1.35 | 589931 | sye, weakly bx'td, 2x15cm crbt veins |
| PGH-18-06 | 292.6 | 293.9 | 1.3 | 589932 | sye bx w/ 30cm crbt |
| PGH-18-06 | 296.6 | 297.42 | 0.82 | 589933 | crbt --> silcarb |
| PGH-18-06 | 297.42 | 298.26 | 0.84 | 589934 | crbt --> silcarb |
| PGH-18-06 | 301.51 | 302.05 | 0.54 | 589935 | silcarb |
| PGH-18-06 | 302.05 | 303.21 | 1.16 | 589936 | bx w/ mica+mt matrix |
| PGH-18-06 | 303.21 | 304.2 | 0.99 | 589937 | bx w/ mica+mt matrix |
| PGH-18-06 | 313.75 | 315 | 1.25 | 589938 | sye-bx |
| PGH-18-06 | 315 | 316.24 | 1.24 | 589939 | sye-bx |
| PGH-18-06 | 316.24 | 317.45 | 1.21 | 589940 | sye-bx |
| PGH-18-06 | 323.69 | 324.64 | 0.95 | 589941 | crbt/ mdyke or ijo |
| PGH-18-06 | 324.64 | 325.32 | 0.68 | 589942 | same w/ mt bands |
| PGH-18-06 | 329.13 | 330.11 | 0.98 | 589943 | crbt |
| PGH-18-06 | 330.11 | 331.37 | 1.26 | 589944 | crbt w/ 15cm gran |
| PGH-18-06 | 331.37 | 332.76 | 1.39 | 589946 | sye, unbx'td w/ carb veining |
| PGH-18-06 | 332.76 | 334.06 | 1.3 | 589947 | sye, bx'td over last 50cm |
| PGH-18-06 | 334.06 | 335.4 | 1.34 | 589948 | sye-bx/sye |
| PGH-18-06 | 338.88 | 340.32 | 1.44 | 589949 | sye-bx/sye |
| PGH-18-06 | 340.32 | 341.73 | 1.41 | 589950 | same, ap in carb veins |
| PGH-18-06 | 341.73 | 343.16 | 1.43 | 589951 | sye/sye-bx |
| PGH-18-06 | 343.16 | 344.54 | 1.38 | 589952 | cg sye to gran w/ carb veining (no bx) |
| PGH-18-06 | 344.54 | 345.98 | 1.44 | 589953 | weakly bx'td sye, abundant blue amph-carb veins |
| PGH-18-06 | 345.98 | 347.38 | 1.4 | 589954 | sye (unbx'td) w/ 2-10cm carb veins w/ ap |
| PGH-18-06 | 347.38 | 348.83 | 1.45 | 589955 | mostly unbx'td sye |
| PGH-18-06 | 348.83 | 350.28 | 1.45 | 589956 | sye/sye-bx |
| PGH-18-06 | 354.18 | 355.22 | 1.04 | 589957 | sye w/ carb veins (typically //-CA w/ rxn rims) |
| PGH-18-06 | 355.22 | 356.12 | 0.9 | 589958 | CRBT (ap rich at UCT) |
| PGH-18-06 | 356.12 | 357.09 | 0.97 | 589959 | CRBT wispy blue bands, blebs py+po |
| PGH-18-06 | 357.09 | 358.44 | 1.35 | 589960 | SYE (mafic) w/ 20 & 15cm CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|--|
| PGH-18-06 | 358.44 | 359.8 | 1.36 | 589961 | SYE (mafic) to SYE, 30cm CRBT |
| PGH-18-06 | 359.8 | 360.92 | 1.12 | 589962 | SYE, 12cm CRBT |
| PGH-18-06 | 360.92 | 362 | 1.08 | 589963 | CRBT |
| PGH-18-06 | 369 | 369.69 | 0.69 | 589964 | SYE-BX, 40-50% carbonates |
| PGH-18-06 | 369.69 | 370.16 | 0.47 | 589965 | CRBT |
| PGH-18-06 | 370.16 | 371.34 | 1.18 | 589966 | SYE (increasing carb veins downhole) |
| PGH-18-06 | 371.34 | 372.56 | 1.22 | 589968 | SYE becoming vcg w/ more amph (+ep) alt'n |
| PGH-18-06 | 372.56 | 373.83 | 1.27 | 589969 | CRBT, white massive |
| PGH-18-06 | 373.83 | 375 | 1.17 | 589970 | CRBT, transition from white massive to pink w/ radiating pseudos |
| PGH-18-06 | 375 | 376.31 | 1.31 | 589971 | CRBT, vcg, mottled brwn, grn, grey, grain size decrease downhole |
| PGH-18-06 | 376.31 | 377.63 | 1.32 | 589972 | CRBT w/ ap bands, po/py+/-pych |
| PGH-18-06 | 377.63 | 378.24 | 0.61 | 589973 | SYE |
| PGH-18-06 | 378.24 | 378.53 | 0.29 | 589974 | CRBT, wispy amph, ap @ LCT |
| PGH-18-06 | 378.53 | 379.64 | 1.11 | 589975 | SYE |
| PGH-18-06 | 379.64 | 380.8 | 1.16 | 589976 | SYE |
| PGH-18-06 | 380.8 | 381.85 | 1.05 | 589977 | SYE |
| PGH-18-06 | 381.85 | 382.94 | 1.09 | 589978 | Massive white to light pink CRBT, ap band at UCT |
| PGH-18-06 | 382.94 | 384.04 | 1.1 | 589980 | CRBT, wispy blue-grn ap+amph bands |
| PGH-18-06 | 384.04 | 385.15 | 1.11 | 589981 | CRBT, pych+py in ap+amph patches/bands |
| PGH-18-06 | 385.15 | 386.24 | 1.09 | 589982 | CRBT, py cubes in amph+ap? Patches |
| PGH-18-06 | 386.24 | 387.37 | 1.13 | 589983 | CRBT, dissem to blebby sulph+pych? |
| PGH-18-06 | 387.37 | 388.55 | 1.18 | 589984 | CRBT, very fine partly open fract w/ sulph, calc, pych? Xtals |
| PGH-18-06 | 388.55 | 389.68 | 1.13 | 589985 | 50% blue-grey amph+ap? Bands |
| PGH-18-06 | 389.68 | 390.84 | 1.16 | 589987 | CRBT |
| PGH-18-06 | 390.84 | 392 | 1.16 | 589989 | CRBT |
| PGH-18-06 | 392 | 393.1 | 1.1 | 589990 | CRBT, patch pych-sulp-ap-amph? |
| PGH-18-06 | 393.1 | 394.4 | 1.3 | 589991 | CRBT |
| PGH-18-06 | 394.4 | 395.6 | 1.2 | 589992 | CRBT, cg |
| PGH-18-06 | 395.6 | 396.5 | 0.9 | 589993 | pink CRBT w/ cg apatites |
| PGH-18-06 | 396.5 | 397.45 | 0.95 | 589995 | Pink CRBT, cg, amph+sulph patches |
| PGH-18-06 | 397.45 | 398.4 | 0.95 | 589996 | CRBT, wispy blue bands |
| PGH-18-06 | 398.4 | 399.31 | 0.91 | 589997 | CRBT, wispy blue bands |
| PGH-18-06 | 399.31 | 400.2 | 0.89 | 589998 | Pyroxenite? Bands in CRBT |
| PGH-18-06 | 400.2 | 401.33 | 1.13 | 589999 | Very very coarse grained CRBT |
| PGH-18-06 | 401.33 | 401.9 | 0.57 | 590000 | 20% po+mt in vvcg CRBT |
| PGH-18-06 | 401.9 | 402.67 | 0.77 | 590001 | vvcg CRBT |
| PGH-18-06 | 402.67 | 403.85 | 1.18 | 590002 | Pyroxenite? Bands in fg CRBT |
| PGH-18-06 | 403.85 | 405.02 | 1.17 | 590003 | Pyroxenite? Bands in fg CRBT |
| PGH-18-06 | 405.02 | 406.23 | 1.21 | 590004 | same, then massive white CRBT |
| PGH-18-06 | 406.23 | 407.48 | 1.25 | 590005 | CRBT, local vf cumulates pych-py-ap |
| PGH-18-06 | 407.48 | 407.98 | 0.5 | 590006 | DIAB dyke |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-06 | 414 | 414.38 | 0.38 | 590008 | DIAB dyke |
| PGH-18-06 | 414.38 | 415.48 | 1.1 | 590009 | CRBT 30% amph+ap |
| PGH-18-06 | 415.48 | 416.68 | 1.2 | 590010 | CRBT 30% amph+ap |
| PGH-18-06 | 416.68 | 417.1 | 0.42 | 590011 | CRBT - orb vein/band |
| PGH-18-06 | 417.1 | 418.28 | 1.18 | 590012 | CRBT, 30cm mica+ap+mt band |
| PGH-18-06 | 418.28 | 419.47 | 1.19 | 590014 | CRBT, wispy amph-ap bands (<10%) |
| PGH-18-06 | 419.47 | 420.66 | 1.19 | 590015 | CRBT, similar bands + py-po blebs |
| PGH-18-06 | 420.66 | 421.87 | 1.21 | 590016 | CRBT, pinker colour |
| PGH-18-06 | 421.87 | 422.98 | 1.11 | 590017 | CRBT, cg bladed carb xtals |
| PGH-18-06 | 422.98 | 424.18 | 1.2 | 590018 | CRBT, highly variable |
| PGH-18-06 | 424.18 | 425.3 | 1.12 | 590019 | very pink CRBT w/ 30cm drk grn band |
| PGH-18-06 | 425.3 | 426.45 | 1.15 | 590020 | CRBT, lighter pink, wispy blue amph+ap bands & patches |
| PGH-18-06 | 426.45 | 427.75 | 1.3 | 590021 | Massive cg white CRBT, minor sulph blebs |
| PGH-18-06 | 427.75 | 429.1 | 1.35 | 590022 | Massive light pink CRBT, open fract, wispy bands at end |
| PGH-18-06 | 429.1 | 430.25 | 1.15 | 590023 | Ap+mt (grn) bands in CRBT |
| PGH-18-06 | 430.25 | 431.4 | 1.15 | 590025 | Banded CRBT |
| PGH-18-06 | 431.4 | 432.45 | 1.05 | 590026 | Banded CRBT |
| PGH-18-06 | 432.45 | 433.5 | 1.05 | 590027 | CRBT, wispy - 20-40% blue-grey colour |
| PGH-18-06 | 433.5 | 434.58 | 1.08 | 590028 | similar w/ vvcg bladed xtals - carb? |
| PGH-18-06 | 434.58 | 435.66 | 1.08 | 590029 | similar, vvcg |
| PGH-18-06 | 435.66 | 436.73 | 1.07 | 590030 | Up to 10cm masses acicular amph+ap+paler pych(?) |
| PGH-18-06 | 436.73 | 437.78 | 1.05 | 590031 | sim to prev |
| PGH-18-06 | 437.78 | 438.33 | 0.55 | 590033 | SYE clast cut by blue amph-carb veins |
| PGH-18-06 | 438.33 | 439.77 | 1.44 | 590034 | Massive white cg CRBT |
| PGH-18-06 | 439.77 | 440.18 | 0.41 | 590035 | SYE w/ mica alt'n rims |
| PGH-18-06 | 440.18 | 441.14 | 0.96 | 590036 | CRBT |
| PGH-18-06 | 441.14 | 441.9 | 0.76 | 590037 | SYE |
| PGH-18-06 | 441.9 | 442.45 | 0.55 | 590038 | CRBT |
| PGH-18-06 | 442.45 | 443.59 | 1.14 | 590039 | SYE |
| PGH-18-06 | 443.59 | 444.8 | 1.21 | 590040 | SYE |
| PGH-18-06 | 444.8 | 445.68 | 0.88 | 590041 | CRBT vein |
| PGH-18-06 | 445.68 | 446.6 | 0.92 | 590042 | SYE |
| PGH-18-06 | 446.6 | 447.26 | 0.66 | 590043 | CRBT w/ mafic bands |
| PGH-18-06 | 468.34 | 468.7 | 0.36 | 590045 | BX zone w/ ap+amph |
| PGH-18-06 | 479.8 | 481.07 | 1.27 | 590046 | Sye/Crbt veins up to 30cm wide |
| PGH-18-06 | 488.77 | 490.04 | 1.27 | 590047 | Mixed sy-bx/crbt. Mt bands. |
| PGH-18-06 | 490.04 | 491.25 | 1.21 | 590048 | Sye-bx |
| PGH-18-06 | 491.25 | 492.46 | 1.21 | 590049 | Sye-->Sye-Bx w/ 15cm CRBT vein |
| PGH-18-06 | 492.46 | 493.66 | 1.2 | 590050 | Sye w/ carb veins/rxn rims |
| PGH-18-06 | 493.66 | 494.76 | 1.1 | 590051 | Crbt-Bx/FZ-BX |
| PGH-18-06 | 494.76 | 496 | 1.24 | 590052 | Crbt-BX |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|-----------|--------|--------|-----------|----------|---|
| PGH-18-06 | 496 | 497.25 | 1.25 | 590053 | Crbt/Sye Bx |
| PGH-18-06 | 497.25 | 498.45 | 1.2 | 590054 | Sye-Bx w/ Pyroxenite + Unkn Bx dyke |
| PGH-18-06 | 498.45 | 499.67 | 1.22 | 590055 | BX w/ cg plag+kspars clasts changing to massive Sye |
| PGH-18-06 | 499.67 | 500.94 | 1.27 | 590056 | Massive Sye, carb+amph-chl veins |
| PGH-18-06 | 500.94 | 501.67 | 0.73 | 590058 | cg CRBT |
| PGH-18-06 | 501.67 | 502.93 | 1.26 | 590059 | massive SYE |
| PGH-18-06 | 502.93 | 503.79 | 0.86 | 590060 | massive CRBT |
| PGH-18-06 | 503.79 | 504.86 | 1.07 | 590061 | massive sye w/ 20cm crbt |
| PGH-18-06 | 504.86 | 506.1 | 1.24 | 590062 | massive sye w/ cg white fspar |
| PGH-18-06 | 506.1 | 507.33 | 1.23 | 590063 | sye/crbt bx |
| PGH-18-06 | 507.33 | 508.56 | 1.23 | 590065 | Sye-Bx |
| PGH-18-06 | 508.56 | 509.78 | 1.22 | 590066 | Sye-Bx |
| PGH-18-06 | 509.78 | 510.54 | 0.76 | 590067 | Sye-Bx w/ 30cm green dyke |
| PGH-18-06 | 515 | 515.64 | 0.64 | 590068 | CRBT dyke |
| PGH-18-06 | 530.6 | 531.75 | 1.15 | 590069 | CRBT |
| PGH-18-06 | 531.75 | 533 | 1.25 | 590070 | CRBT |
| PGH-18-06 | 542.3 | 543.3 | 1 | 590071 | CRBT |
| PGH-18-06 | 543.3 | 544.1 | 0.8 | 590073 | CRBT + gran bx |
| PGH-18-06 | 546 | 547.5 | 1.5 | 590074 | |
| PGH-18-06 | 549.6 | 550.7 | 1.1 | 590075 | GRAN BX + CRBT |
| PGH-18-06 | 552.07 | 553 | 0.93 | 590076 | GRAN + MINOR CRBT |
| PGH-18-06 | 556.54 | 557.48 | 0.94 | 590077 | CRBT |
| PGH-18-06 | 559.39 | 560.3 | 0.91 | 590078 | CRBT, lt grn, cg, |
| PGH-18-06 | 565.2 | 566.7 | 1.5 | 590079 | GRAN + MINOR CRBT |
| PGH-18-06 | 566.7 | 568.2 | 1.5 | 590080 | CRBT + gran |
| PGH-18-06 | 568.2 | 569.33 | 1.13 | 590081 | CRBT + gran |
| PGH-18-06 | 576.84 | 578.12 | 1.28 | 590082 | CRBT |
| PGH-18-06 | 587.31 | 588 | 0.69 | 590083 | GRAN + CRBT |
| PGH-18-06 | 588 | 589.32 | 1.32 | 590084 | CRBT |
| PGH-18-06 | 595.29 | 596.64 | 1.35 | 590085 | 3 CRbt veins + GRAN |
| PGH-18-06 | 618.58 | 620 | 1.42 | 590086 | CRBT |
| PGH-18-06 | 623.96 | 625.45 | 1.49 | 590087 | CRBT + gran bx |
| PGH-18-06 | 630.9 | 631.65 | 0.75 | 590088 | CRbt |
| PGH-18-06 | 631.65 | 632.5 | 0.85 | 590090 | CRBT |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|--------------------|----------|-----------|
| PGH-18-06 | 31 | 31 | 0 | 589792 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 74.88 | 74.88 | 0 | 589810 | A18-06091 | STANDARD | Oka 1 | 2.46 | 0.531 |
| PGH-18-06 | 90.26 | 90.26 | 0 | 589818 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 118 | 118 | 0 | 589830 | A18-06091 | STANDARD | Oka 1 | 2.58 | 0.535 |
| PGH-18-06 | 124.2 | 124.2 | 0 | 589836 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 151.54 | 151.54 | 0 | 589854 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 195.95 | 195.95 | 0 | 589880 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 203.42 | 203.42 | 0 | 589887 | A18-06091 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-06 | 239.7 | 239.7 | 0 | 589912 | A18-06091 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-06 | 255.3 | 255.3 | 0 | 589920 | A18-06091 | STANDARD | Oka 1 | 2.47 | 0.531 |
| PGH-18-06 | 257.5 | 257.5 | 0 | 589923 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 331.37 | 331.37 | 0 | 589945 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 371.34 | 371.34 | 0 | 589967 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 382.94 | 382.94 | 0 | 589979 | A18-06091 | STANDARD | Oka 1 | 2.47 | 0.529 |
| PGH-18-06 | 389.68 | 389.68 | 0 | 589986 | A18-06091 | STANDARD | Oka 1 | 2.48 | 0.527 |
| PGH-18-06 | 390.84 | 390.84 | 0 | 589988 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 395.6 | 396.5 | 0.9 | 589993 | A18-06091 | N/A | ORIGINAL SAMPLE | 5.56 | 0.699 |
| PGH-18-06 | 395.6 | 396.5 | 0.9 | 589994 | A18-06091 | DUPLICATE | DUPLICATE - 589993 | 5.36 | 0.615 |
| PGH-18-06 | 407.98 | 407.98 | 0 | 590007 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 417.1 | 418.28 | 1.18 | 590012 | A18-06091 | N/A | ORIGINAL SAMPLE | 3.75 | 0.038 |
| PGH-18-06 | 417.1 | 418.28 | 1.18 | 590013 | A18-06091 | DUPLICATE | DUPLICATE - 590012 | 4.1 | 0.046 |
| PGH-18-06 | 417.1 | 418.28 | 1.15 | 590024 | A18-06091 | DUPLICATE | DUPLICATE - 590023 | 6.53 | 0.394 |
| PGH-18-06 | 429.1 | 430.25 | 1.15 | 590023 | A18-06091 | N/A | ORIGINAL SAMPLE | 6.24 | 0.422 |
| PGH-18-06 | 437.78 | 437.78 | 0 | 590032 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 447.26 | 447.26 | 0 | 590044 | A18-06091 | STANDARD | Oka 1 | 2.44 | 0.534 |
| PGH-18-06 | 500.94 | 500.94 | 0 | 590057 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 507.33 | 507.33 | 0 | 590064 | A18-06091 | STANDARD | Oka 1 | 2.47 | 0.538 |
| PGH-18-06 | 543.3 | 543.3 | 0 | 590072 | A18-06091 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-06 | 631.65 | 631.65 | 0 | 590089 | A18-06091 | BLANK | Marble | 0.03 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|---------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 8-May-2018 |
| Township/Area: | Killala Lake Area | End Date: | 30-Apr-2018 |
| Claims (converted): | 262731, 332506 | Described by: | B. Clark, BSc |
| Claims (legacy): | TB 4256251 | Log date: | 17-May-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 344.00° | | Easting: 519787 | | Core size: HQ | | Cemented: No | |
| Plunge: -60.00° | | Northing: 5432542 | | Casing: Pulled | | Stored: Yes | |
| Length: 669.0 m | | Elevation: 315.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-07 | Reflex | 18 | 344.2 | -59 | 57515 |
| PGH-18-07 | Reflex | 69 | 344.6 | -59.7 | 57255 |
| PGH-18-07 | Reflex | 120 | 345.6 | -59.7 | 57151 |
| PGH-18-07 | Reflex | 225 | 345.9 | -59.9 | 57264 |
| PGH-18-07 | Reflex | 279 | 346.6 | -60.1 | 57146 |
| PGH-18-07 | Reflex | 330 | 346.9 | -60.4 | 57172 |
| PGH-18-07 | Reflex | 381 | 347.3 | -60.8 | 57239 |
| PGH-18-07 | Reflex | 432 | 339.9 | -60.9 | 57811 |
| PGH-18-07 | Reflex | 483 | 347.2 | -61 | 56871 |
| PGH-18-07 | Reflex | 534 | 349 | -60.8 | 57668 |
| PGH-18-07 | Reflex | 597 | 349.1 | -60.8 | 57931 |
| PGH-18-07 | Reflex | 648 | 349 | -61.3 | 57813 |
| PGH-18-07 | Reflex | 669 | 349.6 | -61.3 | 57573 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|------|------|------------|--------------------------------------|---|
| PGH-18-07 | 0 | 3.2 | OVB | Overburden | Overburden |
| PGH-18-07 | 3.2 | 6.6 | GRAN | Granite | Fenitized granite(?), 70% mafics locally (bt, chl, amph, pyx) with 'bands' of mg-cg granite (qtz 20%, plag 30%, kspar 50%), slightly to moderately weathered. Minor crbt <5cm cream to brown (weathered), diss hem, patchy fluorite |
| PGH-18-07 | 6.6 | 7.7 | SYE-BX | Carbonatite + Granite | Multiple intersections of CRBT up to 25cm; cream to green-purple, 10% fluorite (patchy, locally), trace diss py, fg, local <3mm vugs, contacts undulating. GRAN; mg-cg up to 1cm, pink-red, fenitized, blue amph patches up to 1cm, fractures have clay infill, slightly weathered. |
| PGH-18-07 | 7.7 | 9.4 | QTZ-SYE | Quartz Syenite / Granite | Fg-mg, red-pink, locally up to 20% bt/chl, fenitized (blue amph + crbt filling fractures, amph replacing bt). Veins/veinlets of crbt <5mm. Weak-mod selectively pervasive hem/chl alt. LC planar, weak dissolution along contact. |
| PGH-18-07 | 9.4 | 9.87 | SYE-BX | Carbonatite + Syenite? | Light green alt'n halo around crbt vein ~7cm wide. Undulating diffuse contact between light green halo and crbt vein. Green zone on either side contains kspar <2mm with carb in groundmass. Alt'n halo is 15-20cm in width, UC planar to undulating, LC is irregular. Fractures have fe-ox staining. CRBT; light pink-cream, fg, trace diss hem & blue amph. |
| PGH-18-07 | 9.87 | 11.1 | QTZ-SYE | Quartz Syenite | 15% qtz, kspar 60%, amph 10%, chl 10%, 5% plag. Fg-mg, blue fg amph / chl replacing bt, multiple crbt veins @ moderate angle TCA commonly <1cm locally up to 10cm. Fractures have fe-ox staining, trace diss py. |
| PGH-18-07 | 11.1 | 14.6 | SYE-BX | Quartz Syenite + Carbonatite Breccia | Carbonatite < 0.5m, syenite between crbt zones is weakly fractured with crbt infill. Intersections decrease downhole. SYE; red-pink, fenitized, blue amph/chl replacing mafics. Clasts are from 5mm-5cm, sub rounded, no rxn rims, fractures in clasts and surrounding crbt infilled with crbt/fg blue amph. CRBT; grey to light blue, fg, syn clasts rimmed by blue/green amph/chl, diss hem, clasts have no-minimal rxn rims. |
| PGH-18-07 | 14.6 | 17.5 | CRBT-BX | Carbonatite + Syenite Breccia | Overall 60% Syn clasts, 40% Crbt Syenite clasts up to 20cm, rxn rims <5mm, clasts are rounded to sub rounded, clasts also have fractures <4mm with crbt infill. CRBT; light pink-blue-grey, locally amph up to 4mm, patchy hem, fg, wispy bands of blue-brown (amph +/- ap), trace diss py, slightly weathered (fe-ox on fractures, local vugs <3mm, locally massive infill of blue fibrous amph. 16.60-17: pegmatitic syn |
| PGH-18-07 | 17.5 | 24.7 | SYE | Syenite | Sye; pink-med red to green-blue, weak-mod selectively pervasive hem/chl alt, fractures fill blue amph <4mm and as patches (replacing bt?). Zone varies in gran size (described below), moving down hole bt/chl abundance increases but is patchy. 17.5-18.8: cg xtals up to 1cm, 10% qtz, plag 30%, k-spar 40%, 10% chl, 10% amph/ 18.8-20.3: fg-mg. 20.3-21: Pegmatitic. 22.80-23.20: 50% bt/chl, fg. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|-----------------------|---|
| PGH-18-07 | 24.7 | 30.7 | GRAN | Granite | Unit is brown-green to opaque, locally pink-red, Bt > Fspar > Qtz > Amph > Chl. Locally up to 35% bt (being replaced by chl, locally by blue fibrous amph). Fg-mg xtals up to 5mm. Overall unit is dominated by Bt with nonuniform "bands" or zones which are barren or have significantly less Bt and an increase in qtz/fspar. These bands are at moderate angles TCA and are sporadically distributed across unit, up to 35cm in width but generally <3cm. Where unit becomes coarser grained generally bt decreases. Locally fractures/veins filled with blue amph and have alt halos of red-pink (hem?). 29.3-29.65: CRBT + bx; light khaki to cream, patchy fluorite, diss hem, contacts have rxn rim <3mm and are planar to undulating. Local clasts of gran up to 5cm, sub angular to angular and are fractured. LC is gradational into cg granite. |
| PGH-18-07 | 30.7 | 32.38 | SYE | Syenite | Fg-cg (locally), med red-pink, bt being alt to chl/blue fibrous amph, qtz 10-15%, kspar 50%, chl 10%, amph 10%, plag 10%, bt 10%. Minor crbt/amph veins <8mm. LC planar @ 30/300. |
| PGH-18-07 | 32.38 | 33.14 | MDYKE | Mafic Dyke | Carb/chl alt mafic dyke, non-magnetic, chilled margins <5mm, vfg, Carbonatite 5cm veins along lower contact. CRBT; cream to light green-purple, fg, diss hem, fg blue mineral (amph?) <1mm, trace diss py. |
| PGH-18-07 | 33.14 | 35.3 | SYE | Syenite | Pink-med red, xtals <4mm, qtz 10%, kspar 45%, plag 25%, chl 10%, amph 10%. Amph/chl replacing bt, weak-mod pervasive hem alt. Minor intersections of crbt <3cm; light purple-red, fg, diss hem, mottled. |
| PGH-18-07 | 35.3 | 39.5 | SYE | Syenite | Med red-pink to brown-opaque, fg-mg up to 4mm, local zones dominated by bt (up to 35%) with qtz/fspar/chl/amph. Small zones <20cm where bt is less dominant corresponding with colour change to med red-pink. CRBT veins <4cm, fg, pink-cream to light green, disseminated hem, patchy brown, commonly rimmed by blue amph, contacts are planar to undulating and at moderate angle to core axis. |
| PGH-18-07 | 39.5 | 41 | SYE-BX | Syenite + Carbonatite | SYE; med red to pink, xtals up to 3mm, 15% qtz, kspar 50%, plag 15%, chl/amph/bt 20% (bt completely to partially replaced by chl/amph). Fractures filled with vfg blue mineral (amph). CRBT veins/bx up to 70cm. Veins <5cm; fg, massive, diss hem, vfg blue mineral, patchy fg fluorite. 40.24-40.93: BX, syn clasts up to 3cm, sub angular to rounded, clasts are highly fractured, milled bx?, zone varies from clast dominated to massive crbt zone ~10cm. CRBT; light purple-orange-green, mottled, vfg. |
| PGH-18-07 | 41 | 51.7 | QTZ-SYE | Quartz Syenite | Fg-cg (locally pegmatitic with fspar up to 5cm), med red-pink to dark grey-green (zones dominated by bt/chl). Fenitized, chl/blue amph replacing bt and filling fractures. Bt rich zones have gradational contacts. Weak-mod pervasive hem alt (not as prevalent in bt rich zones). Trace CRBT intersections <15cm; light grey-cream-brown, banded to massive, patchy fg fluorite, diss hem, wavy banding is ~ parallel to contacts. Contacts are brecciated, syn clasts have rxn rims <3mm, veins rimmed by blue amph. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|---------------------------------------|--|
| PGH-18-07 | 51.7 | 58.55 | SYE-BX | Quartz Syenite + Minor Carbonatite | SYE; med red-pink, fg to locally cg up to 20mm, locally zones of more abundant bt up to 30%. Bt being replaced partially to locally completely by chl/blue amph. Cross cut by moderate 30-60 dTCA crbt veins <1cm with either crbt infill or blue amph+crbt. CRBT zones up to 0.5m. 51.70-51.96: CRBT; light grey-red-purple, fg, wispy bands defined by hem, patches of blue-green, undulating UC ~ parallel TCA, LC brecciated 55.38-55.8: CRBT; light pink-blue, syn clasts up to 3cm, agglomerates of clasts are rimmed by fg blue fibrous amph, clasts are sub-rounded with rxn rims up to 5mm. diss hem, trace diss py anhedral masses up to 3mm. UC curved 45/110, LC brecciated. |
| PGH-18-07 | 58.55 | 59.24 | CRBT-BX | Carbonatite Breccia w/ Syenite Clasts | Silico-carb, light pink-purple-green, syn clasts(?) up to 3cm, clasts are highly fractured/carb alt. mottled, apt cum up to 2cm, trace diss py up to 3mm, diss hem, fg diss blue mineral (amph). Fg patchy fluorite near LC. LC @ 18/215, UC irregular |
| PGH-18-07 | 59.24 | 64.3 | QTZ-SYE | Quartz Syenite | Med red-pink, fg-mg, locally 35% bt (being replaced by chl/amph), qtz 15%, kspar 40%. CRBT veins <5cm silico-carb, light grey-cream, diss hem, patchy fluorite, veins @ moderate angles TCA. |
| PGH-18-07 | 64.3 | 65 | CRBT-BX | Carbonatite Breccia | Clast supported, syn clasts are angular to sub-rounded, rxn rims up to 1cm alt to bt, clasts up to 5cm, light grey-cream, fg, patchy hem, trace diss py, higher concentration of hem near LC. CCTs are bx/irregular. |
| PGH-18-07 | 65 | 66.8 | SYE | Syenite | Fg-mg, red-pink, locally 40% bt, crbt veins <5cm, smaller veins have rxn rims of blue/green/red (amph/chl/albite(?)). CRBT veins are silico-carb, massive, fg fluorite, diss hem, trace diss py. |
| PGH-18-07 | 66.8 | 69.8 | SYE-BX | Syenite + Carbonatite | SYE cross cut by multiple Carb veins from 5mm-1.5m. Syenite red-pink, 25% bt, kspar 50%, qtz 10%. Selectively pervasive weak-strong hem alt. Locally CRBT veins are brecciated. Colour of crbt becomes lighter moving down hole (decrease in hem?) 67.6-69.4: CRBT; light pink to dark purple-mauve, fg-mg, fg fluorite <1mm, diss hem, syn clasts up to 5cm some with 5mm rxn rims of bt. locally wispy bands of blue-green. |
| PGH-18-07 | 69.8 | 74.7 | SYE | Syenite | Red-pink-black, qtz 10-15% qtz eyes up to 2mm, kspar 50%, bt 30%, 5-10% plag. Fg-mg, bt alt to chl/amph locally, patchy mod-strong hem alt. CRBT veins at moderate angle TCA commonly < 3cm wide, locally up to 7cm. Frequency is 1-3 per metre increasing in the last meter. Crbt veinlets <1mm throughout locally intense. |
| PGH-18-07 | 74.7 | 76 | CRBT-BX | Carbonatite Breccia | 74.7-75.2: two phases of crbt(?), breccia infill is black vfg with 3%py, clasts of light grey-cream silico-carb, angular which contain clasts of syn(? Possibly just hem alt or highly altered clasts?), later phase or crbt is light pink to grey-green, fg, clasts of syn have black rxn rims up to 1cm, clasts are angular to sub. 75.2-76: clasts have diffuse boundaries and moderately fractured, crbt infill is light green to cream, mg, fg diss hem, moving towards contacts smaller fractures are filled with fg blue fibrous amph. LC gradational |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|--------|------------|-------------------------------|--|
| PGH-18-07 | 76 | 82.2 | SYE | Syenite + Minor Carbonatite | SYE; med red-pink to black, mg, locally bt up to 30%, bt being replaced by blue amph/chl. Alt halos around crbt veins locally in more bt dominated zones pink-cream halos. CRBT up to 0.5m 77-77.28: CRBT; fg, elongate fibrous mineral amph?, secondary carb alt along fractures from second phase of CRBT. contacts are irregular, diss hem. 78.7-79: BX zone, clast supported, crbt infill cream to light green, fg, diss red fg mineral, syn clasts are angular with rxn rims of bt up to 5mm. 79.30-79.70: external margins 5-7cm are purple-light green (apt cumulates up to 5mm), diss hem. Core of crbt is light pink and massive. Trace diss py anhedral masses up to 2cm, fg diss hem(?). UC/LC planar with dissolution along contact. LC 70/125 81.06-81.35: CRBT; grey-green to light purple, mottled, brecciated LC. |
| PGH-18-07 | 82.2 | 86.2 | CRBT-BX | Carbonatite Breccia + Syenite | Two breccia zones 0.5m and 1m respectively, outside of bx zones sporadic crbt veins <7cm. SYN; med red -pink, fg-mg, bt being replaced by chl/amph locally. 83-84: crbt purple-mauve, fg, massive, syn clasts up to 8cm, angular to sub with moderate fractures, 85.25-86.2: crbt grey-green, clast supported, clasts up to 18cm, angular to sub, pink alt halos on clasts up to 7mm. CRBT has vfg orange mineral, diss hem. Silic-carb |
| PGH-18-07 | 86.2 | 97 | GRAN | Granite | Med red-pink, mg-cg locally pegmatitic plag up to 3cm, 20% qtz, 40% kspar, plag 20%, 20% amph/chl/biot. Moderate potassic alteration, striations in plag stained pink-red, masses of kspar, hem alt. bt being replaced by chl. Near contacts with crbt veins blue amph present within gran replacing bt(?). trace diss/stringers of py. Minor crbt veins <10cm. CRBT; light grey-mauve to purple, fg, weakly banded, between 30-60 TCA, patchy fluorite, hem masses up to 4mm, trace diss py, euhedral xtals up to 2mm. fg blue (amph?) 94-94.5: broken core zone, partially due to mechanical breaks but evidence for small scale fault. undulating, smooth fractures with striations and fg chl infill w/rock fragments. Nearing LC gran becoming weakly more fractured up to contact with CRBT @ 25/305 |
| PGH-18-07 | 97 | 97.8 | CRBT | Carbonatite | Light grey-green to mauve-purple, brecciated contacts, clasts of gran up to 20cm sub-rounded with minor dissolution along boundaries. Wispy undulating bands defined by grey-br-rd ap, trace diss py. Dol>sil>calc |
| PGH-18-07 | 97.8 | 99.75 | GRAN | Granite | Med red-pink, xtals <4mm, 30% bt/chl/amph, 20% qtz, kspar 40%, plag 10%. Bt being replaced by amph/chl partially to completely. Veins <5mm of blue amph(?) +/- crbt and low angles <40 TCA. |
| PGH-18-07 | 99.75 | 103.15 | GRAN | Granite + Carbonatite | GRAN; med red-pink, xtals up to 5mm, locally 30% bt/chl/amph (increasing near contacts with crbt), qtz 20%, kspar 40%, plag 10%. Overall zone is Gran 70% CRBT 30% CRBT zones up to 0.7m, veins mostly between 30-60dTCA CRBT; light to dark grey, Dol>sil>calc, fg, locally wispy bands (near contacts), trace diss py locally up to 5% along contact margins. patchy fg fluorite, diss hem, under UV very minor calcite. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------|---|
| PGH-18-07 | 103.15 | 104.2 | CRBT | Carbonatite | Light purple-blue-green to grey, local wispy bands, fg-cg, bands defined by colour and abundance of hem(?), fg black mineral (pyrochlore?), nearing LC apt cum up to 1cm across, trace diss py and blebs up to 1cm. Moving downhole there is a weak correlation with increase in grain size. LC @ 20/200 Gran clasts up to 10cm, sub rounded, weakly fractured, clast boundaries are undulating (dissolution), |
| PGH-18-07 | 104.2 | 108.7 | GRAN | Granite | Med red-pink to grey-green, potassic alt(?) locally up to 20% bt, bt being replaced locally by chl/amph, mg, qtz 25%, kspar 40%, plag 15%, bt 20%. Minor crbt veins <5mm with pink-green alt halos. |
| PGH-18-07 | 108.7 | 109.1 | CRBT | Carbonatite | Light grey-green-purple, weakly banded, fg, diss hem, fg orange mineral along "bands", gran clasts angular <3cm. UC undulating @ 25/85, LC @ 25/90 |
| PGH-18-07 | 109.1 | 109.45 | PEG | Pegmatitic Granite | Pink-light orange, fspar xtals up to 10cm, masses of blue fibrous amph(?) and chl up to 5cm sharp LC @ 30/70 |
| PGH-18-07 | 109.45 | 110.8 | GRAN | Granite | Pink to opaque, qtz 30%, bt 20%, kspar 40%, plag 10%. Pink-green vfg alt halos around crbt veins <3mm. |
| PGH-18-07 | 110.8 | 111.55 | CRBT | Carbonatite | Light pink to blue, diss fg py + nondistinct black mineral, diss hem, patchy fluorite. UC undulating @ 20/200, LC @ 65/180 |
| PGH-18-07 | 111.55 | 111.96 | PEG | Pegmatitic Granite | Kspar up to 4cm, massive qtz ~10cm, locally massive amph(?)/chl, qtz replacing fspar(?). |
| PGH-18-07 | 111.96 | 126.5 | QTZ-SYE | Quartz Syenite | Med red to pink locally blue-green-brown, xtals < 5mm, patchy mod-str potassic alt (k, hem, chl), locally blue amph (finitized). Qtz 15%, kspar 40%, plag 10%, bt 20%, chl 10%, amph 10%. CRBT veins <5cm; light grey, diss hem, fg, trace diss py, between 30-60 dTCA, contacts are planar to undulating. 122.7-122.9: CRBT; cg, massive, light green, diss hem, trace diss euhedral py, Dol>Calc, UC undulating @ 55/075, LC brecciated @ 40/110. |
| PGH-18-07 | 126.5 | 128.15 | PEG | Quartz Syenite Pegmatite | Plag xtals up to 10cm, Finitized, xtals being replaced by qtz/blue fibrous amph(?), chl, light pink vfg (kspar?) along grain boundaries and permeating xtals along striations. 127.3-127.5: CRBT; light green-pink-grey-purple, fg, patchy fluorite, clasts of peg fractured carb alt w/ blue mineral infill. |
| PGH-18-07 | 128.15 | 130.82 | QTZ-SYE | Quartz Syenite | Qtz 15-20%, bt 25%, kspar 40%, plag 15%. moderate-strong patchy hem/chl/amph alt. Where alt stronger bt being replaced by chl/blue amph, alt seems to be halos around crbt veins (4cm), extent of alt has diffuse margins. |
| PGH-18-07 | 130.82 | 133.45 | GRAN | Granite | 20% qtz, bt 10%, plag 30%, kspar 40%, med red, mod selectively pervasive hem/chl, patchy blue amph replacing bt. 132.35-133.20: Pegmatitic |
| PGH-18-07 | 133.45 | 137.13 | GRAN | Granite + Carbonatite | GRAN; med red-pink, selectively pervasive moderate hem alt'n, weak potassic alt'n(?), locally bt replaced by blue fibrous amph/chl. CRBT; vein up to 20cm, light grey-cream-green-blue, fg, massive to locally wispy bands defined by x of hem, trace diss py + other fg blue-grey submetallic mineral (H<5). |
| PGH-18-07 | 137.13 | 139 | GRAN | Granite | Light red to opaque becoming more orange cream to red moving down hole, mg-cg locally up to 1cm, moderate patchy hem alt. qtz 20%, bt, 15%, kspar 40%, plag 20%, chl 5%. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|--|
| PGH-18-07 | 139 | 139.5 | CRBT | Carbonatite | Light grey-purple-orange cream, fg, massive, diss hem, trace diss py + other vfg black mineral, Dol> Calc, contacts are diffuse (dissolution) UC @ 80/120 |
| PGH-18-07 | 139.5 | 141 | GRAN | Granite + Carbonatite | Gran; jointed, Qtz 20%, kspar 40%, plag 20%, bt, 15%, 5% other. Orange cream to med red, orange mineral is altering kspar (clay mineral?, H<2, overprinting kspar), orange mineral is patchy mod intensity, intensity varies with proximity to fractures/crbt veins. Fractures filled with fg black-green chl. CRBT; light grey-purple, fg, massive, dissolution along contacts. |
| PGH-18-07 | 141 | 141.8 | CRBT | Carbonatite | CRBT; light purple-green-pink, mg, Calc>Dol, fg chl in fractures and diss, contacts are gradational/highly altered, diss hem, |
| PGH-18-07 | 141.8 | 143 | GRAN | Granite + Carbonatite | GRAN; med red to light orange (increasing down hole), mg, qtz 20%, bt 10%, kspar 50%, 20% plag. With increase in orange clay(?) increase in chl along fractures and replacing bt(?) |
| PGH-18-07 | 143 | 144.8 | SYE-BX | Granite + Breccia | Qtz 25% light orange with patchy red, locally brecciated, numerous <1mm fractures, ff chl/calc +/- hem/qtz. Fspar being completely alt to orange clay mineral. |
| PGH-18-07 | 144.8 | 146 | SYE-BX | BX / Granite | Cream orange to red, clay/chl altered, fault breccia(?), angular clasts up to 4cm of altered granite with chl/clay infill, patchy strong hem alt, highly fractured outside of bx zone, clasts are angular/fractured. |
| PGH-18-07 | 146 | 151.35 | QTZ-SYE | Quartz Syenite | Med red, qtz 15%, kspar 50%, 15% plag, 20% bt, fg-mg, rare peg zone (15cm). CRBT veins <30cm; light pink-green-grey-purple, fg, mottled, diss hem, trace diss py euhedral xtals up to 1cm locally, fg light orange mineral rimming mottled colours. Contacts are bx to planar/undulating. |
| PGH-18-07 | 151.35 | 152.9 | CRBT-BX | Carbonatite Breccia | Light pink-purple-green-grey, syn clasts sub-angular to sub rounded up to 20cm, clasts have diffuse boundaries and are weakly fractured. Diss hem, trace diss py up to 3mm. 152.65-152.9: mauve to purple, fg black pyrochlore(?) |
| PGH-18-07 | 152.9 | 161.4 | QTZ-SYE | Quartz Syenite | Med red to pink, qtz 15%, kspar 50%, bt 20%, 15% plag. Mod-str selectively pervasive hem alt. Bt being alt to chl/amph locally. Fractures/veins <1cm filled with blue fg amph(?) /chl. Mg to locally cg up to 1cm plag. Weak potassic alteration. CRBT intersections <30cm dominantly at moderate angles TCA. fg, red to light purple-green, diss hem, rimmed by blue mineral (amph) Dol>Calc, trace diss py. |
| PGH-18-07 | 161.4 | 161.7 | MDYKE | Mafic Dyke | Green-grey, fg margins, black crystals <1mm bt?, carbonate/chlorite altered groundmass, non-magnetic. UC @ 80/100, LC @ 70/330 |
| PGH-18-07 | 161.7 | 167.45 | SYE | Syenite | Qtz 10%, kspar 60%, chl 10%, plag 5%, bt 15%. Mg to locally pegmatitic, in peg zones fspar has inclusions of qtz and potassic alt, patchy mod hem alt, bt being replaced by chl/blue fibrous amph. Locally brecciated zones, clast supported, clasts up to 5cm w/ diffuse boundaries, sub rounded to sub angular. Infill blue fg amph(?) /crbt. |
| PGH-18-07 | 167.45 | 167.81 | MDYKE | Mafic Dyke | Light to dark green-grey, fg margins, fg black amph(?) <1mm, vfg yellow mineral diss (dol?), groundmass chl alt, weak carbonate alteration. UC @ 60/030, LC@ 70/075 |
| PGH-18-07 | 167.81 | 169.85 | GRAN | Granite | 25% qtz, kspar 40%, plag 10%, bt 10%, chl 10%, 5% other. Mg locally peg zone <10cm. Patchy mod potassic alt. Nearing lower contact blue amph(?) replacing bt. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|--|
| PGH-18-07 | 169.85 | 182 | CRBT-BX | Carbonatite Breccia + Syenite | <p>Multiple breccia zones up to 0.5m and massive crbt zones up to 1.8m 169.85-170.56: BX; upper 0.4m syn(?) fenitized highly alt to blue fg amph(?) local bt, carb in fractures, massive fg fspar <2mm, diss hem. Syn clasts up to 6cm, angular to sub angular, rxn rims <3mm-6mm, larger rxn rims on smaller clasts, of black bt, clasts are weakly fractured. CRBT; cream to light blue-green to purple, fg, patchy fluorite, diss hem, wispy blue. Locally clasts are completely altered, trace diss py, local fg chl(?) black H<2.</p> <p>171.65-172.24: BX; mosaic breccia, syn clasts up to 9cm, angular to sub, rxn rims up to 1cm, clasts <3cm are completely altered. CRBT; light pink-purple local light green, fg, diss hem, patchy fluorite. LC @ 25/230</p> <p>173.20-173.85: BX; UC undulating, rimmed by ~ 3cm blue fibrous amph, syn clasts angular to sub, up to 4cm, black rxn rims up to 5mm, smaller clasts completely altered. CRBT; light pink, fg, wispy bands near contacts and surrounding clasts, diss hem, fg <1mm blue amph(?), trace diss py, vfg diss ap forming wispy bands.</p> <p>174.30-174.70: CRBT BX; light pink-green-grey, fg blue mineral (amph?) forming wispy bands/masses. trace diss py diss hem. sye clasts angular to sub angular, dominantly completely altered to black fg mica (phlogopite?), some syn clasts appear to be pegmatitic plag with weak potassic alteration permeating along twinning striations of xtals.</p> <p>175.10-175.4: light pink, angular to sub angular 'masses' of higher hem concentration. trace py as anhedral masses up to 1cm. Local 1cm mass of iron black sub-metallic anhedral mineral, H ~6 Columbite/tantalite?. angular fragments of fspar <5mm within crbt. Dissolution along contacts making them diffuse.</p> <p>176.50-176.85: CRBT; light grey-blue, fg, wispy mottled bands of darker to grey, fine discontinuous stringers of hem, trace diss py masses <3mm, vfg orange cream mineral along weak bands and fractures.</p> <p>1787.78-180.05: CRBT; cream to light green-red, cg apatite(?) up to 1cm (65%) under UV no fluorescence, fg groundmass white-blue under UV (purple-red with vfg cream orange in normal light), fg diss hem, fg black metallic mineral <1mm. local trace py</p> <p>181.40-181.95: CRBT BX; 25cm massive crbt, crbt light purple-mauve, vfg, clasts of alkali <8cm, angular/moderately fractured, with diffuse boundaries,</p> |
| PGH-18-07 | 182 | 184.67 | GRAN | Granite | Salmon pink to red, mg-cg up to 3cm, 30% qtz, 25% plag, 35% kspar, 10% bt/chl/amph. Weak-mod potassic alt, vfg pink along twinning striations in plag. Fractures filled with blue amph and spatially associated. LC gradational and marked by sharp increase in bt abundance and absence of plag. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|---|
| PGH-18-07 | 184.67 | 187 | GRAN | Granite | Increase in bt from previous unit, decrease in fspar, pale grey to pink-red, mg, patchy bt 10-20% locally, veinlets <3mm of blue fg sodic amph(?) also as masses up to 5cm more commonly replacing bt(?) and spatially associated to fractures/crvt veins/veinlets <4mm. 185.5-185.7: CRBT; cream to light blue, wispy bands pf fg blue sodic amph & weakly rimming. fg diss py, diss hem. Contacts are planar to undulating with weak dissolution. UC @ 20/70, LC@ 50/50 |
| PGH-18-07 | 187 | 189.6 | SYE | Syenite + Carbonatite | Low angle TCA ~10-15 fractures with blue sodic amph + crbt fill, veins are undulating and sub-parallel TCA, maximum width of 5cm, composes ~15% of unit and becoming brecciated 188.40-188.80. SYN; pink-red, mg-cg locally, fenitized, blue sodic amph replacing mafics(? bt/pyx))and filling fractures, bt being alt the chl. 188.4-188.8: CRBT; light blue-grey, fg, massive, dol>calc, fg stringers hem subparallel to contacts, in areas with increased sodic amph fg black-grey submetallic mineral present (Nb Ox?) |
| PGH-18-07 | 189.6 | 195.1 | SYE | Syenite | Blue-grey to red-pink, patchy increases in bt/amph with decrease in kspar and local qtz-fspar "band"/"pods" up to 5cm, fenitized, chl replacing bt, blue sodic amph fg masses <2mm. Fractures/veins filled with sodic amph +/- crbt, with red alt halos (hem?). Rare crbt veins <3cm, locally brecciated, cream-light blue-grey, silicic-calc, diss hem, trace diss py. LC is gradational. |
| PGH-18-07 | 195.1 | 196.05 | SYE-BX | Carbonatite + Syenite | At top of unit 25cm brecciated zone with sub-angular to angular syn clasts up to 6cm. Clasts becoming progressively more altered moving downhole towards crbt vein ~5cm. 195.52-196.05: CRBT; light grey-blue to cream, fg, massive, Dol>Calc, vfg soft (H<3) black mineral <1mm chl? partially coating fractures and disseminated. trace diss py, diss hem decreasing down hole. LC @ 75/115. |
| PGH-18-07 | 196.05 | 201.17 | SYE | Syenite | Red-pink, fg-pegmatitic locally. Multiple intersections of CRBT as veins and local breccias <30cm, commonly veins <5cm making up <10% of unit. Patchy weak-str potassic alt, local zones with up to 20% bt and vfg fspar(?). Rock mass is fenitized, presence of blue sodic amph within fractures/veins and replacing bt/pyx(?). Bt being replacing partially to completely by green chl. CRBT: grey-blue to light pink, fg, local slender blades of amph up to 2mm, diss hem, trace diss py, contacts are planar to brecciated(locally) and between 30-60dTCA. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|--|
| PGH-18-07 | 201.17 | 206.25 | SYE-BX | Syenite Breccia + Carbonatite | <p>201.17-210.45: bx zone w/ angular to sub syn clasts, black rxn rims up to 4mm, crbt infill light pink to grey-green, patches of fg diss hem up to 7mm, trace diss py.</p> <p>202.2-203.6: CRBT BX; light grey-green to purple-mauve, fg, diss hem & filling fractures, masses of brown-grey apt up to 8cm concentrated near clasts, patchy trace fluorite, local vfg orange cream mineral along fractures, syn clasts up to 11cm sub angular to angular, rxn rims up to 1cm, brown-red-pink-black (chl dominant, hem, +/- albite?). Lower 20cm 'clasts' of peg fspar with concentrically zoned alt, moving outwards (brown->light green), increase in sodic amph infilling fractures.</p> <p>203.85-204.40: BX, syn clasts up to 12 cm commonly <5cm, typically completely alt to bt if <4cm, larger clasts have rxn rims up to 1cm. Diffuse boundaries on clasts appear sub-rounded to rounded with minor fracturing. CRBT infill cream to light grey, fg, diss hem, patchy fluorite, fg <1mm slender blades sodic amph(?)</p> <p>204.62-205.20: CRBT BX, becoming clast dominated moving downhole first 30cm crbt + syn clasts. CRBT cream to light purple-mauve, fg, darker purple-red crbt concentrated near clasts/contacts (increase in hem). trace diss py</p> <p>205.64-206.55: Brecciated pegmatitic syn, clasts of plag xtals that have pervasive potassic alteration(?), crimson in colour, rarely cores of xtals preserved. clasts are highly fractured / angular. CRBT; light grey to cream to purple/mauve, massive to locally banded (alt bands of dark/light). Darker bands have more hem and are ~2cm in width. trace py, also blue wispy bands (fg sodic amph?). LC planar @ 50/215</p> |
| PGH-18-07 | 206.25 | 214.05 | QTZ-SYE | Quartz Syenite / Granite | <p>Bimodal crystal sized zones, fg-mg, mg-pegmatitic locally (up to 4cm), peg xtals have inclusions(?) of qtz/chl/sodic amph. Unit varies from red-pink to green-blue. Green-blue zones are bt/chl/amph dominated and locally up to 60% @ 209.9 ~parallel contact btw cg slightly alt gran and highly fenitized(chl/amph/bt rich) gran(?). Fractures/veinlets of blue amph(?)/crtb increasing in frequency 210-213 ~ 25/m.</p> <p>213-214: strong decrease in sodic amph/bt/chl.</p> <p>LC undulating @ 50/095</p> |
| PGH-18-07 | 214.05 | 220.32 | CRBT | Carbonatite | <p>Light green-purple-grey-cream-pink, fg-mg, weakly banded to locally massive. Rare syn clasts up to 10cm sub-rounded to sub angular, intensely alt to black-brn bt rich. Diss fg hem, Calc >/ Dol, trace diss anhedral/euhedral py up to 2mm, locally vfg cream orange mineral. vfg white mineral appears salt/pepper white under UV (apatite)</p> <p>217.5-219.04 moving down hole there are patches of fg mauve-light orange up to 7cm and an increase in py size up to 1cm, and increase in light green ap(?) up to 1cm 10%. LC sharp undulating</p> <p>219.04-220.32: SYN 50% CRBT BX 50%</p> <p>CRBT BX 60cm zone, light pink to grey-blue, fg, diss fg hem, euhedral cubic py up to 1cm locally poorly formed cubic shape up to 1cm with inclusions of crbt and fg blue-black metallic sulphide(?). LC curved, open, sharp @70/215. SYN clasts angular to sub-angular, weakly fractured, with wk dissolution/rxn rims <3mm.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------------|---|
| PGH-18-07 | 220.32 | 226 | QTZ-SYE | Quartz Syenite / Granite | 15-20% qtz, 10% bt, 40% kspar, 5% chl, 5% sodic amph, 20% plag. Medium red to pink, xtals 1-7mm, weak-mod selectively pervasive chl/ sodic amph, patchy weak-mod hem/potassic alteration. Fractures/veins of sodic amph <5mm with pink-red alt halos up to 1cm. CRBT up to 10cm (224.35-224.45m). LC brecciated @ 50/050. |
| PGH-18-07 | 226 | 230 | CRBT-BX | Carbonatite Breccia | 226-227.5: Clast dominated 65% of unit, clasts up to 20cm, commonly <10cm and intensely altered to bt/sodic amph with less altered cores, sub-angular to sub-rounded. CRBT light pink-cream wispy bands of brown-green fg ap(?), diss hem, patches of blue sodic amph up to 3cm close proximity to clasts. Trace diss/stringer s of py/po. 227.5-229: first 0.5m bx angular to sub sun clasts < 5cm, mod-intensely altered bt/sodic amph, strongly hem alt near UC. CRBT; light purple grading into light pink moving downhole, fg, massive, wispy hem forming very weak bands, trace diss py, vfg orange cream mineral diss and along undulating <1mm veinlets(?), br-grn wispy bands of ap (2%) 229-230: Alkali; strongly altered to bt/chl/hem/ trace ep, bx zone 30cm clasts up to 7cm angular to sub. CRBT; light grey-cream to purple |
| PGH-18-07 | 230 | 232.7 | CRBT | Carbonatite | Light purple-green with light orange, mg xtals <4mm, diss hem, vfg cream orange interstitial ap, trace diss py. Upper portion light purple to light green mg, 231-232 onward fg light grey-pink, <1mm fractures of blue/black (amph?). 232-232.7: Clasts(?) 10cm, of hem rich mauve coloured crbt, <1mm fractures throughout LC planar @ 65/075 |
| PGH-18-07 | 232.7 | 234.58 | SYE | Syenite | Fg-mg, med light red-pink, selectively pervasive chl/sodic blue amph alt (replacing bt/pyx?), qtz 10%, kspar 60%, plag 10%, 20% chl/amph. Minor crbt bx ~20cm. Moderately fenitized clasts (sodic amph), crbt infill light pink, fg, hem patches up to 1cm (fg). |
| PGH-18-07 | 234.58 | 236.35 | CRBT-BX | Carbonatite Breccia | 234.58-235.7: clast dominated, syn clasts up to 7cm typically sub-angular to sub rounded and completely altered, larger clasts >3cm still have unaltered to weakly altered cores, clasts have diffuse boundaries. CRBT infill light pink-grey with blue sodic amph infilling veins <1cm. Dol/Si > Calc, diss he, local <3mm wispy discontinuous ribbons of ap. 235.7-236.35: CRBT; light pink-purple, fg, massive, blotchy patches of vfg hem/crbt masses up to 5cm, trace diss/blebs of py up to 1cm. LC brecciated w/ dissolution, planar @ 25/200 |
| PGH-18-07 | 236.35 | 240 | QTZ-SYE | Syenite / Quartz Syenite | Med red-pink, mg, locally cg, qtz 10-15%, kspar 60%, plag 10%. Moderate-strong hem/chl alt, multiple fractures/veins filled with crbt/chl/hem with local bx up to 7cm. At LC massive qtz up to 10cm with kspar. LC at low angle, undulating to irregular. |
| PGH-18-07 | 240 | 242.25 | SYE-BX | Syenite / Fault Zone Breccia | UC appears to be carb alt mdyke(?) chl rich with fg ribbons of carb, multiple low angle fault planes filled with chl and angular clasts of crbt/syenite/mdyke?. Wall rock heavily fractured, carb infill, Sye being alt'd to black chl/bt rimed by hem/albite(?). Local ep. 241.30: Syn pegmatitic, cg fspar potassic alt/ fractured from faulting, crbt infill hem rich (mauve in colour) FZ 241.2-241.8 UC @ 10/330 coated in chl. CRBT clasts up to 10cm, infilled with light pink crbt massive chl, LC @ 15/320. 241.8-242.25: 10% fg ep near UC, visible small scale fault blocks in syn with 3cm displacement. LC gradational and marked by decrease in fracturing and crbt/hem veinlets. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|--|
| PGH-18-07 | 242.25 | 260 | QTZ-SYE | Syenite / Quartz Syenite | Light red to pink locally blue-green, weak-strongly fenitized (proximity to veins), moderate selectively pervasive chl/sodic amph/hem/potassic alt. fg-cg (locally) qtz 10-15%, kspar 50%, plag 10%, bt/chl/amph. Local bx zones from 3-15cm @ ~50-65/180, local crbt veins commonly <3cm locally up to 60cm. 248.13-248.8: CRBT BX; light blue amph(?) rich in first 30cm (clast rich), clasts angular to sub, up to 7cm, locally clasts completely altered to black-brown (bt/hem/amph), crbt infill light blue-light pink, fg, hem patches up to 1cm. Downhole crbt is light pink- green to cream, fg, massive, trace fg fluorite, vfg cream orange ap(?). LC 30/310 along 1cm crbt vein. |
| PGH-18-07 | 260 | 265.95 | SYE | Syenite w/ minor Carbonatite | Syenite fenitized, fg sodic amph, moderate hem/potassic alt, fg-mg, bt being replaced by chl. Locally pegmatitic xtals up to 5cm.minor CRBT veins/bx making up 10% of unit. CRBT light grey-red, fg, mottled to massive, commonly rimmed by sodic amph, trace diss py. |
| PGH-18-07 | 265.95 | 288 | CRBT-BX | Carbonatite Breccia | 266-266.50: light green-grey, fg, massive, trace diss py and masses up 2cm, Dol>Si>Cal, diss hem. 266.5-267: zones of dark grey-green, chl alt with bt up to 3mm, carb veins <2mm light pink to cream, non-magnetic, carb alt mafic dyke. 267-268.70: light pink in upper section and grading into cream-light blue, masses of diss hem up to 5cm that have small vugs <2mm, cross cut by dol rich vein 2cm wide. wispy bands of light green-brown ap. Last 0.5m increase in light blue fg sodic amph, trace diss pyrrhotite/py. 268.70-271.30: zones up to 0.5m black-green, bt/pyx crystals <5mm, diss sulphides (py/po), carb alt with carb veins <4mm. CRBT infill light blue-cream grading into pink-light green downhole. fg, massive to locally undulating non-uniform 'bands' defined by sodic amph x. Clasts of Syn up to 4cm, locally peg fspar clasts, clasts are commonly completely altered to black-green bt/chl/amph, sub-angular to sub-rounded. patchy fluorite. LC perpendicular TCA @ 80/135. 271.3-274.3: dominated by fenitized syn(?) with local bx zones up to 1m. Unit is moderately fractured with crbt veining. Syn is pale grey and made up of qtz>bt>pyx>amph/chl. crbt veins have multiple orientations but are at moderate angles TCA. CRBT veins cream to light grey, fg, massive, local zones within bx with up to 15% py/po, diss hem, patchy fluorite. 274.3-282.5: CRBT BX; syn clasts up to 10cm sub-rounded to sub-angular, commonly highly fractured with rxn rims up to 1cm or completely altered to bt/pyx/amph/chl, local semi massive py/po overall all <5% of unit. CRBT fill is cream to light pink-grey-blue-green to light red, fg, patches of fluorite up to 1cm, diss hem, wispy bands of br-grn ap <3mm wide. Scint <200c/s @ 281 330 c/s 282.5-288: massive CRBT, light purple-pink-green-orange, fg, massive, 10% vfg interstitial cream orange ap(?). diss hem <1mm, locally clasts(?) of light grey dol/sil>calc crbt up to 5cm, rimmed by fg dol, with irregular undulating clast boundaries, trace fg diss py, weakly vuggy locally <1mm. LC brecciated |
| PGH-18-07 | 288 | 289 | SYE-BX | Syenite Breccia + Carbonatite | SYE 90% CRBT 10%, bx zone 28cm Syn; light red-pink, fenitized (sodic blue amph/chl replacing bt/pyx?, fg. CRBT; light grey-pink, in bx zone clasts have diffuse margins (dissolution), diss hem, rimmed by blue vfg amph(?). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--|--|
| PGH-18-07 | 289 | 293.5 | SYE | Syenite | Blue-green to pink, fenitized syn, mod-str selectively pervasive sodic amph/chl, fg-mg, qtz 10%, kspar 50%, trace diss by. CRBT veins up to 10cm wide, commonly light grey-green, fg to cg locally (peg fspar up to 4cm), massive. LC brecciated, obscured by alteration/dissolution. |
| PGH-18-07 | 293.5 | 297.63 | SYE-BX | Syenite Breccia + Carbonatite | Sye clasts up to 10cm, angular to sub-rounded, rxn rims up to 5mm, clasts <3cm are commonly completely altered to bt/pyx/chl/amph. Locally clasts of peg fspar. CRBT; light pink-cream to cream orange, fg, massive, diss hem, wispy fine(<2mm) bands of sodic amph. 295.5-296: 15% py/po as coliform anhedral masses LC planar @ 40/220. |
| PGH-18-07 | 297.63 | 299.25 | GRAN | Granite | Light pink to light red, mg, 20% qtz, patchy chl/sodic amph/hem alt. <1mm fractures with pink alt halos <2mm, veins of blue sodic amph with alt halos of chl/potassic? LC planar @ 35/210 |
| PGH-18-07 | 299.25 | 307.4 | CRBT | Carbonatite | Massive, fg, light pink-grey to light blue-green, local zones of semi massive py/po overall <5%, wispy bands of blue amph, vfg cream orange ap locally, Calc>Dol, syn clasts present between 304.5-306; clasts up to 10cm rxn rims from 1cm to completely altered if clasts <5cm, angular to sub rounded. LC @ 35/215, planar, closed |
| PGH-18-07 | 307.4 | 313.1 | QTZ-SYE | Quartz Syenite / Granite | Med red to light pink, mg to locally peg up to 3.5cm, qtz 15-20%, kspar 40%, plag 10%, bt 15%, 15% chl/amph. Mod selectively pervasive chl/amph/hem alt. Qtz abundance varies across unit. Minor intersections of crbt up to 20cm commonly <3cm veins. Making up <8% of unit. light purple-pink-grey, fg to locally cg, commonly rimmed by blue sodic amph, trace diss py, local fg black sub-metallic sulphide(?). LC perpendicular TCA. |
| PGH-18-07 | 313.1 | 315.87 | SYE-BX | Brecciated Alkali with Carbonatite | Alkali clasts up to 10cm, angular to sub angular, strongly altered, rxn rims bt/pyx/chl, potassic/fenitized cores. CRBT; light purple to grey-cream, fg-mg, massive, cross cut but <1cm dol rich fg veins, diss fg hem, fg masses of blue-grey sulphide? Up to 1cm locally. |
| PGH-18-07 | 315.87 | 319.95 | SYE | Syenite | Med red-pink, mg-cg <5mm, qtz 10-15%, kspar 50%, chl/amph/carb replacing mafics (bt/pyx?). Locally brecciated with crbt infill <30cm. Unit is mod-str fenitized, fractures filled with amph +/- crbt/chl. CRBT; Si/Dol > Calc, fg-cg, massive, diss hem. 319.4-319.95: CRBT; light pink, UC irregular, massive, fractures filled with fg py, @ UC/LC ap cum up to 1cm forming wispy bands subparallel to contact, diss hem. LC diffuse. |
| PGH-18-07 | 319.95 | 321.7 | SYE | Fenite | Kspar>amph/chl/bt + carb, mg, completely altered syenite(?), carb veins <3mm at moderate angle TCA with white alt halos. UC & LC brecciated |
| PGH-18-07 | 321.7 | 326.6 | SYE-BX | Fenite Breccia with Carbonatite infill | Clasts angular to sub rounded, commonly completely alt (bt/pyx/amph/chl) or with rxn rims and strongly altered cores, clasts up to 10cm with moderate fracturing of clasts. CRBT infill light grey-green to red-green, fg, massive to weak coliform banding around clasts. trace diss py, patchy fg fluorite, vfg diss galena(?) around 323.5, H<3. 325.7-326.30 massive crbt, light grey-green w/ qtz lenses up to 1cm, vfg orange cream ap subparallel bands to contacts @55/265. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---|--|
| PGH-18-07 | 326.6 | 331.25 | SYE | Fenite | Mg, locally cg plag up to 2cm, unit is blue-green to grey, with patchy kspar, bt/chl/amph > kspar/neph, fenitized ljiolite(?), veinlets of crbt throughout unit <2mm at moderate angles TCA, local crbt veins up to 2cm. |
| PGH-18-07 | 331.25 | 344.85 | SYE-BX | Brecciated Fenite with Carbonatite infill | Wall rock and clasts blue-green to grey altered to sodic amph/chl/bt with patchy k-spar?, fg-mg. Local breccia, and massive CRBT up to 0.5m. Moving downhole wall rock is completely altered and dark grey to black with intense fracturing/infill of CRBT. Locally clasts are moderately altered and cores of alkali are distinguishable. 332.56-333: CRBT; light pink-purple, fg massive, fg blue sodic amph, vfg wisps of grn-brn ap? 4mm wide, trace diss py. 334-334.50: CRBT BX; light pink grading into light grey-green, fg, massive, LC brecciated, diss hem 341.3-341.6: CRBT; light blue-green to pink, fg bt, fg blue sodic amph |
| PGH-18-07 | 344.85 | 345.4 | GRAN | Granite | Qtz 20%, kspar 60%, mg-cg, pink, blue amph/chl alt bt(?) UC & LC CRBT. |
| PGH-18-07 | 345.4 | 347.2 | CRBT | Carbonatite | Grading from light pink-green into light blue-grey moving down hole. Moving down hole crbt becomes weakly banded (40/350) with increase in bt and sodic blue amph, trace diss & stringers of py/po. Darker bands mgt/bt/amph |
| PGH-18-07 | 347.2 | 356.7 | SYE | Fenite / Granite | Blue-green, strongly to completely altered alkali feldspathic rock, qtz 10-15%, 10-15% kspar, bt/pyx/chl/sodic amph/hem + interstitial carb locally. Fg to locally cg,.Cg zones are typically weakly fenitized with xtals up to 1cm and composed of qtz 30%, kspar 40%, chl 15%, plag 5%, sodic amph 10%. Breccia zones up to 1m, close proximity to bx zones are zones of mod-strong <4mm veining of crbt and local massive veins up to 10cm. CRBT is light pink-purple-blue-grey to green, fg, massive, trace diss py, local crbt have up to 15% sodic blue amph as wispy bands. wall rock clasts are commonly sub-rounded, fractured, with dissolution along clast boundaries. |
| PGH-18-07 | 356.7 | 357.06 | MDYKE | Mafic Dyke | Light green -grey, aphanitic margins, core is fg, with amygdales <3mm filled with carb, <1mm sub parallel veinlets of carb, elongated blades <1mm of pyx(?), non-magnetic. UC @ 40/280 |
| PGH-18-07 | 357.06 | 358.1 | GRAN | Granite | Med pink to light red, mc-cg, qtz 25%, kspar 60%, chl 15%, weak-mod patchy hem alt, chl replacing bt(?). LC marked by strong increase in bt/chl/amph |
| PGH-18-07 | 358.1 | 372.8 | SYE | Fenite | Dominantly qtz 15%, bt/amph/pyx(?)/chl 70&, kspar 15%. Unit is dominantly massive to locally banded(? bands up to 10cm,light grey qtz/fspar rich between 50-60 dTCA), locally less altered granite distinguishable. Minor crbt bx zone 30cm and veins <10cm. 358-359.5: trace vfg tiger orange to yellow, waxy, light green in UV Bastnaesite? |
| PGH-18-07 | 372.8 | 375.35 | CRBT-BX | Carbonatite Breccia + Alkali Feldspathic | CRBT up to 90cm with alkali zones in between. Alkali Feldspathic fg-cg up to 3cm, med red to pink, qtz 15%, kspar 55%, 15% amph, 15% chl. CRBT; light purple-green to grey, fg, massive, wispy bands <2mm of brown-green ap concentrating sub-parallel to contacts and concentrically around clasts. Clasts up to 4cm, strongly to completely altered and surrounded by masses of blue sodic amph(?). |
| PGH-18-07 | 375.35 | 379.87 | GRAN | Granite + Carbonatite | GRAN 95% CRBT 5%. GRAN; light pink to med red, fg-cg locally, qtz 20%, kspar 45%, plag 10%, 25% chl/bt/amph, fenitized (chl/sodic amph? Replacing bt?), local crbt bx up to 30cm. CRBT; light purple-green-grey-blue, fg, massive, commonly rimmed by fg blue amph(?), trace diss py, diss hem |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|----------------------------------|--|
| PGH-18-07 | 379.87 | 387.72 | SYE | Fenite | Grey-green locally pink, qtz 50%, neph(?) 15%, bt 20%, 5% amph 5% pyx, 5% chl. Dominantly fg locally cg, alt halos of potassic alt around crbt veins and along fractures. Halos 2mm-3cm. Locally cg plag/kspars. Rare crbt veins <4cm. Last 70cm cg alkali <2cm, qtz 30%, kspars 40%, bt 10%, chl 10%, 5% amph 5% other. vfg orange mineral replacing chl(?) green under UV bastnaesite(?) LC in brecciated @ 20/30 |
| PGH-18-07 | 387.72 | 388.2 | CRBT | Carbonatite | Bx contacts, clasts of fg alkali up to 9cm commonly < 2cm, sub-angular to sub rounded, moderately fractured, clast completely altered to black bt/pyx. Blue sodic amph(?) discontinuously rimming contacts of crbt. CRBT; light pink-purple to cream, fg, massive, <1mm veinlets & diss hem, discontinuous bands rimming clasts and contacts of light green-red ap(?). fg diss pyx/blue sodic amph. Trace diss py. UC@ 20/30, LC @ 20/20 |
| PGH-18-07 | 388.2 | 389.14 | SYE | Fenite | Qtz 40%, bt, 20%, chl 15%, fspar 25%?, grey-green, mm pink alt halos around fractures. LC sharp, planar @ 35/110 |
| PGH-18-07 | 389.14 | 390.4 | MDYKE | Mafic Dyke | Black, aphanitic, chilled margins, amygdales filled with plag/qtz, rimmed by hem, magnetic. UC 35/110, LC @ 35/105 |
| PGH-18-07 | 390.4 | 391 | CRBT | Carbonatite + Alkali Feldspathic | 40cm of CRBT after contact with dyke, grading from blue to cream (cg) to light pink with wispy bands of green-blue. Nearing LC mottled blue-green surrounding clasts up to 10cm. Trace diss py, diss hem. Alkali is fg-cg, orange-pink to green-grey, pink-orange alt halos around crbt. |
| PGH-18-07 | 391 | 393.5 | SYE | Fenite | Qtz 40%, bt 20%, chl 15%, fspar 25%. Fg-mg, pink alt halos <4mm around fractures & crbt veins. Locally cg up to 1cm fspar xtals. LC BX 20/205 |
| PGH-18-07 | 393.5 | 395.1 | QTZ-SYE | Quartz Syenite / Syenite | Frst 50cm CRBT BX with undulating LC; light pink to cream, clasts <4cm, angular to sub, rxn rims up to 5mm, diss py, fg blue amph(?). Sye; fg-peg locally up to 3cm plag, light pink to cream, masses of bt/chl up to 2cm, 15% qtz, plag 25%, kspars/neph 30%, bt/cl 20%, 10% amph. |
| PGH-18-07 | 395.1 | 402.2 | SYE | Fenite | Light pink to green-blue, fg, dominated by qtz/bt/chl/amph with selectively pervasive potassic alt. Locally cg zone of qtz/syn described above (near crbt contact). Fractures and veins have light pink alt halos. Rare crbt veins <5cm, commonly rimmed by black bt/pyx, fg, massive, cream to light grey |
| PGH-18-07 | 402.2 | 404.4 | CRBT-BX | Fenite + Carbonatite breccia | Crbt bx up to 75cm with multiple 15cm zones up hole from larger zone. Wall rock in fenite described above with local 404-404.4 cg syenite-qtz-sye which has been moderately fenitized. CRBT; light blue-pink-purple to green, fg, massive with wispy bands of blue-green (ap) near contacts and surrounding clasts. wall rock clasts up to 10cm commonly <5cm and completely altered to bt/pyx/amph. Calc>Dol, trace diss py, trace diss blue-grey fg galena(?), diss hem, vfg white-orange ap(?) within blue-green wispy bands. |
| PGH-18-07 | 404.4 | 405.5 | CRBT | Carbonatite | Med blue-grey to light pink, mottled, fg-mg, locally magnetic (magnetite) rich zones and pods from 2cm to 16cm also rich in bt. Wispy dark bands of blue fg sodic amph(?), trace diss py with local masses 4cm across. LC @ 70/160 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------|--|
| PGH-18-07 | 405.5 | 416 | QTZ-SYE | Quartz Syenite / Fenite | Fenitized mod-str patchy, fg to locally pegmatitic (<3cm), blue-green to light pink-red, local 'bands' of qtz/fspar rich bands surrounded by bt/chl/amph rich fg fenitized alkali. Rare CRBT veins <13cm; light pink-purple, massive, wispy blue-green amph/ap, diss hem, trace py. |
| PGH-18-07 | 416 | 416.6 | MDYKE | Mafic Dyke | Light green, crbt altered groundmass and veins <2mm throughout. Non-magnetic, aphanitic. UC @ 20/235 , LC@ 25/240 |
| PGH-18-07 | 416.6 | 426.7 | QTZ-SYE | Quartz Syenite / Fenite | Fenitized mod-str patchy, fg to locally pegmatitic (<3cm), blue-green to light pink-red, local 'bands' of qtz/fspar rich bands surrounded by bt/chl/amph rich fg-mg fenitized alkali. multiple fracture <2mm fill of blue amph(?) between 30-60 dTCA. Rare CRBT veins <10cm; light pink-purple, massive, wispy blue-green amph/ap, diss hem, trace py. 424.9-425.25: MD; black, magnetic, aphanitic, planar, contacts. Last 1.5m light orange-pink fg-cg (1cm)neph syn with minor fg chl alt. |
| PGH-18-07 | 426.7 | 427.1 | CRBT | Carbonatite | Light purple with masses of forest green ap cumulates up to 10cm, fg, massive, trace diss py. dissolution along UC, LC sharp @ 30/000. |
| PGH-18-07 | 427.1 | 439.65 | MDYKE | Mafic Dyke | Dark green-grey, aphanitic, jointed, magnetic, fractures chl covered, locally carb altered, minor patchy hem. |
| PGH-18-07 | 439.65 | 441.6 | GRAN | Fenite(?) / Granite | Local 'bands' up to 8cm, but not always continuous of qtz/fspar rich, unit is dominantly bt/chl/amph. Bands maybe pseudo-banding from alteration due to discontinuous nature. Lighter bands are light pink, darker bands are dark green-grey with 40% bt/chl/amph (fenitized?). Dominantly fg with rare fspar up to 1cm. Weak potassic alteration rimming xtals. Light bands 60% qtz, 30% kspars, 10% other (bt). |
| PGH-18-07 | 441.6 | 442.4 | CRBT | Carbonatite | Brecciated UC/LC, light pink with wispy bands of blue-green from 1-4mm grading into blue nearing LC, fg, with local chl(?) 1mm along band with py/po stringer, wispy bands are sub-parallel to contacts with variations where clasts are present. 5% py/po as stringers (within wispy bands of blue-green) <1mm and anhedral masses up to 4cm (masses near LC surrounding clasts). Clasts up to 6cm angular to sub (square), rxn rims <5mm with local clasts <2c being completely altered to bt/pyx +/- chl/amph. UC@ 10/180, LC @ 15/200 |
| PGH-18-07 | 442.4 | 444.4 | SYE | Fenite(?) / Granite | Fg-locally peg (up to 2cm), dominantly green-blue to light orange, 35% chl/amph, qtz 15%, fspar 50% (cream to grey k-spar). Fractures / veins <4mm with blue amph/crbt infill. Weakly potassic (pink) alteration rimming fspar |
| PGH-18-07 | 444.4 | 445 | CRBT | Carbonatite | Light pink to blue, wispy bands of blue-green sub-parallel to contact, fg diss py, rare fg sphalerite(? Honey brown), clasts <2cm rxn rims <4mm, trace diss py/po |
| PGH-18-07 | 445 | 448.56 | GRAN | Fenite(?) / Granite | Green-grey to light pink/cream, fg with local cg, weak discontinuous bands of qtz/fspar rich and bt/chl/pyx/amph up to 1cm. Qtz 30%, fspar 30%, bt/chl/amph/pyx 40%. Fractures/veinlets <4mm of blue amph/crbt. Weak potassic alt rimming fspar, weak patchy hem. |
| PGH-18-07 | 448.56 | 449.1 | MDYKE/CRBT | Carbonatite / Mafic Dyke | Carbonatite/Mafic Dyke (20cm)/Carbonatite. CRBT; cream/pink with blue wispy bands and also rimmed by blue-green fg amph/py/ap(?). Trace diss/stringers of py/po. Vfg light beige <1mm ap diss through blue, diss hem MD; black, aphanitic, magnetic, amygdales filled with chl. CCT @ 50/160 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|---|
| PGH-18-07 | 449.1 | 459.3 | GRAN | Fenite(?) / Granite | Forest green to cream-pink, fg to locally cg zones plag up to 2cm qtz 30%, plag 30%, 40% chl/bt/amph. Weak potassic alt rimming fspar, with light orange alt(?). Weak discontinuous 'bands' of qtz/fspar rich material with local zones with up to 70% bt/chl/amph/pyx(?). Fractures filled with amph <5mm at various angles TCA. LC @ 75/125 |
| PGH-18-07 | 459.3 | 459.85 | CRBT | Carbonatite | Cream to light purple (locally), massive, fg, wispy bands <2mm near UC/LC with diss/str py. UC @ 75/125, LC @ 75/120 |
| PGH-18-07 | 459.85 | 468.16 | GRAN | Fenite(?) / Granite | Forest green-blue to cream-pink, fg to locally cg zones plag up to 2cm qtz 30%, plag 30%, 40% chl/bt/amph. Weak potassic alt rimming fspar, with light orange alt(?). Weak discontinuous 'bands' of qtz/fspar rich material with local zones with up to 70% bt/chl/amph/pyx(?). Fractures filled with amph <5mm at various angles TCA. LC bx @ 70/120 |
| PGH-18-07 | 468.16 | 474.35 | CRBT | Carbonatite | Light pink to cream-blue to light green, local zones of black-blue (20cm), fg, massive, with wispy bands of blue green (ap/amph) usually sub-parallel TCA and clast boundaries, diss/stringers of py/po, local clasts of alkali up to 10cm sub-rounded, with rxn rims <3mm, locally clasts <3cm are completely altered. |
| PGH-18-07 | 474.35 | 477.8 | CRBT-BX | Carbonatite Breccia | Clasts of syn up to 15cm, rxn rims <5mm, sub angular to sub rounded, crbt; light blue-cream to light purple, fg, wispy bands of amph, diss hem, trace diss/stringers of py, rxn rims <4mm Syn; fg-cg locally, fenitized (chl/amph alt), med red-pink, xtals up to 1cm locally. strongly fractured with crbt/amph infill. |
| PGH-18-07 | 477.8 | 483.15 | GRAN | Granite | Light pink-orange-red to forest green-blue, fg to locally cg up to 1cm, diffuse 'banding' qtz/fspar and bt/chl/amph. Fractures/veins <10mm infilled with blue amph. Minor crbt infill <15cm. Mod-strongly fenitized (chl/amph), weakly potassic alt (replacing fspar). qtz 25%, kspar 30%, plag 15%, bt/chl/amph 30%. |
| PGH-18-07 | 483.15 | 486.8 | CRBT-BX | Carbonatite Breccia | Cream to light green-blue locally black-dark blue, fg to cg (<3cm), massive, wispy bands of blue green (amph/chl/bt) with diss/stringers of py/po, veins rimmed by blue amph/chl. GRAN clasts up to 10cm, rxn rims <5mm, fractured. Locally magnetic (po), patchy fluorite. BX contacts @ 20/180, LC @ 45/225 |
| PGH-18-07 | 486.8 | 492.55 | SYE | Syenite | Red-pink to blue-green, weak-mod potassic/fenitized alt, fg-mg (<4mm), qtz 10%, kspar 40%, plag 10% chl/bt/amph 40%. <1mm veinlets with light pink-red halos, fractures filled with blue amph. Minor CRBT veins<5cm, cream to light grey, fg, diss py, diss hem. |
| PGH-18-07 | 492.55 | 495 | SYE-BX | Syenite + Carbonatite Breccia | CRBT zones up to 70cm 492.55-492.80: dark grey to light purple, fg, mottled, diss hem, trace diss py and masses up to 2cm 492.80-493.05: dark green-blue, 5% diss hem, amph up to 3mm, chl/amph/hem 493.05-493.26: light grey-green to red-purple, diss hem, patchy fluorite 493.55-75: CRBT; light green-grey, fg, 10% py, Si/Dol>Calc, diss hem. 494.64-484.85: CRBT; light pink-cream to green-grey, cg calc, diss hem, wispy bands of amph with fg py and ap? Between zones are light pink to med red, selectively pervasive chl/amph alt with weak potassic alt. Qtz 10%, kspar 40%, plag 15%, 35% chl/bt/amph |
| PGH-18-07 | 495 | 497.05 | GRAN | Granite | Pink, mg, qtz 25%, kspar 40%, 35% plag. Fractures filled with chl, fractured with light pink-red halos <3mm. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------|---|
| PGH-18-07 | 497.05 | 497.8 | MDYKE | Mafic Dyke | Light green, aphanitic, fg, carb/chl alt, local bt up to 1mm UC @ 25/130, LC @ 25/110 |
| PGH-18-07 | 497.8 | 498.95 | GRAN | Granite | Pink, mg, qtz 25%, kspar 40%, 35% plag. Fractures filled with chl, fractured with light pink-red halos <3mm. LC @ 35/010 |
| PGH-18-07 | 498.95 | 499.56 | MDYKE | Mafic Dyke | Aphanitic, dark grey-green, sharp UC @ 35/010, LC @ 55/020, magnetic. |
| PGH-18-07 | 499.56 | 501.2 | GRAN | Granite | Pink, mg, qtz 25%, kspar 40%, 35% plag. Fractures filled with chl/amph up to 1cm, fractured with light pink-red halos <3mm. Local CRBT up to 3cm (cream, fg, rimed by blue amph?) LC @ 30/140 brecciated |
| PGH-18-07 | 501.2 | 506.45 | CRBT-BX | Carbonatite Breccia | 501.2-501.95: GRAN BX; strongly altered (chl/amph/diss py), syn clasts up to 3cm, rxn rims up to 5mm with smaller clasts completely altered. CRBT infill blue-green to cream, fg, wispy bands sub-parallel to contacts. 10% bt up to 1mm, ap cumulates up to 5mm. 501.95-502.3: CRBT; banded, wispy bands (@ 60/080) up to ~1cm, alternating bands of blue/cream/light green, diss hem, fg diss py 502.3-502.8: moderate veining with amph fill, GRAN 502.8-504: med green-blue to light purple-cream, local magnetite, diss fg py, 2mm amph xtals, rare gran clasts strongly altered to black bt/pyx(?)/chl/amph. weakly banded with alternating concentrations of amph/bt 504-506.45: BX; gran clasts up to 14cm sub-rounded to sub-angular, rxn rims <1cm, clasts smaller than 4cm completely altered. CRBT; light green-purple to light blue, fg, wispy bands of blue-green, diss py, patchy fluorite, diss hem, infill between clasts is higher concentrations of blue amph/chl. |
| PGH-18-07 | 506.45 | 512.15 | GRAN | Granite | Med red to blue, fg to pegmatitic locally up to 5cm, moderately fractured with fill of blue amph +/- crbt <10cm. Weak-mod selectively pervasive chl/amph alt, weak potassic alt rimming fspar. Locally weakly banded similar to above. CRBT; fg (larger crbt cg), light blue-grey to light green, diss hem, with local clasts of plag. |
| PGH-18-07 | 512.15 | 512.75 | CRBT | Carbonatite | 512.2-512.75: CRBT; light pink-purple with blue near UC/LC, diss hem, fg, wispy masses up to ~3cm blue/brown amph with diss py and vfg ap(?). |
| PGH-18-07 | 512.75 | 512.98 | GRAN | Granite | 512.75-512.98: GRAN; light pink-green, parallel fractures with crbt infill, chl/kspar alt UC @ 45/70, LC @ 40/100 |
| PGH-18-07 | 512.98 | 514.2 | MDYKE | Mafic Dyke | Carb alt mafic dyke, light green-grey, chl alt groundmass, crbt/hem filling fractures and vesicles. Amygdales <1cm, 2mm xtals of pyx(?), locally weakly magnetic LC @ 40/90 |
| PGH-18-07 | 514.2 | 519.5 | GRAN | Granite / Fenite | Med red-pink to grey-green/blue, mod-strongly fenitized (blue sodic amph/chl) with veins and fractures filled with crbt/amph that have pink-red alt halos. Selectively pervasive chl/amph alt with patchy hem/potassic. K-spar rimming/replacing plag. Local bx zones up to 20cm crbt/amph infill. 516.23-516.53: light purple to green with diss fg hem, vfg light orange ap(?) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------|---|
| PGH-18-07 | 519.5 | 532.91 | CRBT-BX | Carbonatite Breccia | <p>Zones of breccia up to 1.80m /alkali up to 1m /massive crbt up to 3m Clasts of SYN up to 20cm, sub angular to sub rounded, rxn rims of bt/pyx/amph commonly ~5mm, locally smaller clasts are completely altered. Clasts are fenitized, blue amph/chl + kspar, pink-medium red, fg to locally cg.</p> <p>CRBT in breccia is commonly fg, cream to light blue-green, wispy bands sub-parallel to contacts/clast boundaries of amph(?) +/- bt/ap, locally magnetic</p> <p>522.12-523.3: Dominantly cream to light pink, 'bands' of blue-green (amph +/- ap, bt, mgt, diss py), magnetic (Mag SUS 92.4) moving downhole more green (chl?) present and defining 'bands'</p> <p>523.6-524.45: medium blue to light purple locally cream, wispy bands of blue fg amph(?), fg, bt <1mm, trace diss py.</p> <p>527.75-529.3: cream to light purple-pink to blue-green, fg, massive, wispy bands of blue-green ap cumulates <2cm, trace diss py, darker areas amph/mgt/bt, magnetic (MagSUS 99.1)</p> <p>529.83-532.91: CRBT; light purple to green grey with alternating zones of dominantly dark grey-black-green up to 35cm and locally magnetic. Darker zones amph(?) +/- mgt, bt, chl(?), hem. lighter purple zones cg with diss hem and fg trace py. Locally crbt appears to be infilling amygdales(?) possibly part of unit is highly carb alt MD?</p> <p>LC @ 70/080, planar</p> |
| PGH-18-07 | 532.91 | 534.65 | GRAN | Granite | <p>Qtz 25%, kspar 40%, plag 15%, 10% bt, 10% chl/amph, weak potassic alt. fg to cg locally, selectively pervasive amph/chl. Fractures <2mm with amph infill.</p> <p>LC @ 85/100</p> |
| PGH-18-07 | 534.65 | 534.9 | CRBT | Carbonatite | <p>Cream to light pink with wispy bands <5mm of amph, diss/masses of py up to 3cm.</p> <p>LC 70/085</p> |
| PGH-18-07 | 534.9 | 544.75 | GRAN | Granite / Fenite | <p>Green-blue to pink-red opaque, locally 70% bt/chl, fg-mg with local peg. Weak discontinuous 'bands' of qtz/fspar rich. Minor crbt vein <10cm.</p> <p>CRBT; cream, cg, wispy bands of amph, diss py and masses up to 1cm.</p> <p>539-341.5: Pegmatitic, xtals up to 7cm, massive qtz 40%, plag 50%, kspar 10%.</p> |
| PGH-18-07 | 544.75 | 545.5 | CRBT | Carbonatite | <p>Light pink-purple to green-grey, fg, massive, locally wisps of blue amph, Calc>Dol, within light purple zone is vfg orange ap(?). nearing LC 10cm mass with high x of blue amph/bt/diss py.</p> <p>LC @ 70/150</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|--------|------------|--------------------------|--|
| PGH-18-07 | 545.5 | 547.7 | QTZ-SYE | Quartz Syenite / Syenite | Med red-pink to light green-blue, fenitized (selectively pervasive chl/amph replacing bt?), fg-cg (locally), fractures <5mm fill with amph. Qtz 10-15%, kspar 40%, plag 25%, 20% chl/amph/bt. Minor CRBT veins <2cm; light pink-green, fg, massive, rimmed by amph. |
| PGH-18-07 | 547.7 | 556.1 | CRBT-BX | Carbonatite Breccia | Zones between breccias is fenitized SYN/QTZ SYN; med red-pink with green-blue, fg-mg, weak potassic alt, moderate selectively pervasive chl/amph. 547.10-550.2: CRBT BX; light blue to pink-purple, weak bands subparallel to clasts/contacts up to 3cm thick. syn clasts up to 10cm (rxn rims up to 5mm), light green ap cum surrounding clasts. darker bands amph/bt/ diss py. 551.15-552.63: CRBT BX; light pink-purple to light green-blue, fg-mg, massive, with syn clasts up to 7cm (rxn rims up to 5mm, cores fenitized (chl/amph/light orange-pink) 554.75-556.15: CRBT BX; dominated by wispy blue-green, local light pink-cream-purple, wispy bands concentrically around clasts and sub-parallel to contacts. darker zones rich in bt/amph. LC @ 20/200 |
| PGH-18-07 | 556.1 | 570.5 | QTZ-SYE | Quartz Syenite / Fenite | Qtz 15-20%, kspar 40%, plag 10%, bt/chl/amp 30%, fg to locally cg <1cm locally, light pink-red to green-blue, darker areas more rich in bt/chl/amph. Fractures <1mm with pink alt halos. Fractures filled with blue amph(?) < 4mm at moderate angles TCA. Minor crbt veins <20cm; light pink-purple, fg, massive. LC is diffuse and obscured by chl alt but defined by colour change/magnetism. |
| PGH-18-07 | 570.5 | 573.15 | MDYKE/CRBT | Carbonatite / Mafic Dyke | Dark grey-green, fg, magnetic, carb filled fractures and amygdales <1cm, fractures also have elongated blades of amph/pyx <3mm. Zones are locally more magnetic than others, near the top of zone weak flow banding(?). Trace diss py. Sharp LC with xenoliths(?) <2cm of mafic material (chl alt, black rxn rims) |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------|---|
| PGH-18-07 | 573.15 | 586.42 | CRBT | Carbonatite | <p>Light pink-green-blue-grey to cream, syn zones 45cm-1.5m, CRBT massive to mottled, fg-cg, locally magnetic.</p> <p>573.2-578: light purple-grey-green-pink, ap cumulates up to 3cm, diss hem, trace diss py, local zones up to 35cm dark grey-blue, magnetic, wispy bands <3mm of blue-green</p> <p>578-580.7: dominated by zones up to 0.5m and clast of highly altered syn, clasts are highly fractured/altered to bt/pyx/amph with trace pink zones, sub-rounded/sub-angular. CRBT is light pink-green, fg, massive, trace diss py, vfg <1mm black mineral (pyrochlore?)</p> <p>580.7-582.45: light pink green syn, cg crbt fill up to 2cm, diss hem</p> <p>582.45-586.4: CRBT light pink-green grading into cream-pink cg crbt with wispy bands of blue-green ap up to 2cm . Syn clasts up to 30cm, commonly <10cm, rxn rims up to 7mm with clasts smaller than 4cm being completely altered to bt/pyx/amph. trace diss py and masses up to 2cm. Blue amph up to 2mm.</p> |
| PGH-18-07 | 586.42 | 590.9 | MDYKE/CRBT | Carbonatite / Mafic Dyke | <p>Green to dark grey-black, masses of crbt light pink, sub-parallel fractures with crbt infill <2cm, locally strongly magnetic, trace diss py/po, fibrous masses of blades black mineral pyx/amph?. Moving down hole unit grades into light green-grey with rare crbt veins ~10cm.</p> <p>Possibly crbt alt mafic dyke as above CRBT zone?</p> |
| PGH-18-07 | 590.9 | 598.3 | QTZ-SYE | Quartz Syenite / Fenite | <p>Dark in colour blue-green with minor pink-red, locally 30% bt/chl/amph, qtz 10-15%, kspar 40%, plag 10%, fg to locally peg up to 2cm, local breccia/crbt zones up to 60cm. <1mm veinlets/fractures with light pink <3mm halos. CRBT veins with amph rimming and red-pink alt halos <5mm.</p> <p>594.5-595.10: crbt; light blue-pink-green, weakly banded, masses of blue amph and clasts of syn completely altered.</p> |
| PGH-18-07 | 598.3 | 600.1 | CRBT | Carbonatite | <p>Syn clasts up to 15cm, fg, rxn rims <3mm, cores pink-green potassic/chl/amph.</p> <p>CRBT; light purple-pink to cream, trace diss py and masses up to 2cm, diss hem and along fractures, br-grn ap cumulates up to 5mm as wispy bands, trace qtz, vfg light orange ap(?). trace galena(?)</p> |
| PGH-18-07 | 600.1 | 608 | QTZ-SYE | Fenite / Quartz Syenite | <p>Up to 40% bt/chl/amph (fg) with local cg zones/'bands' of qtz/fspar with xtals up to 2cm. Plag with potassic rims/penetrating xtals, <1mm veinlets/fractures with light green-grey alt halos.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------------|---|
| PGH-18-07 | 608 | 615.1 | SYE-BX | Syenite Breccia + Carbonatite | <p>608-610.60: Upper 1m dominated by syn with fractures filling with CRBT. Qtz syn, fenitized with variability in grain size similar to above unit (patches of cg-pegmatitic plag xtals with potassic(pink-red alteration rimming/along striations). surrounded by chl/bt/amph (blue) 30%, qtz 15% , kspar 30%, plag 25%. Becoming more brecciated toward 609. From there 10% clasts (<7cm, rxn rims and mod-comp alt to bt/pyx), 90% CRBT; light purple to blue-green, gentle diffuse waves (weakly defined bands) running sub-parallel to UC/LC & clast boundaries. Clasts commonly rimmed by light green crbt, Calc>Dol, trace diss vfg orange-red minerals (LREE?), 2% vfg black, metallic mineral (pyrochlore?)</p> <p>Local veins up to 10cm perpendicular TCA cross cutting wavy crbt described above (2nd Phase?, P2). Cross cutting vein light-med grey-green, fg, wispy 'bands' parallel to contacts <2cm alternating opaque-grey and med grey. vfg trace diss orange/red diss mineral (bastnaesite?/LREE?) <1mm, Dol > Calc rare Si, vfg trace <1mm black mineral (Fe-Nb Ox?)</p> <p>Cg crbt vein xc, sub-p TCA (orientation as P2), 3cm cream xtals <5mm with rims/interstitial red-orange (LREE?)</p> <p>610.6-615.2: Dominated by qtz syn with breccia and low angle crbt, fracture vary from perpendicular TCA and at low angle (major crbt), Syn med-red-pink with rxn rims 1cm-5mm, alt halos of light pink and rxn rims of black (bt/pyx?). Clasts within crbt are sub-rounded/fractured), multiple fractures <2mm with dark blue infill(?). Local veins <1cm with sphalerite up to 2cm then rimmed by fg galena. Sphalerite zoned, inner light brown, outer 1mm med brown. Masses of anhedral blue/black mineral up to 1cm and diss (galena?), forest green wisps of ap cum with darker masses up to 1cm. locally magnetic, trace diss and stringers of py.</p> |
| PGH-18-07 | 615.1 | 625 | CRBT | Carbonatite | <p>CRBT 80%, SYN Clasts 20%, Clasts <25cm, fg to locally cg qtz syn, common rxn rims <5mm, clasts <5cm commonly completely altered, commonly moderately fractured (<3mm). CRBT light pink cream to blue-green-brown. Vfg diss red/orange minerals 2% LREE?, local wispy bands/masses of med grey-brown up to 5cm with <1mm vugs, fg black diss trace mineral (pyrochlore).</p> |
| PGH-18-07 | 625 | 626.8 | SYE-BX | Quartz Syenite Breccia + Carbonatite | <p>30% CRBT, 70% QTZ SYE QTZ-SYE; med red-pink with blue amph/chl carb alt, qtz 15%, kspar 45%, plag 10%, amph 15%, chl 10%, 5% other. Clasts are angular to sub, rxn rims up to 1cm locally completely altered. Trace diss/masses up to 5mm py. CRBT infill; smaller fractures <1cm more massive zones light green-purple-pink to cream, rimming/weakly banded(?). Disseminated anhedral pyrochlore(?) masses up to 1cm.</p> |
| PGH-18-07 | 626.8 | 631.84 | QTZ-SYE | Quartz Syenite | <p>Fenitized, mod-str selectively pervasive chl/amph, patchy potassic alt(?), fg-cg locally, qtz 10-15%, kspar 40%, plag 10%, chl/amph 35%. Multiple fractures <2mm with blue amphib infill, at moderate angles TCA.</p> |
| PGH-18-07 | 631.84 | 634.3 | CRBT-BX | Carbonatite Breccia | <p>Dominated by SYN/Clasts, CRBT bx up to 60m. SYN; clasts angular to sub, light rxn rims, CRBT; light pink, fg, wispy bands, 2% py euhedral up to 5mm, light green bands, fg black-blue metallic (pyrochlore) anhedral masses <5mm, diss hem, vfg light orange mineral trace.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|----------------------|--|
| PGH-18-07 | 634.3 | 639 | CRBT-BX | Carbonatite Breccia | <p>Syn clasts are strongly to completely altered, sub rounded to sub angular and elongated, rxn rims <8mm, smaller clasts are completely altered. Clast are alt to amph/bt with patches of remnant kspar(? pink).</p> <p>CRBT; light grey-green-beige/orange surrounding and in close proximity to clasts/contacts to light pink-purple in areas less densely populated by clasts, fg to locally cg, within zones dominated by CRBT clasts are diffuse 'blobs', 3% diss py euhedral xtals <4mm, trace diss fg anhedral grey-blue sub metallic sulphide(?) H<4, wispy bands and masses of blue amph up to 4mm, trace diss hem,</p> |
| PGH-18-07 | 639 | 647.3 | CRBT | Carbonatite | <p>Colour and grain size vary across unit (described below), crbt dominantly massive with xc veins of grey-brown crbt <10cm sub-perpendicular TCA occurring near top and bottom of unit. Overall light pink to cream in colour. Trace diss py <3mm.</p> <p>639-643.5: light pink, fg, xc veins of grey-beige up to 5cm, masses/wispy bands of blue amph(?) up to 9cm, trace fg diss pyrochlore(?), vfg trace orange/red mineral bastnaesite(or other LREE?), local sparse vugs <1mm with hem infill.</p> <p>643.5-644.25: cream, cg, with blue amph diffuse masses up to 10cm with xtals <5mm, Calc>Dol.</p> <p>644.25-646: cream-pink with local vfg red/orange LREE?, cg, areas with 5% phlogopite (bt) / 5% blue-green arfvedsonite (amph).</p> <p>646-647.3: 30% wispy bands/masses of grey-br-blue (amph/bt/ap?), interstitial hem / vfg diss red-orange LREE(?).</p> <p>LC sharp (gran clast?) @ 65/110.</p> |
| PGH-18-07 | 647.3 | 650.75 | MIX ZONE | Carbonatite / Fenite | <p>Alternating zones of alkali and carbonatite described below. First zone of alkali could be large clast as lower contact is perpendicular TCA and has diffuse boundaries.</p> <p>647.3-647.87: FEN: 45% qtz, 10% kspar, 35 % chl/bt/amph, 10% plag, mg, veinlets/fractures <1mm with pink alt halos.</p> <p>647.87-648.60: CRBT; two phases, multiple xc veins <13cm perpendicular TCA. Phase 1 light pink to cream, Calc>Dol mg-cg, with masses of red-brown-orange 2-10cm (locally xc by phase 2), masses ap +/- hem/LREE?, trace diss py. Phase 2; grey-green, fg, diss hem, Dol >Calc, wavy contacts and veins non-uniform thickness. LC @ 50/90.</p> <p>649.10-649.50:CRBT; light pink, fg, wispy bands <4mm of light green-brn with euhedral py up to 2mm 5%. LC @ 35/220</p> <p>650.10-650.75: CRBT; light pink to purple-cream, cg, massive, diss hem (interstitial) more abundant near contacts (trace), light green ap cumulates <4mm 2%, vfg diss light orange mineral, near LC mass of red-brown 1cm wide. LC planar @ 60/045.</p> |
| PGH-18-07 | 650.75 | 657 | SYE | Fenite | <p>Forest green with light red-pink patches, qtz 25%, fspar 35%, chl/bt/amph 40%. Mg, veinlets/fractures <1mm with light pink to green alt halos <5mm at moderate angles TCA, occasional crbt veins commonly <2cm locally up to 23cm.</p> <p>652.80-653.03: CRBT; light purple-pink, massive, wispy bands of green-brn <1cm wide, trace diss py, diss hem, ap cum masses up to 2cm,</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------|--|
| PGH-18-07 | 657 | 662.7 | SYE | Syenite / Fenite | Light pink to green, mg, fenitized (selectively pervasive chl/amph (blue)), amph infilling fractures, minor crbt veins <2cm at moderate angles TCA, 659.80 onward crbt veining increases (low angle TCA). CRBT light grey-cream to purple, massive, diss py, diss hem. |
| PGH-18-07 | 662.7 | 663.93 | CRBT | Carbonatite | Moving downhole; light pink grading into forest green-grey (bt/chl?/amph rich, xtals <3mm), in darker crbt under UV bright orange-yellow fluorescent mineral <1mm ap?, grading into pink-green at lower contact. Trace diss py, diss hem, vfg red-orange mineral (LREE?) |
| PGH-18-07 | 663.93 | 669 | SYE | Syenite / Fenite | Patchy pink-red to green-grey, fractures/veins have light pink alt halos, mg, local intense <2mm fractures filled with crbt. |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|--------------------------------|---|
| PGH-18-07 | 19.1 | JNT | 40 | 135 | | JNT in SYN | curved, slightly rough, no fill |
| PGH-18-07 | 21.93 | JNT | 65 | 275 | | JNT in SYN | planar, chl infill, fe-ox, slightly rough |
| PGH-18-07 | 22.04 | JNT | 60 | 200 | | JNT in SYN | undulating, slightly weathered, slightly rough, chl infill <1mm |
| PGH-18-07 | 23.36 | JNT | 50 | 85 | | JNT in SYN | curved, slightly weathered, slightly rough, chl/fe-ox infill. |
| PGH-18-07 | 27.35 | JNT | 30 | 320 | | JNT in SYN | planar, open, slightly rough, no fill. |
| PGH-18-07 | 28.12 | BND | 30 | 150 | | bnd in GRAN | band of qtz/fldsp in GRAN |
| PGH-18-07 | 28.55 | JNT | 50 | 115 | | JNT in GRAN | planar, amph infill <4mm, slightly rough |
| PGH-18-07 | 29.65 | VN | 70 | 320 | | LC CRBT vn | undulating, closed] |
| PGH-18-07 | 33.13 | CT | 50 | 70 | | LC MD | planar, closed |
| PGH-18-07 | 37.3 | VN | 60 | 150 | | CRBT vn | planar, open, slightly rough, amph fill <3mm |
| PGH-18-07 | 40.02 | VN | 65 | 130 | | LC CRBT vein | planar, closed |
| PGH-18-07 | 40.24 | CT | 65 | 130 | | CRBT BX | undulating, closed] |
| PGH-18-07 | 43.2 | VN | 50 | 180 | | LC CRBT | irregular, bx contact, closed |
| PGH-18-07 | 44.3 | JNT | 60 | 170 | | JNT in SYN | planar, slightly rough, chl infill <2mm |
| PGH-18-07 | 45.2 | JNT | 40 | 15 | | JNT in SYN | curved, slightly rough, chl/amph infill <2mm |
| PGH-18-07 | 48.16 | CT | 50 | 60 | | UC CRBT | planar, closed |
| PGH-18-07 | 57.6 | VN | 45 | 285 | | crbt vein 3mm, along joint set | planar, closed, crb fill |
| PGH-18-07 | 59.2 | CT | 18 | 215 | | LC crbt with syn | planar, closed |
| PGH-18-07 | 65.9 | VN | 45 | 80 | | UC CRBT vein | planar, closed |
| PGH-18-07 | 66.65 | JNT | 20 | 215 | | JNT in SYN | planar, open, slightly rough, fe-ox staining |
| PGH-18-07 | 67.3 | VN | 35 | 315 | | BX crbt vein 2cm wide | planar, closed |
| PGH-18-07 | 69.65 | VN | 20 | 310 | | crbt vein, 3cm, | planar, closed |
| PGH-18-07 | 79.7 | CT | 70 | 125 | | LC crbt | planar, closed |
| PGH-18-07 | 81.06 | VN | 85 | 320 | | UC CRBT vein | planar, closed |
| PGH-18-07 | 81.65 | JNT | 60 | 70 | | JNT in syn | planar, smooth, no fill |
| PGH-18-07 | 81.85 | VN | 20 | 330 | | CRBT vn in syn | undulating, closed |
| PGH-18-07 | 90.78 | VN | 35 | 290 | | fracture in gran | planar, chl infill 2mm, slightly rough |
| PGH-18-07 | 95.3 | JNT | 70 | 180 | | JNT in GRAN | planar, slightly rough, no fill |
| PGH-18-07 | 95.7 | VN | 45 | 105 | | crbt vein 2cm | planar, closed |
| PGH-18-07 | 96.17 | VN | 20 | 310 | | 3cm crbt vein | planar, closed |
| PGH-18-07 | 97 | CT | 25 | 305 | | UC CRBT | planar, open, fg black chl(?) infill <2mm |
| PGH-18-07 | 97.75 | CT | 30 | 50 | | LC CRBT | brecciated, planar, closed |
| PGH-18-07 | 97.9 | JNT | 55 | 320 | | jnt in gran | planar, slightly rough, no fill |
| PGH-18-07 | 101.15 | CT | 20 | 275 | | LC CRBT | planar, closed |
| PGH-18-07 | 120.65 | CT | 45 | 280 | | LC CRBT | undulating |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------|--|
| PGH-18-07 | 121.6 | CT | 60 | 280 | | LC CRBT | curved, closed |
| PGH-18-07 | 122.7 | CT | 55 | 75 | | UC CRBT | planar, closed |
| PGH-18-07 | 122.9 | CT | 40 | 110 | | LC CRBT | curved, closed |
| PGH-18-07 | 124.84 | JNT | 40 | 240 | | JNT | blue-green amph/chl/hem infill, planar, slightly rough |
| PGH-18-07 | 127.31 | CT | 50 | 285 | | UC crbt | planar, closed |
| PGH-18-07 | 127.45 | CT | 50 | 290 | | LC crbt | planar, closed |
| PGH-18-07 | 135.47 | CT | 25 | 100 | | UC CRBT | undulating, closed |
| PGH-18-07 | 136.9 | CT | 50 | 120 | | UC CRBT | planar, closed |
| PGH-18-07 | 137.1 | CT | 50 | 40 | | LC CRBT | irregular, closed |
| PGH-18-07 | 138.8 | JNT | 70 | 140 | | JNT in Gran | slightly rough, planar, chl infill |
| PGH-18-07 | 139.05 | CT | 80 | 120 | | UC CRBT | planar, closed |
| PGH-18-07 | 142.75 | CT | 30 | 235 | | LC CRBT | planar, closed |
| PGH-18-07 | 146.75 | CT | 50 | 125 | | UC CRBT | planar, closed |
| PGH-18-07 | 147 | CT | 45 | 135 | | LC CRBT | irregular |
| PGH-18-07 | 147.75 | CT | 70 | 60 | | LC CRBT | planar, closed |
| PGH-18-07 | 148.2 | CT | 60 | 80 | | LC CRBT | undulating, closed |
| PGH-18-07 | 148.73 | CT | 50 | 60 | | LC CRBT | planar, closed |
| PGH-18-07 | 151.13 | JNT | 35 | 80 | | JNT in GRAN | planar, slightly rough, no fill |
| PGH-18-07 | 151.22 | JNT | 40 | 300 | | JNT in GRAN | planar, chl fill <2mm, slightly rough |
| PGH-18-07 | 151.38 | CT | 45 | 110 | | UC CRBT | planar, closed |
| PGH-18-07 | 152.85 | CT | 30 | 280 | | LC CRBT | planar, closed |
| PGH-18-07 | 153.9 | JNT | 45 | 50 | | JNT | slightly rough, planar, chl infill |
| PGH-18-07 | 154.17 | JNT | 75 | 320 | | JNT in GRAN | curved, slightly rough, chl infill |
| PGH-18-07 | 154.5 | CT | 40 | 320 | | LC CRBT | undulating, closed |
| PGH-18-07 | 158.9 | CT | 75 | 340 | | LC CRBT | planar, closed |
| PGH-18-07 | 161.4 | CT | 80 | 100 | | UC MD | planar, closed |
| PGH-18-07 | 161.7 | CT | 70 | 330 | | LC MD | irregular, closed |
| PGH-18-07 | 162.47 | JNT | 45 | 180 | | JNT in syn | curved, rough, amph infill |
| PGH-18-07 | 165.22 | JNT | 60 | 195 | | JNT in syn | undulating, slightly rough, chl/amph infill |
| PGH-18-07 | 165.46 | JNT | 45 | 70 | | JNT in Syn | planar, rough, blue amph infill |
| PGH-18-07 | 166.6 | JNT | 70 | 150 | | JNT in Syn | planar, slightly rough, amph infill <1mm |
| PGH-18-07 | 167.1 | JNT | 75 | 140 | | JNT in Syn | undulating, slightly rough, blue amph infill <4mm |
| PGH-18-07 | 167.45 | CT | 60 | 30 | | UC MD | planar, closed |
| PGH-18-07 | 167.82 | CT | 70 | 75 | | LC MD | planar, closed |
| PGH-18-07 | 168.95 | VN | 45 | 150 | | crbt vein <3mm | planar, rough, crbt/chl infill <2mm |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------|--|
| PGH-18-07 | 169.07 | JNT | 80 | 290 | | jnt in syn | planar, slightly rough, chl indill |
| PGH-18-07 | 169.73 | CT | 60 | 270 | | UC BX CRBT | planar, closed |
| PGH-18-07 | 173.8 | CT | 35 | 210 | | LC CRBT | planar, closed |
| PGH-18-07 | 174.3 | CT | 50 | 90 | | UC BX CRBT | planar, closed |
| PGH-18-07 | 175.38 | CT | 20 | 100 | | LC CRBT | undulating, closed |
| PGH-18-07 | 175.5 | CT | 40 | 130 | | UC CRBT | undulating, closed |
| PGH-18-07 | 175.8 | CT | 60 | 90 | | LC CRBT | questionable ORI, planar, closed |
| PGH-18-07 | 180.5 | CT | 40 | 320 | | LC CRBT | planar, closed |
| PGH-18-07 | 180.85 | CT | 30 | 290 | | LC CRBT | planar, closed |
| PGH-18-07 | 185.5 | CT | 20 | 70 | | UC CRBT | undulating, closed |
| PGH-18-07 | 185.7 | CT | 50 | 50 | | LC CRBT | planar, closed |
| PGH-18-07 | 187 | JNT | 60 | 60 | | JNT in syn | planar, slightly roughl, blue amph infill <2mm |
| PGH-18-07 | 196.04 | CT | 75 | 115 | | LC CRBT | curved, open, bt fill. |
| PGH-18-07 | 196.87 | CT | 75 | 320 | | LC CRBT | planar, closed |
| PGH-18-07 | 197.08 | JNT | 70 | 310 | | JNT in SYN | planar, open, sodic blu amph infill <2mm, slightly rough |
| PGH-18-07 | 197.4 | CT | 60 | 180 | | LC CRBT | planar, closed |
| PGH-18-07 | 199.75 | CT | 60 | 100 | | UC CRBT | planar, open, rough, no fill |
| PGH-18-07 | 201.17 | CT | 70 | 125 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 201.45 | CT | 60 | 130 | | LC BX | planar, closed |
| PGH-18-07 | 206.3 | BND | 60 | 45 | | BND in CRBT | planar, hem, closed |
| PGH-18-07 | 206.54 | CT | 50 | 215 | | LC BX | planar, closed |
| PGH-18-07 | 208.5 | JNT | 75 | 150 | | JNT in syn | planar, slightly rough, sodic amph in fill <2mm |
| PGH-18-07 | 209.5 | JNT | 60 | 160 | | JNT in syn | planar, slightly rough, sodic amph, fill <1mm |
| PGH-18-07 | 214.05 | CT | 50 | 95 | | UC CRBT | undulating, diffuse, open, bt |
| PGH-18-07 | 215.4 | BND | 85 | 75 | | BND in CRBT | planar, closed |
| PGH-18-07 | 216.25 | BND | 60 | 30 | | BND in CRBT | planar, closed |
| PGH-18-07 | 232.74 | CT | 65 | 75 | | LC CRBT | planar, closed |
| PGH-18-07 | 236.3 | CT | 25 | 200 | | LC BX | planar, closed |
| PGH-18-07 | 237.5 | JNT | 40 | 325 | | jnt in syn | planar, chl infill <2mm |
| PGH-18-07 | 238.9 | JNT | 35 | 180 | | jnt in syn | planar, smooth, chl <2mm |
| PGH-18-07 | 239.55 | JNT | 70 | 330 | | JNT in syn | planar, open, chl infill <1 |
| PGH-18-07 | 241.72 | FZ | 15 | 320 | | LC fz | planar, chl fill, smooth |
| PGH-18-07 | 243.3 | CT | 60 | 20 | | UC crbt | planar, cloed |
| PGH-18-07 | 243.43 | CT | 60 | 15 | | LC crbt | planar, closed |
| PGH-18-07 | 245.5 | CT | 65 | 185 | | LC BX | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------|---|
| PGH-18-07 | 245.93 | CT | 50 | 180 | | LC BX | planar, closed |
| PGH-18-07 | 247.15 | JNT | 40 | 300 | | JNT in syn | planar, blue amph fg <1mm |
| PGH-18-07 | 248.1 | CT | 75 | 205 | | | planar, open, slightly rough, amph fill <1mm |
| PGH-18-07 | 249.25 | CT | 40 | 190 | | LC CRBT | planar, closed |
| PGH-18-07 | 250.27 | CT | 65 | 180 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 253.8 | CT | 30 | 300 | | UC CRBT VN | planar, closed |
| PGH-18-07 | 258.95 | CT | 35 | 295 | | LC CRBT VN | planar, closed |
| PGH-18-07 | 260 | VN | 30 | 340 | | crbt vn | planar, closed |
| PGH-18-07 | 318.2 | CT | 18 | 295 | | MDYKE | planar, closed |
| PGH-18-07 | 319.7 | CT | 25 | 200 | | UC CRBT | undulating, closed, dissolution along cct |
| PGH-18-07 | 326.05 | CT | 55 | 265 | | UC crbt | planar, closed |
| PGH-18-07 | 329.8 | VN | 60 | 180 | | CRBT vn | planar, closed |
| PGH-18-07 | 331.25 | CT | 60 | 125 | | UC CRBT | planar, open, |
| PGH-18-07 | 347.75 | CT | 10 | 235 | | LC CRBT | planar, closed |
| PGH-18-07 | 352.15 | CT | 75 | 290 | | jnt in gran | cct btw gran-fen |
| PGH-18-07 | 356 | JNT | 45 | 230 | | jnt in gran | slightly rough, planar, sodic amph infill <1mm + py |
| PGH-18-07 | 356.7 | CT | 40 | 280 | | UC md | planar, closed |
| PGH-18-07 | 360.4 | CT | 75 | 125 | | LC bx | open, crb <2mm infill, slightly rough |
| PGH-18-07 | 360.75 | CT | 40 | 180 | | LC CRBT | planar, closed |
| PGH-18-07 | 383.75 | CT | 15 | 310 | | LC CRBT | planar, closed |
| PGH-18-07 | 387.85 | CT | 20 | 30 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 388.15 | CT | 20 | 20 | | LC CRBT BX | planar, closed |
| PGH-18-07 | 389.2 | CT | 30 | 110 | | UC MD | planar, closed] |
| PGH-18-07 | 390.35 | CT | 30 | 105 | | LC MD | planar, open, chl/amph, slightly rough |
| PGH-18-07 | 390.75 | CT | 35 | 35 | | LC CRBT | planar, closed |
| PGH-18-07 | 393.55 | CT | 20 | 205 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 399.1 | JNT | 30 | 290 | | JNT in FEN | planar, amph infill <1mm |
| PGH-18-07 | 402.4 | CT | 50 | 25 | | LC CRBT | planar, closed |
| PGH-18-07 | 402.74 | CT | 80 | 35 | | UC CRBT | planar, closed |
| PGH-18-07 | 405.5 | CT | 70 | 160 | | LC CRBT | planar, closed |
| PGH-18-07 | 406.54 | JNT | 40 | 180 | | JNT in syn | planar, slightly rough, amph infill <1mm |
| PGH-18-07 | 407 | CT | 45 | 225 | | UC CRBT | planar, closed |
| PGH-18-07 | 409 | VN | 10 | 315 | | LC VN | planar, closed |
| PGH-18-07 | 413.85 | CT | 30 | 220 | | bnd in syn | planar, closed |
| PGH-18-07 | 416.05 | CT | 20 | 235 | | UC MD | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------------|--|
| PGH-18-07 | 416.6 | CT | 25 | 240 | | LC MD | planar, closed |
| PGH-18-07 | 418.35 | CT | 25 | 250 | | cct btw fg/cg syn | planar, closed |
| PGH-18-07 | 419.7 | JNT | 75 | 300 | | JNT in syn | planar, closed,slightly rough, sodic amph <1mm |
| PGH-18-07 | 424.93 | CT | 50 | 325 | | UC MD | planar, closed |
| PGH-18-07 | 425.25 | CT | 40 | 320 | | LC MD | planar, closed |
| PGH-18-07 | 425.5 | JNT | 25 | 290 | | JNT in alkali | planar, open, chl infill <1mm |
| PGH-18-07 | 425.73 | JNT | 20 | 210 | | JNT in Alkali | planar, open, chl infill <1mm |
| PGH-18-07 | 427.1 | CT | 30 | 0 | | UC MD | planar, open, no fill |
| PGH-18-07 | 432.36 | JNT | 30 | 45 | | JNT in MD | planar, smooth, chl infill |
| PGH-18-07 | 442 | CT | 10 | 180 | | crbt bx UC | bx, closed |
| PGH-18-07 | 442.3 | CT | 15 | 200 | | crbt bx LC | bx, closed |
| PGH-18-07 | 444.45 | CT | 30 | 180 | | UC CRBT | planar, closed |
| PGH-18-07 | 448.9 | CT | 50 | 160 | | UC MD | planar, open, chl infill |
| PGH-18-07 | 449.1 | CT | 70 | 260 | | LC CRBT | undulating, closed |
| PGH-18-07 | 455.15 | JNT | 80 | 180 | | JNT syn | planar, open, slightly rough, amph infill |
| PGH-18-07 | 455.85 | JNT | 25 | 240 | | JNT syn | planar, open, chl/amph infill, slightly rough |
| PGH-18-07 | 456.5 | BND | 15 | 140 | | BND in fenite | planar, closed, qtz/fldsp rich bands |
| PGH-18-07 | 457.5 | JNT | 55 | 180 | | JNT in syn | planar, open, amph/chl fill <1mm, slightly rough |
| PGH-18-07 | 459.85 | CT | 75 | 120 | | LC CRBT | planar, open, amph fill <1mm, slightly rough |
| PGH-18-07 | 460.73 | JNT | 75 | 180 | | JNT in syn | planar, slightly rough, amph/chl fill <1mm |
| PGH-18-07 | 468.16 | CT | 70 | 180 | | UC CRBT | planar, closed |
| PGH-18-07 | 469.05 | CT | 70 | 180 | | LC CRBT | planar, closed |
| PGH-18-07 | 469.23 | JNT | 75 | 290 | | JNT | planar, open, chl/amph fill, slightly rough |
| PGH-18-07 | 479.4 | JNT | 75 | 50 | | JNT | planar, crbt <5mm fill, slightly rough |
| PGH-18-07 | 480.23 | JNT | 40 | 330 | | JNT | planar, opn, slightly rough, chl/amph fill |
| PGH-18-07 | 485.4 | JNT | 45 | 60 | | JNT in SYN | planar, open, chl/amph/crbt fill |
| PGH-18-07 | 485.57 | CT | 20 | 180 | | UC CRBT | planar, closed, amph fill |
| PGH-18-07 | 486.57 | CT | 20 | 180 | | LC CRBT | planar, closed |
| PGH-18-07 | 486.77 | CT | 45 | 225 | | LC CRBT | planar, open, slightly rough, amph fill <5mm |
| PGH-18-07 | 492 | CT | 60 | 280 | | UC CRBT VN | planar, closed |
| PGH-18-07 | 493.75 | CT | 25 | 240 | | LC CRBT | planar, closed |
| PGH-18-07 | 494.82 | CT | 85 | 340 | | LC CRBT | planar, closed |
| PGH-18-07 | 497.22 | CT | 25 | 130 | | LC CRBT | planar, closed |
| PGH-18-07 | 497.75 | CT | 25 | 110 | | UC CRBT | planar, closed |
| PGH-18-07 | 499 | CT | 35 | 10 | | UC MD | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|---------------|---|
| PGH-18-07 | 499.55 | CT | 55 | 20 | | LC MD | planar, closed |
| PGH-18-07 | 501.25 | CT | 30 | 190 | | UC BX CRBT | brecciated, planar, closed |
| PGH-18-07 | 502.05 | BND | 60 | 80 | | BND in CRBT | Planar, closed, blue amph(?) |
| PGH-18-07 | 506.45 | CT | 60 | 45 | | LC CRBT BX | planar, open, slightly rough, amph infill |
| PGH-18-07 | 507.75 | CT | 35 | 225 | | LC CRBT | planar, closed |
| PGH-18-07 | 508.33 | CT | 30 | 280 | | LC CRBT | planar, closed |
| PGH-18-07 | 512.15 | CT | 65 | 30 | | UC CRBT | planar, closed |
| PGH-18-07 | 512.75 | CT | 45 | 70 | | LC CRBT | planar, closed |
| PGH-18-07 | 512.93 | CT | 40 | 100 | | UC MD | planar, closed |
| PGH-18-07 | 514.24 | CT | 40 | 90 | | LC MD | planar, closed |
| PGH-18-07 | 514.82 | JNT | 45 | 180 | | JNT | planar, slightly rough, amph infill 3mm |
| PGH-18-07 | 515.15 | CT | 40 | 210 | | LC CRBT | planar, closed |
| PGH-18-07 | 517 | JNT | 40 | 210 | | JNT | planar, slightly rough, amph infill <3mm |
| PGH-18-07 | 519.5 | CT | 70 | 140 | | UC CRBT | planar, closed |
| PGH-18-07 | 521 | VN | 40 | 310 | | amph vn | planar, open, slightly rough, amph fill <4mm |
| PGH-18-07 | 521.82 | VN | 45 | 225 | | crbt vn | planar, open, crbt/amph fill <4mm, slightly rough |
| PGH-18-07 | 529.33 | CT | 60 | 180 | | LC CRBT | planar, closed |
| PGH-18-07 | 529.71 | JNT | 65 | 55 | | JNT in alkali | planar, open, amph fill <1mm, slightly rough |
| PGH-18-07 | 547.55 | JNT | 60 | 310 | | JNT in syn | planar, open, slightly rough, chl/amph fill <1mm |
| PGH-18-07 | 547.75 | CT | 35 | 140 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 550.5 | JNT | 45 | 160 | | Jnt in syn | planar, open, amph fill <1mm, slightly rough |
| PGH-18-07 | 551.15 | CT | 45 | 60 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 556.15 | CT | 20 | 200 | | LC CRBT BX | planar, closed |
| PGH-18-07 | 557.27 | VN | 65 | 35 | | CRBT VN <3cm | planar, closed |
| PGH-18-07 | 559.9 | CT | 40 | 160 | | LC CRBT | planar, closed |
| PGH-18-07 | 593.67 | JNT | 55 | 220 | | JNT in SYN | planar, open, slightly rough, amph fill <1mm |
| PGH-18-07 | 595.1 | CT | 65 | 180 | | LC CBRT | planar, closed, disolution |
| PGH-18-07 | 598.17 | VN | 75 | 70 | | CRBT VN <1cm | planar, open, crbt fill 7mm |
| PGH-18-07 | 598.3 | CT | 35 | 240 | | UC CRBT | planar, closed |
| PGH-18-07 | 608.05 | CT | 30 | 145 | | UC CRBT BX | planar, closed |
| PGH-18-07 | 611.4 | CT | 50 | 110 | | UC CRBT | planar, closed |
| PGH-18-07 | 626.9 | CT | 50 | 20 | | LC CRBT BX | undulating, closed |
| PGH-18-07 | 35717 | CT | 55 | 40 | | LC CRBT | undulating, open, slightly rough, sodic amph |
| PGH-18-07 | 100.45 | CT | 35 | 290 | | UC CBRT | planar, closed |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-----------------------|
| PGH-18-07 | 11.15 | 12.63 | 1.48 | 590091 | A18-06697 | 4.92 | 0.031 | 2.36 | < 0.003 | < 0.003 | 0.007 | 0.005 | 0.003 | 0.011 | < 0.003 | CRBT + Syn bx |
| PGH-18-07 | 12.63 | 13.44 | 0.81 | 590092 | A18-06697 | 5.76 | 0.018 | 0.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.005 | Syn |
| PGH-18-07 | 13.44 | 14.33 | 0.89 | 590093 | A18-06697 | 5.14 | 0.019 | 1 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.009 | syn w/ minor crbt |
| PGH-18-07 | 14.33 | 15.32 | 0.99 | 590094 | A18-06697 | 4.23 | 0.029 | 1.2 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.009 | < 0.003 | CRBT bx |
| PGH-18-07 | 15.32 | 16.51 | 1.19 | 590095 | A18-06697 | 3.63 | 0.032 | 1.45 | < 0.003 | < 0.003 | 0.012 | 0.01 | 0.003 | 0.013 | < 0.003 | CRBT bx |
| PGH-18-07 | 16.51 | 17.8 | 1.29 | 590096 | A18-06697 | 6.5 | 0.03 | 0.85 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.005 | 0.006 | < 0.003 | CRBT bx |
| PGH-18-07 | 39 | 40.22 | 1.22 | 590097 | A18-06697 | 5.72 | 0.011 | 0.64 | 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.005 | 0.018 | SYN + crbt |
| PGH-18-07 | 40.22 | 41 | 0.78 | 590098 | A18-06697 | 6.6 | 0.051 | 2.18 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.015 | 0.009 | CRBT bx |
| PGH-18-07 | 51.7 | 53 | 1.3 | 590099 | A18-06697 | 5.16 | 0.018 | 2.43 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.006 | 0.015 | 0.012 | CRBT + syn |
| PGH-18-07 | 53 | 54 | 1 | 590100 | A18-06697 | 6.47 | 0.01 | 0.39 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.017 | syn + CRBT |
| PGH-18-07 | 55.1 | 55.96 | 0.86 | 590101 | A18-06697 | 8.13 | 0.034 | 0.99 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.003 | 0.008 | 0.007 | CRBT bx |
| PGH-18-07 | 58.47 | 59.25 | 0.78 | 590102 | A18-06697 | 7.12 | 0.049 | 1.64 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.005 | 0.012 | < 0.003 | CRBT BX |
| PGH-18-07 | 66.76 | 67.38 | 0.62 | 590103 | A18-06697 | 6.24 | 0.013 | 0.19 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.011 | CRBT + SYN |
| PGH-18-07 | 67.38 | 68.36 | 0.98 | 590104 | A18-06697 | 6.78 | 0.026 | 5.31 | < 0.003 | < 0.003 | 0.008 | 0.005 | 0.004 | 0.017 | 0.049 | CRBT |
| PGH-18-07 | 68.36 | 69.36 | 1 | 590105 | A18-06697 | 6.77 | 0.016 | 1.81 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.012 | 0.011 | CRBT |
| PGH-18-07 | 74 | 74.73 | 0.73 | 590106 | A18-06697 | 6.48 | 0.024 | 0.81 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.02 | SYN + crbt |
| PGH-18-07 | 74.73 | 76 | 1.27 | 590107 | A18-06697 | 7.74 | 0.081 | 1.49 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.003 | CRBT BX |
| PGH-18-07 | 82 | 83 | 1 | 590108 | A18-06697 | 6.4 | 0.011 | 0.13 | < 0.003 | 0.003 | 0.007 | < 0.005 | 0.004 | 0.005 | 0.012 | syn + crbt |
| PGH-18-07 | 83 | 84 | 1 | 590109 | A18-06697 | 7.09 | 0.026 | 0.98 | 0.003 | < 0.003 | 0.008 | < 0.005 | 0.004 | 0.009 | 0.024 | syn + crbt bx |
| PGH-18-07 | 84 | 85 | 1 | 590110 | A18-06697 | 6.64 | 0.015 | 0.13 | 0.003 | < 0.003 | 0.006 | < 0.005 | 0.004 | 0.003 | 0.006 | syn + crbt veins |
| PGH-18-07 | 85 | 86.3 | 1.3 | 590111 | A18-06697 | 7.23 | 0.026 | 1.39 | 0.003 | 0.003 | 0.008 | < 0.005 | 0.003 | 0.009 | 0.006 | crt bx |
| PGH-18-07 | 96.93 | 97.86 | 0.93 | 590112 | A18-06697 | 8.62 | 0.063 | 0.11 | < 0.003 | < 0.003 | 0.019 | < 0.005 | 0.004 | 0.005 | < 0.003 | CRBT |
| PGH-18-07 | 99.4 | 100.42 | 1.02 | 590113 | A18-06697 | 7.43 | 0.056 | 0.74 | < 0.003 | 0.005 | 0.011 | < 0.005 | 0.003 | 0.006 | 0.005 | Gran + CRBT |
| PGH-18-07 | 100.42 | 101.25 | 0.83 | 590115 | A18-06697 | 9.8 | 0.333 | 0.05 | 0.015 | 0.005 | 0.009 | 0.011 | 0.004 | < 0.003 | 0.006 | CRBT + Gran |
| PGH-18-07 | 103 | 104.3 | 1.3 | 590116 | A18-06697 | 6.54 | 0.048 | 3 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.015 | 0.006 | CRBT |
| PGH-18-07 | 108.34 | 109.2 | 0.86 | 590117 | A18-06697 | 7.05 | 0.027 | 1.14 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.003 | 0.01 | 0.01 | CRBT + minor Gran peg |
| PGH-18-07 | 110.83 | 111.61 | 0.78 | 590118 | A18-06697 | 6.15 | 0.033 | 1.03 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.006 | 0.008 | < 0.003 | CRBT + Minor gran peg |
| PGH-18-07 | 134.23 | 135.73 | 1.5 | 590119 | A18-06697 | 5.08 | 0.016 | 0.76 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.013 | Gran + CRBT |
| PGH-18-07 | 139 | 140 | 1 | 590120 | A18-06697 | 4.7 | 0.032 | 3.66 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.005 | 0.013 | 0.025 | CRBT + GRAN |
| PGH-18-07 | 140 | 141 | 1 | 590121 | A18-06697 | 3.76 | 0.006 | 0.21 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | < 0.003 | < 0.003 | Gran + CRBT |
| PGH-18-07 | 141 | 142 | 1 | 590122 | A18-06697 | 5.92 | 0.029 | 1.74 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.01 | < 0.003 | CRBT |
| PGH-18-07 | 142 | 143.5 | 1.5 | 590123 | A18-06697 | 5.09 | 0.041 | 1.71 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.008 | 0.003 | Gran + CRBT |
| PGH-18-07 | 146.67 | 147.63 | 0.96 | 590124 | A18-06697 | 5.53 | 0.029 | 0.81 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.035 | Gran + CRBT |
| PGH-18-07 | 147.63 | 149 | 1.37 | 590125 | A18-06697 | 5.59 | 0.03 | 2.35 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.014 | CRBT + GRAN |
| PGH-18-07 | 151.31 | 152.12 | 0.81 | 590126 | A18-06697 | 3.97 | 0.034 | 2.96 | < 0.003 | 0.003 | 0.007 | < 0.005 | 0.006 | 0.014 | 0.052 | CRBT |
| PGH-18-07 | 152.12 | 152.93 | 0.81 | 590127 | A18-06697 | 5.29 | 0.031 | 3.01 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.011 | 0.052 | CRBT |
| PGH-18-07 | 169.85 | 170.58 | 0.73 | 590128 | A18-06697 | 8.27 | 0.035 | 1.49 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.007 | 0.01 | BX CRBT |
| PGH-18-07 | 170.58 | 171.63 | 1.05 | 590130 | A18-06697 | 8.22 | 0.016 | 0.39 | 0.004 | 0.004 | < 0.005 | < 0.005 | 0.004 | < 0.003 | 0.025 | SYN |
| PGH-18-07 | 171.63 | 172.37 | 0.74 | 590131 | A18-06697 | 8.06 | 0.031 | 1.17 | < 0.003 | 0.005 | < 0.005 | < 0.005 | 0.009 | 0.004 | < 0.003 | BX CRBT |
| PGH-18-07 | 172.37 | 173.13 | 0.76 | 590132 | A18-06697 | 8.67 | 0.018 | 0.27 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.013 | < 0.003 | 0.009 | SYN |
| PGH-18-07 | 173.13 | 174 | 0.87 | 590133 | A18-06697 | 6.78 | 0.042 | 3.4 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.009 | 0.036 | BX CRBT + SYN |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|---------------------|
| PGH-18-07 | 174 | 175 | 1 | 590134 | A18-06697 | 6.65 | 0.025 | 1.46 | 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.005 | 0.015 | SYN + CRBT BX |
| PGH-18-07 | 175 | 176 | 1 | 590135 | A18-06697 | 6.13 | 0.012 | 1.12 | 0.004 | 0.003 | 0.008 | < 0.005 | 0.003 | 0.008 | 0.005 | CRBT + SYN |
| PGH-18-07 | 176 | 177 | 1 | 590136 | A18-06697 | 7.97 | 0.023 | 0.91 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.004 | 0.006 | 0.014 | BX CRBT |
| PGH-18-07 | 177 | 177.91 | 0.91 | 590137 | A18-06697 | 7.19 | 0.014 | 0.83 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.003 | 0.007 | 0.018 | SYN + minor CRBT |
| PGH-18-07 | 177.91 | 178.78 | 0.87 | 590138 | A18-06697 | 7.21 | 0.012 | 0.68 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.015 | SYN + minor CRBT |
| PGH-18-07 | 178.78 | 180.18 | 1.4 | 590139 | A18-06697 | 6.17 | < 0.003 | 4.34 | < 0.003 | < 0.003 | 0.012 | < 0.005 | 0.003 | 0.027 | < 0.003 | CRBT |
| PGH-18-07 | 180.18 | 181 | 0.82 | 590141 | A18-06697 | 6.6 | 0.013 | 0.25 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.004 | 0.007 | SYN + CRBT |
| PGH-18-07 | 181 | 182 | 1 | 590142 | A18-06697 | 5.76 | 0.039 | 2.73 | < 0.003 | 0.003 | 0.006 | < 0.005 | 0.003 | 0.015 | 0.015 | SYN + CRBT |
| PGH-18-07 | 195 | 196.05 | 1.05 | 590143 | A18-06697 | 6.61 | 0.022 | 0.13 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | < 0.003 | < 0.003 | CRBT + SYN |
| PGH-18-07 | 201 | 202.22 | 1.22 | 590144 | A18-06697 | 6.4 | 0.016 | 0.61 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.023 | SYN + minor crbt bx |
| PGH-18-07 | 202.22 | 203.61 | 1.39 | 590145 | A18-06697 | 7.54 | 0.7 | 3.94 | 0.006 | 0.003 | 0.008 | 0.012 | 0.005 | 0.011 | 0.011 | CRBT BX |
| PGH-18-07 | 203.61 | 204.6 | 0.99 | 590146 | A18-06697 | 7.6 | 0.113 | 0.26 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.011 | SYN BX + CRBT |
| PGH-18-07 | 204.6 | 205.63 | 1.03 | 590147 | A18-06697 | 5.63 | 0.022 | 1.55 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.009 | 0.005 | SYN BX + CRBT |
| PGH-18-07 | 205.63 | 206.59 | 0.96 | 590148 | A18-06697 | 5.76 | 0.024 | 1.35 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | < 0.003 | SYN |
| PGH-18-07 | 214.06 | 215 | 0.94 | 590149 | A18-06697 | 5.53 | 0.032 | 1.94 | 0.007 | 0.003 | 0.007 | < 0.005 | 0.003 | 0.01 | 0.02 | CRBT |
| PGH-18-07 | 215 | 216.5 | 1.5 | 590151 | A18-06697 | 5.42 | 0.071 | 3.79 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.015 | 0.018 | CRBT |
| PGH-18-07 | 216.5 | 218 | 1.5 | 590152 | A18-06697 | 3.93 | 0.13 | 5.88 | < 0.003 | < 0.003 | 0.009 | 0.009 | < 0.003 | 0.022 | 0.004 | CRBT |
| PGH-18-07 | 218 | 219.05 | 1.05 | 590154 | A18-06697 | 3.27 | 0.073 | 3.51 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.004 | 0.013 | 0.01 | CRBT |
| PGH-18-07 | 219.05 | 219.7 | 0.65 | 590155 | A18-06697 | 4.24 | 0.014 | 0.76 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 0.005 | 0.018 | CRBT + SYN |
| PGH-18-07 | 219.7 | 220.32 | 0.62 | 590156 | A18-06697 | 4.1 | 0.058 | 2.82 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.005 | 0.012 | < 0.003 | CRBT / SYN |
| PGH-18-07 | 226 | 226.9 | 0.9 | 590157 | A18-06697 | 7.87 | 0.1 | 1.43 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.005 | 0.006 | 0.006 | CRBT BX |
| PGH-18-07 | 226.9 | 227.6 | 0.7 | 590158 | A18-06697 | 8.59 | 0.03 | 0.56 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.003 | 0.004 | 0.011 | SYN BX |
| PGH-18-07 | 227.6 | 228.95 | 1.35 | 590160 | A18-06697 | 5.31 | 0.211 | 2.93 | < 0.003 | 0.003 | 0.008 | 0.009 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-07 | 228.95 | 229.95 | 1 | 590161 | A18-06697 | 7.32 | 0.053 | 1.08 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.024 | SYN BX |
| PGH-18-07 | 229.95 | 231 | 1.05 | 590162 | A18-06697 | 4.38 | 0.068 | 5.67 | < 0.003 | 0.003 | 0.013 | 0.007 | 0.003 | 0.025 | < 0.003 | CRBT |
| PGH-18-07 | 231 | 232 | 1 | 590163 | A18-06697 | 4.75 | 0.101 | 4.29 | < 0.003 | 0.004 | 0.007 | 0.006 | 0.003 | 0.013 | 0.019 | CRBT |
| PGH-18-07 | 232 | 232.7 | 0.7 | 590164 | A18-06697 | 8.52 | 0.108 | 4.12 | < 0.003 | 0.003 | 0.007 | < 0.005 | 0.005 | 0.013 | 0.038 | CRBT |
| PGH-18-07 | 232.7 | 233.7 | 1 | 590165 | A18-06697 | 5.11 | 0.015 | 0.24 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.012 | SYN |
| PGH-18-07 | 233.7 | 234.58 | 0.88 | 590166 | A18-06697 | 6.72 | 0.025 | 0.42 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.004 | 0.009 | SYN + CRBT |
| PGH-18-07 | 234.58 | 235.48 | 0.9 | 590167 | A18-06697 | 9.81 | 0.064 | 2.15 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.003 | 0.008 | 0.004 | BX CRBT |
| PGH-18-07 | 235.48 | 236.37 | 0.89 | 590168 | A18-06697 | 7.51 | 0.158 | 1.96 | < 0.003 | < 0.003 | 0.007 | 0.007 | 0.004 | 0.011 | 0.005 | BX CRBT |
| PGH-18-07 | 248.1 | 249.3 | 1.2 | 590169 | A18-06697 | 7.64 | 0.06 | 1.55 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.004 | CRBT BX |
| PGH-18-07 | 265.95 | 267 | 1.05 | 590170 | A18-06697 | 12.53 | 0.079 | 2.06 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.011 | 0.022 | |
| PGH-18-07 | 267 | 268 | 1 | 590171 | A18-06697 | 2.91 | 0.055 | 2 | < 0.003 | < 0.003 | 0.011 | 0.005 | 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-07 | 268 | 268.7 | 0.7 | 590172 | A18-06697 | 2.15 | 0.237 | 3.51 | < 0.003 | 0.004 | 0.007 | 0.011 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-07 | 268.7 | 269.6 | 0.9 | 590173 | A18-06697 | 14.32 | 0.085 | 1.86 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.005 | 0.006 | 0.03 | CRBT BX |
| PGH-18-07 | 269.6 | 270.5 | 0.9 | 590174 | A18-06697 | 6.69 | 0.115 | 2.46 | 0.004 | 0.003 | 0.006 | 0.007 | 0.003 | 0.008 | < 0.003 | CRBT + BX |
| PGH-18-07 | 270.5 | 271.4 | 0.9 | 590176 | A18-06697 | 8.54 | 0.082 | 2.03 | < 0.003 | < 0.003 | 0.007 | 0.009 | < 0.003 | 0.008 | < 0.003 | CRBT + BX |
| PGH-18-07 | 271.4 | 272.9 | 1.5 | 590177 | A18-06697 | 8.83 | 0.024 | 0.8 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.005 | 0.015 | SYN BX + CRBT |
| PGH-18-07 | 272.9 | 274.3 | 1.4 | 590178 | A18-06697 | 7.24 | 0.065 | 0.92 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.02 | SYN BX + CRBT |
| PGH-18-07 | 274.3 | 275.8 | 1.5 | 590179 | A18-06697 | 7.47 | 0.042 | 1.34 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.008 | 0.016 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-----------------|
| PGH-18-07 | 275.8 | 277.3 | 1.5 | 590180 | A18-06697 | 8.26 | 0.169 | 0.25 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.005 | 0.004 | < 0.003 | CRBT BX |
| PGH-18-07 | 277.3 | 278.8 | 1.5 | 590181 | A18-06697 | 8.33 | 0.339 | 0.97 | < 0.003 | 0.004 | 0.005 | 0.005 | < 0.003 | 0.005 | 0.003 | CRBT BX |
| PGH-18-07 | 278.8 | 280.3 | 1.5 | 590182 | A18-06697 | 10.53 | 0.267 | 2.38 | < 0.003 | < 0.003 | 0.006 | 0.005 | < 0.003 | 0.01 | < 0.003 | CRBT BX |
| PGH-18-07 | 280.3 | 281.8 | 1.5 | 590183 | A18-06697 | 9.99 | 0.053 | 1.37 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.006 | 0.008 | CRBT BX |
| PGH-18-07 | 281.8 | 283 | 1.2 | 590185 | A18-06697 | 5.21 | 0.082 | 7.78 | < 0.003 | < 0.003 | 0.008 | 0.006 | 0.004 | 0.033 | 0.009 | CRBT |
| PGH-18-07 | 283 | 284.5 | 1.5 | 590186 | A18-06697 | 3.91 | 0.039 | 7.2 | < 0.003 | < 0.003 | 0.014 | 0.006 | < 0.003 | 0.044 | < 0.003 | CRBT |
| PGH-18-07 | 284.5 | 286 | 1.5 | 590187 | A18-06697 | 4.57 | 0.072 | 6.49 | < 0.003 | 0.003 | 0.013 | 0.005 | 0.003 | 0.04 | 0.003 | CRBT |
| PGH-18-07 | 286 | 287 | 1 | 590188 | A18-06697 | 4 | 0.112 | 5.02 | < 0.003 | 0.004 | 0.009 | 0.005 | 0.003 | 0.023 | 0.01 | CRBT |
| PGH-18-07 | 287 | 288 | 1 | 590189 | A18-06697 | 6.47 | 0.075 | 1.74 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.003 | 0.014 | 0.016 | CRBT |
| PGH-18-07 | 288 | 289 | 1 | 590190 | A18-06697 | 7.25 | 0.11 | 0.67 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.004 | 0.015 | SYN BX + CRBT |
| PGH-18-07 | 293.35 | 294.85 | 1.5 | 590192 | A18-06697 | 7.93 | 0.132 | 2.1 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.007 | 0.018 | CRBT BX + SYN |
| PGH-18-07 | 294.85 | 296.35 | 1.5 | 590193 | A18-06697 | 15 | 0.063 | 1.07 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.007 | 0.011 | CRBT BX + SYN |
| PGH-18-07 | 296.35 | 297.85 | 1.5 | 590194 | A18-06697 | 7.59 | 0.125 | 1.12 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.024 | CRBT BX + SYN |
| PGH-18-07 | 297.85 | 299.2 | 1.35 | 590195 | A18-06697 | 4.71 | 0.01 | 0.28 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.003 | 0.015 | SYN |
| PGH-18-07 | 299.2 | 300.7 | 1.5 | 590196 | A18-06697 | 6.26 | 0.05 | 0.47 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-07 | 300.7 | 302.2 | 1.5 | 590197 | A18-06697 | 9.67 | 0.029 | 0.65 | < 0.003 | < 0.003 | 0.006 | 0.008 | 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-07 | 302.2 | 303.7 | 1.5 | 590198 | A18-06697 | 19.87 | 0.012 | 0.74 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT |
| PGH-18-07 | 303.7 | 305.2 | 1.5 | 590199 | A18-06697 | 15.09 | 0.024 | 0.88 | < 0.003 | 0.003 | 0.006 | < 0.005 | 0.003 | 0.01 | < 0.003 | CRBT |
| PGH-18-07 | 305.2 | 306.5 | 1.3 | 590200 | A18-06697 | 8.04 | 0.127 | 2.05 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.01 | 0.005 | CRBT |
| PGH-18-07 | 306.5 | 307.5 | 1 | 590201 | A18-06697 | 3.32 | 0.01 | 0.59 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.005 | 0.01 | < 0.003 | CRBT + SYN |
| PGH-18-07 | 313.1 | 314.5 | 1.4 | 590204 | A18-06697 | 6.06 | 0.035 | 0.68 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.014 | CRBT SYN BX |
| PGH-18-07 | 314.5 | 315.92 | 1.42 | 590205 | A18-06697 | 6.8 | 0.06 | 2.72 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.016 | 0.016 | CRBT SYN BX |
| PGH-18-07 | 321.85 | 323.35 | 1.5 | 590206 | A18-06697 | 8.01 | 0.067 | 1.02 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.013 | CRBT SYN BX |
| PGH-18-07 | 323.35 | 324.85 | 1.5 | 590207 | A18-06697 | 6.88 | 0.087 | 1.15 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.004 | 0.01 | 0.006 | CRBT SYN BX |
| PGH-18-07 | 324.85 | 326.35 | 1.5 | 590208 | A18-06697 | 9.59 | 0.096 | 2.77 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.015 | 0.012 | CRBT SYN BX |
| PGH-18-07 | 332.54 | 333.04 | 0.5 | 590209 | A18-06697 | 4.32 | 0.021 | 2.68 | < 0.003 | < 0.003 | 0.009 | 0.007 | 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-07 | 333.04 | 333.78 | 0.74 | 590210 | A18-06697 | 7.25 | 0.034 | 0.75 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.012 | BX + minor CBRt |
| PGH-18-07 | 333.78 | 335.39 | 1.61 | 590211 | A18-06697 | 7.45 | 0.05 | 2.24 | < 0.003 | 0.004 | 0.007 | 0.006 | 0.004 | 0.011 | < 0.003 | CRBT BX |
| PGH-18-07 | 338.7 | 339.61 | 0.91 | 590212 | A18-06697 | 8.28 | 0.05 | 1.98 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.006 | CRBT BX |
| PGH-18-07 | 341.25 | 342 | 0.75 | 590213 | A18-06697 | 8.01 | 0.1 | 1.74 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.007 | 0.016 | CRBT + BX |
| PGH-18-07 | 345.34 | 346.24 | 0.9 | 590214 | A18-06697 | 8.05 | 0.03 | 4.81 | < 0.003 | < 0.003 | 0.007 | 0.005 | 0.003 | 0.013 | 0.102 | CRBT |
| PGH-18-07 | 346.24 | 347.2 | 0.96 | 590215 | A18-06697 | 7.99 | 0.033 | 4.8 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.012 | 0.074 | CRBT |
| PGH-18-07 | 347.2 | 348 | 0.8 | 590216 | A18-06697 | 8.26 | 0.055 | 1.31 | 0.003 | 0.004 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.028 | BX + CRBT |
| PGH-18-07 | 359.56 | 361 | 1.44 | 590217 | A18-06697 | 6.62 | 0.028 | 0.85 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.015 | CRBT vn + bx |
| PGH-18-07 | 372.75 | 373.75 | 1 | 590218 | A18-06697 | 3.98 | 0.216 | 2.88 | < 0.003 | 0.003 | 0.008 | 0.014 | 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-07 | 373.75 | 374.52 | 0.77 | 590219 | A18-06697 | 5.12 | 0.01 | 0.36 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.007 | SYN |
| PGH-18-07 | 374.52 | 375.37 | 0.85 | 590220 | A18-06697 | 5.68 | 0.036 | 4.42 | < 0.003 | < 0.003 | 0.008 | 0.008 | 0.003 | 0.018 | 0.019 | CRBT BX |
| PGH-18-07 | 378.9 | 379.9 | 1 | 590221 | A18-06697 | 6.9 | 0.035 | 2.44 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.006 | 0.016 | < 0.003 | CRT BX |
| PGH-18-07 | 387 | 387.72 | 0.72 | 590222 | A18-06697 | 4.78 | 0.006 | 0.4 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.017 | FEN |
| PGH-18-07 | 387.72 | 388.26 | 0.54 | 590223 | A18-06697 | 5.36 | 0.021 | 1.01 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.006 | < 0.003 | CRBT |
| PGH-18-07 | 390.3 | 391.05 | 0.75 | 590224 | A18-06697 | 4.28 | 0.022 | 1.33 | < 0.003 | < 0.003 | 0.005 | 0.005 | 0.003 | 0.005 | < 0.003 | CRBT + FEN |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|--|
| PGH-18-07 | 402.2 | 403.25 | 1.05 | 590225 | A18-06697 | 6.17 | 0.116 | 2.02 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.005 | 0.027 | CRBT + Alkali |
| PGH-18-07 | 403.25 | 404.4 | 1.15 | 590226 | A18-06697 | 6.87 | 0.118 | 1.83 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.024 | CRBT + Alkali |
| PGH-18-07 | 404.4 | 405.53 | 1.13 | 590227 | A18-06697 | 11.71 | 0.08 | 4.77 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.012 | 0.101 | Dark CRBT - bt, mag, py, pyrochlore(?) |
| PGH-18-07 | 426.56 | 427.14 | 0.58 | 590228 | A18-06697 | 2.34 | 0.007 | 6.73 | < 0.003 | < 0.003 | 0.008 | 0.007 | 0.004 | 0.018 | < 0.003 | CRBT, ap up to 10cm |
| PGH-18-07 | 441.6 | 442.4 | 0.8 | 590229 | A18-06697 | 6.42 | 0.097 | 1.23 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.006 | < 0.003 | CRBT BX |
| PGH-18-07 | 444.36 | 445.04 | 0.68 | 590230 | A18-06697 | 3.7 | 0.223 | 2.27 | < 0.003 | < 0.003 | 0.005 | 0.005 | 0.003 | 0.007 | < 0.003 | CRBT BX |
| PGH-18-07 | 468.15 | 469.08 | 0.93 | 590231 | A18-06697 | 6.98 | 0.044 | 2.45 | < 0.003 | 0.004 | 0.007 | 0.006 | 0.004 | 0.008 | < 0.003 | CRBT |
| PGH-18-07 | 469.08 | 469.83 | 0.75 | 590232 | A18-06697 | 5.58 | 0.015 | 0.47 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.018 | GRAN |
| PGH-18-07 | 469.83 | 471 | 1.17 | 590233 | A18-06697 | 1.77 | 0.088 | 1.05 | < 0.003 | < 0.003 | 0.007 | 0.009 | 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-07 | 471 | 472 | 1 | 590234 | A18-06697 | 2.44 | 0.094 | 1.14 | < 0.003 | < 0.003 | 0.01 | 0.008 | < 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-07 | 472 | 473 | 1 | 590235 | A18-06697 | 2.65 | 0.21 | 2.96 | < 0.003 | 0.003 | 0.009 | 0.008 | 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-07 | 473 | 474.37 | 1.37 | 590236 | A18-06697 | 5.3 | 0.133 | 1.9 | < 0.003 | < 0.003 | 0.007 | 0.01 | < 0.003 | 0.007 | < 0.003 | CRBT |
| PGH-18-07 | 474.37 | 475.85 | 1.48 | 590237 | A18-06697 | 5.79 | 0.033 | 0.88 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.007 | ALKALI + CRBT |
| PGH-18-07 | 475.85 | 477.35 | 1.5 | 590238 | A18-06697 | 5.75 | 0.081 | 1.78 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.005 | 0.006 | < 0.003 | ALKALI + CRBT |
| PGH-18-07 | 477.35 | 478.4 | 1.05 | 590239 | A18-06697 | 4.22 | 0.031 | 0.88 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.008 | 0.003 | 0.003 | ALKALI + CRBT |
| PGH-18-07 | 483.13 | 484.04 | 0.91 | 590241 | A18-06697 | 4.94 | 0.023 | 2.28 | < 0.003 | < 0.003 | 0.007 | 0.01 | 0.003 | 0.01 | < 0.003 | CRBT |
| PGH-18-07 | 484.04 | 484.75 | 0.71 | 590242 | A18-06697 | 5.87 | 0.017 | 2.95 | < 0.003 | < 0.003 | 0.007 | 0.006 | < 0.003 | 0.011 | < 0.003 | CRBT , dark |
| PGH-18-07 | 484.75 | 485.5 | 0.75 | 590243 | A18-06697 | 5.27 | 0.008 | 0.5 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.016 | ALKLAI |
| PGH-18-07 | 485.5 | 486.82 | 1.32 | 590244 | A18-06697 | 6.47 | 0.05 | 1.47 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.007 | < 0.003 | CRBT BX |
| PGH-18-07 | 492.5 | 493.84 | 1.34 | 590245 | A18-06697 | 9.84 | 0.054 | 1.22 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.009 | 0.06 | CRBT + GRAN |
| PGH-18-07 | 493.84 | 494.9 | 1.06 | 590247 | A18-06697 | 5.77 | 0.029 | 0.63 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | < 0.003 | GRAN + CRBT |
| PGH-18-07 | 501 | 501.95 | 0.95 | 590248 | A18-06697 | 8.3 | 0.078 | 1.63 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.005 | 0.003 | GRAN + CRBT |
| PGH-18-07 | 501.95 | 502.8 | 0.85 | 590249 | A18-06697 | 5.83 | 0.09 | 1.35 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.012 | CRBT + BX |
| PGH-18-07 | 502.8 | 504 | 1.2 | 590250 | A18-06697 | 10.21 | 0.052 | 5.29 | < 0.003 | < 0.003 | 0.006 | 0.005 | 0.003 | 0.011 | 0.105 | CRBT |
| PGH-18-07 | 504 | 505.5 | 1.5 | 590251 | A18-06697 | 6.52 | 0.038 | 2.35 | < 0.003 | < 0.003 | 0.006 | 0.006 | < 0.003 | 0.01 | 0.004 | CRBT BX |
| PGH-18-07 | 505.5 | 506.45 | 0.95 | 590252 | A18-06697 | 6.21 | 0.038 | 2.44 | < 0.003 | 0.003 | 0.007 | 0.006 | < 0.003 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-07 | 512.15 | 513.2 | 1.05 | 590253 | A18-06697 | 4.3 | 0.072 | 1.8 | < 0.003 | < 0.003 | 0.007 | 0.007 | < 0.003 | 0.01 | 0.013 | CRBT + GRAN + MD |
| PGH-18-07 | 513.2 | 514.23 | 1.03 | 590254 | A18-06697 | 10.83 | 0.047 | 2.23 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.005 | 0.008 | 0.11 | CRB alt MD |
| PGH-18-07 | 514.23 | 515.73 | 1.5 | 590256 | A18-06697 | 4.74 | 0.074 | 1.48 | < 0.003 | 0.003 | < 0.005 | 0.005 | < 0.003 | 0.004 | 0.013 | GRAN + minor CRBT |
| PGH-18-07 | 515.73 | 517.16 | 1.43 | 590257 | A18-06697 | 5.66 | 0.037 | 0.63 | < 0.003 | < 0.003 | 0.011 | 0.006 | < 0.003 | 0.006 | < 0.003 | GRAN + minor CRBT |
| PGH-18-07 | 517.16 | 518.32 | 1.16 | 590258 | A18-06697 | 3.61 | 0.009 | 0.31 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 | GRAN |
| PGH-18-07 | 518.32 | 519.5 | 1.18 | 590259 | A18-06697 | 5.17 | 0.015 | 0.41 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.013 | GRAN |
| PGH-18-07 | 519.5 | 520.4 | 0.9 | 590260 | A18-06697 | 4.69 | 0.159 | 3.21 | < 0.003 | < 0.003 | 0.011 | 0.01 | 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-07 | 520.4 | 521.2 | 0.8 | 590261 | A18-06697 | 4.19 | 0.017 | 0.26 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.018 | ALKLAI |
| PGH-18-07 | 521.2 | 522.12 | 0.92 | 590262 | A18-06697 | 4.23 | 0.112 | 1.7 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.006 | 0.006 | CRBT + ALKALI |
| PGH-18-07 | 522.12 | 523.61 | 1.49 | 590263 | A18-06697 | 5.39 | 0.119 | 2.71 | < 0.003 | 0.004 | 0.006 | 0.009 | 0.004 | 0.009 | < 0.003 | CRBT + BX |
| PGH-18-07 | 523.61 | 525.09 | 1.48 | 590264 | A18-06697 | 4.24 | 0.07 | 1.95 | < 0.003 | 0.003 | 0.005 | 0.008 | 0.003 | 0.007 | < 0.003 | CRBT + BX |
| PGH-18-07 | 525.09 | 526.24 | 1.15 | 590265 | A18-06697 | 5.46 | 0.04 | 1.59 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.004 | CRBT + BX |
| PGH-18-07 | 526.24 | 527.14 | 0.9 | 590266 | A18-06697 | 6.73 | 0.055 | 3.05 | < 0.003 | < 0.003 | 0.007 | 0.007 | < 0.003 | 0.011 | 0.012 | CRBT |
| PGH-18-07 | 527.14 | 527.89 | 0.75 | 590267 | A18-06697 | 6.07 | 0.054 | 2.16 | < 0.003 | 0.003 | 0.005 | 0.006 | < 0.003 | 0.008 | 0.013 | CRBT BX |
| PGH-18-07 | 527.89 | 529.33 | 1.44 | 590268 | A18-06697 | 5.25 | 0.106 | 2.29 | < 0.003 | 0.003 | 0.007 | 0.006 | 0.003 | 0.011 | 0.008 | CRBT, dark |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-------------|
| PGH-18-07 | 529.33 | 529.83 | 0.5 | 590269 | A18-06697 | 4.88 | 0.019 | 0.31 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.009 | ALKALI |
| PGH-18-07 | 529.83 | 530.65 | 0.82 | 590270 | A18-06697 | 10.68 | 0.118 | 3.07 | < 0.003 | < 0.003 | 0.008 | 0.005 | 0.004 | 0.012 | 0.087 | CRBT |
| PGH-18-07 | 530.65 | 531.8 | 1.15 | 590271 | A18-06697 | 7.34 | 0.102 | 1.04 | < 0.003 | < 0.003 | 0.012 | 0.011 | 0.004 | 0.007 | 0.008 | CRBT |
| PGH-18-07 | 531.8 | 532.91 | 1.11 | 590273 | A18-06697 | 9.36 | 0.092 | 3.33 | < 0.003 | 0.003 | 0.007 | 0.006 | 0.004 | 0.009 | 0.031 | CRBT |
| PGH-18-07 | 534.6 | 535.05 | 0.45 | 590275 | A18-06697 | 3.46 | 0.045 | 1.51 | < 0.003 | < 0.003 | 0.006 | 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT |
| PGH-18-07 | 535.86 | 536.58 | 0.72 | 590276 | A18-06697 | 3.52 | 0.005 | 0.75 | < 0.003 | < 0.003 | 0.006 | 0.005 | 0.003 | 0.009 | < 0.003 | CRBT +PEG |
| PGH-18-07 | 544.17 | 544.75 | 0.58 | 590277 | A18-06697 | 4.53 | 0.015 | 0.34 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.007 | SYN + CRBT |
| PGH-18-07 | 544.75 | 545.53 | 0.78 | 590279 | A18-06697 | 4.08 | 0.062 | 2.12 | < 0.003 | < 0.003 | 0.009 | 0.008 | < 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-07 | 545.53 | 546.68 | 1.15 | 590280 | A18-06697 | 5.38 | 0.013 | 0.35 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.004 | < 0.003 | 0.013 | SYN |
| PGH-18-07 | 546.68 | 547.67 | 0.99 | 590281 | A18-06697 | 4.78 | 0.017 | 0.59 | < 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | < 0.003 | 0.006 | SYN |
| PGH-18-07 | 547.67 | 549.16 | 1.49 | 590282 | A18-06697 | 3.92 | 0.04 | 2.77 | < 0.003 | < 0.003 | 0.006 | 0.01 | 0.004 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-07 | 549.16 | 550.15 | 0.99 | 590283 | A18-06697 | 6.05 | 0.041 | 1.26 | < 0.003 | 0.003 | 0.006 | < 0.005 | 0.005 | 0.005 | < 0.003 | CRBT BX |
| PGH-18-07 | 550.15 | 551.15 | 1 | 590285 | A18-06697 | 6.2 | 0.018 | 0.25 | 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | < 0.003 | 0.012 | SYN |
| PGH-18-07 | 551.15 | 552.64 | 1.49 | 590286 | A18-06697 | 6.07 | 0.141 | 2.08 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.004 | 0.011 | < 0.003 | CRBT BX |
| PGH-18-07 | 552.64 | 553.74 | 1.1 | 590287 | A18-06697 | 5.24 | 0.056 | 0.24 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.009 | SYN + CRBT |
| PGH-18-07 | 553.74 | 554.75 | 1.01 | 590288 | A18-06697 | 5.23 | 0.027 | 0.14 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.014 | SYN + CRBT |
| PGH-18-07 | 554.75 | 556.13 | 1.38 | 590289 | A18-06697 | 6.1 | 0.153 | 2.7 | < 0.003 | < 0.003 | 0.007 | 0.006 | 0.003 | 0.011 | < 0.003 | CRBT BX |
| PGH-18-07 | 570.55 | 571.87 | 1.32 | 590290 | A18-06697 | 14.4 | 0.045 | 1.61 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.003 | 0.006 | 0.054 | MD + CRBT |
| PGH-18-07 | 571.87 | 573.14 | 1.27 | 590291 | A18-06697 | 15.28 | 0.041 | 2.29 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.004 | 0.005 | 0.072 | MD + CRBT |
| PGH-18-07 | 573.14 | 573.88 | 0.74 | 590292 | A18-06697 | 6.81 | 0.381 | 5.24 | < 0.003 | < 0.003 | 0.013 | 0.007 | < 0.003 | 0.016 | 0.01 | CRBT |
| PGH-18-07 | 573.88 | 574.81 | 0.93 | 590293 | A18-06697 | 9.28 | 0.15 | 0.71 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.004 | 0.006 | CRBT |
| PGH-18-07 | 574.81 | 576.35 | 1.54 | 590294 | A18-06697 | 5.99 | 0.268 | 2.53 | < 0.003 | 0.003 | 0.011 | 0.009 | 0.004 | 0.013 | < 0.003 | CRBT |
| PGH-18-07 | 576.35 | 577.18 | 0.83 | 590295 | A18-06697 | 3.52 | 0.355 | 4.27 | < 0.003 | 0.005 | 0.012 | 0.015 | 0.003 | 0.021 | < 0.003 | CRBT |
| PGH-18-07 | 577.18 | 578 | 0.82 | 590296 | A18-06697 | 4.01 | 0.162 | 3.26 | < 0.003 | 0.003 | 0.01 | 0.007 | 0.003 | 0.019 | 0.02 | CRBT |
| PGH-18-07 | 578 | 579.02 | 1.02 | 590297 | A18-06697 | 7.86 | 0.171 | 1.92 | < 0.003 | < 0.003 | 0.007 | 0.005 | < 0.003 | 0.007 | < 0.003 | CRBT BX |
| PGH-18-07 | 579.02 | 579.72 | 0.7 | 590299 | A18-06697 | 6.88 | 0.273 | 4.29 | < 0.003 | 0.003 | 0.008 | 0.007 | 0.005 | 0.015 | < 0.003 | CRBT |
| PGH-18-07 | 579.72 | 580.72 | 1 | 590300 | A18-06697 | 7.22 | 0.125 | 2.57 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.006 | 0.013 | 0.011 | CRBT BX |
| PGH-18-07 | 580.72 | 582.15 | 1.43 | 590301 | A18-06697 | 7.12 | 0.324 | 1.43 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.004 | 0.006 | 0.011 | SYN |
| PGH-18-07 | 582.15 | 583.46 | 1.31 | 590302 | A18-06697 | 7.38 | 0.2 | 1.99 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.005 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-07 | 583.46 | 584.95 | 1.49 | 590303 | A18-06697 | 3.14 | 0.885 | 4.59 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.003 | 0.01 | < 0.003 | CRBT BX |
| PGH-18-07 | 584.95 | 585.37 | 0.42 | 590304 | A18-06697 | 7.19 | 0.149 | 0.93 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.013 | SYN |
| PGH-18-07 | 585.37 | 586.42 | 1.05 | 590305 | A18-06697 | 2.56 | 0.114 | 2.33 | < 0.003 | 0.004 | 0.009 | 0.011 | < 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-07 | 586.42 | 587 | 0.58 | 590306 | A18-06697 | 11.53 | 0.066 | 3.37 | < 0.003 | 0.004 | 0.007 | < 0.005 | < 0.003 | 0.009 | 0.041 | MD + CRBT |
| PGH-18-07 | 587 | 588.5 | 1.5 | 590307 | A18-06697 | 14.92 | 0.054 | 2.1 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.007 | 0.052 | MD + CRBT |
| PGH-18-07 | 588.5 | 590 | 1.5 | 590308 | A18-06697 | 10.2 | 0.034 | 1.95 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.005 | 0.007 | 0.051 | MD + CRBT |
| PGH-18-07 | 590 | 591.5 | 1.5 | 590309 | A18-06697 | 8.44 | 0.062 | 1.94 | < 0.003 | 0.006 | 0.006 | < 0.005 | 0.004 | 0.01 | 0.055 | MD + CRBT |
| PGH-18-07 | 598.13 | 599.23 | 1.1 | 590312 | A18-06697 | 5.34 | 0.114 | 0.92 | < 0.003 | 0.003 | 0.008 | 0.006 | 0.005 | 0.009 | < 0.003 | CRBT +SYN |
| PGH-18-07 | 599.23 | 600.23 | 1 | 590313 | A18-06697 | 3.97 | 0.042 | 2.01 | < 0.003 | 0.003 | 0.007 | 0.007 | 0.006 | 0.014 | 0.007 | CRBT + SYN |
| PGH-18-07 | 608 | 609 | 1 | 590314 | A18-06697 | 6.88 | 0.023 | 0.52 | < 0.003 | 0.003 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.006 | CRBT BX |
| PGH-18-07 | 609 | 610.5 | 1.5 | 590315 | A18-06697 | 5.42 | 0.123 | 3.14 | < 0.003 | 0.005 | 0.01 | 0.012 | 0.003 | 0.016 | < 0.003 | CRBT BX |
| PGH-18-07 | 610.5 | 611.4 | 0.9 | 590316 | A18-06697 | 7.25 | 0.011 | 0.38 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.016 | CRBT BX |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|---------------------|
| PGH-18-07 | 611.4 | 612.3 | 0.9 | 590317 | A18-06697 | 8.15 | 0.059 | 0.67 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.017 | CRBT BX |
| PGH-18-07 | 612.3 | 613 | 0.7 | 590318 | A18-06697 | 8.07 | 0.038 | 0.95 | 0.004 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.005 | 0.005 | CRBT BX, sphalerite |
| PGH-18-07 | 613 | 614.25 | 1.25 | 590319 | A18-06697 | 7.96 | 0.041 | 0.81 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.003 | 0.006 | 0.004 | CRBT BX |
| PGH-18-07 | 614.25 | 615.22 | 0.97 | 590320 | A18-06697 | 6.21 | 0.015 | 0.69 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.011 | CRBT BX |
| PGH-18-07 | 615.22 | 616.7 | 1.48 | 590321 | A18-06697 | 1.48 | 0.037 | 1.67 | < 0.003 | < 0.003 | 0.007 | 0.006 | 0.003 | 0.013 | < 0.003 | CRBT BX |
| PGH-18-07 | 616.7 | 617.7 | 1 | 590322 | A18-06697 | 2.9 | 0.161 | 5.14 | < 0.003 | 0.005 | 0.011 | 0.011 | 0.006 | 0.02 | 0.003 | CRBT BX |
| PGH-18-07 | 617.7 | 618.7 | 1 | 590323 | A18-06697 | 5.07 | 0.078 | 2.4 | < 0.003 | 0.004 | 0.009 | 0.007 | < 0.003 | 0.01 | < 0.003 | CRBT BX |
| PGH-18-07 | 618.7 | 620.19 | 1.49 | 590324 | A18-06697 | 4.62 | 0.133 | 1.58 | < 0.003 | 0.003 | 0.008 | 0.007 | < 0.003 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-07 | 620.19 | 621.69 | 1.5 | 590326 | A18-06697 | 6.34 | 0.068 | 0.96 | < 0.003 | 0.003 | 0.006 | 0.005 | 0.004 | 0.007 | 0.006 | CRBT BX |
| PGH-18-07 | 621.69 | 623.19 | 1.5 | 590327 | A18-06697 | 5.16 | 0.187 | 2.09 | < 0.003 | 0.005 | 0.01 | 0.01 | 0.006 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-07 | 623.19 | 624.69 | 1.5 | 590328 | A18-06697 | 5.47 | 0.14 | 4.53 | < 0.003 | 0.003 | 0.008 | 0.012 | < 0.003 | 0.013 | < 0.003 | CRBT BX |
| PGH-18-07 | 624.69 | 626 | 1.31 | 590329 | A18-06697 | 6.45 | 0.045 | 0.89 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.003 | CRBT BX |
| PGH-18-07 | 626 | 626.9 | 0.9 | 590331 | A18-06697 | 7.77 | 0.052 | 1.64 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.004 | 0.009 | < 0.003 | CRBT BX |
| PGH-18-07 | 626.9 | 628.4 | 1.5 | 590332 | A18-06697 | 5.96 | 0.013 | 0.22 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 | QTZ SYN |
| PGH-18-07 | 628.4 | 629.6 | 1.2 | 590333 | A18-06697 | 5.67 | 0.006 | 0.52 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.009 | QTZ SYN |
| PGH-18-07 | 629.6 | 630.75 | 1.15 | 590334 | A18-06697 | 6.26 | 0.009 | 0.49 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.008 | QTZ SYN |
| PGH-18-07 | 630.75 | 631.84 | 1.09 | 590335 | A18-06697 | 5.85 | 0.015 | 0.22 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.008 | CRBT BX |
| PGH-18-07 | 631.84 | 633.3 | 1.46 | 590336 | A18-06697 | 7.13 | 0.028 | 0.24 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.004 | 0.003 | 0.003 | CRBT BX |
| PGH-18-07 | 633.3 | 634.3 | 1 | 590337 | A18-06697 | 7.71 | 0.022 | 0.45 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.006 | < 0.003 | CRBT BX |
| PGH-18-07 | 634.3 | 635.78 | 1.48 | 590338 | A18-06697 | 9.3 | 0.07 | 6.59 | < 0.003 | < 0.003 | 0.017 | 0.005 | 0.004 | 0.044 | < 0.003 | CRBT BX |
| PGH-18-07 | 635.78 | 637.28 | 1.5 | 590339 | A18-06697 | 8.69 | 0.027 | 0.46 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | < 0.003 | CRBT BX |
| PGH-18-07 | 637.28 | 638.78 | 1.5 | 590340 | A18-06697 | 8.37 | 0.054 | 0.82 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | 0.01 | CRBT BX |
| PGH-18-07 | 638.78 | 640.28 | 1.5 | 590341 | A18-06697 | 4.14 | 0.089 | 4.74 | < 0.003 | 0.004 | 0.015 | 0.006 | 0.004 | 0.022 | 0.035 | CRBT |
| PGH-18-07 | 640.28 | 641 | 0.72 | 590343 | A18-06697 | 3.72 | 0.064 | 6.18 | < 0.003 | < 0.003 | 0.015 | 0.005 | 0.004 | 0.025 | 0.032 | CRBT |
| PGH-18-07 | 641 | 642 | 1 | 590344 | A18-06697 | 2.4 | 0.067 | 3.71 | < 0.003 | 0.004 | 0.008 | 0.008 | < 0.003 | 0.011 | 0.022 | CRBT |
| PGH-18-07 | 642 | 643 | 1 | 590345 | A18-06697 | 2.15 | 0.042 | 3.59 | < 0.003 | < 0.003 | 0.009 | 0.009 | < 0.003 | 0.015 | 0.037 | CRBT |
| PGH-18-07 | 643 | 643.5 | 0.5 | 590347 | A18-06697 | 2.66 | 0.118 | 4.15 | < 0.003 | < 0.003 | 0.011 | 0.007 | 0.003 | 0.015 | 0.037 | CRBT |
| PGH-18-07 | 643.5 | 644.5 | 1 | 590348 | A18-06697 | 1.65 | 0.043 | 0.93 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.005 | 0.012 | < 0.003 | CRBT |
| PGH-18-07 | 644.5 | 645 | 0.5 | 590349 | A18-06697 | 2.86 | 0.01 | 0.13 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.006 | 0.006 | < 0.003 | CRBT |
| PGH-18-07 | 645 | 646 | 1 | 590350 | A18-06697 | 3.86 | 0.091 | 3.03 | < 0.003 | < 0.003 | 0.013 | 0.006 | 0.004 | 0.014 | 0.041 | CRBT |
| PGH-18-07 | 646 | 647.3 | 1.3 | 590351 | A18-06697 | 4.61 | 0.888 | 6.14 | < 0.003 | 0.012 | 0.019 | 0.025 | 0.005 | 0.016 | 0.245 | CRBT |
| PGH-18-07 | 647.3 | 647.87 | 0.57 | 590353 | A18-06697 | 6.74 | 0.013 | 0.33 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.004 | 0.004 | 0.013 | ALKLAI |
| PGH-18-07 | 647.87 | 648.57 | 0.7 | 590354 | A18-06697 | 4.57 | 0.479 | 5.46 | < 0.003 | 0.006 | 0.013 | 0.011 | 0.003 | 0.017 | 0.076 | CRBT BX |
| PGH-18-07 | 648.57 | 649.08 | 0.51 | 590355 | A18-06697 | 5.44 | 0.008 | 0.15 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 0.003 | 0.013 | ALKLAI |
| PGH-18-07 | 649.08 | 649.59 | 0.51 | 590356 | A18-06697 | 12.37 | 0.029 | 1.12 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.003 | 0.008 | 0.004 | CRBT + ALKALI |
| PGH-18-07 | 649.59 | 650.1 | 0.51 | 590357 | A18-06697 | 8.08 | 0.138 | 1.23 | < 0.003 | 0.005 | < 0.005 | 0.005 | 0.003 | 0.006 | 0.036 | CRBT |
| PGH-18-07 | 650.1 | 650.75 | 0.65 | 590358 | A18-06697 | 2 | 0.088 | 1.03 | < 0.003 | < 0.003 | 0.009 | 0.005 | 0.003 | 0.011 | 0.013 | CRBT |
| PGH-18-07 | 650.75 | 651.91 | 1.16 | 590359 | A18-06697 | 7.95 | 0.009 | 0.58 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.029 | FEN |
| PGH-18-07 | 651.91 | 652.53 | 0.62 | 590360 | A18-06697 | 8.75 | 0.018 | 0.81 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.005 | 0.029 | FEN + MD |
| PGH-18-07 | 652.53 | 653.02 | 0.49 | 590361 | A18-06697 | 7.27 | 0.248 | 2.26 | < 0.003 | 0.004 | 0.011 | 0.006 | 0.003 | 0.011 | 0.004 | CRBT |
| PGH-18-07 | 662.7 | 663.93 | 1.23 | 590362 | A18-06697 | 9.77 | 0.072 | 3.43 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.005 | 0.014 | 0.063 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|-----|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-------------|
| PGH-18-07 | 663.93 | 665 | 1.07 | 590363 | A18-06697 | 4.44 | 0.009 | 0.21 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.006 | FEN |
| PGH-18-07 | 665 | 666 | 1 | 590364 | A18-06697 | 6.21 | 0.055 | 4.85 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.003 | 0.017 | < 0.003 | CRBT |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|------------------|----------|-----------|
| PGH-18-07 | 100.42 | 100.42 | 0 | 590114 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 170.58 | 170.58 | 0 | 590129 | A18-06697 | STANDARD | Oka 1 | 2.48 | 0.552 |
| PGH-18-07 | 180.18 | 180.18 | 0 | 590140 | A18-06697 | BLANK | Marble | 0.05 | < 0.003 |
| PGH-18-07 | 215 | 215 | 0 | 590150 | A18-06697 | STANDARD | Oka 1 | 2.49 | 0.539 |
| PGH-18-07 | 216.5 | 218 | 1.5 | 590152 | A18-06697 | N/A | ORIGINAL SAMPLE | 5.88 | 0.13 |
| PGH-18-07 | 216.5 | 218 | 1.5 | 590153 | A18-06697 | DUPLICATE | DUPLICATE 590152 | 5.6 | 0.117 |
| PGH-18-07 | 227.6 | 227.6 | 0 | 590159 | A18-06697 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-07 | 270.5 | 270.5 | 0 | 590175 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 281.8 | 281.8 | 0 | 590184 | A18-06697 | BLANK | Marble | 0.04 | < 0.003 |
| PGH-18-07 | 289 | 289 | 0 | 590191 | A18-06697 | STANDARD | Oka 1 | 2.51 | 0.548 |
| PGH-18-07 | 307.5 | 307.5 | 0 | 590202 | A18-06697 | STANDARD | Oka 1 | 2.57 | 0.552 |
| PGH-18-07 | 307.5 | 307.5 | 0 | 590203 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 478.4 | 478.4 | 0 | 590240 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 493.84 | 493.84 | 0 | 590246 | A18-06697 | BLANK | Marble | 0.05 | < 0.003 |
| PGH-18-07 | 514.23 | 514.23 | 0 | 590255 | A18-06697 | STANDARD | Oka 1 | 2.45 | 0.534 |
| PGH-18-07 | 531.8 | 531.8 | 0 | 590272 | A18-06697 | STANDARD | Oka 1 | 2.47 | 0.537 |
| PGH-18-07 | 531.8 | 532.91 | 1.11 | 590273 | A18-06697 | N/A | ORIGINAL SAMPLE | 3.33 | 0.092 |
| PGH-18-07 | 531.8 | 532.91 | 1.11 | 590274 | A18-06697 | DUPLICATE | DUPLICATE 590273 | 3.18 | 0.094 |
| PGH-18-07 | 544.75 | 544.75 | 0 | 590278 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 550.15 | 550.15 | 0 | 590284 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 579.02 | 579.02 | 0 | 590298 | A18-06697 | STANDARD | Oka 1 | 2.49 | 0.538 |
| PGH-18-07 | 591.5 | 591.5 | 0 | 590310 | A18-06697 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-07 | 591.5 | 591.5 | 0 | 590311 | A18-06697 | STANDARD | Oka 1 | 2.45 | 0.532 |
| PGH-18-07 | 620.19 | 620.19 | 0 | 590325 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 626 | 626 | 0 | 590330 | A18-06697 | STANDARD | Oka 1 | 2.47 | 0.536 |
| PGH-18-07 | 640.28 | 640.28 | 0 | 590342 | A18-06697 | STANDARD | Oka 1 | 2.41 | 0.525 |
| PGH-18-07 | 643 | 643 | 0 | 590346 | A18-06697 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-07 | 646 | 647.3 | 1.3 | 590351 | A18-06697 | N/A | ORIGINAL SAMPLE | 6.14 | 0.888 |
| PGH-18-07 | 646 | 647.3 | 1.3 | 590352 | A18-06697 | DUPLICATE | DUPLICATE 590351 | 4.58 | 0.724 |



| | | | |
|---------------------|------------------------------|---------------|---------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 9-May-2018 |
| Township/Area: | Killala Lake Area | End Date: | 14-May-2018 |
| Claims (converted): | 332506 | Described by: | B. Clark, BSc |
| Claims (legacy): | TB 4256251 | Log date: | 25-May-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|----------------|--|--------------|--|
| Azimuth: 344.00° | | Easting: 519731 | | Core size: HQ | | Cemented: No | |
| Plunge: -50.00° | | Northing: 5432724 | | Casing: Pulled | | Stored: Yes | |
| Length: 498.0 m | | Elevation: 318.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-08 | Reflex | 24 | 344.7 | -51 | 58487 |
| PGH-18-08 | Reflex | 75 | 345.4 | -51 | 57417 |
| PGH-18-08 | Reflex | 126 | 345.4 | -51.1 | 57436 |
| PGH-18-08 | Reflex | 177 | 345.3 | -51 | 57474 |
| PGH-18-08 | Reflex | 228 | 345.7 | -50.8 | 57467 |
| PGH-18-08 | Reflex | 279 | 346.9 | -50.5 | 57483 |
| PGH-18-08 | Reflex | 330 | 347.1 | -50.6 | 57568 |
| PGH-18-08 | Reflex | 381 | 347.3 | -50.4 | 57668 |
| PGH-18-08 | Reflex | 432 | 347.8 | -50.4 | 57722 |
| PGH-18-08 | Reflex | 498 | 348.1 | -49.8 | 57713 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|--|---|
| PGH-18-08 | 0 | 8.6 | OVB | Overburden / Casing | Overburden / Casing |
| PGH-18-08 | 8.6 | 9.4 | CRBT | Carbonatite | Purple to brown-red, fg, massive, slightly weathered, patches of orange-red, wispy bands of green-cream with ap cumulates up to 5mm, trace diss py, masses up to 7mm of black anhedral Nb Ox? |
| PGH-18-08 | 9.4 | 12.5 | SYE | Syenite | Light pink-red, fg-mg, qtz 10-15%, kspar 50%, plag 20%, bt 10%, 5% other. Weakly to moderately altered to clay minerals. Diss hem and along fractures, local breccias <30cm. Minor crbt veins <3cm at high angles TCA. CCT @ 55/040, brecciated. |
| PGH-18-08 | 12.5 | 13.25 | CRBT | Carbonatite | Light grey-green-red-orange-pink, fg, locally vuggy <2mm, trace fg diss grey-black metallic mineral, trace dis py |
| PGH-18-08 | 13.25 | 13.4 | SYE | Syenite | Light pink-red to orange-green, mod-strongly altered to clay (fspar degrading), mg, fractures with clay fill/alt. <2mm crbt veining at various angles. |
| PGH-18-08 | 13.4 | 15.64 | CRBT | Carbonatite | Light grey-brown, fractures filled with brown, diss hem, syn clasts up to 5cm which are fractured and carb altered, vfg light pink mineral, slightly weathered |
| PGH-18-08 | 15.64 | 28.2 | QTZ-SYE | Quartz Syenite / Syenite + minor Carbonatite | Light pink-orange to green-yellow to red, fspar mod alt'd to illite(?clays), mg, fractures with pink alt halos, diss hem, moderately fractured as various angle TCA. Alteration is patchy and concentrated in areas where more fractures present. Crbt veins <30cm; purple-red, fg, massive, diss hem, vfg light pink-orange mineral, local light grey-green, patchy fluorite. LC brecciated. |
| PGH-18-08 | 28.2 | 29.55 | CRBT-BX | Carbonatite + Breccia | First 60cm brecciated syn; dark-fluorescent green to red-orange, mod-strongly weathered clasts up to 5cm, diffuse boundaries, crbt fill CRBT; light purple patchy pink, fg, massive, locally vuggy up to 1cm filled with fg grey-black metallic mineral (hem + pyrochlore?), vfg diss trace orange mineral. At LC brown-red masses with ap cum <1cm LC @ 60/180 |
| PGH-18-08 | 29.55 | 40.5 | QTZ-SYE | Quartz Syenite / Syenite + minor Carbonatite | 12% CRBT, 78% SYN SYN; light pink-red to orange-green, mod-str clay altered fspar, mg, fractures and veins with light alt halos, patchy mod chl alt. qtz 10-15%, kspar 50%, plag 20%, chl/amph 15%. CRBT; dark-light purple to grey-cream, fg-cg, diss hem, patchy fluorite, vfg diss orange/red minerals (LREE?), locally fg ap <1mm light green, commonly rimmed with hem. |
| PGH-18-08 | 40.5 | 43.25 | CRBT-BX | Carbonatite Breccia + Syenite | Syn clast dominated 65%, crbt 35% SYN; light pink-red, chl (replacing bt?), clasts <10cm moderately fractured, with local rxn rims of brown-black (bt/pyx?/amph), clasts have diffuse boundaries, sub-rounded to sub-angular. MD: 40.9-41.4: crbt alt MD with sub parallel (perpendicular TCA) veins from 2mm-15mm, light green-grey, bt xtals <3m locally. Sharp contacts with syn ~ perp TCA CRBT; light grey-pink, fg-cg, breccia appears blobby with diffuse clasts of syn and patchy kspar? within crbt. br-red wispy bands of ap(?), diss hem. LC obscured by breccia. |
| PGH-18-08 | 43.25 | 45.9 | QTZ-SYE | Quartz Syenite | Light pink-red, mg-fg, qtz 20%, kspar 50%, plag, 10%, bt 10%, 10% crbt. Fspar cores red-orange rimmed with cream-pink. Xtals <3mm, rare crbt +/- amph veins <5mm, locally chl replacing bt |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|------|-------|------------|----------------------------------|--|
| PGH-18-08 | 45.9 | 53 | CRBT-BX | Carbonatite Breccia | <p>Syn clasts up to 15cm, diffuse boundaries, clasts are locally mod-strongly weathered to clays (black-green-orange), rimmed by light pink.</p> <p>45.9-48.5 CRBT; light grey-purple-pink, fg, massive, diss hem up to 3mm, trace diss py.</p> <p>48.5-49.3: light pink-purple, cg, patches of mauve and orange masses LREE? with vfg native copper(?), up to 1.5cm with fg black diss mineral within (weak vugs). qtz xtals up to 5mm near LC.</p> <p>49.6-50.10: light cream-pink-purple, fg, massive, wispy bands of mauve with patches of orange from<1mm-2cm, fluorescent white under UV, with diss vfg red mineral.</p> |
| PGH-18-08 | 53 | 72.2 | CRBT-BX | Carbonatite Breccia + Syenite | <p>SYN; light red-pink, weak potassic/hem alt, light grey/green crbt fill, clasts have diffuse boundaries, clasts up to 15cm, patchy chl alt (black)</p> <p>CRBT; grey-green to mauve-purple, locally vuggy, fg, massive, trace vfg orange mineral</p> <p>59.5-62.6: light-dark purple-grey, fg, wispy bands of mauve, vfg orange diss mineral long bands, diss hem, locally weakly vuggy, diss vfg black metallic mineral (pyrochlore?)</p> <p>64.5-66.20: purple-mauve, fg, 10% diss fg red mineral, minor clasts of syn with diffuse boundaries, LC @ 25/220</p> <p>67-69: light purple-cream-pink, fg, ap cumulates up to 4cm lenses, locally strongly weathered syn clasts (green-orange), vfg orange mineral diss/interstitial</p> <p>69-72.2: BX ; local vugs/weathered and filled with pyrochlore up to 4mm, cream-purple-mauve, clasts have light alt rims, to completely altered (black-green clays?).</p> |
| PGH-18-08 | 72.2 | 89.7 | QTZ-SYE | Quartz Syenite / Fenite(?) | <p>Mg light pink-red, patches of bt/chl/amph up to 70% with undulating/diffuse contacts to syn, <2mm fractures/veins with light pink-red halos. Qtz 15%, kspar 50%, plag 15%, bt/chl 10-70%.</p> <p>Crbt veins <30cm; light purple-mauve to cream, fg, massive, diss hem, diss py, , patchy diss light green fg mineral.</p> |
| PGH-18-08 | 89.7 | 102.5 | SYE-BX | Carbonatite Breccia with Granite | <p>GRAN; light orange-red to pink, weak-mod clay alt(?) fspar being replaced, disseminated hem, qtz 10-25%, kspar 50%, plag 10%, 15% chl/bt locally weakly vuggy, veinlets <1mm with pink-orange light alt halos</p> <p>CRBT up to 1.3m:</p> <p>89.7-90: light pink to purple mauve, wispy bands of mauve-red, disseminated hem, clasts with diffuse boundaries, wispy bands massing around clasts and contacts, vfg light orange mineral, LC undulating and irregular</p> <p>91.2-92.2: light green-grey to purple, fg, massive to very weakly banded, diss hem, Calc>Dol, bands defined by pink pink-light green</p> <p>95.30-99.5: light pink-purple-green to cream, weakly oxidized fe-ox staining, very weakly vuggy, diss hem, local wispy patches of amph</p> <p>101.7-102.5: purple, diss hem, br-grey wispy masses, light orange vfg diss mineral.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|---|
| PGH-18-08 | 102.5 | 108.75 | GRAN | Granite | <p>Mg, light pink-red, qtz 25%, kspar 50%, plag 15%, 10% bt. Fractures/veinlets with light pink-orange alt halos, weak potassic alt, diss hem, patchy chl replacing bt. CRBT veins <4cm moderate to perpendicular TCA. Patchy light orange alt to fspar.</p> <p>Local crbt bx 106.41-107.05: light pink-purple-cream, diss hem, light green ap cumulated <2mm rimmed by hem, 2% fg black-grey metallic pyrochlore(?). Gran clasts are vuggy and clay altered(?) <10cm, diffuse boundaries, sun-angular to sub-rounded.</p> |
| PGH-18-08 | 108.75 | 123.5 | CRBT-BX | Carbonatite + Breccia | <p>CRBT 85%, ALKALI 15% zones of fractured alkali and clasts within crbt. ALKALI; red-pink to cream orange, mg, clasts have diffuse boundaries, locally weakly vuggy and patchy clay alteration (lime green-grey-orange). Cores of clasts commonly clay altered and fractured.</p> <p>CRBT; dominantly purple-mauve, fg, massive, locally cg cream-pink to purple 109.15-111.40: UC brecciated, purple-mauve with locally light pink, diss hem as irregular masses <3mm, fg black diss mineral (pyrochlore?), irregular kspar xtals within crbt. Grading into cg light pink-purple, with wispy discontinuous bands of hem, vfg light orange-pink mineral (LREE?), masses of dark ap(?) up to 1cm. Brecciated 40cm towards LC</p> <p>113-122.50: dominantly fg purple-mauve, locally vuggy, diss hem, light pink-orange interstitial vfg mineral, locally light green-cream crbt cg, diss py, Calc>Dol</p> |
| PGH-18-08 | 123.5 | 138.2 | GRAN | Granite | <p>Red-orange-pink to green locally, mg, locally mod fenitized (patches of 40% bt/chl/amph), fractures/veins with light pink potassic alt halos, crbt veins rimmed by hem also veins <4mm with blue amph +/- crbt fill. Local blobby breccia(?) with amph fill, Locally qtz up to 40%.</p> <p>CRBT veins <20cm, light purple-mauve to grey, fg, diss hem, vfg light orange mineral, local qtz within veins.</p> |
| PGH-18-08 | 138.2 | 140.1 | CRBT-BX | Carbonatite Breccia + Granite | <p>Massive crbt up to 38cm, BX zone 1m. CRBT; purple-mauve-grey, vfg, weakly vuggy <1mm, contacts planar, UC @ 65/115 BX; alkali clasts up to 13cm, black to pink-med red, weak-mod fractured, diffuse boundaries, rxn rims increase in size as class size decreases, clasts < 4cm str-completely altered, sub rounded to sub angular. CRBT; light grey-purple to blue, with local 1cm xc fg vein, clasts discontinuously rimmed by light green and red-brown masses/wisps with ap(?). Fill becoming light blue-green to mauve moving downhole, increase in amph/chl/hem?</p> |
| PGH-18-08 | 140.1 | 144.2 | GRAN | Granite / Fenite | <p>Mg gran med red-pink with zones up 35% bt/chl/amph blue-green. Fractures with chl, amph, hem <2mm with alt halos pink-red. Local patches of fspar light orange-yellow with med red cores (close proximity to crbt), CRBT up to 30cm; purple-mauve to light grey-green, fg, rimmed by hem, stringers of hem, brown-red ap cum up to 5mm UC @ 23/280</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|---|
| PGH-18-08 | 144.2 | 149.95 | GRAN | Granite | Light pink to opaque to light red, mg, veins/fractures with alt halos of light pink, veins 2mm-50mm at moderate angles TCA and larger veins >1cm perpendicular TCA. Moving downhole alt changes to clays(?) weakly-strongly weathered light orange-green moving close to LC with CRBT. |
| PGH-18-08 | 149.95 | 156.2 | CRBT-BX | Carbonatite / Granite | Granite 25%, CRBT 75% 149.95-150.70: CRBT; purple to mauve, diss hem and angular masses of hem rich crbt up to 1cm. Vfg light pink-orange mineral interstitial. 150.7-152.6: GRAN; light pink, mg, weak-mod weathered local patches completely altered. Moving downhole crbt veining increases in frequency commonly <5mm and at high angles TCA. LC strongly hematite altered and obscured by degree of alteration. 152.6-156.2: CRBT + MD?; 0.5m of carb alt MD (green-grey, magnetic, pyx/bt up to 4mm, hem alt, carb filling amygdales <5mm). CRBT; purple-mauve, fg, hem rich, brn-red ap whips, diss fg orange-pink fspar? slightly weathered (fe-ox staining) |
| PGH-18-08 | 156.2 | 170.95 | SYE-BX | Granite Breccia + Carbonatite | First 2m massive GRAN, Zones of CRBT up to 1.7m but commonly just intense CRBT veining. CRBT 60%, GRAN 40%. GRAN; light orange-pink-red, mg, locally mod-str clay alt(fspar being replaced), mod selectively pervasive to patchy hem alt, locally clasts within crbt have vugs up to 1cm, clasts have diffuse boundaries and commonly mod-highly fractured. Vugs caused by weathering out of clay(? alt bt?) CRBT; in zones >10cm crbt is purple to mauve, fg, weak ox, clasts gran highly altered with local vugs. in smaller zones CRBT is light grey-cream in colour with diss hem to locally completely hem. |
| PGH-18-08 | 170.95 | 174 | GRAN | Granite | 170.95-171.15: CRBT; light pink with rimmed by light green fg CRBT, wispy br-red fg hem rich, diss hem. GRAN with significant decrease in number of fractures/veins with crbt fill, possibly larger gran clast which isn't strongly fractured(?). selectively pervasive chl/amph alt replacing bt(?). Veins crbt +/- amph fill < 5mm at 3 veins/metre. LC @ 80/340 |
| PGH-18-08 | 174 | 183 | CRBT | Carbonatite | Light pink-blue-green, with wispy bands of light green-brown ap cum(?) < 5mm wide, trace diss local bt <2mm concentrated in darker coloured areas, massive, low angle light green veins(?) xc light pink crbt. Vfg light orange-cream mineral diss <1mm, Calc >Dol LC 60cm brecciated zone @ 55/70 |
| PGH-18-08 | 183 | 207.1 | SYE | Alkali Feldspathic | Modal % variations across unit due to alteration (potassic alteration along fractures/veins and pervasively locally, pink-cream halos with recrystallized fldsp(?) pink-cream rims with red cores), unit varies from med red-pink to locally grey. Fractures/veins of blue amph/chl commonly <5mm 2-4/m at moderate to low angles TCA. moderate patchy selectively pervasive fenitization (chl/blue amph replacing bt/mafic?). Fg-cg rare pegmatitic plag up to 4cm, dominantly xtals <4mm, sub parallel veins with alt halos >5mm at mod angles TCA. Locally zones of glimmerite(?) bt/chl 65%, patchy with diffuse boundaries. CRBT veins commonly <10cm locally up to 50cm. light pink-purple, diss hem, wispy brown-red near contacts, rimmed by blue-green amph. 201.10-201.7: CRBT; purple to brown-mauve, wispy bands of brown-mauve hem rich, fg, contacts are planar and sharp. vfg light orange mineral along bands. under UV 'bands' are white (ap) 30/130 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|---|
| PGH-18-08 | 207.1 | 208 | CRBT | Carbonatite | Light purple-grey, fg, massive, diss fg pink-red hem(?), Calc>Dol, trace diss py, UC & LC planar @ 35/150. wispy bands of br-red along / sub-parallel to contacts. |
| PGH-18-08 | 208 | 222.35 | SYE | Alkali Feldspathic | Light orange-cream to light red, mg, fractures/veins <5cm filled with hem/crbt, fe-ox staining/hem halos around fractures, locally within veins hem xtals are concentrically zoned (hem/crbt), slightly weathered(?), locally sodic blue amph within crbt, rimming and replacing bt(?). Local crbt veins weakly vuggy. 2 dominant sets of fractures, 1; sub parallel TCA, 2; at moderate angles TCA. kfldsp 50%, plag 25%, qtz 10%, 15% hem/crbt/chl/bt. |
| PGH-18-08 | 222.35 | 224.2 | CRBT | Carbonatite | Purple-mauve, fg-mg, wispy discontinuous bands/masses of br-red hem+/- ap, masses up to 10cm, bands <1cm, fg diss pink-red (kspar??, poorly formed <2mm), diss hem, Calc>Dol. UC @ 80/30 |
| PGH-18-08 | 224.2 | 230.4 | SYE | Alkali Feldspathic | Similar to described above; mg to locally cg, in cg zones fldsp xtals have diffuse to irregular crystal boundaries and locally fractured with hem/crbt infill. Up to 15% qtz locally, patchy forest green w/ light orange cream, to red-brown. Two phases of alt(?), green (chl/clay?)-orange (replaced fldsp, clay?) are at core and halos from veins and fractures are brown-red (hem), locally there are zones of unaltered to weakly altered syenite. moderate fracturing with hem/crbt fill at low-mod angle TCA, veins up to 5cm locally, commonly <2cm and planar. LC gradational due to alt overprint |
| PGH-18-08 | 230.4 | 232.2 | CRBT-BX | Carbonatite + Alkali | 40% Alkali, 60% CRBT CRBT purple-mauve, multiple veins <0.5m at moderate angles TCA, fg, mottled, locally vuggy/clay altered near UC, UC brecciated, trace diss patchy fg fluorite, vfg white-orange mineral (ap?), abundant hem. Clasts of alkali sub rounded to sub angular, diffuse boundaries. LC @ 30/170 |
| PGH-18-08 | 232.2 | 235.73 | GRAN | Granite | Qtz 30%, kspar 40%, plag 10%, bt 10%, 10% chl/amph. Fg-mg, local peg (20cm @ LC), dominantly opaque to med red, <1mm fractures/veinlets with red alt halos <2mm, minor veins of blue fg amph/crbt <1cm. Chl replacing bt locally (proximity to veins/fractures). Last 20cm contains peg plag up to 4cm with potassic alt rims/penetrating along striations, crystals have irregular to diffuse boundaries and are being replaced by qtz. moving towards LC crbt increasing and strongly fractured. |
| PGH-18-08 | 235.73 | 240.4 | CRBT-BX | Carbonatite + Granite | 20% Gran, 80% CRBT 235.9-236.8: GRAN; light orange-green, mg, fractures/veinlets <5mm filled with crbt/hem and mod angles TCA with alt halos of hem(?), qtz 15-20%, kspar 50%, plag 10%. Weakly clay altered(?) 236.8-240.4: CRBT; light pink-cream to purple-mauve, wispy discontinuous bands/masses up to 2cm, fg, 2% light green ap cum up to 5mm (sub rounded), vfg light orange mineral (LREE?). LC irregular at ~45d TCA |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---|--|
| PGH-18-08 | 240.4 | 250.5 | GRAN | Granite | Top 1m mod-strongly altered light orange-pink to green (potassic/chl alt?) with gradational lower boundary. Unit dominantly light red-pink to opaque, weakly fenitized (weakly selectively pervasive chl/blue sodic amph replacing bt(?), with higher concentrations near fractures and crbt veins). mg to rarely vcg (up to 3cm plag xtals). Fractures/veinlets have red-pink alt halos <4mm, where multiple veins/fractures intersect halos are larger. Veins filled with amph/crbt +/- hem. CRBT veins up to 10cm but commonly <1cm. Larger veins are pink-purple-cream, fg, massive, wisps of hem, wispy bands of grn-brn near / sub parallel to contact, diffuse contacts, trace diss py. LC gradational and marked by increase in alteration. |
| PGH-18-08 | 250.5 | 251.85 | GRAN | Granite & Carbonatite | 250.5-251.4: GRAN w/ crbt veining; fspar alt light orange cream, H<3, mod chl/hem/crbt in between fspar xtals, increasing in alt with increase in crbt veins becoming mottled (blobby breccia). Contact with massive CRBT gradational. 251.4-251.85: CRBT; light pink-purple, fg, massive, highly altered clasts of gran up to 5cm, wispy band of light brown-green along LC (ap). diss trace py, hem rimming altered clasts/along fractures/discontinuous "bands". LC @ 50/240 |
| PGH-18-08 | 251.85 | 255.85 | GRAN | Granite & Carbonatite | 75% GRAN, 25% CRBT GRAN; light red-pink, mg-cg locally (1cm plag), bt % varies across unit (up to 10% but commonly <5%), fractures/veins have light pink-orange to red alt halos, where halos are red (hem) gran weakly fenitized. LC gran becoming pegmatitic CRBT veins/local bx up to 60cm; dominantly light pink-purple, fg, massive 253.95-254.53: BX CRBT; gran clasts up to 7cm, locally mod weathered and weakly vuggy, sub angular to sub rounded, diffuse clast boundaries, crbt is mottled pink-grey-green, fg, discontinuous bands of hem +/- ap(?) parallel to contacts. LC clay altered, planar, @ 60/140 |
| PGH-18-08 | 255.85 | 259.6 | MDYKE/CRBT | Carbonatite / Mafic Dyke with minor Granite | Multiple CRBT veins, cross cutting MD and with associated GRAN BX. 255.85-256.6: mottled crbt bx, strongly altered gran/plag clasts with fg light grey crbt fill. 256.6-258: MD; forest green- dark grey, magnetic, chl alt, carb filling amygdales, and near contacts with CRBT light grey carb/red hem alt, trace diss py. CRBT/bx zones up to 25cm, light pink-cream to purple, fg-cg, massive, diss hem, trace diss py. LC @ 50/115, lc of crbt vein |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------------|--|
| PGH-18-08 | 259.6 | 279.2 | GRAN | Granite | <p>Light grey to pink-red, fg-cg locally, locally weakly fenitized (selectively pervasive chl/blue amph), fractures/veinlets have red to pink alt halos <4mm and commonly filled with crbt/amph/chl, CRBT veins up to 80cm but commonly <10cm. Dominantly fractures are at moderate angles TCA, minor veins at low angles TCA.</p> <p>268.45-270: CRBT; light pink, massive, cg, Calc>Dol, wispy bands of light green with ap cum (light green up to 5mm), bands are sub parallel to and concentrated near contacts. diss hem, trace diss py.</p> <p>276.27-276.5: CRBT; light pink-purple, rimmed by light green-brown with wispy bands. light green ap cumulates up to 2cm masses at UC/LC (increase at LC), trace diss py, trace diss hem. Near LC 5mm 'band' of lighter pink calcite with perpendicular fractures at 1cm intervals with infill vfg light purple. UC @ 60/160, LC @ 75/140</p> <p>278.3-278.8: CRBT; light pink-purple locally light green-grey-orange with vfg black mineral, fg, wispy bands of blue (sodic amph) 2-10mm in width, with diss py. UC bx with clasts of gran <2cm, sub angular, diffuse clast boundaries, lighter cream orange colouration rimming clasts (dissolution), clasts have darker br-black rims with pink cores.</p> <p>LC ; wispy light green 5-7mm, with cores of light orange red, sub parallel to LC, 1cm patch fluorite with calc growths. Contact @ 45/255 (multiple veins, dominant)</p> |
| PGH-18-08 | 279.2 | 279.72 | MIX ZONE | mixed zone of three phases of dykes | <p>Order of occurrence: 1) CRBT 2) altered 3) diabase</p> <p>1) CRBT; light grey-green to mauve-purple, fg, mottled, rimmed by light green (ap cum?), vfg light orange mineral along fractures of red-brown (hem/pych?) @ 40/170</p> <p>2) 2cm rxn rims of light red-green, plag 25% with vfg diss ap alt(?), local olivine, crbt alt, UC @ 80/20, LC @ 75/50</p> <p>3) Porphyritic, xtals <2mm of bt/plag, brown-red, sharp contacts UC @ 75/50, LC @ 85/50</p> |
| PGH-18-08 | 279.72 | 280.78 | GRAN | Granite | Med orange-red, mg, <5mm crbt veins of light green-grey, weak potassic alt, kspar 60%, qtz 25%, 10% bt, 5% plag. |
| PGH-18-08 | 280.78 | 283.58 | GRAN | Granite / Fenite | <p>Zones up to 50cm of fenitized gran; 50-60% bt/chl/amph. Zones have cross cutting veinlets of blue amph with light pink halos up to 5mm.</p> <p>CRBT <15cm; light purple-grey, light green-red, fg mottled, rimmed by light green-brown.</p> |
| PGH-18-08 | 283.58 | 286.03 | GRAN | Granite | Qtz 25%, kspar 40%, 10%, bt, 10% chl, plag 15%. Mg, veinlets/fractures with 5mm alt halos red-pink. Weakly fenitized (chl/amph) LC brecciated |
| PGH-18-08 | 286.03 | 286.9 | CRBT | Carbonatite | UC brecciated, gran clasts up to 8cm with diffuse boundaries, sub rounded to sub angular, rimmed by light green-grey crbt. Light purple-cream, cg, ap cum up to 2cm 5% of unit, diss hem. LC purple-blue mottled diffuse contact 50/180 |
| PGH-18-08 | 286.9 | 287.5 | GRAN | Granite | As above. |
| PGH-18-08 | 287.5 | 287.9 | CRBT | Carbonatite | UC planar @ 25/290, light pink-purple with wispy bands <3mm of blue/black, local clasts rimmed by light green, sub rounded, wispy bands of ap/hem <4mm along LC. LC planar 55/150 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|--------|------------|-------------------------------|--|
| PGH-18-08 | 287.9 | 290.8 | GRAN | Granite | Med red -pink, mg, 25% qtz, 50% kspar, 10% bt, plag 10%, 5% hem. Minor CRBT <4cm 2% of unit at mod angle TCA, weakly fenitized. |
| PGH-18-08 | 290.8 | 315.25 | CRBT-BX | Carbonatite Breccia / Granite | <p>GRAN clasts within crbt and zones of fractured gran. qtz 25%, kspar 45%, plag 15%, bt 10%, 5% hem. mg-cg locally peg, Locally strongly altered (light green-orange clays(?)), commonly clasts/contacts are more strongly alt. Locally fenitized (blue sodic amph, chl) patchy moderately strong selectively pervasive. Contacts are diffuse, undulating to planar. Clasts are sub-angular to sub-rounded, < 15cm, locally clasts are of pegmatitic gran. Zones of massive GRAN up to 2m between crbt zones.</p> <p>291.2-291.5: CRBT; light purple-orange-grey-green, fg, mottled, clasts <3cm strongly to completely altered, vfg light orange diss mineral, diss hem, trace diss py.</p> <p>293-294.5 : light grey-green, fg, grading into light pink crbt, trace diss hem, vfg black mineral, light pink-purple is massive crbt, diss py, discontinuous wispy band of br-grn w/ ap cumulates, LC brecciated</p> <p>299.50-301.3: light purple-grey-green, fg, diss wispy bands/masses of red-brn concentrated near clasts and contacts (hem, vfg orange mineral, light green. Minor clasts of gran <5cm commonly completely altered black-pink (bt/amph/pyx?), locally clasts are pegmatitic fspar that are heavily fractured. trace diss py, hem along fractures <1mm, LC is brecciated.</p> <p>301.85-303.25: CRBT; light purple-grey down hole grey-brown, cg, with light green rims, wispy bands of light green-red ap cumulates up to 3mm commonly near contacts/clasts. diss hem, trace diss py.</p> <p>306.3-306.85: CRBT; light grey-green to light purple, fg-cg, diss hem, 5% ap cum up to 4mm, core of vein more cg up to 7mm.</p> <p>309.25-312.5: purple-mauve to light pink with wispy bands of light green-blue , sub parallel to contacts/clasts, bands up to <2cm, <1mm fractures/veinlets with hem fill. vfg diss light orange mineral. mauve vfg rimmed calcite xtals in masses up to 5cm. Local clasts of gran, completely altered black-pink (chl/amph/bt with pink rims). Locally (312.15) semi-massive sulphide (py).</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|---|
| PGH-18-08 | 315.25 | 337.8 | CRBT | Carbonatite | <p>Dominantly CRBT with zones of highly fenitized GRAN from 80-150cm, local BX zones 20-40cm. CRBT; light pink-purple with light green-grey wispy bands/rimming clasts/at contacts. Bands are <7mm in width, trace diss py, locally trace vfg light brown-beige mineral. fractures/veinlets filled with hem/or blue amph(?), locally wispy masses of light ap up to cm.</p> <p>GRAN clasts are sub-angular to sub-rounded < 10cm, grey-black patchy cores (chl/bt) with diffuse boundaries</p> <p>320.72-320.92: dyke, clasts <8cm, sub-rounded, green-grey, polymictic LC @ 60/145</p> <p>321.05-321.85 & 232-324 & 325-327:m strongly fenitized GRAN, blue sodic amph/chl/bt masses up to 20cm, clasts are diffuse and locally completely altered black cores and pink-red rims.</p> <p>336.6-337.8: CRBT; light pink-red, fg, trace diss py, masses of crbt <2cm blobby, clast of highly altered gran up to 3cm, moving into crbt for last 20cm.</p> |
| PGH-18-08 | 337.8 | 342.83 | GRAN | Granite / Fenite | <p>Light red to green-blue, mg, alt halos around crbt veins <5mm, crbt veins <2cm at moderate angles TCA. Qtz 20%, kspar 50%, bt 10% chl/amph 10%, 10 plag%.</p> <p>CRBT veins light grey-green, with diss hem, blue sodic amph within/rimming veins. LC @ 30/250</p> |
| PGH-18-08 | 342.83 | 344.62 | CRBT-BX | Carbonatite + Breccia | <p>Purple-mauve to light orange cream-grey, vfg light orange mineral (interstitial), salt n pepper red purple (hem), trace diss py, local clasts of gran highly fractured, diffuse boundaries. last 85cm breccia which is clast dominated, mosaic breccia, clasts 2mm-150mm, sharp boundaries.</p> |
| PGH-18-08 | 344.62 | 347.08 | GRAN | Granite + Carbonatite | <p>20% CRBT, 80% GRAN GRAN; light salmon pink-red, mg, crbt veining <2cm with patchy chl/amph (replacing bt?), light pink alt halos <3mm around veins. 346.57-347.08: CRBT BX, light purple-cream with wispy bands of green-red-brown (fg hem /ap?) up to 2cm (25% of unit) sub parallel to contacts and clasts., trace diss py,</p> |
| PGH-18-08 | 347.08 | 349.15 | GRAN | Granite | <p>30% bt, kspar 40%, qtz 20%, 10% plag. Xtals <2mm, bt cont'n patchy with diss red-pink. Local strong crbt veining <2mm with light grey-pink alt halos <5mm, mod patchy chl/amph alt LC is gradational and marked by decrease in bt</p> |
| PGH-18-08 | 349.15 | 357.2 | SYE-BX | Granite + Carbonatite Breccia | <p>Qtz 20%, kspar 50%, plag 10%, chl/amph/bt 20%. Light red-pink, moderate amount of crbt veining <4cm, commonly with light pink halos <4mm. Moderately fenitized with blue sodic amph/chl within and in proximity to veins/fractures. Local crbt bx (blobby bx) up to 20cm. CRBT; light grey-green to purple, fg</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------|--|
| PGH-18-08 | 357.2 | 368 | CRBT-BX | Carbonatite Breccia | 357.2-359: BX + CRBT; clasts up to 10cm, angular to sub-rounded, mg, fenitized cores with light pink alt rims, crbt light grey-green, fg, diss hem, light green wispy bands. Weakly banded light green-brown up to 1cm with vfg black diss mineral. 359-360.15: carb alt MD(?) green-grey, fg, strongly carb alt, masses up to 5mm, bt <3mm locally, chl alt. LC @ 50/120 360.15-368: CRBT BX; mosaic breccia, gran clasts up to 13cm, sub-rounded to sub-angular, diffuse boundaries, green-black-orange cores (clay alt). CRBT light grey-pink to cream-green, trace diss py, br-red masses up to 6mm of ap, Wispy bands of light green <2cm sub-parallel to contacts. |
| PGH-18-08 | 368 | 372.25 | GRAN | Granite | Med red-pink, mg, qtz 20%, kspar 50%, plag 10%, bt 5%, amph 5%, weak fenitized (amph/chl along fractures and in proximity), xtals <1cm. Fractures/veinlets have light pink alt halos and are at mod-low angles TCA. LC is gradational and obscured by carb alt bx gran. |
| PGH-18-08 | 372.25 | 376.7 | CRBT | Carbonatite | Light pink-purple, fg, massive, wispy bands/masses of light green-red ap cum up to 4cm in width, local bands of magnetite up to 2cm and at low angle. Trace diss py, fractures <2mm with hem fill at low angle TCA. Diss hem, |
| PGH-18-08 | 376.7 | 383.3 | CRBT-BX | Carbonatite Breccia | 376.7-377.85: GRAN/FEN; med red red-pink, moving down increase in bt/chl/amph up to 30%. Mod fenitized with selectively pervasive chl/blue sodic amph. LC in diffuse and intensely crbt alt. Fractures/veins of crbt <4cm at mod angles TCA. 377.85-382: CRBT BX; light pink to green-brown, clasts of alkali up to 13cm, sub-rounded to sub-angular, diffuse clast boundaries, and cores mod-str chl/amph alt. rimming clasts is light green crbt. trace diss py, trace hem, wispy bands and masses of br-red ap up to 2cm in width (in proximity to clasts/contacts and sub-parallel). vfg diss black mineral pyrochlore? within wispy bands. |
| PGH-18-08 | 383.3 | 386.55 | CRBT | Carbonatite | Light pink, fg, massive, locally wispy band of light green-red up to 4cm wide (ap/hem), diss hem, trace diss py, fg blue sodic amph, local clasts of gran up to 4cm with diffuse boundaries, sub-rounded, light green rimming clasts. LC @ 50/130 |
| PGH-18-08 | 386.55 | 387.34 | MDYKE | Mafic Dyke | Black, magnetic, chilled margins 3cm, amygdales up to 1cm filled with carb and are elongate to circular, trace diss py. |
| PGH-18-08 | 387.34 | 393.2 | CRBT-BX | Carbonatite Breccia | Light pink-purple to grey, massive, fg, bands of light green up to 35cm, wispy bands with ap cum up to 1cm, clasts of gran sub-rounded to sub-angular, diffuse boundaries, fractured and mod alt cores of orange-green locally. Patchy fluorite, diss hem, trace diss py. 392-392.63: dyke with angular clasts if gran, pegmatitic/fg, light grey-green, polymictic |
| PGH-18-08 | 393.2 | 394.16 | SYE | Syenite | Mg, med red-pink, qtz 20%, kspar 50%, plag 15%, bt 10%, 5% amph/chl. Mod fenitized bt being replaced by chl/amph. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------------------|--|
| PGH-18-08 | 394.16 | 396.32 | CRBT-BX | Carbonatite Breccia | 80% CRBT, 20% Clasts GRAN clasts up to 10cm, commonly moderately fractured, sub-angular to sub rounded with diffuse boundaries, locally str-completely crbt alt. CRBT; light grey-green to light purple, Calc>Dol, massive, mg, wispy bands/masses of light green-red-brn <5mm, commonly near clasts and contacts. trace diss hem/py, trace patchy fluorite, locally within 'bands' vfg black mineral |
| PGH-18-08 | 396.32 | 398.8 | SYE | Syenite | Moderately fenitized with veins of crbt +/- amph/chl <7mm, veins have light pink alt halos <4mm. Qtz 10%, kspar 60%, plag 10%, 20% chl/bt/amph. Local crbt veins <10cm. LC at 70/075, undulating. |
| PGH-18-08 | 398.8 | 402.15 | CRBT-BX | Carbonatite + Breccia Zones | 30% massive CRBT, 65% BX, 5% SYN CRBT; light pink-purple with olive green bands/wisps, rd-brn wispy bands <4mm commonly sub/p to contacts, trace diss hem, trace diss py, locally bt <2mm xtals BX; clasts up to 10cm, diffuse boundaries, moderately fractured, sub-rounded to sub-angular. |
| PGH-18-08 | 402.15 | 404.5 | QTZ-SYE | Quartz Syenite | Med red -pink, mg, 15% qtz, kspar 60%, plag 10%, 10% chl/amph. Weak pink alt halos along veinlets, LC obscured by alteration. 403.63-403.92: CRBT; light pink-purple with patchy light green, trace diss hem, trace diss py. LC undulating @ 36/265. |
| PGH-18-08 | 404.5 | 408.2 | MIX ZONE | Carbonatite, Mafic Dyke?, Syenite | Mixed zone with multiple dykes (CRBT/mafic) with fenitized syn between. Dykes are generally < 55cm but up to 1m. There are distinct CRBT dykes and indistinct carb altered mafic dykes 404.5-404.95: Carbonatite altered mafic dyke; light green-grey in colour, aphanitic, xtals of bt <2mm, acicular masses of crbt up to 7mm, weakly undulating bands perp TCA of crbt/fg MD/mg MD w chl/bt. Contacts are diffuse 405.65-406.2: CRBT; grading from grey-brown into brown green to light pink-purple moving downhole. locally weakly banded <4mm of actuating colours, fg red-orange mineral, diss hem, trace diss py, LC @ 70/30 407.17-408: CRBT; massive crbt for first 30cm grading into crbt alt MD(?), from light pink-purple into green-grey. With cross cutting crbt veins up to 5cm, mottled chl alt through MD, non-magnetic, diss hem. CRBT BX with ap cum up to 5mm along LC. |
| PGH-18-08 | 408.2 | 409 | QTZ-SYE | Quartz Syenite | 20% qtz, 60% kspar, 15% plag, 5% bt, mg <3mm, minor crbt veins <4mm rimmed by blue sodic amph with light pink alt halos <3mm. |
| PGH-18-08 | 409 | 412 | CRBT-BX | Carbonatite + Breccia | CRBT; light pink-purple with discontinuous bands (subparallel to contacts, UC@ 55/40) of light green-brown to blue with fg elongate xtals <2mm of amph(?). Trace diss hem, trace diss py, wispy bands/masses 2cm wide of ap cum +/- sph/pych. LC 30/000 brecciated for last meter with crbt decreasing downhole. |
| PGH-18-08 | 412 | 417 | QTZ-SYE | Quartz Syenite | 20% qtz, 60% kspar, 15% plag, 5% bt, bt being replaced by chl/amph, mg <3mm, minor crbt veins <4mm (locally up to 2cm) rimmed by blue sodic amph with light pink-green alt halos <3mm. Moving towards LC light orange-pink alt more pronounced. |
| PGH-18-08 | 417 | 420 | CRBT | Carbonatite | Local BX at UC, light orange colouration to clasts, clasts fractured and strongly altered. CRBT light green-cream, massive, locally weakly vuggy, diss hem, trace diss/ stringers <5mm py |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|--|
| PGH-18-08 | 420 | 422.2 | MIX_ZONE | Syenite / Carbonatite | CRBT 45%, SYN 55% SYE; med red-pink to light orange locally, mg, patchy chl alt, fractures filled with crbt up to 3cm, locally diffuse contacts with crbt veins. CRBT; light purple to light green-grey, wispy bands <2mm, trace diss hem, traced diss py, wispy bands at sub parallel to contacts/clasts, vfg diss light orange mineral, fg light green ap 5%? |
| PGH-18-08 | 422.2 | 441.7 | SYE | Syenite | Med red-pink to light grey, qtz 15-20%, kspar 50%, plag 10%, 20% bt/chl/amph. Mg, fractures/vein <5mm with blue vfg amph(?) fill at moderate to low angle TCA, with light pink to green alt halos <4mm. Local crbt veins up to 15cm. |
| PGH-18-08 | 441.7 | 443 | CRBT | Carbonatite | Grading from bands of blue-grey-green into mottled light pink-green-blue moving downhole. Darker bands contain magnetite, trace diss py/po up to 4mm, blue amph(?) / chl. Mottled masses of similar composition moving down hole. UC diffuse @ 25/40, LC @ 45/50 |
| PGH-18-08 | 443 | 446.23 | QTZ-SYE | Quartz Syenite | Qtz 15%, kspar 50%, plag 15%, bt 10%, 10%chl/amph. Local patches of chl/amph up to 15cm. Crbt veins/fractures <3mm with light pink halos. |
| PGH-18-08 | 446.23 | 448.75 | CRBT-BX | Carbonatite + Syenite | CRBT 70%, SYN 30% 446.23-447.2: CRBT; light purple to olive green, fg, massive, wispy bands of light green with light orange mineral, diss hem, trace diss py. 448.2-448.76: CRBT; light grey, vfg, massive, vfg light orange mineral, patches of vfg chl (dark green). |
| PGH-18-08 | 448.75 | 464 | GRAN | Granite | Med red -pink to cream-grey, mg, 35% qtz, kspar 50%, plag 5%, bt 10%. Bt being alt to chl/blue amph locally. Fractures/veinlets filled with chl/amph with light pink halos <2mm. CRBT veins < 25cm locally; light grey-green, fg, massive, diss hem. Fenitization increasing moving downhole towards contact LC @ 50/000, planar, closed |
| PGH-18-08 | 464 | 464.75 | CRBT | Carbonatite | Dominantly dark blue with bands of light purple-pink, rimmed by blue sodic amph, massive, cg, trace diss py within blue crbt. Vfg diss black mineral (pyrochlore?), local trace diss magnetite, . UC @ 50/000, LC planar @ 60/50 |
| PGH-18-08 | 464.75 | 470.5 | GRAN | Granite | 20% qtz, kspar 60%, 10% chl/amph, 5% plag, 5% biot. light pink-red to grey-opaque, Mg, locally moderately fenitized (amph/chl replacing bt), carb alt MD <20cm light green-grey. Fractures/veinlets with chl/amph infill and alt halos of light pink <3mm. Bt abundance varies across unit (locally up to 10%). LC is gradational and marked by increase in bt/chl/amph. |
| PGH-18-08 | 470.5 | 498 | GRAN | Granite / Fenite | Med red-pink to green-blue-black, mg, selectively pervasive chl/amph throughout unit locally up to 50%. Qtz 15-20%, kspar 40%, bt/chl/amph 10-50%, plag 10%. CRBT veins <35cm, commonly with sharp contacts, light purple to green-grey, fg, wispy bands of light green-brown ap(?) <3mm, diss hem, trace diss py. Veins are at moderate angles TCA. |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|------------------|--|
| PGH-18-08 | 12.46 | CT | 55 | 40 | | UC CRBT | planar, closed |
| PGH-18-08 | 14.4 | CT | 20 | 10 | | U CRBT | planar, closed |
| PGH-18-08 | 22 | JNT | 55 | 200 | | JNT in syn | planar, slightly rough, clay |
| PGH-18-08 | 24.56 | VN | 15 | 200 | | crbt vein | planar, open, slightly rough, moderately weathered |
| PGH-18-08 | 29.55 | CT | 60 | 180 | | LC CRBT | planar, closed |
| PGH-18-08 | 30.28 | JNT | 55 | 300 | | JNT in syn | planar, slightly rough, no fill |
| PGH-18-08 | 30.77 | CT | 50 | 260 | | UC CRBT | planar, closed |
| PGH-18-08 | 30.95 | CT | 50 | 295 | | LC CRBT | planar, closed |
| PGH-18-08 | 66.1 | CT | 25 | 220 | | LC CRBT | planar, open, slightly rough, moderately weathered |
| PGH-18-08 | 72.8 | JNT | 20 | 15 | | JNT in syn | undulating, slightly weathered |
| PGH-18-08 | 74.1 | VN | 35 | 20 | | JNT in syn | planar, crbt fill <2mm |
| PGH-18-08 | 76.2 | JNT | 25 | 305 | | JNT in syn | planar, slightly rough, no fill |
| PGH-18-08 | 77.77 | CT | 65 | 60 | | UC CRBT | planar, closed |
| PGH-18-08 | 79.22 | CT | 60 | 70 | | UC CRBT | planar, closed |
| PGH-18-08 | 82 | VN | 25 | 240 | | VN 5mm | planar, open, slightly rough, amph fill <4mm |
| PGH-18-08 | 85.16 | JNT | 70 | 115 | | JNT in syn | planar, open, no fill |
| PGH-18-08 | 85.45 | JNT | 70 | 125 | | JNT in syn | planar, open, no fill |
| PGH-18-08 | 88.52 | JNT | 65 | 70 | | JNT in syn | curved, chl infill <1mm |
| PGH-18-08 | 89.67 | CT | 65 | 125 | | UC CRBT BX | planar, open, slightly rough, no fill |
| PGH-18-08 | 96.37 | JNT | 25 | 60 | | fracture in crbt | planar, open, slightly rough, no fill |
| PGH-18-08 | 98.75 | VN | 10 | 300 | | <2mm vein | undulating, slightly weathered |
| PGH-18-08 | 99.5 | CT | 20 | 200 | | LC CRBT | planar, closed |
| PGH-18-08 | 99.8 | JNT | 60 | 270 | | JNT in syn | planar, open, slightly rough, no fill |
| PGH-18-08 | 99.95 | VN | 25 | 180 | | crbt vein | undulating, slightly weathered, crbt infill <4mm |
| PGH-18-08 | 102.3 | CT | 15 | 290 | | LC CRBT | planar, open, slightly weathered, slightly rough |
| PGH-18-08 | 102.48 | JNT | 20 | 285 | | JNT in syn | planar, open, slightly rough, <2mm crb fill |
| PGH-18-08 | 104.52 | CT | 30 | 290 | | LC CRBT | planar, closed |
| PGH-18-08 | 107.25 | VN | 15 | 270 | | VN 5mm | |
| PGH-18-08 | 126.38 | VN | 70 | 220 | | crbt vein <5mm | planar, open, rough, crbt fill |
| PGH-18-08 | 128.5 | JNT | 15 | 0 | | JNT in syn | planar, open, no fill |
| PGH-18-08 | 130.91 | JNT | 70 | 275 | | JNT in syn | planar, open, grey-green, chl fill <1mm |
| PGH-18-08 | 132.28 | JNT | 75 | 70 | | JNT in syn | planar, crbt fill |
| PGH-18-08 | 132.6 | JNT | 20 | 225 | | JNT in syn | planar, slightly rough, chl |
| PGH-18-08 | 132.8 | VN | 25 | 20 | | undulating | undulating cct |
| PGH-18-08 | 134.55 | CT | 60 | 105 | | UC CRBT | undulating |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-------------------------------|---|
| PGH-18-08 | 138.15 | CT | 65 | 115 | | UC CRBT | planar, open, crbt fill |
| PGH-18-08 | 143.45 | CT | 35 | 280 | | UC CRBT | planar, closed |
| PGH-18-08 | 156.73 | JNT | 30 | 135 | | JNT in syn | planar, chl fill, slightly rough |
| PGH-18-08 | 157.5 | JNT | 60 | 240 | | JNT in syn | planar, open, no fill |
| PGH-18-08 | 160.65 | CT | 60 | 90 | | UC CRBT | planar, closed |
| PGH-18-08 | 167.4 | CT | 60 | 80 | | LC CRBT | planar, closed |
| PGH-18-08 | 167.45 | JNT | 75 | 120 | | JNT in syn | planar, chl fill, slightly rough |
| PGH-18-08 | 171.75 | VN | 30 | 30 | | 3mm blue amph vein | planar, slightly rough, |
| PGH-18-08 | 172.45 | JNT | 50 | 180 | | jnt in gran | planar, slightly rough, no fill |
| PGH-18-08 | 174 | CT | 80 | 340 | | UC CRBT | undulating, closed |
| PGH-18-08 | 182.75 | CT | 55 | 70 | | LC CRBT BX | planar, very rough, open, no fill |
| PGH-18-08 | 183 | VN | 25 | 145 | | Amph vein <4mm | planar, closed |
| PGH-18-08 | 183.95 | JNT | 60 | 205 | | jnt in alkali | planar, slightly rough, infill <1mm amph |
| PGH-18-08 | 188.05 | JNT | 50 | 200 | | jnt in alkali | planar, slightly rough, amph fill |
| PGH-18-08 | 189 | CT | 25 | 180 | | LC CRBT | planar, closed |
| PGH-18-08 | 190 | JNT | 60 | 125 | | jnt in alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 191.68 | CT | 60 | 110 | | UC CRBT | planar, slightly rough, crbt/amph fill <5mm |
| PGH-18-08 | 197.33 | JNT | 60 | 150 | | jnt in alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 197.38 | JNT | 30 | 190 | | jnt in | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 198.1 | JNT | 35 | 170 | | jnt in alakli | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 198.5 | CT | 40 | 40 | | UC CRBT | planar, closed |
| PGH-18-08 | 201.15 | CT | 25 | 150 | | UC CRBT | planar, closed |
| PGH-18-08 | 201.7 | CT | 30 | 150 | | LC CRBT | planar, closed |
| PGH-18-08 | 202.2 | VN | 25 | 140 | | Amph vein <4mm | planar, closed |
| PGH-18-08 | 203.4 | JNT | 60 | 290 | | jnt in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 203.7 | CT | 15 | 200 | | weak cct btw bt rich and grab | planar, diffuse, closed |
| PGH-18-08 | 206.5 | JNT | 40 | 320 | | jnti in alkali | planar, rough, chl/cly fill, alt halo |
| PGH-18-08 | 207.4 | CT | 35 | 150 | | UC CRBT | planar, closed |
| PGH-18-08 | 207.85 | CT | 35 | 150 | | LC CRBT | planar, closed |
| PGH-18-08 | 209.25 | CT | 35 | 120 | | LC CRBT | planar, closed |
| PGH-18-08 | 212.1 | JNT | 25 | 230 | | JNT in Alkali | planar, hem/crbt, infill <1mm, slightly rough |
| PGH-18-08 | 213.2 | JNT | 20 | 245 | | JNT in Alkalio | planar, slightly rough, chl/crbt/hem <1mm |
| PGH-18-08 | 214 | JNT | 35 | 240 | | JNT in Alkali | planar, slightly rough, |
| PGH-18-08 | 215.28 | JNT | 45 | 295 | | JNT in Alkali | planar, slightly rough |
| PGH-18-08 | 222.35 | CT | 80 | 30 | | UC CRBT | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|------------------|---|
| PGH-18-08 | 226.7 | JNT | 30 | 295 | | JNT in Alkali | planar, open, slightly rough, hemchl fill <2mm |
| PGH-18-08 | 230.83 | JNT | 50 | 200 | | JNT in alkali | planar, slightly rough, hem <1mm |
| PGH-18-08 | 232.2 | CT | 30 | 170 | | LC CRBT | planar, closed |
| PGH-18-08 | 235.93 | CT | 30 | 160 | | LC CRBT | planar, closed |
| PGH-18-08 | 243.35 | VN | 20 | 290 | | crbt vn <1cm | planar, closed |
| PGH-18-08 | 244.1 | VN | 70 | 135 | | LC CRBT | planar, closed |
| PGH-18-08 | 245.45 | CT | 20 | 205 | | LC CRBT | planar, closed |
| PGH-18-08 | 246.15 | BND | 45 | 210 | | BND in alkali | planar, closed |
| PGH-18-08 | 247.95 | CT | 65 | 150 | | LC CRBT | planar, closed |
| PGH-18-08 | 248.75 | VN | 20 | 305 | | VN 5mm | planar, closed |
| PGH-18-08 | 249.1 | CT | 70 | 60 | | LC CRBT | planar, closed |
| PGH-18-08 | 251.8 | CT | 50 | 240 | | LC CRBT | planar, closed |
| PGH-18-08 | 254.55 | CT | 60 | 140 | | LC CRBT | planar, closed |
| PGH-18-08 | 256.45 | CT | 80 | 310 | | LC CRBT | planar, closed |
| PGH-18-08 | 259.58 | CT | 50 | 165 | | LC CRBT | planar, closed |
| PGH-18-08 | 261.18 | JNT | 65 | 295 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 261.36 | JNT | 75 | 290 | | JNT in alkali | planar, closed, amph fill <4mm |
| PGH-18-08 | 262.7 | JNT | 60 | 165 | | JNT | planar, amph fill <2mm |
| PGH-18-08 | 262.85 | CT | 55 | 150 | | LC CRBT | planar |
| PGH-18-08 | 263.55 | CT | 55 | 100 | | LC CRBT | planar |
| PGH-18-08 | 264.12 | VN | 20 | 280 | | VN < 1cm | planar, closed |
| PGH-18-08 | 265.1 | VN | 30 | 280 | | VN < 4mm | planar, closed |
| PGH-18-08 | 266.2 | CT | 50 | 170 | | LC CRBT | planar, closed |
| PGH-18-08 | 267.2 | CT | 25 | 270 | | LC CRBT | planar, closed |
| PGH-18-08 | 269.75 | CT | 60 | 65 | | LC CRBT | planar, closed |
| PGH-18-08 | 272.04 | VN | 75 | 140 | | VN <4mm | planar, closed |
| PGH-18-08 | 272.45 | JNT | 25 | 40 | | jnt in alkali | planar, slightly rough, |
| PGH-18-08 | 273.35 | JNT | 25 | 40 | | JNT in alkali | planar, slightly rough, chl <1mm |
| PGH-18-08 | 274.6 | JNT | 25 | 40 | | JNT in alkali | planar, slightly rough, chl <1mm |
| PGH-18-08 | 276.3 | CT | 60 | 160 | | UC CRBT | planar, cloed |
| PGH-18-08 | 276.48 | CT | 75 | 140 | | LC CRBT | planar, closed |
| PGH-18-08 | 278.3 | CT | 35 | 180 | | UC CRBT | planar, closed |
| PGH-18-08 | 279.25 | CT | 40 | 170 | | UC CRBT | planar, closed |
| PGH-18-08 | 281.55 | CT | 70 | 0 | | UC CRBT | planar, closed |
| PGH-18-08 | 282.23 | VN | 60 | 85 | | 1cm vn amph fill | planar, closed, amph/crbt fill 1cm, alt halo hem <4mm |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|---|--|
| PGH-18-08 | 284.26 | CT | 65 | 320 | | LC CRBT | planar, closed |
| PGH-18-08 | 285.7 | JNT | 45 | 350 | | JNT in alkali | planar, slightly rough, no fill |
| PGH-18-08 | 286.9 | CT | 50 | 180 | | LC CRBT | planar, closed |
| PGH-18-08 | 287.5 | CT | 25 | 290 | | UC CRBT | planar, closed |
| PGH-18-08 | 287.9 | CT | 55 | 150 | | LC CRBT | planar, closed |
| PGH-18-08 | 288.25 | CT | 35 | 220 | | UC CRBT | planar, closed |
| PGH-18-08 | 291 | CT | 25 | 140 | | UC CRBT | planar, closed |
| PGH-18-08 | 293 | CT | 25 | 140 | | UC CRBT | planar, closed |
| PGH-18-08 | 337.8 | CT | 80 | 250 | | LC CRBT BX | diffuse |
| PGH-18-08 | 338.75 | JNT | 75 | 220 | | JTN in alkali | planar, blue amph, slightly rough |
| PGH-18-08 | 342.85 | CT | 30 | 250 | | UC CRBT | curved, closed |
| PGH-18-08 | 347.09 | CT | 65 | 60 | | LC CRBT | planar, closed |
| PGH-18-08 | 348.4 | CT | 40 | 290 | | LC CRBT | planar, slightly rough, hem fill <1mm |
| PGH-18-08 | 351.1 | CT | 65 | 290 | | LC CRBT | planar, diffuse, closed |
| PGH-18-08 | 355.38 | JNT | 50 | 160 | | JNT in GRAN | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 359.55 | BND | 40 | 110 | | BND in CRBT | planar, closed |
| PGH-18-08 | 360.1 | CT | 50 | 120 | | LC crbt | planar, closed |
| PGH-18-08 | 360.9 | JNT | 70 | 180 | | jnt in syn | planar, slightly rough |
| PGH-18-08 | 369.42 | JNT | 80 | 320 | | JNT in GRAN | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 369.48 | JNT | 75 | 150 | | JNT in GRAN | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 369.9 | VN | 50 | 120 | | VN <4mm, blue sodic amph fill, slightly rough | |
| PGH-18-08 | 370.51 | JNT | 70 | 310 | | JNT in GRAN | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 371.72 | JNT | 70 | 150 | | jnt in gran | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 386.55 | CT | 50 | 130 | | UC MD | planar, closed |
| PGH-18-08 | 387.34 | CT | 55 | 150 | | LC MD | planar, closed |
| PGH-18-08 | 392.68 | CT | 45 | 65 | | UC CRBT | planar, closed |
| PGH-18-08 | 392.85 | CT | 45 | 55 | | LC CRBT | planar, closed |
| PGH-18-08 | 398.86 | CT | 70 | 75 | | UC CBRT | undulating, clsoed |
| PGH-18-08 | 399.1 | CT | 65 | 60 | | LC CRBT | planar, closed |
| PGH-18-08 | 399.42 | CT | 75 | 40 | | UC CRBT | planar, closed |
| PGH-18-08 | 401.2 | CT | 55 | 40 | | UC CRBT | planar, closed |
| PGH-18-08 | 402.1 | CT | 70 | 60 | | LC CRBT | planar, closed |
| PGH-18-08 | 403.92 | CT | 55 | 265 | | LC CRBT | planar, closed |
| PGH-18-08 | 404.95 | CT | 55 | 140 | | LC CRBT | planar, closed |
| PGH-18-08 | 406.18 | CT | 70 | 30 | | LC CRBT | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|------------------|--|
| PGH-18-08 | 407.45 | CT | 55 | 100 | | LC CRBT | planar, closed |
| PGH-18-08 | 408.4 | CT | 80 | 140 | | UC CRBT | planar, closed |
| PGH-18-08 | 408.5 | CT | 50 | 120 | | LC CRBT | planar, closed |
| PGH-18-08 | 409.05 | CT | 55 | 40 | | U CRBT | planar, closed |
| PGH-18-08 | 411.2 | CT | 30 | 0 | | UC CRBT | planar, closed |
| PGH-18-08 | 413.65 | JNT | 65 | 260 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-08 | 414.65 | JNT | 40 | 110 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 415.65 | JNT | 40 | 335 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 416.03 | JNT | 40 | 315 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 416.7 | JNT | 25 | 240 | | JNT in Alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 420.15 | JNT | 55 | 20 | | JNT in Alkali | slightly rough, planar, chl fill <1mm |
| PGH-18-08 | 420.18 | JNT | 35 | 260 | | JNT in Alkali | slightly rough, planar, chl fill <1mm |
| PGH-18-08 | 422.3 | JNT | 65 | 130 | | JNT in Alkali | slightly rough, planar, chl fill <1mm |
| PGH-18-08 | 425.73 | JNT | 60 | 100 | | JNT in Alkali | slightly rough, planar, chl fill <1mm |
| PGH-18-08 | 426.1 | JNT | 60 | 190 | | JNT in Alkali | slightly rough, planar, chl fill <1mm |
| PGH-18-08 | 426.3 | CT | 55 | 190 | | UC CRBT | planar, closed |
| PGH-18-08 | 426.46 | CT | 50 | 180 | | LC CRBT | planar, closed |
| PGH-18-08 | 428.27 | JNT | 50 | 200 | | JNT in Alkali | planar, open, amph fill <2mm |
| PGH-18-08 | 428.52 | JNT | 60 | 180 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 431.12 | JNT | 45 | 180 | | JNT in Alkali | stepped, open, slightly rough, chl fill |
| PGH-18-08 | 432.55 | JNT | 55 | 200 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-08 | 433.63 | JNT | 65 | 205 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 436.3 | VN | 15 | 85 | | VN 7mm amph fill | planar, closed |
| PGH-18-08 | 436.75 | JNT | 30 | 100 | | JNT in Alkali | planar, slightly rough, amph/chl fill |
| PGH-18-08 | 437.65 | JNT | 60 | 30 | | JNT in Alkali | planar, slightly rough, amph/chl fill <1mm |
| PGH-18-08 | 437.9 | CT | 50 | 95 | | UC CRBT | planar, closed |
| PGH-18-08 | 439.2 | JNT | 60 | 205 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 439.75 | JNT | 60 | 200 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 440.35 | JNT | 45 | 310 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-08 | 440.6 | VN | 45 | 320 | | JNT in Alkali | planar, slightly rough, amph/chl <4mm |
| PGH-18-08 | 441.75 | CT | 25 | 40 | | UC CRBT | planar, diffuse, closed |
| PGH-18-08 | 442.7 | CT | 45 | 50 | | LC CRBT | planar, closed |
| PGH-18-08 | 442.9 | CT | 65 | 180 | | LC CRBT | planar, closed |
| PGH-18-08 | 445.3 | JNT | 25 | 130 | | JNT in Alkali | undulating, slightly rough, chl/amph fill <2mm |
| PGH-18-08 | 446.65 | JNT | 50 | 140 | | JNT in Alkali | planar, slightly rough, chl/cb fill <1mm |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------|--|
| PGH-18-08 | 446.8 | CT | 50 | 280 | | UC CRBT | planar, closed |
| PGH-18-08 | 447.25 | JNT | 30 | 200 | | JNT in Alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 448.8 | JNT | 65 | 60 | | JNT in Alkali | planar, slightly rough, chl/cb fill <1mm |
| PGH-18-08 | 452.88 | JNT | 70 | 210 | | JNT in Alklai | planar, slightly rough, crbt fill |
| PGH-18-08 | 454.6 | JNT | 50 | 40 | | JNT in Alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 454.95 | JNT | 45 | 295 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 455.35 | JNT | 65 | 270 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 455.76 | JNT | 55 | 160 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 458.7 | JNT | 70 | 230 | | JNT in Alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-08 | 462.75 | VN | 25 | 20 | | Amph vein <4mm | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 463.95 | CT | 50 | 0 | | UC CRBT | planar, closed |
| PGH-18-08 | 464.75 | CT | 60 | 50 | | LC CRBT | planar, slightly rough, amph fill <3mm |
| PGH-18-08 | 466.12 | JNT | 35 | 75 | | JNT in Alkali | Planar, slightly rough, amph fill <1mm |
| PGH-18-08 | 466.72 | JNT | 65 | 40 | | JNT in Alkali | Planar, slightly rough, amph/chl fill <1mm |
| PGH-18-08 | 471.6 | JNT | 15 | 40 | | JTN in alkali | undulating, slightly rough, chl/amph fill <2mm |
| PGH-18-08 | 472.13 | JNT | 60 | 190 | | JNT in alkali | planar, slightly rough, blue amph <1mm |
| PGH-18-08 | 472.25 | JNT | 60 | 200 | | JNT in Alkali | planar, slightly rough, blue amph <1mm |
| PGH-18-08 | 472.55 | JNT | 60 | 140 | | JNT in Alkali | planar, slightly rough, blue amph/chl <1mm |
| PGH-18-08 | 472.67 | JNT | 55 | 170 | | JNT in Alkali | planar, slightly rough, blue amph, <2mm |
| PGH-18-08 | 472.87 | JNT | 40 | 150 | | JNT in Alkali | planar, slightly rough, blue amph/chl <2mm |
| PGH-18-08 | 473.7 | CT | 60 | 170 | | UC CRBT | planar, closed |
| PGH-18-08 | 476.25 | JNT | 50 | 160 | | JNT in Alkali | planar, slightly rough, blue amph/chl <2mm |
| PGH-18-08 | 476.5 | JNT | 50 | 55 | | JNT Alkali | planar, slightly rough, blue amph/chl <2mm |
| PGH-18-08 | 478.05 | CT | 50 | 55 | | UC CRBT | planar, closed |
| PGH-18-08 | 479.75 | CT | 70 | 130 | | LC CRBT | planar, closed |
| PGH-18-08 | 480.45 | JNT | 30 | 270 | | JNT in Alkali | undulating, slightly rough, chl/amph fill <2mm |
| PGH-18-08 | 483.1 | JNT | 70 | 250 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 483.2 | JNT | 70 | 130 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 484 | CT | 45 | 125 | | UC CRBT | planar, closed |
| PGH-18-08 | 484.4 | JNT | 40 | 160 | | JNT in Alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-08 | 485.75 | JNT | 70 | 40 | | JNT in Alkali | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 487.15 | JNT | 45 | 55 | | JNT in Alkali | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 487.6 | JNT | 70 | 215 | | JNT in Alkali | planar, slightly rough, amph fill <2mm |
| PGH-18-08 | 491.5 | JNT | 55 | 50 | | JNT in Alkali | planar, slightly rough, amph fil <2mm |
| PGH-18-08 | 491.68 | JNT | 75 | 215 | | JNT in Alkali | planar, slightly rough, amph/chl fill <1mm |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|-------|-------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|----------------------|
| PGH-18-08 | 12.4 | 13.3 | 0.9 | 590365 | A18-08116 | 5.84 | 0.02 | 4.82 | < 0.003 | < 0.003 | 0.017 | < 0.005 | 0.003 | 0.038 | < 0.003 | CRBT |
| PGH-18-08 | 13.3 | 14.4 | 1.1 | 590366 | A18-08116 | 2.56 | 0.011 | 0.08 | 0.004 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.012 | SYN |
| PGH-18-08 | 14.4 | 15.55 | 1.15 | 590367 | A18-08116 | 6.68 | 0.019 | 1.85 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-08 | 15.55 | 16.3 | 0.75 | 590368 | A18-08116 | 4.58 | 0.205 | 1.27 | < 0.003 | 0.003 | 0.006 | < 0.005 | 0.003 | 0.011 | 0.015 | SYN + CRBT |
| PGH-18-08 | 28.21 | 29.57 | 1.36 | 590370 | A18-08116 | 4.46 | 0.014 | 0.49 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.008 | 0.006 | BX + CRBT |
| PGH-18-08 | 32 | 33.5 | 1.5 | 590371 | A18-08116 | 5.82 | 0.034 | 1.47 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.012 | 0.029 | CRBT + SYN |
| PGH-18-08 | 35.97 | 36.75 | 0.78 | 590372 | A18-08116 | 4.13 | 0.02 | 0.09 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.004 | 0.011 | CRBT |
| PGH-18-08 | 36.75 | 38 | 1.25 | 590373 | A18-08116 | 2.64 | 0.006 | 0.08 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.015 | SYN |
| PGH-18-08 | 38 | 39 | 1 | 590374 | A18-08116 | 3.85 | 0.099 | 0.54 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.009 | SYN + CRBT |
| PGH-18-08 | 39 | 40 | 1 | 590375 | A18-08116 | 3.95 | 0.013 | 0.48 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.01 | SYN |
| PGH-18-08 | 40 | 40.9 | 0.9 | 590376 | A18-08116 | 4.67 | 0.014 | 0.29 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.008 | SYN + CRBT |
| PGH-18-08 | 40.9 | 42 | 1.1 | 590377 | A18-08116 | 9.45 | 0.051 | 0.18 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.003 | 0.03 | CRBT BX |
| PGH-18-08 | 42 | 43.26 | 1.26 | 590378 | A18-08116 | 6.94 | 0.086 | 0.12 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.013 | 0.004 | 0.005 | CRBT BX |
| PGH-18-08 | 43.26 | 44.56 | 1.3 | 590379 | A18-08116 | 3.33 | 0.009 | 0.25 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.009 | SYN |
| PGH-18-08 | 44.56 | 45.9 | 1.34 | 590381 | A18-08116 | 3.47 | 0.011 | 0.47 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.011 | SYN |
| PGH-18-08 | 45.9 | 47 | 1.1 | 590382 | A18-08116 | 5.71 | 0.091 | 0.73 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT |
| PGH-18-08 | 47 | 48.5 | 1.5 | 590383 | A18-08116 | 5.52 | 0.086 | 0.36 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.011 | CRBR BX |
| PGH-18-08 | 48.5 | 50 | 1.5 | 590384 | A18-08116 | 3.96 | 0.01 | 1.81 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | 0.003 | CRBT + SYN |
| PGH-18-08 | 50 | 51.2 | 1.2 | 590385 | A18-08116 | 5.44 | 0.019 | 2.03 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.013 | < 0.003 | CRBT BX |
| PGH-18-08 | 51.2 | 52 | 0.8 | 590386 | A18-08116 | 3.06 | 0.005 | 0.22 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.004 | 0.01 | SYN |
| PGH-18-08 | 52 | 52.93 | 0.93 | 590387 | A18-08116 | 3.92 | 0.017 | 1.42 | 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | 0.035 | SYN |
| PGH-18-08 | 52.93 | 54.43 | 1.5 | 590388 | A18-08116 | 5.26 | 0.035 | 1.33 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.012 | 0.003 | SYN + CRBT |
| PGH-18-08 | 54.43 | 55.91 | 1.48 | 590389 | A18-08116 | 5.17 | 0.014 | 0.27 | 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.007 | CRBT BX |
| PGH-18-08 | 55.91 | 57 | 1.09 | 590390 | A18-08116 | 7.39 | 0.073 | 1.83 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.019 | 0.022 | CRBT + SYN |
| PGH-18-08 | 57 | 58.5 | 1.5 | 590391 | A18-08116 | 4.52 | 0.015 | 0.06 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.008 | CRBT BX |
| PGH-18-08 | 58.5 | 60 | 1.5 | 590392 | A18-08116 | 6.01 | 0.029 | 0.83 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.01 | 0.01 | CRBT BX |
| PGH-18-08 | 60 | 61 | 1 | 590394 | A18-08116 | 6.93 | 0.124 | 2.28 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.021 | 0.007 | CRBT |
| PGH-18-08 | 61 | 62 | 1 | 590395 | A18-08116 | 5.97 | 0.101 | 2.94 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.024 | < 0.003 | CRBT |
| PGH-18-08 | 62 | 63 | 1 | 590396 | A18-08116 | 3.71 | 0.14 | 1.14 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.011 | 0.005 | CRBT |
| PGH-18-08 | 63 | 64.5 | 1.5 | 590397 | A18-08116 | 4.09 | 0.021 | 1.71 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.013 | 0.009 | SYN + CRBT |
| PGH-18-08 | 64.5 | 66 | 1.5 | 590398 | A18-08116 | 5.21 | 0.147 | 2.11 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.014 | 0.003 | CRBT |
| PGH-18-08 | 66 | 67.5 | 1.5 | 590399 | A18-08116 | 4.36 | 0.063 | 0.87 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.007 | 0.006 | BX + CRBT |
| PGH-18-08 | 67.5 | 69 | 1.5 | 590400 | A18-08116 | 4.32 | 0.04 | 0.12 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.006 | CRBT |
| PGH-18-08 | 69 | 70 | 1 | 590401 | A18-08116 | 7.9 | 0.21 | 1.51 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.003 | 0.012 | 0.011 | BX + CRBT |
| PGH-18-08 | 70 | 71 | 1 | 590402 | A18-08116 | 6.22 | 0.089 | 0.04 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.007 | BX |
| PGH-18-08 | 71 | 72 | 1 | 590403 | A18-08116 | 5.34 | 0.092 | 0.37 | 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.007 | BX CRBT + pyrochlore |
| PGH-18-08 | 72 | 73 | 1 | 590404 | A18-08116 | 6.12 | 0.029 | 0.25 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.004 | 0.026 | bx + syn |
| PGH-18-08 | 89.67 | 91.15 | 1.48 | 590405 | A18-08116 | 6.63 | 0.207 | 1.03 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.015 | CRBT BX + SYN |
| PGH-18-08 | 91.15 | 92.5 | 1.35 | 590406 | A18-08116 | 5.01 | 0.107 | 5.6 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.025 | 0.013 | CRBT |
| PGH-18-08 | 92.5 | 94 | 1.5 | 590407 | A18-08116 | 3.23 | 0.181 | 0.49 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.005 | 0.011 | BX SYN + CRBT |
| PGH-18-08 | 94 | 95.25 | 1.25 | 590409 | A18-08116 | 3.04 | 0.008 | 0.27 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.004 | 0.008 | CRBT + SYN |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-----------------------|
| PGH-18-08 | 95.25 | 96.2 | 0.95 | 590410 | A18-08116 | 7.48 | 0.006 | 2.12 | < 0.003 | 0.003 | 0.018 | < 0.005 | 0.003 | 0.022 | < 0.003 | CRBT |
| PGH-18-08 | 96.2 | 97.09 | 0.89 | 590411 | A18-08116 | 6.4 | 0.008 | 0.02 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.004 | < 0.003 | CRBT |
| PGH-18-08 | 97.09 | 98.33 | 1.24 | 590412 | A18-08116 | 9.84 | 0.195 | 5.1 | < 0.003 | 0.003 | 0.015 | 0.008 | 0.004 | 0.04 | 0.013 | CRBT |
| PGH-18-08 | 98.33 | 99.57 | 1.24 | 590413 | A18-08116 | 3.36 | 0.145 | 1.32 | < 0.003 | < 0.003 | 0.009 | 0.005 | 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-08 | 99.57 | 101.05 | 1.48 | 590414 | A18-08116 | 6.08 | 0.033 | 0.59 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.005 | 0.005 | 0.008 | SYN + CRBT |
| PGH-18-08 | 101.05 | 102.54 | 1.49 | 590415 | A18-08116 | 6.52 | 0.036 | 0.36 | < 0.003 | 0.003 | 0.011 | < 0.005 | < 0.003 | 0.007 | 0.005 | CRBT |
| PGH-18-08 | 108.75 | 110.14 | 1.39 | 590416 | A18-08116 | 7.9 | 0.042 | 1.84 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.004 | 0.013 | 0.036 | dark crbt |
| PGH-18-08 | 110.14 | 111.39 | 1.25 | 590417 | A18-08116 | 5.69 | 0.052 | 0.93 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.01 | 0.004 | CRBT |
| PGH-18-08 | 111.39 | 112.9 | 1.51 | 590418 | A18-08116 | 5.87 | 0.104 | 0.36 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.012 | ALKALI + CRBT |
| PGH-18-08 | 112.9 | 114 | 1.1 | 590419 | A18-08116 | 7.43 | 0.034 | 10.47 | < 0.003 | 0.004 | 0.016 | < 0.005 | 0.004 | 0.066 | 0.027 | CRBT, purple |
| PGH-18-08 | 114 | 115 | 1 | 590420 | A18-08116 | 7.48 | 0.015 | 5.03 | < 0.003 | < 0.003 | 0.016 | < 0.005 | 0.003 | 0.029 | 0.009 | CRBT, purple |
| PGH-18-08 | 115 | 116.5 | 1.5 | 590421 | A18-08116 | 8.42 | 0.026 | 8.5 | < 0.003 | < 0.003 | 0.022 | < 0.005 | 0.004 | 0.05 | 0.009 | CRBT, purple |
| PGH-18-08 | 116.5 | 118 | 1.5 | 590422 | A18-08116 | 7.1 | 0.019 | 2.25 | < 0.003 | 0.003 | 0.012 | < 0.005 | < 0.003 | 0.015 | < 0.003 | CRBT, cg, light green |
| PGH-18-08 | 118 | 119.5 | 1.5 | 590423 | A18-08116 | 5.33 | 0.044 | 4.07 | < 0.003 | 0.004 | 0.01 | < 0.005 | 0.003 | 0.021 | 0.029 | BX CRT |
| PGH-18-08 | 119.5 | 121 | 1.5 | 590425 | A18-08116 | 6 | 0.05 | 1.37 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.012 | 0.003 | CRBT |
| PGH-18-08 | 121 | 122.5 | 1.5 | 590426 | A18-08116 | 5.62 | 0.056 | 1.22 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.011 | 0.004 | CRBT |
| PGH-18-08 | 122.5 | 123.58 | 1.08 | 590427 | A18-08116 | 7.4 | 0.054 | 0.49 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | < 0.003 | CRBT |
| PGH-18-08 | 138.16 | 139 | 0.84 | 590428 | A18-08116 | 8.05 | 0.068 | 7.44 | < 0.003 | < 0.003 | 0.017 | 0.005 | 0.005 | 0.054 | < 0.003 | CRBT BX |
| PGH-18-08 | 139 | 140 | 1 | 590429 | A18-08116 | 6.8 | 0.179 | 1.03 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.009 | 0.007 | CRBT BX |
| PGH-18-08 | 140 | 140.7 | 0.7 | 590430 | A18-08116 | 6.45 | 0.067 | 1.76 | < 0.003 | 0.004 | 0.006 | < 0.005 | < 0.003 | 0.012 | < 0.003 | CRBT BX |
| PGH-18-08 | 148.26 | 149 | 0.74 | 590431 | A18-08116 | 6 | 0.024 | 1.64 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.015 | 0.007 | BX CRBT |
| PGH-18-08 | 149 | 149.95 | 0.95 | 590432 | A18-08116 | 5.52 | 0.018 | 1.16 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.013 | 0.004 | BX CRBT |
| PGH-18-08 | 149.95 | 150.6 | 0.65 | 590433 | A18-08116 | 3.82 | < 0.003 | 0.04 | < 0.003 | < 0.003 | 0.02 | < 0.005 | < 0.003 | 0.008 | 0.004 | CRBT |
| PGH-18-08 | 150.6 | 151.6 | 1 | 590434 | A18-08116 | 4.79 | 0.023 | 0.03 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.003 | 0.011 | ALKALI + CRBT |
| PGH-18-08 | 151.6 | 152.5 | 0.9 | 590435 | A18-08116 | 6.3 | 0.015 | 0.15 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.009 | ALKALI + CRBT |
| PGH-18-08 | 152.5 | 154 | 1.5 | 590436 | A18-08116 | 13.63 | 0.151 | 0.98 | < 0.003 | 0.004 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.066 | CRBT |
| PGH-18-08 | 154 | 155.5 | 1.5 | 590437 | A18-08116 | 10.77 | 0.136 | 0.42 | < 0.003 | < 0.003 | 0.012 | < 0.005 | 0.003 | 0.007 | 0.079 | CRBT |
| PGH-18-08 | 155.5 | 156.3 | 0.8 | 590438 | A18-08116 | 8.84 | 0.032 | 2.82 | < 0.003 | < 0.003 | 0.025 | < 0.005 | 0.003 | 0.025 | 0.006 | CRBT |
| PGH-18-08 | 156.3 | 157.8 | 1.5 | 590439 | A18-08116 | 2.63 | 0.006 | 0.24 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.006 | ALKLAI |
| PGH-18-08 | 157.8 | 159 | 1.2 | 590440 | A18-08116 | 4.39 | 0.016 | 0.08 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.008 | < 0.003 | 0.004 | ALKLAI |
| PGH-18-08 | 159 | 160.5 | 1.5 | 590441 | A18-08116 | 7.54 | 0.058 | 0.04 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.003 | 0.014 | ALKLAI + CRBT |
| PGH-18-08 | 160.5 | 162 | 1.5 | 590442 | A18-08116 | 5.06 | 0.036 | 2.04 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.011 | 0.011 | CRBT |
| PGH-18-08 | 162 | 163.5 | 1.5 | 590443 | A18-08116 | 5.57 | 0.052 | 2.53 | < 0.003 | 0.005 | 0.01 | < 0.005 | < 0.003 | 0.017 | 0.01 | CRBT BX |
| PGH-18-08 | 163.5 | 165 | 1.5 | 590444 | A18-08116 | 4.66 | 0.064 | 0.46 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.008 | CRBT BX |
| PGH-18-08 | 165 | 166 | 1 | 590445 | A18-08116 | 6.42 | 0.101 | 0.37 | < 0.003 | 0.004 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.018 | CRT BX |
| PGH-18-08 | 166 | 167 | 1 | 590446 | A18-08116 | 7.27 | 0.065 | 0.5 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.007 | 0.031 | CRT BX |
| PGH-18-08 | 167 | 168.5 | 1.5 | 590448 | A18-08116 | 3.81 | 0.015 | 0.48 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.004 | ALKLAI + CRBT |
| PGH-18-08 | 168.5 | 170 | 1.5 | 590450 | A18-08116 | 5.07 | 0.019 | 0.32 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.004 | ALKLAI + CRBT |
| PGH-18-08 | 170 | 171.5 | 1.5 | 590451 | A18-08116 | 4.49 | 0.007 | 1.21 | < 0.003 | < 0.003 | 0.008 | < 0.005 | 0.004 | 0.01 | < 0.003 | ALKLAI + CRBT |
| PGH-18-08 | 171.5 | 173 | 1.5 | 590452 | A18-08116 | 3.73 | 0.008 | 0.27 | 0.006 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.004 | ALKALI + CRBT |
| PGH-18-08 | 173 | 174 | 1 | 590453 | A18-08116 | 2.22 | 0.005 | 0.16 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.006 | ALKALI + CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|--------------|
| PGH-18-08 | 174 | 175 | 1 | 590454 | A18-08116 | 2.74 | 0.294 | 2.81 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.005 | 0.016 | < 0.003 | CRBT |
| PGH-18-08 | 175 | 176.5 | 1.5 | 590455 | A18-08116 | 2.87 | 0.12 | 3 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.012 | 0.02 | CRBT |
| PGH-18-08 | 176.5 | 178 | 1.5 | 590456 | A18-08116 | 3.13 | 0.119 | 4.35 | < 0.003 | < 0.003 | 0.009 | 0.006 | 0.004 | 0.015 | 0.064 | CRBT |
| PGH-18-08 | 178 | 179.5 | 1.5 | 590457 | A18-08116 | 4.3 | 0.182 | 5.32 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.004 | 0.023 | 0.032 | CRBT |
| PGH-18-08 | 179.5 | 181 | 1.5 | 590458 | A18-08116 | 3.05 | 0.085 | 3.22 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.02 | 0.004 | CRBT |
| PGH-18-08 | 181 | 182 | 1 | 590459 | A18-08116 | 1.71 | < 0.003 | 0.32 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT |
| PGH-18-08 | 182 | 183 | 1 | 590460 | A18-08116 | 3.58 | 0.063 | 2.06 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.012 | < 0.003 | CRT BX |
| PGH-18-08 | 222.35 | 223.3 | 0.95 | 590461 | A18-08116 | 5.71 | 0.12 | 8.75 | < 0.003 | 0.005 | 0.024 | < 0.005 | 0.005 | 0.062 | 0.013 | CRBT |
| PGH-18-08 | 223.3 | 224.23 | 0.93 | 590462 | A18-08116 | 5.35 | 0.099 | 5.4 | < 0.003 | 0.004 | 0.02 | < 0.005 | 0.003 | 0.04 | 0.011 | CRBT |
| PGH-18-08 | 230.38 | 231.29 | 0.91 | 590463 | A18-08116 | 7.38 | 0.071 | 2.13 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.004 | 0.017 | < 0.003 | CRBT |
| PGH-18-08 | 231.29 | 232.28 | 0.99 | 590464 | A18-08116 | 6.86 | 0.09 | 2.34 | < 0.003 | 0.004 | 0.012 | < 0.005 | 0.003 | 0.016 | 0.014 | CRBT |
| PGH-18-08 | 236.77 | 237.86 | 1.09 | 590465 | A18-08116 | 1.68 | 0.088 | 2.26 | < 0.003 | 0.003 | 0.008 | < 0.005 | 0.005 | 0.013 | 0.01 | CRBT |
| PGH-18-08 | 237.86 | 239.36 | 1.5 | 590466 | A18-08116 | 3.01 | 0.209 | 3.84 | < 0.003 | 0.003 | 0.011 | 0.009 | 0.003 | 0.02 | 0.015 | CRBT |
| PGH-18-08 | 239.36 | 240.38 | 1.02 | 590468 | A18-08116 | 3.04 | 0.182 | 4.4 | < 0.003 | 0.005 | 0.011 | 0.009 | 0.004 | 0.019 | 0.011 | CRBT |
| PGH-18-08 | 251.36 | 251.89 | 0.53 | 590469 | A18-08116 | 4.51 | 0.038 | 1.95 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.018 | < 0.003 | CRBT |
| PGH-18-08 | 269.44 | 270 | 0.56 | 590470 | A18-08116 | 2.53 | 0.063 | 1.22 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-08 | 278.28 | 278.87 | 0.59 | 590471 | A18-08116 | 3.32 | 0.213 | 1.97 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-08 | 286.03 | 286.93 | 0.9 | 590472 | A18-08116 | 3.33 | 0.181 | 1.87 | < 0.003 | 0.006 | 0.009 | < 0.005 | < 0.003 | 0.009 | 0.005 | BX + CBT |
| PGH-18-08 | 290.76 | 292.26 | 1.5 | 590473 | A18-08116 | 5.31 | 0.153 | 1.96 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.012 | 0.046 | BX CRBT |
| PGH-18-08 | 292.26 | 293.62 | 1.36 | 590474 | A18-08116 | 5.02 | 0.027 | 2.11 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.016 | 0.003 | BX CRBT |
| PGH-18-08 | 293.62 | 294.43 | 0.81 | 590476 | A18-08116 | 3.88 | 0.305 | 2.09 | < 0.003 | 0.003 | 0.011 | 0.005 | 0.004 | 0.013 | 0.011 | CRBT |
| PGH-18-08 | 294.43 | 295.79 | 1.36 | 590477 | A18-08116 | 3.58 | 0.019 | 1.31 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.01 | 0.006 | GRAN + CRBT |
| PGH-18-08 | 295.79 | 296.64 | 0.85 | 590478 | A18-08116 | 5 | 0.064 | 0.84 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.008 | 0.003 | CRBT + GRAN |
| PGH-18-08 | 296.64 | 297.52 | 0.88 | 590479 | A18-08116 | 5.9 | 0.024 | 0.12 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.003 | 0.004 | GRAN |
| PGH-18-08 | 297.52 | 298.47 | 0.95 | 590480 | A18-08116 | 6.54 | 0.033 | 0.71 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.005 | 0.006 | GRAN |
| PGH-18-08 | 298.47 | 299.46 | 0.99 | 590481 | A18-08116 | 4.64 | 0.017 | 0.25 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | < 0.003 | 0.004 | GRAN + crbt |
| PGH-18-08 | 299.46 | 300.52 | 1.06 | 590482 | A18-08116 | 6.44 | 0.05 | 4.09 | < 0.003 | < 0.003 | 0.012 | < 0.005 | 0.004 | 0.027 | < 0.003 | CRBT |
| PGH-18-08 | 300.52 | 301.77 | 1.25 | 590483 | A18-08116 | 5.57 | 0.139 | 2.27 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.014 | 0.012 | CRBT |
| PGH-18-08 | 301.77 | 303.28 | 1.51 | 590486 | A18-08116 | 4.42 | 0.053 | 0.46 | < 0.003 | < 0.003 | 0.014 | < 0.005 | 0.003 | 0.008 | 0.004 | BX |
| PGH-18-08 | 303.28 | 304.13 | 0.85 | 590487 | A18-08116 | 4.74 | 0.031 | 1.01 | < 0.003 | 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.013 | CRBT + GRABN |
| PGH-18-08 | 304.13 | 305.12 | 0.99 | 590489 | A18-08116 | 4.35 | 0.009 | 0.13 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.003 | 0.012 | GRAN |
| PGH-18-08 | 305.12 | 306.13 | 1.01 | 590490 | A18-08116 | 3.24 | 0.012 | 0.11 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | < 0.003 | 0.006 | GRAN |
| PGH-18-08 | 306.13 | 306.85 | 0.72 | 590491 | A18-08116 | 3.7 | 0.086 | 2.88 | < 0.003 | < 0.003 | 0.023 | < 0.005 | 0.005 | 0.028 | 0.017 | CRBT |
| PGH-18-08 | 306.85 | 307.36 | 0.51 | 590492 | A18-08116 | 4.2 | 0.028 | 0.52 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.008 | 0.009 | GRAN BX |
| PGH-18-08 | 307.36 | 308.44 | 1.08 | 590493 | A18-08116 | 5.43 | 0.057 | 1.54 | < 0.003 | < 0.003 | 0.018 | < 0.005 | 0.003 | 0.016 | 0.014 | CRBT |
| PGH-18-08 | 308.44 | 309.25 | 0.81 | 590494 | A18-08116 | 4.07 | 0.009 | 0.2 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.005 | 0.003 | 0.011 | GRAN |
| PGH-18-08 | 309.25 | 310.56 | 1.31 | 590495 | A18-08116 | 2.6 | 0.081 | 2.61 | < 0.003 | 0.004 | 0.012 | 0.007 | < 0.003 | 0.013 | 0.025 | CRBT |
| PGH-18-08 | 310.56 | 312 | 1.44 | 590496 | A18-08116 | 3.73 | 0.099 | 2.43 | < 0.003 | 0.003 | 0.01 | 0.008 | 0.003 | 0.011 | 0.021 | CRBT BX |
| PGH-18-08 | 312 | 313 | 1 | 590497 | A18-08116 | 11.52 | 0.033 | 0.37 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.007 | 0.017 | BX CRBT |
| PGH-18-08 | 313 | 314 | 1 | 590498 | A18-08116 | 6.87 | 0.045 | 0.85 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.01 | 0.021 | BX CRBT |
| PGH-18-08 | 314 | 315.28 | 1.28 | 590499 | A18-08116 | 5.88 | 0.051 | 1 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.01 | 0.011 | GRAN + CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|----------------|
| PGH-18-08 | 315.28 | 316.32 | 1.04 | 590500 | A18-08116 | 2.09 | 0.045 | 2.01 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.005 | 0.013 | 0.022 | CRBT |
| PGH-18-08 | 316.32 | 316.82 | 0.5 | 590501 | A18-08116 | 6.17 | 0.094 | 0.09 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.004 | 0.022 | CRBT |
| PGH-18-08 | 316.82 | 317.32 | 0.5 | 590502 | A18-08116 | 2.72 | 0.237 | 2.06 | < 0.003 | < 0.003 | 0.013 | 0.007 | 0.005 | 0.014 | < 0.003 | CRBT |
| PGH-18-08 | 317.32 | 318.26 | 0.94 | 590503 | A18-08116 | 5.82 | 0.148 | 2.14 | < 0.003 | < 0.003 | 0.011 | 0.005 | 0.003 | 0.019 | 0.005 | CRBT |
| PGH-18-08 | 318.26 | 319.75 | 1.49 | 590504 | A18-08116 | 2.07 | 0.158 | 2.82 | < 0.003 | < 0.003 | 0.014 | 0.007 | 0.004 | 0.02 | 0.003 | GRAN + BX CRBT |
| PGH-18-08 | 319.75 | 320.71 | 0.96 | 590505 | A18-08116 | 1.33 | 0.041 | 1.48 | < 0.003 | 0.003 | 0.01 | 0.005 | < 0.003 | 0.012 | < 0.003 | crbt |
| PGH-18-08 | 320.71 | 321.87 | 1.16 | 590507 | A18-08116 | 6.65 | 0.062 | 2.41 | < 0.003 | 0.005 | 0.011 | < 0.005 | 0.003 | 0.016 | 0.014 | bx crbt |
| PGH-18-08 | 321.87 | 323 | 1.13 | 590508 | A18-08116 | 1.66 | 0.075 | 2.19 | < 0.003 | 0.003 | 0.011 | 0.008 | < 0.003 | 0.02 | < 0.003 | CRBT |
| PGH-18-08 | 323 | 324.5 | 1.5 | 590509 | A18-08116 | 7 | 0.058 | 0.43 | < 0.003 | < 0.003 | 0.017 | < 0.005 | 0.005 | 0.009 | 0.016 | CRBT |
| PGH-18-08 | 324.5 | 326 | 1.5 | 590510 | A18-08116 | 7.51 | 0.044 | 0.5 | < 0.003 | 0.004 | 0.009 | < 0.005 | < 0.003 | 0.008 | 0.008 | CRBT + FEN |
| PGH-18-08 | 326 | 327 | 1 | 590511 | A18-08116 | 7.48 | 0.019 | 0.11 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.005 | 0.004 | 0.007 | FEN + CRBT |
| PGH-18-08 | 327 | 328 | 1 | 590512 | A18-08116 | 3.43 | 0.069 | 0.83 | < 0.003 | < 0.003 | 0.015 | < 0.005 | 0.004 | 0.01 | 0.006 | CRBT |
| PGH-18-08 | 328 | 329 | 1 | 590513 | A18-08116 | 3.14 | 0.692 | 5.39 | < 0.003 | 0.004 | 0.016 | 0.008 | 0.007 | 0.021 | 0.029 | CRBT |
| PGH-18-08 | 329 | 330.5 | 1.5 | 590514 | A18-08116 | 2.93 | 0.141 | 2.13 | < 0.003 | < 0.003 | 0.015 | < 0.005 | 0.004 | 0.013 | 0.028 | CRBT |
| PGH-18-08 | 330.5 | 332 | 1.5 | 590515 | A18-08116 | 2.9 | 0.227 | 3.61 | < 0.003 | < 0.003 | 0.014 | 0.008 | 0.003 | 0.016 | 0.051 | CRBT |
| PGH-18-08 | 332 | 333.5 | 1.5 | 590516 | A18-08116 | 3.12 | 0.1 | 1.64 | < 0.003 | 0.003 | 0.014 | < 0.005 | < 0.003 | 0.016 | 0.028 | CRBT |
| PGH-18-08 | 333.5 | 335 | 1.5 | 590517 | A18-08116 | 5.4 | 0.182 | 2.13 | < 0.003 | 0.003 | 0.016 | < 0.005 | < 0.003 | 0.015 | 0.021 | CRBT |
| PGH-18-08 | 335 | 336 | 1 | 590518 | A18-08116 | 5.9 | 0.059 | 2.59 | < 0.003 | < 0.003 | 0.021 | < 0.005 | 0.003 | 0.02 | 0.018 | CRBT |
| PGH-18-08 | 336 | 337 | 1 | 590520 | A18-08116 | 8.96 | 0.047 | 1.2 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.011 | 0.011 | CRBT |
| PGH-18-08 | 337 | 338 | 1 | 590521 | A18-08116 | 5.84 | 0.069 | 1.21 | < 0.003 | 0.004 | 0.01 | < 0.005 | 0.003 | 0.011 | 0.009 | CRBT |
| PGH-18-08 | 342.83 | 343.84 | 1.01 | 590522 | A18-08116 | 6.49 | 0.08 | 4.15 | < 0.003 | < 0.003 | 0.015 | < 0.005 | 0.004 | 0.027 | 0.064 | CRBT |
| PGH-18-08 | 343.84 | 344.62 | 0.78 | 590523 | A18-08116 | 4.43 | 0.03 | 0.53 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.005 | CRBT BX |
| PGH-18-08 | 344.62 | 346 | 1.38 | 590524 | A18-08116 | 4.61 | 0.007 | 0.09 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.003 | 0.005 | GRAN |
| PGH-18-08 | 346 | 346.56 | 0.56 | 590525 | A18-08116 | 4.92 | 0.05 | 0.17 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.014 | CRBT BX |
| PGH-18-08 | 346.56 | 347.09 | 0.53 | 590527 | A18-08116 | 4.82 | 0.614 | 4.95 | < 0.003 | < 0.003 | 0.022 | 0.006 | 0.005 | 0.041 | 0.006 | CRBT |
| PGH-18-08 | 357.17 | 358 | 0.83 | 590528 | A18-08116 | 5.43 | 0.038 | 0.24 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.003 | 0.003 | < 0.003 | GRAN BX + CRBT |
| PGH-18-08 | 358 | 359 | 1 | 590529 | A18-08116 | 6.14 | 0.127 | 2.97 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.02 | 0.016 | CRBT BX |
| PGH-18-08 | 359 | 360.1 | 1.1 | 590530 | A18-08116 | 10.52 | 0.073 | 2.24 | < 0.003 | 0.003 | 0.008 | 0.005 | 0.004 | 0.011 | 0.13 | CRBT ? MD |
| PGH-18-08 | 360.1 | 361.25 | 1.15 | 590531 | A18-08116 | 5.09 | 0.014 | 0.16 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.011 | GRAN |
| PGH-18-08 | 361.25 | 362 | 0.75 | 590532 | A18-08116 | 7.45 | 0.1 | 0.9 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.009 | 0.011 | CRBT BX |
| PGH-18-08 | 362 | 363 | 1 | 590533 | A18-08116 | 6.59 | 0.051 | 0.46 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | < 0.003 | CRBT BX |
| PGH-18-08 | 363 | 364.5 | 1.5 | 590534 | A18-08116 | 6.58 | 0.085 | 0.8 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | 0.011 | CRBT BX |
| PGH-18-08 | 364.5 | 365.46 | 0.96 | 590535 | A18-08116 | 7.67 | 0.07 | 0.98 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.009 | CRBT BX |
| PGH-18-08 | 365.46 | 367 | 1.54 | 590537 | A18-08116 | 5.26 | 0.016 | 0.1 | 0.004 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.006 | GRAN BX |
| PGH-18-08 | 367 | 368.5 | 1.5 | 590538 | A18-08116 | 4.8 | 0.012 | 0.49 | 0.004 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.006 | 0.007 | GRAN |
| PGH-18-08 | 368.5 | 370 | 1.5 | 590539 | A18-08116 | 3.54 | 0.006 | 0.33 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.007 | GRAN |
| PGH-18-08 | 370 | 371 | 1 | 590540 | A18-08116 | 3.21 | 0.006 | 0.19 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.004 | 0.007 | GRAN |
| PGH-18-08 | 371 | 372.25 | 1.25 | 590542 | A18-08116 | 4.1 | 0.023 | 0.65 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.006 | GRAN + BX CRBT |
| PGH-18-08 | 372.25 | 373 | 0.75 | 590543 | A18-08116 | 3.96 | 0.238 | 2.89 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-08 | 373 | 374 | 1 | 590544 | A18-08116 | 2.71 | 0.074 | 2.96 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.013 | 0.014 | CRBT |
| PGH-18-08 | 374 | 375 | 1 | 590545 | A18-08116 | 4.64 | 0.092 | 5.38 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.004 | 0.023 | 0.047 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|----------------|
| PGH-18-08 | 375 | 376 | 1 | 590547 | A18-08116 | 2.97 | 0.044 | 2.08 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.006 | 0.013 | < 0.003 | CRBT |
| PGH-18-08 | 376 | 376.7 | 0.7 | 590548 | A18-08116 | 2.64 | 0.355 | 5.79 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.019 | < 0.003 | GRAN |
| PGH-18-08 | 376.7 | 377.85 | 1.15 | 590549 | A18-08116 | 5.91 | 0.049 | 0.18 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.009 | CRBT BX |
| PGH-18-08 | 377.85 | 379.11 | 1.26 | 590550 | A18-08116 | 6.49 | 0.214 | 1.75 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.01 | 0.008 | CRBT BX |
| PGH-18-08 | 379.11 | 380.24 | 1.13 | 590551 | A18-08116 | 6.79 | 0.245 | 1.87 | < 0.003 | 0.003 | 0.012 | < 0.005 | 0.003 | 0.014 | < 0.003 | CRBT BX |
| PGH-18-08 | 380.24 | 381 | 0.76 | 590552 | A18-08116 | 4.98 | 0.063 | 0.59 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.006 | 0.005 | GRAN + CRBT BX |
| PGH-18-08 | 381 | 382 | 1 | 590553 | A18-08116 | 5.13 | 0.023 | 0.37 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.004 | 0.005 | < 0.003 | GRAN BX |
| PGH-18-08 | 382 | 383.18 | 1.18 | 590554 | A18-08116 | 3.03 | 0.009 | 0.1 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | < 0.003 | 0.011 | GRAN BX |
| PGH-18-08 | 383.18 | 384.2 | 1.02 | 590555 | A18-08116 | 1.96 | 0.182 | 2.24 | < 0.003 | < 0.003 | 0.008 | 0.005 | 0.004 | 0.01 | < 0.003 | CRBT |
| PGH-18-08 | 384.2 | 385 | 0.8 | 590556 | A18-08116 | 2.24 | 0.04 | 0.34 | < 0.003 | 0.003 | 0.01 | < 0.005 | 0.004 | 0.008 | < 0.003 | CRBT |
| PGH-18-08 | 385 | 386 | 1 | 590557 | A18-08116 | 2.82 | 0.099 | 0.49 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.008 | < 0.003 | CRBT |
| PGH-18-08 | 386 | 386.53 | 0.53 | 590558 | A18-08116 | 3.35 | 0.035 | 2.02 | < 0.003 | < 0.003 | 0.012 | < 0.005 | 0.004 | 0.014 | 0.015 | CRBT |
| PGH-18-08 | 386.53 | 387.35 | 0.82 | 590559 | A18-08116 | 13.15 | 0.01 | 0.7 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.026 | MD |
| PGH-18-08 | 387.35 | 388 | 0.65 | 590560 | A18-08116 | 4.29 | 0.04 | 0.44 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.007 | < 0.003 | CRBT |
| PGH-18-08 | 388 | 389.5 | 1.5 | 590561 | A18-08116 | 4.52 | 0.071 | 1.11 | < 0.003 | 0.003 | 0.01 | < 0.005 | < 0.003 | 0.009 | 0.016 | CRBT BX |
| PGH-18-08 | 389.5 | 391 | 1.5 | 590562 | A18-08116 | 4.12 | 0.066 | 0.29 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.006 | 0.018 | CRBT BX |
| PGH-18-08 | 391 | 392 | 1 | 590563 | A18-08116 | 5.5 | 0.134 | 8.51 | < 0.003 | 0.004 | 0.023 | 0.005 | 0.003 | 0.057 | < 0.003 | CRBT |
| PGH-18-08 | 392 | 393.2 | 1.2 | 590564 | A18-08116 | 8.58 | 0.067 | 2.96 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | 0.04 | DYKE |
| PGH-18-08 | 393.2 | 394.16 | 0.96 | 590565 | A18-08116 | 4.43 | 0.009 | 0.06 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.009 | GRAN |
| PGH-18-08 | 394.16 | 395 | 0.84 | 590566 | A18-08116 | 6.06 | 0.067 | 0.03 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.003 | < 0.003 | CRBT BX |
| PGH-18-08 | 395 | 396.35 | 1.35 | 590567 | A18-08116 | 6.04 | 0.039 | 0.07 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | CRBT BX |
| PGH-18-08 | 396.35 | 397.08 | 0.73 | 590568 | A18-08116 | 7.11 | 0.023 | 0.4 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | < 0.003 | GRN + CRBT |
| PGH-18-08 | 397.08 | 398 | 0.92 | 590569 | A18-08116 | 5.11 | 0.014 | 0.31 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | < 0.003 | GRN |
| PGH-18-08 | 398 | 398.85 | 0.85 | 590570 | A18-08116 | 5.55 | 0.011 | 0.69 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.005 | GRN |
| PGH-18-08 | 398.85 | 399.85 | 1 | 590571 | A18-08116 | 5.14 | 0.041 | 1.24 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.003 | 0.007 | 0.021 | CRBT + BX |
| PGH-18-08 | 399.85 | 400.63 | 0.78 | 590573 | A18-08116 | 4.1 | 0.022 | 0.76 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.003 | BX + CRBT |
| PGH-18-08 | 400.63 | 402.11 | 1.48 | 590574 | A18-08116 | 3.37 | 0.015 | 1.3 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.012 | < 0.003 | CRBT + GRAN |
| PGH-18-08 | 402.11 | 403.63 | 1.52 | 590575 | A18-08116 | 3.5 | 0.013 | 0.28 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.005 | GRAN |
| PGH-18-08 | 403.63 | 404.95 | 1.32 | 590576 | A18-08116 | 5.4 | 0.039 | 1.65 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.043 | CRBT + GRAN |
| PGH-18-08 | 404.95 | 405.55 | 0.6 | 590577 | A18-08116 | 4.37 | 0.007 | 0.42 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.01 | GRAN |
| PGH-18-08 | 405.55 | 406.2 | 0.65 | 590578 | A18-08116 | 6.53 | 0.095 | 2.15 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.013 | 0.063 | CRBT + GRAN |
| PGH-18-08 | 406.2 | 407.18 | 0.98 | 590579 | A18-08116 | 6.64 | 0.04 | 1.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | 0.042 | GRAN + CRBT |
| PGH-18-08 | 407.18 | 408.09 | 0.91 | 590580 | A18-08116 | 7.79 | 0.071 | 2.92 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.016 | 0.086 | CRBT |
| PGH-18-08 | 408.09 | 409 | 0.91 | 590581 | A18-08116 | 2.93 | 0.033 | 1.14 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.007 | 0.013 | GRAN |
| PGH-18-08 | 409 | 410 | 1 | 590582 | A18-08116 | 4.5 | 0.133 | 2 | < 0.003 | < 0.003 | 0.018 | < 0.005 | < 0.003 | 0.015 | 0.029 | CRBT |
| PGH-18-08 | 410 | 411 | 1 | 590583 | A18-08116 | 3.03 | 0.075 | 2.09 | < 0.003 | < 0.003 | 0.017 | 0.006 | 0.004 | 0.014 | 0.011 | CRBT |
| PGH-18-08 | 411 | 412 | 1 | 590584 | A18-08116 | 5.22 | 0.052 | 0.98 | 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.003 | CRBT BX |
| PGH-18-08 | 417 | 418.5 | 1.5 | 590585 | A18-08116 | 4.52 | 0.056 | 1.32 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-08 | 418.5 | 420 | 1.5 | 590586 | A18-08116 | 3.69 | 0.108 | 0.22 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.006 | 0.004 | CRBT |
| PGH-18-08 | 441.6 | 443 | 1.4 | 590587 | A18-08116 | 7.24 | 0.053 | 3.03 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.004 | 0.008 | 0.066 | CRBT |
| PGH-18-08 | 446.22 | 447.2 | 0.98 | 590588 | A18-08116 | 3.44 | 0.077 | 4.91 | < 0.003 | 0.003 | 0.013 | < 0.005 | 0.003 | 0.025 | < 0.003 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-------------|
| PGH-18-08 | 447.2 | 448.15 | 0.95 | 590589 | A18-08116 | 1.77 | 0.007 | 0.22 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | < 0.003 | 0.006 | GRAN |
| PGH-18-08 | 448.15 | 449.45 | 1.3 | 590590 | A18-08116 | 6.52 | 0.034 | 4.33 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.019 | 0.059 | CRBT + GRAN |
| PGH-18-08 | 463.94 | 464.75 | 0.81 | 590591 | A18-08116 | 3.88 | 0.048 | 4.83 | < 0.003 | 0.004 | 0.008 | 0.01 | < 0.003 | 0.012 | 0.027 | CRBT |
| PGH-18-08 | 477.08 | 478.5 | 1.42 | 590593 | A18-08116 | 7.74 | 0.034 | 2.15 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | 0.05 | CRBT + FEN |
| PGH-18-08 | 478.5 | 479.35 | 0.85 | 590594 | A18-08116 | 7.15 | 0.009 | 0.24 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.012 | GRAN / FEN |
| PGH-18-08 | 479.35 | 480.5 | 1.15 | 590595 | A18-08116 | 6.27 | 0.022 | 4.24 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.017 | 0.016 | CRBT / FEN |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|-----------|--------|--------|-----------|----------|-----------|-----------|------------------|----------|-----------|
| PGH-18-08 | 16.3 | 16.3 | 0 | 590369 | A18-08116 | STANDARD | Oka 1 | 2.5 | 0.554 |
| PGH-18-08 | 44.56 | 44.56 | 0 | 590380 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 60 | 60 | 0 | 590393 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 94 | 94 | 0 | 590408 | A18-08116 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-08 | 119.5 | 119.5 | 0 | 590424 | A18-08116 | BLANK | Marble | 0.05 | < 0.003 |
| PGH-18-08 | 167 | 167 | 0 | 590447 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 168.5 | 168.5 | 0 | 590449 | A18-08116 | STANDARD | Oka 1 | 2.47 | 0.548 |
| PGH-18-08 | 239.36 | 239.36 | 0 | 590467 | A18-08116 | STANDARD | Oka 1 | 2.51 | 0.552 |
| PGH-18-08 | 293.62 | 293.62 | 0 | 590475 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 300.52 | 301.77 | 1.25 | 590483 | A18-08116 | N/A | ORIGINAL SAMPLE | 2.27 | 0.139 |
| PGH-18-08 | 300.52 | 301.77 | 1.25 | 590484 | A18-08116 | DUPLICATE | DUPLICATE 590483 | 1.75 | 0.121 |
| PGH-18-08 | 301.77 | 301.77 | 0 | 590485 | A18-08116 | STANDARD | Oka 1 | 2.5 | 0.549 |
| PGH-18-08 | 304.13 | 304.13 | 0 | 590488 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 320.71 | 320.71 | 0 | 590506 | A18-08116 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-08 | 336 | 336 | 0 | 590519 | A18-08116 | STANDARD | Oka 1 | 2.48 | 0.532 |
| PGH-18-08 | 346.56 | 346.56 | 0 | 590526 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 365.46 | 365.46 | 0 | 590536 | A18-08116 | STANDARD | Oka 1 | 2.52 | 0.552 |
| PGH-18-08 | 371 | 371 | 0 | 590541 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 374 | 375 | 1 | 590545 | A18-08116 | N/A | ORIGINAL SAMPLE | 5.38 | 0.092 |
| PGH-18-08 | 374 | 375 | 1 | 590546 | A18-08116 | DUPLICATE | DUP 590545 | 3.82 | 0.075 |
| PGH-18-08 | 399.85 | 399.85 | 0 | 590572 | A18-08116 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-08 | 464.75 | 464.75 | 0 | 590592 | A18-08116 | BLANK | Marble | 0.21 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|---------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 14-May-2018 |
| Township/Area: | Killala Lake Area | End Date: | 20-May-2018 |
| Claims (converted): | 262731, 332506, 230752 | Described by: | B. Clark, BSc |
| Claims (legacy): | TB 4256251 | Log date: | 6-Jun-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|------------|--------|-----------|-----|
| Azimuth: 337.00° | | Easting: 519664 | | Core size: | HQ | Cemented: | No |
| Plunge: -50.00° | | Northing: 5432567 | | Casing: | Pulled | Stored: | Yes |
| Length: 510.0 m | | Elevation: 316.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-09 | Reflex | 18 | 337.5 | -49.9 | 59642 |
| PGH-18-09 | Reflex | 69 | 338.3 | -50.1 | 58054 |
| PGH-18-09 | Reflex | 120 | 338.9 | -50 | 57984 |
| PGH-18-09 | Reflex | 171 | 340 | -50.2 | 57925 |
| PGH-18-09 | Reflex | 222 | 338.2 | -50.3 | 57700 |
| PGH-18-09 | Reflex | 270 | 339.5 | -50.3 | 57598 |
| PGH-18-09 | Reflex | 321 | 339.3 | -50.4 | 57546 |
| PGH-18-09 | Reflex | 372 | 339.9 | -50.1 | 57634 |
| PGH-18-09 | Reflex | 423 | 340.2 | -50.1 | 57616 |
| PGH-18-09 | Reflex | 474 | 340.5 | -50 | 57654 |
| PGH-18-09 | Reflex | 510 | 341.6 | -49.8 | 57585 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|------------------------------|---|
| PGH-18-09 | 0 | 1.82 | OVB | Overburden | |
| PGH-18-09 | 1.82 | 13 | SYE | Fenite / Syenite | Moderately to completely fenitized syenite, strong disking and mechanical fracturing of core near top of hole. Med red-pink to blue-green <15% qtz, fenitization is patchy to selectively pervasive, patches 'zones' of >50% amph/chl up to 15 cm and locally completely altered zones 1.5m. Selectively pervasive chl/amph replacing bt(?). CRBT veins/veinlets up to 24cm and as vein/fracture networks with veins <1cm. CRBT light grey-green to light pink-purple, fg, massive, wispy bands of light green-brown commonly rimming clasts and subparallel to contacts <5mm. LC is gradational and marked by decrease in zones of chl/amph replacement. |
| PGH-18-09 | 13 | 23.25 | SYE | Syenite | Med red-pink to blue-green, moderate selectively pervasive chl/blue sodic amph replacing bt(?), interstitial crbt infill and veinlets/fractures. Multiple low angle (sub-parallel TCA) fractures with amph/crbt fill <5mm. Zones of crbt fill have light pink-cream alt halo. Local CRBT veins up to 20cm at low angles <30 TCA. CRBT; light grey-green, fg, massive, patchy fluorite, diss hem, trace diss py, wispy bands up to 5mm of blue-olive green, contacts are locally brecciated to planar. |
| PGH-18-09 | 23.25 | 28.15 | PEG | Fenite / Pegmatite | Moderate to completely fenitized zones up to 1m, these zones contain >60% chl/amph/bt, outside of completely alt zones is alkali pegmatite with fspar xtals >2cm, moderately fractured at multiple orientations (sub-parallel TCA and perpendicular TCA), fractures filled with chl/amph +/- hem/crbt. weak light pink alt to fspar along striations, trace diss py. Xtals are being broken down and have irregular xstal boundaries. qtz 15%, kspar 60%, plag 10%, 15% crbt/chl/amph. LC is gradational and marked by change in grain size |
| PGH-18-09 | 28.15 | 32.25 | SYE | Syenite | Light red-pink to blue, mg, qtz 10%, kspar 50%,25% crbt/hem/amph. Moderate selectively pervasive amph/hem/crbt in fractures/veins/veinlets and patchy through out syn. Common red to light pink alt halos up to 5mm. CRBT veins <3cm, fg, light green-grey, massive. Gradational LC obscured by broken core. |
| PGH-18-09 | 32.25 | 52.9 | SYE-BX | Fenite / Carbonatite Breccia | Moderate to strong fenitization of syenite, local weakly altered syenite but dominantly strongly fenitized with up to 70% amph/chl/bt. Alteration is selectively pervasive to pervasive in irregularly shaped patches. In strongly altered zones common to have numerous crbt veins <5mm sub-parallel to one another at various angle TCA. Local crbt veins and breccia zones up to 2m 38.4-40.6: CRBT BX; mod-str fen, clasts locally have diffuse boundaries, sub-rounded to sub-angular, <10cm. CRBT infill is light pink-purple to grey-green, fg, massive, trace diss py, wispy bands/rimmed by blue amph, diss hem. 43-52.9: CRBT BX; zones of massive crbt up to 1m locally, dominantly breccia. clasts are <35cm, and of fenite or mod-str alt syn, clasts are sub-angular to sub rounded, locally with diffuse boundaries and fractured (if surrounded dom by crbt), strong hem alteration locally. CRBT light green-grey to pink with local light purple-cream, fg, massive, commonly rimmed by blue amph, diss hem, trace dis py, local wispy bands/masses <1cm in width of light green-red-brown commonly sub-parallel to contact or clasts. LC is irregular/brecciated |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|-------------------------------|--|
| PGH-18-09 | 52.9 | 57.5 | SYE | Syenite | Med red, weak-mod selectively pervasive chl/amph +/- crbt. Weakly fractured with infill of crbt +/- hem/amph, fluorite, increasing downhole. Fractures are irregular and <1cm. |
| PGH-18-09 | 57.5 | 63.53 | SYE-BX | Syenite Breccia | Med red, selectively pervasive hem/amph/crbt alt, crbt infill, intensity varies from weak to moderate, clasts up to 10cm, sub-angular to sub-rounded, within crbt clasts have diffuse boundaries and are rimmed up to 5mm with vfg blue sodic amph(?) with masses of black fg metallic mineral (pyrochlore?) up to 2mm. CRBT; light grey-green to light purple-pink, fg, wispy bands of blue to red-brown from 1-5mm, commonly sub parallel to contact/clast boundary. Locally massive CRBT up to 0.5m. trace diss py, diss hem. |
| PGH-18-09 | 63.53 | 65.45 | FZ | Fault Zone / Breccia | Dark grey to pink-red with local lime green, mod ep alt, angular fragments/clasts of syn and crbt <4cm with rock flour infill, fault breccia, locally mod clay alt. moving down hole becomes more rock fill dominated with smaller clasts that are more rounded at greater spacing and strongly clay altered at LC. |
| PGH-18-09 | 65.45 | 80.43 | GRAN | Granite / Fenite | Med red to blue-green, mg-cg up to 5mm, locally, locally >15% qtz, mod-str selectively pervasive chl/amph +/- carb alt. bt abundance from 5-15%, local CRBT veins up to 22cm commonly <5cm, at moderate angles TCA. CRBT; light green-grey to light purple-mauve, fg, massive, diss hem, wispy ap cumulated up to 5mm (locally). |
| PGH-18-09 | 80.43 | 81 | CRBT | Carbonatite | Light pink-cream to opaque, fg, massive, local clasts of gran up to 4cm with diffuse boundaries, sub rounded, Si>Calc > DOL, wispy mauve bands up to 1cm (white in UV ap?) locally having appearance of a fold hinge. Trace fg diss black metallic mineral. Trace diss hem, trace diss py. UC @ 65/50 |
| PGH-18-09 | 81 | 87.1 | GRAN | Granite / Fenite | Med red-pink locally green-grey to blue, mg with local cg sections, mod-str selectively pervasive chl/amph alt replacing bt(?). qtz locally <15%, crbt veins /bx up to 15cm, commonly <2cm and at moderate to low angles TCA. CRBT; light grey to pink-purple, partially rimmed by blue sodic amph <3mm along clast boundaries and contacts, trace diss hem, clasts and contacts have diffuse boundaries, trace diss py. |
| PGH-18-09 | 87.1 | 91.85 | GRAN | Granite | Med red-pink, fg-locally cg, jointed rock mass, qtz up to 1cm, qtz <20%, kspar 60%, 10% plag, 10% biot. Fractures/veinlets at mod angles TCA, light pink alt halos <3mm, locally filled with blue amph/crbt +/- hem, weakly selectively pervasive chl/amph. |
| PGH-18-09 | 91.85 | 97.15 | SYE-BX | Granite + Carbonatite Breccia | 40% CRBT/BX, 60% GRAN GRAN; med red-pink to light orange, mg, qtz 15%, kspar 60%, plag 10%, bt 10%. Moderate patchy hem alt, clasts of gran up to 10cm, angular to sub rounded, diffuse boundaries. CRBT; light purple to light green, fg, massive, wispy bands of red-brown <2mm, bands sub-parallel to contacts / clast boundaries, light green fg crbt rimming clasts <5mm, diss hem, fg black metallic mineral (pyrochlore) |
| PGH-18-09 | 97.15 | 98 | SYE | Fenite | Selectively pervasive chl/amph/bt up to 55%, boundaries are gradational, fractures/veins <5mm amph/crbt, |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------------|--|
| PGH-18-09 | 98 | 104.8 | GRAN | Granite / Carbonatite | Qtz 15-20%, kspar 50%, plag 10%, bt 10%, amph/chl 10%. Fractures/veinlets with light pink alt halos 3mm filled with amph/crbt +/- hem. 100.36-101.41: CRBT; light grey-purple to light green-cream, fg, massive, Dol>Calc, diss hem, diffuse masses of kspar <4mm, trace diss py. 102.60-103: purple-grey to light orange, fg, massive, wispy bands of brown-red <5mm, trace diss py |
| PGH-18-09 | 104.8 | 106.85 | GRAN | Fenite / Granite | Chl/amph/bt 55%, fg-cg gran <1cm, patches of cg gran up to 10cm, with selectively pervasive blue sodic amph, fractures/veinlets of crbt sub-angular to sub-rounded, with crbt fg fill. |
| PGH-18-09 | 106.85 | 112 | GRAN | Granite | Qtz 20%, kspar 50%, plag 15%, 5% bt, 10% amph/crbt, fg-mg, plag xtals rimmed by pink kspar, weak-mod selectively pervasive amph/chl alt, fractures/veins of crbt <5mm at low-mod angles TCA. CRBT light grey-cream to light purple, rimmed by blue amph, diss hem. |
| PGH-18-09 | 112 | 116.78 | CRBT | Carbonatite | Light grey-cream to light purple-blue, massive, fg, zones of alkali clasts up to 30cm, angular to sub rounded, locally mod-str clay altered (light green-orange), diss fg kspar clasts <3mm with diffuse boundaries, diss hem, patchy trace fluorite, trace diss py, local blue-grey bands with fg diss steel blue metallic mineral, within blue-grey bands fluorite along fractures. Locally vfg light orange-red mineral rimming vugs <3mm. |
| PGH-18-09 | 116.78 | 139 | CRBT-BX | Fenite Breccia / Carbonatite | Green-blue to red, mod-completely fenitized alkali feldspathic rock, locally intensely brecciated with crbt veins at multiple orientations from perpendicular to sub parallel TCA, dominant sets @ ~50 & @~ 15 dTCA. 70% chl/amph/bt with local patches of cg remnant alkali feldspathic rock (kspar with mod-str selectively pervasive chl/amph/bt). CRBT; light purple-mauve to light green-grey-cream, fg, massive, with wispy band sod mauve up to 5mm and masses up to 4cm locally, sub-parallel to contacts/clasts with fg diss black mineral (pych?), vfg diss light orange mineral, diffuse kspar clasts throughout crbt <3mm, trace diss hem, trace diss euhedral py up to 3mm, clasts/contacts have diffuse boundaries, Dol>Calc, |
| PGH-18-09 | 139.1 | 139.5 | MDYKE | Mafic Dyke | Green-grey, fg, trace diss py, non-magnetic, diss hem, mod carb alt and infill of amygdales(?) up to 1cm LC @ 75/115 |
| PGH-18-09 | 139.5 | 141 | SYE | Syenite | Med red-pink, patchy weak-mod chl/amph alt replacing bt(?), Qtz <10%, kspar 60%, plag 10%, veins up to 1cm with amph/crbt fill at moderate angle TCA, light pink-cream alt halos <5mm. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|------------------------------|--|
| PGH-18-09 | 141 | 149.7 | CRBT-BX | Carbonatite / Fenite Breccia | <p>141-142.08: CRBT BX; clasts of alt syn at top, lower clasts of Fenite (60% blue sodic amph, chl, bt). Upper clasts are sub-rounded with diffuse boundaries, alt to blue-green with locally red (hem) cores. LC clasts sub-angular to elongate rectangles, weakly fractured and <15cm. CRBT; light purple-green to cream-grey, mottled, ap cum up to 2cm, diffuse, diss hem, wispy bands of light green-brown.</p> <p>142.08-143.26: CRBT; light purple-green to olive brown, massive, fg, wispy bands locally, local clasts of syn <5cm diffuse boundaries, fractured, wispy bands of red-olive brown ap cum(?) <5mm. diss red-pink kspar(?) 2%</p> <p>143.26-143.65: BX CRBT; elongate clasts of syn <5cm, from completely altered to black rxn rims <5mm, clasts are sub-angular to sub-rounded, diffuse boundaries, CRBT infill light green-pink to blue, fg, wispy bands of blue-green surrounding clasts.</p> <p>146.65-143.85: carb alt MD?, green-grey, chl/bt/pyx(?) non-magnetic, weak carb/chl altered.</p> <p>143.85-145.9: CRBT BX; clasts of syn up to 10cm, sub-rounded to sub angular, diffuse boundaries, locally smaller clasts <4cm completely altered. CRBT fill light green-grey with locally 25% ap as wispy bands of olive brown-mauve. Clasts are lower contact are completely altered. LC brecciated.</p> <p>145.9-149.7: CRBT 25%, FEN 75% ; FEN is strongly to completely alt to amph/chl/bt blue-green with "bands" of cg syn. moderately fractured ~ perp TCA more intense near crbt contacts. CRBT; light grey-green to olive brown, light purple, local 5% fluorite, , diss fg hem,</p> |
| PGH-18-09 | 149.7 | 161.1 | SYE-BX | Quartz Syenite + Breccia | <p>BX 155.20-157: clasts of syn <12cm, smaller than 5cm clasts are strongly to completely altered, sub-rounded to sub angular, diffuse boundaries, CRBT; light grey-green-purple-pink, mottled, wispy mauve bands <2mm rimming clasts/contacts.</p> <p>Med red-pink with moderate selectively pervasive chl/amph/carb, fractures/ veins <2cm with blue sodic amph/crbt fill. Local zones of massive crbt <35cm.</p> <p>159.5-160.15: UC is brecciated, clasts <10cm, sub-angular, with local rims of black bt(?), crbt light pink-purple, massive, LC with wispy bands of light green-olive brown, trace diss hem.</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|------------------------------|--|
| PGH-18-09 | 161.1 | 172.38 | SYE-BX | Fenite Breccia / Carbonatite | Dominated by Fenite and fenite clasts, locally remnant kspar (Syenite pre alt'n), clasts are <15cm, angular to sub rounded, locally with diffuse boundaries, clasts are mosaic breccias 161.32-163.20: CRBT BX; light purple-mauve, mottled with wispy bands of mauve <5mm sub-parallel to contacts/clasts, local masses up to 3cm. trace diss, py/hem. Clasts are completely altered (bt/chl/amph), clasts moderately fractured with diffuse boundaries. 167.15-167.75: olive brown, fg, clasts from 1-5mm, sub-rounded, alternating 'beds/bands' of diff grain size, clasts are red-cream (syn?). 169.05-169.72: CRBT; light purple-pink, cg, massive, local clasts of strongly hematite altered syn(?), ap cumulates up to 5mm, trace diss hem/py. 170.20-171.50: crbt bx; light green-blue to light pink-purple, clasts rimmed by olive brown-green and massive crbt more blue-green on colour. wispy bands/masses of mauve-green up to 5mm, patchy fluorite, clasts strongly-completely alt to amph/bt. |
| PGH-18-09 | 172.38 | 175.75 | CRBT | Carbonatite | Cream to like pink, massive, patchy fg blue sodic amph, trace diss py, fractures filled with blue sodic amph <2mm, local masses of irregularly shaped hem rich alt clasts(?). |
| PGH-18-09 | 175.75 | 177.45 | CRBT-BX | Carbonatite Breccia | Med blue-green to pink green, more strongly altered clasts are blue-black. strongly fenitized syenite with sub angular to sub-rounded clasts up to 30cm with multiple parallel fractures with carb infill. CRBT; light purple-green to cream-grey, diss hem, blue sodic amph fill, trace diss py 177-177.45: CRBT; cream with patchy purple. mottled, trace diss hem, ap cumulates up to 7mm, trace diss py. |
| PGH-18-09 | 177.45 | 180.45 | MDYKE/CRBT | Mafic Dyke / Carbonatite | Green-grey, porphyritic, xtals <2mm, bt/chl/carb/pyx?, trace diss py, locally brecciated MD /SYN clasts, and crbt veins <10cm. Patchy hem alt. CRBT; light grey-cream to light pink-purple, massive, fg, hem LC @ 40/030 |
| PGH-18-09 | 180.45 | 180.85 | CRBT | Carbonatite | Light pink to cream-green, masses and wispy bands of blue-green up to 5cm ap cumulates 10%, trace diss py, trace diss hem, irregularly shaped masses of red fg hem(?). LC @ 40/030 |
| PGH-18-09 | 180.85 | 182.1 | SYE | Syenite | Med red, mg, qtz <15%, kspar 60%, plag 10%, chl/amph/carb 15%. Jointed with amph fill <1mm at mod angles TCA. Brecciated LC. |
| PGH-18-09 | 182.1 | 184.5 | MDYKE/CRBT | Mafic Dyke / Carbonatite | Green-grey to mauve, mottled, porphyritic, xtals of bt <4mm, selectively pervasive chl alt, mod patchy hem alt, locally carb infill in vesicles?. LC diffuse @ 65/40 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------|--|
| PGH-18-09 | 184.5 | 187.83 | CRBT | Carbonatite | 184.5-186.10: light grey-green, vfg light orange-cream mineral diss, dol>calc, trace diss hem, trace diss py, near UC light green-red ap cum 'bands' up to 1cm. Local zones of MD that carb alt as described above. 186.10-186.50: light purple-green with diss red, am cum as wispy bands and masses up to 5mm 15%. 186.5-187.10: Cg oxidized/weakly vuggy, brecciated crbt with hem infill, vfg light orange mineral diss. 187.10-187.83: light purple -grey to light green, fg, massive, LC 20cm cream to light green, cg, with diss hem, trace diss py. |
| PGH-18-09 | 187.83 | 203.25 | MDYKE | Mafic Dyke | Green-grey, carbonate altered mafic dyke, magnetic, porphyritic, bt/chl/pyx <5mm, bt 30%, diopside 15%, plag 30%, mgt 5%, carb 20%. carb veins <1cm locally up to 5cm, trace diss py, Fractures commonly filled with fibrous blue amph coating. crbt veining increasing in frequency moving towards LC and becoming mottled breccia. |
| PGH-18-09 | 203.25 | 204.67 | SYE-BX | Breccia / Syenite | 203.25-204: crbt bx with highly altered clasts of MD & Syn up to 15cm, sub rounded to sub-angular, diffuse boundaries, rxn rims from 3-15mm. CRBT fill light green-grey to purple-mauve w/ wispy bands <2mm sub parallel to clast boundaries. 204-204.67: SYN; med red-pink, mod selectively pervasive amph/chl/carb alt, fractures at low and mod angles TCA ~ 3/5cm filled with amph/crbt <5mm. |
| PGH-18-09 | 204.67 | 208.25 | CRBT | Carbonatite | Light purple-green, moderately vuggy near UC up to 1cm vugs filled with hem/pyrochlore up to 7mm, light green ap cumulates up to 2cm across, locally weakly vuggy with diss py/fg black mineral (pyrochlore?), ap cum are sub rounded blobby masses, irregular shaped masses of hem/carb/pych?/amph up to 10cm wide.. Locally trace diss galena(?) <2mm along fracture. LC @ 45/305, planar closed |
| PGH-18-09 | 208.25 | 210.25 | QTZ-SYE | Quartz Syenite | Med red-light pink, mg, patchy chl alt, selectively pervasive amph & fracture infill, veinlets and fractures <7mm with light pink-blue alt halos up to 1cm. 15% qtz, kspar 60%, plag 10%, 15% chl/amph/carb. LC diffuse @ 60/000. |
| PGH-18-09 | 210.25 | 212 | CRBT | Carbonatite | Light purple-pink to cream, massive, UC diffuse with 'bands' parallel to contact from syn to crbt ; light pink, green, beige all are ~3mm wide and undulating. Fg diss trace py, hem along fractures and trace diss. 211.5-212: mottled with local bands of olive brown crbt + orange cream vfg mineral. ap cum up to 1cm 20%, diss hem, traced diss py, LC is diffuse and perpendicular TCA. |
| PGH-18-09 | 212 | 217.15 | QTZ-SYE | Quartz Syenite + Breccia | 35% BX 65% QTZ SYN QTZ SYN; med red-light pink, mod-str selectively pervasive chl/amph/carb alt. Mg, qtz 15%, kspar 60%, plag 10%, 15% chl/amph/carb. Crbt veins/bx commonly rimmed by blue fg sodic amph. CRBT; light grey-cream to green-blue, fg, weakly banded sub parallel to contacts, fg, blue amph(?), diss hem, local ap cum <3mm. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---------------------|--|
| PGH-18-09 | 217.15 | 225.23 | QTZ-SYE | Quartz Syenite | Med red-light pink to weak grey-blue. Fg-mg, ,qtz 15%, kspar 60%, plag 5%, 20% bt/chl/amph. Fractures/veinlets <4mm with blue amph fill and light pink halos. Selectively pervasive mod chl/amph/carb alt. Local crbt up to 30cm. 221.72-222.10: light green to grey-blue, fg, massive, dis hem. 223.70-224: CRBT, massive, cream, rimmed by light blue-green ap cum as wispy bands up to 3cm wide, also bands od red with hem. traced diss py. LC brecciated |
| PGH-18-09 | 225.23 | 227.15 | CRBT | Carbonatite | Light green to light pink-purple to cream, massive, cross cutting veins <4cm olive brown, wispy ap cumulates <2cm of light blue-brown. Rimmed by bands of light green-blue to pink <4mm. Trace diss py |
| PGH-18-09 | 227.15 | 234.5 | QTZ-SYE | Quartz Syenite | Light brown-grey to pink-red, mg-cg locally, qtz 15%, plag 15%, kspar 50%, 20% chl/amph. Fractures/veins of blue amph <8mm at mod angles TCA. LC planar. |
| PGH-18-09 | 234.5 | 239 | CRBT-BX | Carbonatite Breccia | Qtz clasts up to 15cm,sub-rounded to sub-angular, rxn rims up to 7mm of blue-black, cores of pink-red with selectively pervasive blue sodic amph. CRBT; light pink-blue-purple to light green, fg, wispy bands of brown-green <5mm subparallel to clasts and contacts. ap cum up to 5mm. Dol>Calc, local vfg bands of light orange-pink mineral. Last 0.5m light green carb alt MD? |
| PGH-18-09 | 239 | 243.67 | GRAN | Granite | Qtz 30%, kspar 50%, bt, 5%, chl/amph 15%. Light pink-grey, mg, minor fractures with light pink halos <3mm. Larger near crbt veins. LC planar @ 70/110 |
| PGH-18-09 | 243.67 | 246.15 | CRBT | Carbonatite | Cream to light pink-purple with patchy blue, bleu is fg sodic amph as masses surrounding calc xtals. Local ap cum along contacts up to 1.5cm, trace diss hem, local masses of py/po up to 7cm. |
| PGH-18-09 | 246.15 | 249.4 | QTZ-SYE | Quartz Syenite | 244.9-246: fenite, 70% chl/amph/bt/pyx QTZ SYN; med red to light pink, selectively pervasive chl/amph/carb, fractures have light pink-red halos and are filled with carb/amph up to 3mm. Qtz 15-20%, kspar 60%, plag 10%, 15% chl/amph/bt. |
| PGH-18-09 | 249.4 | 252.5 | CRBT-BX | Carbonatite Breccia | UC @ ~10/075 moving down hole becomes sub parallel TCA, alkali clasts are from 1-15cm, either cream-pink in colour (clasts <5cm) or zoned (clasts >5cm, pink rims from 3-15mm, black-grey chl/bt (alt?) with trace diss py, cores of light pink-red qtz syn). Rxn rim along contacts is light pink and up to 3cm, within wall rock selectively pervasive carb/amph alt & rimming rxn zone <1cm. CRBT; brown-mauve to light purple-green to grey, wispy masses of mauve-brown-orange up to 5cm across following sub-parallel to contacts and clasts. vfg 'fiamme' of ap <2mm in width contained within 'masses' of darker material. Local massive qtz up to 2cm, Cal>Dol 15% Si, trace diss hem, trace diss py, trace fg black mineral anhedral masses <5mm, trace patchy fluorite. LC bx and irregular |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|---|---|
| PGH-18-09 | 252.5 | 256.7 | SYE-BX | Quartz Syenite + Carbonatite Breccia | 45% QTZ SYN, 55% CRBT BX Alternating zones of alkali/crbt bx up to 60cm & 80cm respectively. QTZ SYN; red light pink, mg, weak-mod selectively pervasive amph (blue) alt & infilling fractures/veins w/ crbt. Qtz 15%, kspar 60%, bt 10%, amph 15%. CRBT; light grey to light pink-purple, fg, locally weakly banded, clasts of qtz within crbt <7cm, completely alt to light pink pervasive carb, wispy bands and masses of ap up to 2cm, masses concentrating near contacts and surrounding clasts. Contacts are planar to brecciated. |
| PGH-18-09 | 256.7 | 263.25 | GRAN | Granite | Qtz >20%, kspar 60%, amph/chl/bt 15%,mg, mod-weak selectively pervasive chl/amph alt, med red to light pink, fractures/veins subparallel ~50dTCA filled with amph+/- crbt, hem (mauve) <4mm, locally crbt dyke 20cm. Local <2cm MD, weakly joints rock mass LC @ 60/290 |
| PGH-18-09 | 263.25 | 263.75 | MDYKE/CRBT | Mafic Dyke / Carbonatite | Green-grey, aphanitic, non-magnetic, amygdales <5mm filled with chl/crbt, rimmed by crbt & 1cm xc crbt dyke. Contact btw MD/CRBT sharp with local clasts of MD. UC @ 60/290, LC @ 25/280 |
| PGH-18-09 | 263.75 | 273.2 | MIX ZONE | Mixed zone of carbonate altered mafic dyke, alkali feldspathic, and carbonatite breccia | QTZ SYN 50%, CRBT BX 40%, 10% MD qtz syn with mod selectively pervasive amph/carb +/- hem alt, qtz 15%, plag 10%, 60% kspar, 15% amph/carb, mg. CRBT BX: light green-grey to pink-purple to cream, fg, wispy bands/masses of mauve ap cum up to 5cm, commonly in 'bands' sub-parallel to contacts and clasts, bands are discontinuous and <1cm wide, silicio-calc carbonatite, trace diss hem, traced sis py. MD is surrounded by crbt and crbt altered (crtb later than MD). Crbt contacts are cnlr rimmed by blue fg amph and light pink alt halos <1cm. MD: light green-grey, strong carb alt along fractures sub-parallel to contacts with masses of chl <3mm. LC @ 50/000 271.18-127.8: CRBT; cream grading into light pink, cg, massive, trace diss py, masses of ap cum up to 3cm. 272.57-273.2: CRBT; cream, cg, massive, fg wispy blue amph, trace diss py. |
| PGH-18-09 | 273.2 | 276.95 | GRAN | Granite | Qtz 30%, kspar 40%, plag 15%, 15% amph/chl/bt, mg, fractures filled with amph <2mm at ~45 dTCA. Mod selectively pervasive chl/amph. LC @ 40/340 |
| PGH-18-09 | 276.95 | 292.85 | MDYKE | Mafic Dyke | Chilled margin, magnetic, green-grey, fg, chl along fractures, 25% plag, jointed. Mag sus 23.8 LC @ 25/340 |
| PGH-18-09 | 292.85 | 297.35 | CRBT | Carbonatite | Light blue to cream, cg, massive with wispy bands of blue-green, trace diss py, patches of dark blue, fg, with bt, trace py/po and magnetite. Masses/wispy bands of ap cum +/- mgt, masses up to 3cm, 'bands' up to 4cm. LC irregular 50/000 |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------|--|
| PGH-18-09 | 297.35 | 300.2 | GRAN | Granite | Qtz 30%, kspar 30%, plag 30%, chl/amph 10%, fg-cg up to 1.5cm, light brown to cream-pink, moderately fractured with infills of amph/crbt <5mm. LC @25/150 |
| PGH-18-09 | 300.2 | 303.95 | SYE-BX | Granite Breccia | Blobby clasts of gran described above up to 15cm, clasts highly fractured with diffuse boundaries, CRBT fill <3cm, fractures are locally numerous 2 per cm, at high angles ~70dTCA. Strongly selectively pervasive amph alt. LC sharp @ 50/100 |
| PGH-18-09 | 303.95 | 305.55 | MDYKE/CRBT | Mafic Dyke / Carbonatite | Forest green-grey with mottled chl/carb alt, fg, amygdales <5mm filled with chl/carb, magnetic bands of black <4mm, elongate pyx up to 5mm, trace diss py, at UC cross cutting CRBT dyke. Mottled near LC with ap cumulates up to 1cm UC @ 50/100, LC @ 30/180 |
| PGH-18-09 | 305.55 | 313.2 | QTZ-SYE | Quartz Syenite | Light pink-red, fg-cg <5mm, selectively pervasive chl/amph/bt alt, qtz 15%, kspar 50%, plag 15%, 20% chl/amph, cross cutting crbt dyke of olive brown ~30 dTCA. CRBT; olive brown, fg, massive, to light pink-purple, diss hem, wispy bands of ap cum local qtz near contacts, light orange mineral in wispy bands. LC @ 20/235 |
| PGH-18-09 | 313.2 | 317 | CRBT-BX | Carbonatite Breccia | CRBT 50%, BX 50% CRBT; light pink-purple to light green-grey, massive, diss hem, wispy bands of olive brown-red, trace diss py/po locally SMS infill in breccia, surrounding clasts light green with wispy brn-red ap cum, Calc>Dol BX; syn clasts <20cm sub-rounded to sub-angular with rxn rims <5mm an selectively pervasive alt cores amph/bt. patchy trace fluorite, |
| PGH-18-09 | 317 | 320.6 | SYE-BX | Quartz Syenite Breccia | Med red-light pink, fg - cg up to 7mm, mod selectively pervasive chl/amph/crbt alt and infill of fractures/veins up to 3cm, with light pink alt halos. Contacts are diffuse becoming more so where veins are larger. Strong hem alt moving towards LC. Patchy strong chl alt'n. LC irregular. |
| PGH-18-09 | 320.6 | 325.3 | CRBT-BX | Carbonatite Breccia | BX 20%, CRBT 80% BX diffuse, blobby clasts of strongly to completely altered syn, up to 20cm, sub-angular to sub-rounded, highly fractured with strongly chl alt cores with pink rxn rims. CRBT; light purple-grey to light pink-blue-green, massive to locally weakly banded, fg, weak bands of blue containing sodic amph +/- bt, ap (beige, H<5, sub angular, <4mm), py, hem. Wispy light green-brown bands up to 7mm of ap cum. Trace diss py, trace diss hem. |
| PGH-18-09 | 325.3 | 332.5 | QTZ-SYE | Quartz Syenite | Qtz 15-20%, kspar 50%, plag 15%, bt/chl/amph 15%, fg-cg up to 8mm, med red-pink to green-blue, moderate selectively pervasive fenitization (chl/amph) alt. Veins of crbt at mod angle TCA <2cm, light grey-brown, fg massive with diss hem and fg sodic amph. LC planar @ 50/55. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|-------|-------|------------|-------------------------------|---|
| PGH-18-09 | 332.5 | 335.3 | CRBT | Carbonatite | Light pink-purple, massive, cg, trace diss hem, wispy bands of olive brown dol rich crbt cross cutting as veins up to 8cm locally vuggy with hem/pych(?) infill. Wisps of red-brown hem/ap cum <3mm in width, trace patchy fluorite, local clasts of light brown weakly vuggy <2mm vuggy vfg crbt, clasts are sub-rounded to sub-angular. bands of ap cum/hem rimming clasts/contacts <7mm. |
| PGH-18-09 | 335.3 | 340.2 | SYE-BX | Syenite Breccia + Carbonatite | Clasts <20cm, angular to sub-rounded, clast moderately fenitized with selectively pervasive chl/amph alt, locally clasts have diffuse boundaries. CRBT fill light grey-blue to light pink, clasts are highly fractured, fill with fg light blue amph. Trace diss py, trace diss hem. |
| PGH-18-09 | 340.2 | 341.2 | CRBT | Carbonatite | Mauve to light green-grey, fg, massive, trace diss hem, 2% fg diss black mineral (pyrochlore), weakly vuggy, masses of chl <3cm, trace diss py. LC @ 55-310 |
| PGH-18-09 | 341.2 | 345.6 | QTZ-SYE | Quartz Syenite / Granite | 15-25% qtz, mod fenitized (selectively pervasive chl/amph/crbt), fractures/veins <4mm with blue sodic amph fill +/- crbt. Med red-pink to blue-green, mg, Crbt veins have red-pink alt halos <5mm. Increase in frequency/size of Crbt veining moving towards LC with veins up to 1cm. |
| PGH-18-09 | 345.6 | 347 | CRBT | Carbonatite | CCTs at low angle TCA ~10-15. light brown, pink-purple to cream, trace diss hem, trace fg anhedral masses of py up to 2cm concentrating near clasts and rimming LC. LC @ 15/180, undulating, closed |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-------------------------------|--|
| PGH-18-09 | 347 | 368.6 | GRAN | Granite | <p>Light grey with patchy med red-pink, opaque to light grey kspar 50%, qtz 25%, 5% plag, 20% bt/chl/amph. Veins filled with blue fg sodic amph have light pink potassic alteration halos, this alteration is also visible along fractures and increases in intensity near CRBT veins/dykes. mg-cg locally pegmatitic <2cm xtals. CRBT veins and commonly rimmed by chl/amph (blue-green) rims and smaller veins. 352.14-352.40: CRBT; light pink to cream purple, cg, massive, cg band 2cm wide near LC (blue amph?, hem, crbt). ap cum up to 1.5cm near UC/LC. Wispy discontinuous bands of altered gran boarding contacts. LC @ 40/080</p> <p>352.75: FZ; healed, small scale normal faulting <1cm visible is crbt vein. brittle deformation of vein with plane ~ @ 35/275</p> <p>353.07-354.24: CRBT; brecciated UC @ 15/125, clasts of altered gran up to 5cm, sub-angular to sub rounded, clasts <1cm are commonly completely altered to biot. CRBT is light pink-cream to light green-blue, massive, trace diss py, local wispy bands of blue-green to olive brown amph/ap/py <6mm. LC rimmed by massive chl/amph</p> <p>359.5-360.15: Mafic Dyke; black, magnetic, aphanitic, sharp contacts, chilled margin, amygdales filled with carb/chl <3mm. CU @ ~55/190 (irregular), LC @ 50/140</p> <p>364.3-365: CRBT BX; pink-red alt mg granite, CRBT; light pink-purple, massive, ap cum up to 1cm near contacts, rimmed by blue amph/mauve hem.</p> |
| PGH-18-09 | 368.6 | 371.9 | CRBT-BX | Carbonatite Breccia + Granite | <p>CRBT 40%, BX/GRAN 60%</p> <p>UC @ 15/085, undulating contact.</p> <p>Clasts of gran up to 40cm, commonly rimmed with blue/black and rxn rims of bt/amph, clasts <15cm are commonly completely altered with occasional unaltered cores.</p> <p>CRBT; cream to light blue-pink, lower section with wispy bands of blue amph/diss py, clasts are rimmed by light green ap cum, and wispy bands of hem/ap cumulate</p> |
| PGH-18-09 | 371.9 | 375.36 | GRAN | Granite | <p>Qtz 20-30%, kspar 40%, plag 10%, bt/amph/chl 20%. Zones of blobby breccia with crbt fill over 1m zone. Outside of this weak veining filled with crbt/amph <5mm</p> |
| PGH-18-09 | 375.36 | 380.15 | CRBT | Carbonatite | <p>Light pink to cream, with wispy bands of green-blue with amph/trace diss py/trace beige ap(?) <1mm, fg, dominantly massive, trace diss hem, rimmed by blue sodic amph.</p> <p>378.85-379.7: 5% magnetite, 10% bt, light green within zones of bt/mag, crbt cream to light pink, trace diss py</p> |
| PGH-18-09 | 380.15 | 381.93 | GRAN | Granite | <p>Med red-pink, mg, selectively pervasive chl/amph/crbt, fractures filled with amph/crbt <4mm,</p> <p>380.69-380.84: 15cm of chl/carb alt MD, non-magnetic</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|----------------------------------|---|
| PGH-18-09 | 381.93 | 383.5 | MIX_ZONE | Mafic Dyke, Carbonatite, Granite | CRBT 25%, MD 55%, 20% GRAN CRBT; light purple-cream, trace diss hem/py, light green fg ap cum(?) MD; green-grey, xtals <3mm, bt/chl/pyx(?) crbt altered, carb masses <4mm, diss py, is on either side of CRBT dyke GRAN; grey to blue-green, fenitized, mg, |
| PGH-18-09 | 383.5 | 390.6 | GRAN | Granite | Light pink -grey, 35% qtz, 50% kspar, 5% plag, 10% bt/chl/amph. Fg-mg, fractures/veins filled with chl/amph/crbt <4mm, commonly with light pink potassic(?) alt halos <4mm. LC @40/175 |
| PGH-18-09 | 390.6 | 408.2 | GRAN | Granite + Carbonatite | GRAN >> CRBT GRAN; light pink -grey, 35% qtz, 50% kspar, 5% plag, 10% bt/chl/amph. Fg-mg, fractures/veins filled with chl/amph/crbt <4mm, commonly with light pink potassic(?) alt halos <4mm. locally pegmatitic near LC up to 3cm xtals with weak-str potassic overprinting. CRBT; multiple bx zones and veins < 1m, commonly <20cm. 390.6-391.1: CRBT; cream to light pink, massive, rimmed by blue fg sodic amph, trace diss py. 391.45-391.9: CRBT; light pink to cream with blue-green wispy bands along contacts, massive, fg, 395-396: light grey-green, fg, massive, crbt(?) or intensely alt dyke(?) local diffuse clasts light green with bt xtals. 399.9-401.3: CRBT BX; light pink-olive brown, massive, with wispy bands of mauve-light orange <1cm, diss hem, mottled light green-brown. |
| PGH-18-09 | 408.2 | 413 | SYE | Fenite / Granite | Green-grey, strong to complete alteration to bt/chl/amph up to 70%, irregular patches of weakly altered fg-mg granite (grey-pink, 30% qtz, kspar 40%, 15% plag, 15% bt/chl/amph), trace diss py. |
| PGH-18-09 | 413 | 415.15 | GRAN | Granite / Fenite | Light pink-red, fg-cg up to 5mm, mod-str fenitized with selectively pervasive amph/chl. Qtz 25%, kspar 45%, plag 10%, 20% amph/chl. Moderately fractured with crbt fill <3mm moving downhole/closer to contact with crbt. Locally >50% amph/chl/bt |
| PGH-18-09 | 415.15 | 416.05 | CRBT | Carbonatite | Light purple-pink with light green, UC @ ~ 30dTCA, LC irregular and ~perpendicular TCA. Massive, trace diss py/hem, light green ap cum up to 5mm, and as wispy bands of green-brown with light orange cream vfg mineral. |
| PGH-18-09 | 416.05 | 426 | GRAN | Fenite / Granite | Irregular patches of chl/amph/bt strongly to completely altered granite. Outside of highly altered masses gran is still mod alt with selectively pervasive chl/amph/carb alteration. GRAN; light pink-red, mg-cg <2cm locally, bimodal grain size distribution, qtz 25%, kspar 40%, plag 10%, amph/chl/bt 15-60%. moderate veining/fractures filled with crbt <5cm and at mod angles TCA. LC is gradational and marked by increase in CRBT veining/bx |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|--------------------------------------|---|
| PGH-18-09 | 426 | 437.4 | SYE-BX | Carbonatite Breccia + Fenite/Granite | <p>FEN/GRAN 65%, CRBT/BX 35%</p> <p>FEN/GRAN; dominantly completely alt to chl/amph/bt with local 'cores' of clasts/zones of moderately altered granite. Strong-completely altered granite in close proximity to crbt bx. Clasts are up to 20cm, sub angular to sub-rounded, moderately fractured, and commonly completely altered. Veins/joints commonly filled with amph/crbt and have light pink to red hem alt halos.</p> <p>CRBT; light grey-cream to light blue-green, massive, wispy bands surrounding clasts/contacts, commonly rimmed by blue sodic amph</p> <p>427-428: CRBT; fg diss magnetite, crbt is blue-green to light pink, diss fg bt/mgt/diss py, light green chl(?)</p> <p>435-437.4: CRBT; light pink-cream, wispy bands/masses of light green-blue, fg, with patchy disseminated hem. commonly concentrically zoned from contact in blue amph - light green-red and red-brown, trace diss py bands are from 2-20mm</p> <p>LC @ 60/200</p> |
| PGH-18-09 | 437.4 | 441.45 | GRAN | Granite / Carbonatite | <p>GRAN 75%, CRBT 25%</p> <p>GRAN; light pink-red to orange with green-blue, fg-pegmatitic, moderately to strongly fenitized (masses and selectively pervasive chl/amph/carb), qtz 25%, kspar 45%, plag 10%, 20% chl/amph. Gran has weak potassic alt(?) light pink rimming white kspar and penetrating xtals to varying degrees. Approaching contacts with crbt is coarser grained gran and larger masses of amph/chl up to 10cm.</p> <p>439.35-440: CRBT; light grey-green to light pink, massive, stringers/diss py with euhedral xtals <3mm, running sub-parallel to contact. gran clasts within crbt and completely alt to bt/amph. contacts are diffuse and undulating UC @ 20/275, LC @15/270</p> |
| PGH-18-09 | 441.45 | 445 | GRAN | Granite / Glimmerite | <p>Alternating 'bands' (only locally are bands from 2-10cm clearly distinguishable) of mod alt gran and glimmerite (<70% bt/chl/pyx(?)). Moving downhole beyond 444m strongly pervasive glimm alt.</p> <p>green-blue to grey, gran fg-mg, patches and zones <5cm of only mod alt gran with selectively pervasive chl/amph/bt and trace diss py.</p> <p>443.25-443.5: crbt cream to light purple with wispy bands of blue sodic amph/py/hem(?) +/- ap? <8mm in width. cg,</p> <p>LC @ 75/210</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|---|
| PGH-18-09 | 445 | 459.65 | CRBT-BX | Carbonatite / Breccia | <p>445-447.67: CRBT BX; clasts of mod fenitized alt gran, <25cm clasts, sub-angular to sub-rounded with black rxn rims <2cm, and cores of grey-light pink-green. Clasts smaller than 5cm and completely contained within crbt are completely altered to black-blue-green (bt/chl/amph). 40cm of CRBT; cream to light pink with wispy bands <5mm of blue-green to olive brown with fg sodic amph +/- hem, ap cumulates, trace diss py.</p> <p>447.67-449.55: CRBT; cream to light pink-blue, cg, vfg blue sodic amph intercrystalline, wispy blue-grey bands <1cm with diss py/amph/ap? (light beige xtals <1mm), Calc>Dol, LC in irregular and marked by sharp drop in sodic amph</p> <p>449.55-451: CRBT/GRAN?; light grey-green with bt xtals <2mm and patch chl(?) possibly crbt alt section of GRAN?, non-magnetic, spheres of qtz/kspar/bt <3mm surrounded by crbt. CRBT is light purple-green, massive, diss hem,</p> <p>451-454.4: CRBT; light pink-purple, massive, with wispy bands/masses of blue-green <1cm with diss py and ap cum <1cm. locally olive brown 'bands' <2cm with diss hem and fg ap(?). Trace diss py, and increase in wispy bands near LC.</p> <p>454.4-456.1: MD/CRBT; green-grey, vfg chl and bt/pyx xtals <3mm, cross cut by crbt and carb alt, contacts are irregular to brecciated, non-magnetic, LC perpendicular TCA and undulating.</p> <p>456.1-459.65: CRBT; light pink-purple to cream, massive, with local wispy bands of blue <3cm (amph/diss py/ap?), interstitial and wispy masses throughout of green-olive brown (white under UV) ap +/- diss hem, pyrochlore <2mm (black, within masses). Near LC ap cum up to 5cm (light green masses), LC is irregular and wall rock is completely fenitized</p> |
| PGH-18-09 | 459.65 | 470.1 | CRBT-BX | Carbonatite + Fenite | <p>Blue-green, strongly to completely fenitized (sodic amph/bt/chl) with locally less altered patches of GRAN(?) mg-cg, light orange-green. Multiple zones of crbt bx and en echelon crbt veining <1cm.</p> <p>CRBT; light purple-pink to cream, massive, rimmed by light green and locally blue fg blue amph. contacts are commonly planar, and locally diffuse, diss hem, trace diss py. locally ap cum near contacts <5mm. Wispy bands/masses of red-brown<2cm (hem/ap?).</p> |
| PGH-18-09 | 470.1 | 474.6 | GRAN | Granite | Light pink-red with weak-mod selectively pervasive chl. Qtz 25%, kspar 45%, plag 15%, bt 10%, 5% chl |
| PGH-18-09 | 474.6 | 477.25 | CRBT-BX | Carbonatite Breccia | <p>Low angle undulating upper contact.</p> <p>Clasts of granite <20cm, within bx zone clasts are commonly rimmed with black-blue <7mm, locally clasts are completely altered. Clasts diminishing in size moving downhole into massive crbt.</p> <p>CRBT; light grey-green, mottled, diss hem, trace diss py, fg diss ap, Calc> Dol/Si, vfg light orange mineral, local fg black <1mm pyrochlore(?)</p> |
| PGH-18-09 | 477.25 | 484 | GRAN | Carbonatite / Granite | <p>CRBT 30%, GRAN 70%</p> <p>GRAN; light pink, mg, <2mm fractures filled with crbt/amph, qtz 25% kspar 50%, 15% plag, chl/amph 10%</p> <p>CRBT; light purple-pink to light green-cream, massive, locally wispy bands <5mm, diss hem, local patches with bt/amph, trace diss py and masses up to 5mm near bx LC</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|-----------|--------|--------|------------|-----------------------|--|
| PGH-18-09 | 484 | 487.15 | GRAN | Fenite / Granite | Very weakly foliated with mod-str selectively pervasive bt/chl/amph with zones of light grey mg granite. Fractures/veins with light pink-red alt halos <5mm. Bt/chl/amph up to 35%. Local crbt up to 25cm; light purple to blue, cg, massive, diss hem UC of CRBT 40/0353 |
| PGH-18-09 | 487.15 | 495 | CRBT | Carbonatite + Breccia | Cream to light purple-pink with blue-green wispy masses and bands, fibrous masses are rimming clasts and are up to 4cm and contain amph xtals <4mm, diss fg py, vfg ap(?) . Clasts of gran up to 30cm with bt rxn rims <7mm, sub-angular to sub-rounded. Local trace qtz within bands, trace fg <1mm metallic blue-black mineral (pyrochlore?) 493.6-495: altered MD, light grey-green with xtals of bt <2mm, with sub-rounded spheres of qtz/kspar <3mm, non-magnetic. |
| PGH-18-09 | 495 | 503.7 | GRAN | Granite | Light pink-red, selectively pervasive chl/amph/crbt, mg-locally pegmatitic, fractures/veinlets filled with chl/amph/crbt <4mm, qtz 25%, kspar 45%, plag 10%, 20% bt/chl/amph. 500.20-501.35: CRBT; light purple to purple to cream, zoning at contacts, light grey-blue outer (sodic amph) - beige to green (dol) - wispy red-pink with ap masses <4mm. LC at ~10dtca |
| PGH-18-09 | 503.7 | 505.56 | CRBT | Carbonatite | Light purple-pink to light green, massive, wispy masses/bands of light green-brown <1cm with diss hem/ap, bands of blue vfg sodic amph <1cm, trace diss py/hem |
| PGH-18-09 | 505.56 | 510 | GRAN | Granite / Fenite | Light pink, mg-cg, mod to strongly altered to amph/chl with veins/fractures <1cm filled with crbt/amph with light pink alt halos <5mm. Qtz 25%, kspar 45%, plag 10%, 20% amph/chl. Locally CRBT veins <15cm; cream to light pink with patchy blue, massive. |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|-------|------|-----------|----------|-----------|---------------|---|
| PGH-18-09 | 11.35 | JNT | 40 | 35 | | JNT in alkali | undulating, rough, fe-ox chl fill <3mm |
| PGH-18-09 | 11.68 | JNT | 50 | 95 | | JNT in alkali | planar, slightly rough, Fe-Ox |
| PGH-18-09 | 11.75 | CT | 60 | 140 | | UC CRBT | planar, slightly rough, weak Fe-ox |
| PGH-18-09 | 12.58 | VN | 60 | 155 | | CRBT VN | planar, moderatley weatherd, slightly rough |
| PGH-18-09 | 13.77 | JNT | 60 | 240 | | JNT in alkali | planar, slightly rough, partial fill chl <1mm |
| PGH-18-09 | 16.35 | CT | 30 | 110 | | LC CRBT | planar, closed |
| PGH-18-09 | 17.45 | CT | 65 | 120 | | UC CRBT | planar, slightly rough, slightly weathered, fe-ox, crbt fill <2mm |
| PGH-18-09 | 22.4 | JNT | 60 | 130 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 42.8 | JNT | 45 | 220 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 43 | CT | 55 | 80 | | UC CRBT | planar, closed |
| PGH-18-09 | 65.5 | CT | 45 | 295 | | LC FZ BX | planar, closed |
| PGH-18-09 | 66.63 | JNT | 60 | 320 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 67.03 | JNT | 60 | 300 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 67.35 | JNT | 50 | 255 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 68.1 | CT | 45 | 330 | | LC CRBT VN | planar, closed |
| PGH-18-09 | 68.32 | JNT | 50 | 250 | | JNT in alkali | stepped, rough, no fill |
| PGH-18-09 | 68.62 | JNT | 50 | 230 | | JNT in alkali | planar, slightly rough, wk staining no fill |
| PGH-18-09 | 69.1 | JNT | 50 | 235 | | JNT in alkali | planar, slightly rough, crb/chl fill <1mm, minor staining |
| PGH-18-09 | 69.7 | JNT | 45 | 130 | | JNT in alkali | planar, slightly rough, no fill |
| PGH-18-09 | 70.4 | JNT | 50 | 220 | | JNT in alkali | planar, slightly rough, no fill |
| PGH-18-09 | 71.18 | JNT | 45 | 220 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 71.45 | JNT | 30 | 90 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 71.55 | JNT | 45 | 250 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 72.25 | JNT | 60 | 230 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 72.48 | JNT | 55 | 230 | | JNT in alkali | planar, slightly rough, cbr/chl fill <1mm |
| PGH-18-09 | 73.45 | JNT | 50 | 200 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 75.57 | JNT | 40 | 240 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 76.4 | JNT | 35 | 225 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 77.26 | JNT | 55 | 130 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 80.05 | JNT | 30 | 85 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 82.4 | JNT | 75 | 120 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 83.8 | JNT | 50 | 75 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 85 | CT | 50 | 275 | | UC CRBT | planar, closed |
| PGH-18-09 | 89.5 | JNT | 40 | 160 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 90.25 | JNT | 55 | 170 | | JNT in alkali | curved, slightly rough, no fill |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------|---|
| PGH-18-09 | 90.48 | JNT | 70 | 170 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 90.98 | JNT | 70 | 260 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 91.25 | JNT | 25 | 315 | | JNT in alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-09 | 91.5 | JNT | 55 | 165 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 91.85 | CT | 30 | 250 | | UC CRBT | planar, rough, amph fill <1mm |
| PGH-18-09 | 96.75 | JNT | 30 | 320 | 80 | JNT in alkali | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 97 | CT | 50 | 310 | 80 | CCT w/ CRBT | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 97.15 | JNT | 30 | 320 | | JNT in alkali | undulating, slightly rough, chl fill <1mm |
| PGH-18-09 | 99.5 | JNT | 25 | 210 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 100.36 | CT | 70 | 195 | | CRBT UC | planar, rough, amph fill <1mm |
| PGH-18-09 | 100.67 | CT | 80 | 225 | | LC CRBT | planar, closed |
| PGH-18-09 | 102.6 | CT | 70 | 180 | | UC CRBT | planar, closed |
| PGH-18-09 | 102.96 | CT | 70 | 165 | | LC CRBT | planar, closed |
| PGH-18-09 | 103.05 | JNT | 40 | 220 | | JNT in alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 106.35 | CT | 55 | 105 | | UC CRBT | planar, closed |
| PGH-18-09 | 106.95 | JNT | 80 | 200 | | JNT in alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-09 | 107.1 | CT | 55 | 100 | | UC CRBT | undulating, rough, amph fill <1mm |
| PGH-18-09 | 107.35 | CT | 60 | 105 | | LC CRBT | planar, closed |
| PGH-18-09 | 108.36 | JNT | 45 | 170 | | JNT in alkali | undulating, slightly rough, amph fill <1mm |
| PGH-18-09 | 108.65 | JNT | 75 | 300 | | JNT in alkali | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-09 | 109.05 | JNT | 65 | 80 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 111.25 | JNT | 70 | 50 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 111.6 | VN | 50 | 60 | | CRBT VN | planar, closed |
| PGH-18-09 | 112 | CT | 60 | 65 | | UC CRBT | planar, rough, no fill |
| PGH-18-09 | 115.12 | CT | 60 | 95 | | LC CRBT | planar, closed |
| PGH-18-09 | 115.9 | CT | 70 | 80 | | UC CRBT | planar, closed |
| PGH-18-09 | 116.65 | CT | 60 | 120 | | LC CRBT | undulating, rough, no fill |
| PGH-18-09 | 116.85 | JNT | 65 | 105 | | JNT in alkali | planar, slightly rough, amph/crbt fill <1mm |
| PGH-18-09 | 119.56 | CT | 55 | 140 | | LC CRBT | planar, closed |
| PGH-18-09 | 119.9 | JNT | 60 | 115 | | JNT in alkali | planar, slightly rough, crbt/amph fill <1mm |
| PGH-18-09 | 121.33 | CT | 50 | 120 | | LC CRBT | planar, closed |
| PGH-18-09 | 128.87 | CT | 60 | 140 | | LC CRBT | planar, closed |
| PGH-18-09 | 130.05 | CT | 45 | 280 | | LC CRBT BX | planar, closed |
| PGH-18-09 | 137.23 | CT | 55 | 270 | | LC CRBT VN 1cm | planar, closed |
| PGH-18-09 | 138.8 | JNT | 30 | 150 | | JNT in alkali | undulating, slightly rough, amph fill <1mm |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|-----------------|--|
| PGH-18-09 | 139.45 | CT | 75 | 115 | | LC of MD? | planar, closed |
| PGH-18-09 | 139.56 | JNT | 50 | 185 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 139.85 | JNT | 50 | 170 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 147.98 | CT | 75 | 120 | | LC CRBT | planar, slightly rough, no fill |
| PGH-18-09 | 148.08 | CT | 75 | 190 | | UC CRBT | planar, closed |
| PGH-18-09 | 150.7 | JNT | 45 | 130 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 152.48 | JNT | 50 | 170 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 154.43 | JNT | 65 | 140 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 158.2 | CT | 75 | 330 | | UC CRBT | planar, closed |
| PGH-18-09 | 158.38 | CT | 70 | 280 | | LC CRBT | planar, closed |
| PGH-18-09 | 158.75 | JNT | 55 | 180 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 159.55 | CT | 30 | 130 | | UC CRBT BX | planar, closed |
| PGH-18-09 | 160.1 | CT | 30 | 110 | | LC CRBT BX | planar, closed |
| PGH-18-09 | 160.9 | CT | 55 | 115 | | UC CRBT | planar, rough, no fill |
| PGH-18-09 | 165.1 | CT | 25 | 100 | | LC CRBT | planar, closed |
| PGH-18-09 | 166.43 | CT | 55 | 140 | | UC CRBT | planar, closed |
| PGH-18-09 | 175.75 | CT | 75 | 120 | | LC CRBT BX | diffuse, closed |
| PGH-18-09 | 176.3 | JNT | 30 | 100 | | JNT in CRBT BX | planar, slightly rough, crb fill |
| PGH-18-09 | 177.88 | CT | 70 | 280 | | UC CRBT | planar, closed |
| PGH-18-09 | 178.47 | JNT | 50 | 290 | | JNT in CRBT BX | planar, no fill, slightly rough |
| PGH-18-09 | 180.46 | CT | 40 | 30 | | UC CRBT | planar, closed |
| PGH-18-09 | 180.8 | CT | 40 | 35 | | LC CRBT | planar, closed, diffuse |
| PGH-18-09 | 181.25 | CT | 55 | 115 | | LC CRBT | planar, closed |
| PGH-18-09 | 182.4 | VN | 60 | 50 | | crb vein in MD? | planar, crb fill <1mm, slightly rough |
| PGH-18-09 | 184.5 | CT | 65 | 40 | | UC CRBT | planar, closed |
| PGH-18-09 | 185.7 | CT | 50 | 55 | | UC MD/CRBT | planar, closed |
| PGH-18-09 | 187.83 | CT | 35 | 70 | | LC CRBT | planar, slightly rough, chl/crb fill <1mm |
| PGH-18-09 | 190.15 | CT | 50 | 270 | | LC CRBT | planar, closed |
| PGH-18-09 | 196.55 | VN | 45 | 110 | | CRBT VN 2mm | planar, slightly rough, crb fill <1mm |
| PGH-18-09 | 197.28 | JNT | 40 | 100 | | JNT in MD? | planar, slightly rough, chl/amph fill <1mm |
| PGH-18-09 | 199.05 | CT | 75 | 110 | | LC CRBT | planar, closed |
| PGH-18-09 | 208.22 | CT | 50 | 305 | | LC CRBT | planar, closed, diffuse |
| PGH-18-09 | 208.33 | CT | 60 | 20 | | UC CRBT | planar, closed, diffuse |
| PGH-18-09 | 208.8 | JNT | 65 | 180 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 209.8 | JNT | 35 | 40 | | JNT in SYN | planar, slightly rough, amph fill <1mm |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|--------------------------|---|
| PGH-18-09 | 210.1 | JNT | 60 | 105 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 210.25 | CT | 60 | 0 | | UC CRBT | diffuse, closed |
| PGH-18-09 | 213.85 | JNT | 30 | 180 | | JNT in SYN | planar, slightly rough |
| PGH-18-09 | 217 | CT | 20 | 190 | | LC CRBT BX | diffuse, closed |
| PGH-18-09 | 218.3 | VN | 40 | 170 | | LC CRBT/AMPH VN | planar, slightly rough amph fill 4mm |
| PGH-18-09 | 220.5 | JNT | 40 | 170 | | JNT in SYN | planar, slightly rough, amph/chl fill |
| PGH-18-09 | 221.25 | JNT | 55 | 250 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 221.65 | JNT | 40 | 150 | | JNT | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 225.3 | JNT | 45 | 80 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 225.6 | JNT | 55 | 255 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 229.9 | JNT | 65 | 50 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 230.13 | JNT | 60 | 300 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 231.2 | JNT | 20 | 290 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 231.65 | JNT | 65 | 290 | | JN1t in SYN | planar, slightly rough, amph <1mm |
| PGH-18-09 | 233.1 | VN | 45 | 210 | | VN filled with CRBT/amph | planar, slightly rough, crbt/amph fill <1mm |
| PGH-18-09 | 233.84 | JNT | 70 | 240 | | JNT in SYN | planar, slightly rough, infill amph <1mm |
| PGH-18-09 | 234.4 | CT | 25 | 210 | | UC CRBT | planar, closed |
| PGH-18-09 | 239.22 | JNT | 65 | 170 | | JNT in SYN | planar, slightly rough, infill amph <1mm |
| PGH-18-09 | 239.45 | JNT | 70 | 0 | | JNT in SYN | planar, slightly rough, in fill amph <1mm |
| PGH-18-09 | 243.65 | CT | 70 | 110 | | UC CRBT | planar, closed, diffuse |
| PGH-18-09 | 245.95 | CT | 50 | 120 | | UC CRBT | planar, closed |
| PGH-18-09 | 246.1 | CT | 55 | 100 | | LC CRBT | planar, diffuse, closed |
| PGH-18-09 | 246.4 | JNT | 60 | 190 | | JNT in SYN | planar, slightly rough, infill amph <2mm |
| PGH-18-09 | 247.55 | JNT | 35 | 170 | | JNT in SYN | planar, slightly rough, infill amph <2mm |
| PGH-18-09 | 257.9 | JNT | 45 | 290 | | JNT in SYN | planar, slightly rough, infill amph <2mm |
| PGH-18-09 | 261.45 | JNT | 45 | 120 | | JNT in SYN | planar, slightly rough, infill amph <2mm |
| PGH-18-09 | 261.85 | JNT | 50 | 190 | | JNT in SYN | planar, slightly rough, chl fill <2mm |
| PGH-18-09 | 262.28 | JNT | 40 | 150 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 262.5 | JNT | 50 | 160 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 263.72 | CT | 25 | 280 | | LC of MD? | undulating, closed |
| PGH-18-09 | 271.15 | JNT | 55 | 60 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 271.8 | JNT | 30 | 170 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 273.6 | JNT | 55 | 200 | | JNT in SYN | planar, rough, amph/chl fill <2mm |
| PGH-18-09 | 276.5 | JNT | 35 | 280 | | JNT in SYN | planar, slightly rough, chl <2mm |
| PGH-18-09 | 276.95 | CT | 40 | 350 | | cct btw sy & md | irregular, rough |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|------------------------------|--|
| PGH-18-09 | 278.28 | JNT | 70 | 345 | | JNT in MD | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 279.8 | JNT | 25 | 270 | | JNT in MD | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 280.05 | JNT | 30 | 80 | | JNT in MD | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 284.45 | JNT | 50 | 210 | | JNT in MD | planar, smooth/slickenslides, chl fill 2mm |
| PGH-18-09 | 292.88 | CT | 25 | 340 | | LC MD | planar, closed |
| PGH-18-09 | 297.34 | CT | 50 | 0 | | LC CRBT | planar, closed |
| PGH-18-09 | 298.06 | JNT | 70 | 170 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 299.25 | JNT | 45 | 80 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 299.34 | JNT | 65 | 190 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 301.95 | CT | 60 | 120 | | UC CRBT | planar, closed |
| PGH-18-09 | 302.22 | CT | 35 | 295 | | UC CRBT | planar, closed |
| PGH-18-09 | 308.2 | CT | 25 | 270 | | LC CRBT | planar, closed |
| PGH-18-09 | 309.05 | CT | 70 | 200 | | LC CRBT | planar, closed |
| PGH-18-09 | 309.2 | CT | 35 | 320 | | UC CRBT | planar, closed |
| PGH-18-09 | 309.55 | CT | 25 | 300 | | LC CRBT | planar, closed |
| PGH-18-09 | 310.25 | CT | 30 | 190 | | LC CRBT | planar, closed |
| PGH-18-09 | 311.7 | CT | 50 | 0 | | LC CRBT VN | planar, closed |
| PGH-18-09 | 313.2 | VN | 20 | 235 | | UC CRBT VN | planar, closed, amph fill <5mm |
| PGH-18-09 | 314.5 | CT | 65 | 325 | | UC CRT BX | bx closed |
| PGH-18-09 | 324.7 | JNT | 40 | 215 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 325.57 | CT | 65 | 0 | | LC CRBT | planar, closed |
| PGH-18-09 | 327.05 | CT | 50 | 0 | | UC CRBT | planar, closed |
| PGH-18-09 | 327.65 | JNT | 55 | 105 | | JNT in SYN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 329.45 | VN | 65 | 150 | | VN 4mm wide | planar, closed, 3mm amph with light pink <1mm alt halo |
| PGH-18-09 | 335.12 | CT | 55 | 180 | | UC CRT BX | planar, closed |
| PGH-18-09 | 335.3 | CT | 60 | 180 | | LC CRBT | planar, closed |
| PGH-18-09 | 341.2 | CT | 55 | 310 | | LC CRBT | planar, closed |
| PGH-18-09 | 346.9 | CT | 15 | 180 | | LC CRBT undulating, closed | |
| PGH-18-09 | 349.95 | JNT | 65 | 225 | | JNT in SYN | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 350.78 | CT | 45 | 50 | | LC CRBT | planar/diffuse, closed |
| PGH-18-09 | 351.6 | VN | 25 | 140 | | CRBT VN 2cm | planar, closed |
| PGH-18-09 | 352.35 | CT | 40 | 80 | | LC CRBT | planar, closewd |
| PGH-18-09 | 352.9 | CT | 35 | 275 | | LC cct btw alt gran and gran | planar, sharp, closed |
| PGH-18-09 | 353.3 | CT | 15 | 125 | | BX UC CRBT | brecciated, closed |
| PGH-18-09 | 355.83 | CT | 65 | 240 | | UC CRBT | undulating, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------------|--|
| PGH-18-09 | 357.25 | CT | 55 | 130 | | 5mm MD | planar, sharp, MD fill |
| PGH-18-09 | 358.3 | JNT | 50 | 125 | | JNT in alkali | planar, slightly rough, no fill |
| PGH-18-09 | 359.2 | JNT | 35 | 110 | | JNT in alkali | planar, slightly rough, no fill |
| PGH-18-09 | 359.55 | CT | 55 | 190 | | UC MD | irregular, closed |
| PGH-18-09 | 360.12 | CT | 50 | 140 | | LC MD | planar, closed |
| PGH-18-09 | 362.48 | JNT | 55 | 150 | | JNT in alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 364.9 | CT | 50 | 10 | | LC CRBT | planar, closed |
| PGH-18-09 | 365.4 | JNT | 60 | 265 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 365.5 | CT | 25 | 85 | | CRBT VN 3m | planar, closed, rimmed by blue amph <3mm |
| PGH-18-09 | 366.75 | JNT | 50 | 250 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 368.7 | CT | 15 | 85 | | UC CRBT BX | planar, closed |
| PGH-18-09 | 371.35 | CT | 55 | 20 | | UC CRBT | planar, closed |
| PGH-18-09 | 371.88 | CT | 50 | 325 | | LC CRBT | planar, closed |
| PGH-18-09 | 372.38 | CT | 70 | 240 | | cct btw fg/cg alkali | slightly rough, cc fill 5mm |
| PGH-18-09 | 375.35 | CT | 60 | 290 | | UC CRBT | planar, closed |
| PGH-18-09 | 378.18 | CT | 45 | 50 | | LC CRBT | planar, closed |
| PGH-18-09 | 383.5 | CT | 70 | 115 | | LC CRBT | planar, closed |
| PGH-18-09 | 384.17 | CT | 70 | 240 | | LC CRBT | planar, closed |
| PGH-18-09 | 385.65 | JNT | 65 | 150 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 386.24 | JNT | 70 | 180 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 388.1 | JNT | 30 | 200 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 388.35 | CT | 75 | 155 | | LC CRBT | planar, closed |
| PGH-18-09 | 390.45 | JNT | 75 | 130 | | JNT in Alkali | planar, slightly rough, chl fill <1mm |
| PGH-18-09 | 390.65 | CT | 40 | 175 | | UC CRBT | planar, closed |
| PGH-18-09 | 391 | CT | 35 | 180 | | LC CRBT | planar, slightly rough, amph fill 1cm |
| PGH-18-09 | 391.8 | CT | 35 | 170 | | LC CRBT | planar, closed |
| PGH-18-09 | 394.25 | CT | 70 | 250 | | UC CRBT | planar, closed |
| PGH-18-09 | 394.55 | CT | 35 | 310 | | LC CRBT | planar, closed |
| PGH-18-09 | 395.95 | CT | 45 | 180 | | LC CRBT | planar, closed |
| PGH-18-09 | 397.1 | VN | 50 | 210 | | CRBT vn 1cm | planar, slightly rough, amph fill <5mm |
| PGH-18-09 | 398 | CT | 30 | 210 | | UC CRBT | planar, slightly rough, amph fill <5mm |
| PGH-18-09 | 398.18 | CT | 40 | 180 | | LC CRBT | planar, closed |
| PGH-18-09 | 398.38 | JNT | 40 | 180 | | Jnt in Alkali | planar, slightly rough, amph fill <3mm |
| PGH-18-09 | 398.85 | JNT | 40 | 180 | | JNT in Alkali | planar, slightly rough, amph fill <2mm |
| PGH-18-09 | 403.05 | JNT | 30 | 80 | | JNT in Alkali | Planar, slightly rough, no fill |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------|--|
| PGH-18-09 | 406.38 | CT | 40 | 170 | | LC CRBT | planar, slightly rough, crbt fill <1l |
| PGH-18-09 | 407.05 | JNT | 60 | 60 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 409.15 | JNT | 60 | 270 | | JNT in Alkali | planar, slightly rough, fill chl/amph <1mm |
| PGH-18-09 | 419.35 | JNT | 35 | 85 | | JNT in FEN | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 428.85 | CT | 45 | 165 | | LC CRBT | planar, closed |
| PGH-18-09 | 429.15 | JNT | 30 | 180 | | jnt in alkali | planar, slightly rough, amph <1mm |
| PGH-18-09 | 429.5 | CT | 55 | 335 | | UC CRBT | planar, closed |
| PGH-18-09 | 430.25 | CT | 30 | 200 | | CRBT LC | planar, closed |
| PGH-18-09 | 432.65 | JNT | 40 | 210 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 434.6 | CT | 20 | 285 | | LC CRBT | undulating, closed |
| PGH-18-09 | 437.38 | CT | 60 | 200 | | LC CRBT | planar, closed |
| PGH-18-09 | 439 | CT | 40 | 45 | | CRBT LC | planar, closed |
| PGH-18-09 | 439.3 | JNT | 45 | 180 | | JNT in Alklai | planar, slightly rough, infill amph <1mm |
| PGH-18-09 | 439.4 | CT | 20 | 275 | | UC CRBT | planar, closed |
| PGH-18-09 | 443.5 | CT | 75 | 210 | | LC CRBT | planar, closed |
| PGH-18-09 | 446.4 | CT | 45 | 40 | | UC CRBT | planar, closed |
| PGH-18-09 | 463 | CT | 55 | 180 | | LC CRBT | planar, closed |
| PGH-18-09 | 463.15 | CT | 35 | 200 | | LC CRBT | planar, closed |
| PGH-18-09 | 463.73 | CT | 55 | 70 | | LC CRBT | planar, closed |
| PGH-18-09 | 464.25 | CT | 45 | 20 | | LC CRBT | planar, closed |
| PGH-18-09 | 465.7 | CT | 60 | 315 | | LC CRBT | planar, closed |
| PGH-18-09 | 470.05 | CT | 50 | 240 | | LC CRBT | planar, closed |
| PGH-18-09 | 470.75 | VN | 40 | 170 | | LC CRBT | planar, closed |
| PGH-18-09 | 472.2 | JNT | 55 | 185 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 478.52 | CT | 45 | 175 | | UC CRBT | planar, closed |
| PGH-18-09 | 481.15 | CT | 70 | 10 | | UC CRBT | planar, closed |
| PGH-18-09 | 482.65 | CT | 40 | 160 | | LC CRBT | brecciated, closed |
| PGH-18-09 | 484.23 | JNT | 55 | 175 | | JNT in Alkali | planar, slightly rough, crb fill |
| PGH-18-09 | 485.5 | VN | 45 | 100 | | VN on crbt 1cm | planar, closed |
| PGH-18-09 | 486.4 | CT | 55 | 85 | | UC CRBT | planar, mechanically open, rough |
| PGH-18-09 | 486.65 | CT | 60 | 145 | | LC CRBT | planar, closed |
| PGH-18-09 | 486.9 | VN | 35 | 255 | | VN <3mm | planar, amph fill <3mm |
| PGH-18-09 | 487.1 | CT | 40 | 35 | | UC CRBT | planar, closed |
| PGH-18-09 | 489.1 | VN | 35 | 160 | | LC CRBT | planar, closed |
| PGH-18-09 | 492.95 | CT | 60 | 25 | | LC CRBT | planar, closed |

ORIENTED STRUCTURES

| DDH | Depth | Type | Alpha (°) | Beta (°) | Gamma (°) | Title | Description |
|-----------|--------|------|-----------|----------|-----------|----------------|--|
| PGH-18-09 | 493.5 | VN | 65 | 245 | | LC CRBT | planar, closed |
| PGH-18-09 | 493.6 | CT | 70 | 240 | | UC CRBT | planar, closed |
| PGH-18-09 | 494.85 | CT | 20 | 170 | | LC CRBT | undulating, closed |
| PGH-18-09 | 497.4 | VN | 25 | 180 | | LC CRBT VN 5cm | planar, closed |
| PGH-18-09 | 500.2 | CT | 70 | 340 | | UC CRBT | undulating, closed |
| PGH-18-09 | 503.23 | JNT | 60 | 275 | | JNT in Alkali | planar, slightly rough, amph/chl fill <1mm |
| PGH-18-09 | 504.6 | CT | 55 | 155 | | UC CRBT | planar, closed |
| PGH-18-09 | 505.35 | CT | 70 | 130 | | UC CRBT | planar, closed |
| PGH-18-09 | 508.75 | CT | 65 | 165 | | UC CRBT | planar, slightly rough, amph fill <2mm |
| PGH-18-09 | 509.8 | JNT | 60 | 190 | | JNT in Alkali | planar, slightly rough, amph fill <1mm |
| PGH-18-09 | 509.93 | CT | 40 | 180 | | LC CRBT | planar, closed |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-----------------|
| PGH-18-09 | 42.95 | 44 | 1.05 | 590596 | A18-08115 | 9.87 | 0.083 | 5.21 | < 0.003 | 0.004 | 0.01 | 0.007 | 0.004 | 0.027 | 0.01 | CRBT BX |
| PGH-18-09 | 44 | 44.75 | 0.75 | 590597 | A18-08115 | 9.92 | 0.051 | 1.08 | < 0.003 | < 0.003 | 0.006 | 0.005 | < 0.003 | 0.007 | 0.005 | CRBT BX |
| PGH-18-09 | 44.75 | 46.25 | 1.5 | 590598 | A18-08115 | 9.56 | 0.016 | 0.39 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 | FEN BX |
| PGH-18-09 | 46.25 | 47.8 | 1.55 | 590599 | A18-08115 | 11.19 | 0.018 | 0.08 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.009 | FEN |
| PGH-18-09 | 47.8 | 48.55 | 0.75 | 590600 | A18-08115 | 7.84 | 0.028 | 6.74 | < 0.003 | 0.003 | 0.016 | 0.005 | < 0.003 | 0.049 | < 0.003 | CRBT |
| PGH-18-09 | 48.55 | 49.18 | 0.63 | 590601 | A18-08115 | 9.29 | 0.017 | 0.07 | < 0.003 | 0.004 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.006 | FEN + CRBT BX |
| PGH-18-09 | 49.18 | 50.43 | 1.25 | 590602 | A18-08115 | 6.42 | 0.055 | 3.04 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.018 | < 0.003 | CRBT BX |
| PGH-18-09 | 50.43 | 51.68 | 1.25 | 590603 | A18-08115 | 8.07 | 0.058 | 0.66 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.006 | FEN BX |
| PGH-18-09 | 51.68 | 52.86 | 1.18 | 590604 | A18-08115 | 5.74 | 0.059 | 4.75 | < 0.003 | < 0.003 | 0.016 | < 0.005 | 0.003 | 0.038 | < 0.003 | CRBT |
| PGH-18-09 | 58.76 | 59.5 | 0.74 | 590605 | A18-08115 | 5.52 | 0.025 | 0.13 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.005 | 0.006 | BX SYN |
| PGH-18-09 | 59.5 | 61 | 1.5 | 590606 | A18-08115 | 6.11 | 0.017 | 0.59 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.007 | 0.009 | BX SYN |
| PGH-18-09 | 61 | 62.5 | 1.5 | 590608 | A18-08115 | 6.41 | 0.028 | 0.76 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.01 | 0.004 | BX SYN + CRBT |
| PGH-18-09 | 62.5 | 63 | 0.5 | 590609 | A18-08115 | 4.02 | 0.034 | 0.81 | < 0.003 | 0.003 | 0.012 | < 0.005 | 0.003 | 0.018 | < 0.003 | CRBT |
| PGH-18-09 | 63 | 63.5 | 0.5 | 590610 | A18-08115 | 7.42 | 0.028 | 0.35 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.015 | CRBT BX |
| PGH-18-09 | 63.5 | 64 | 0.5 | 590611 | A18-08115 | 6.79 | 0.035 | 0.65 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.007 | CRBT BX / FZ BX |
| PGH-18-09 | 64 | 65.5 | 1.5 | 590612 | A18-08115 | 5.36 | 0.023 | 0.31 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.01 | FZ BX |
| PGH-18-09 | 80.35 | 81 | 0.65 | 590613 | A18-08115 | 6.36 | 0.02 | 2.55 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.016 | < 0.003 | CRBT BX |
| PGH-18-09 | 94.68 | 96 | 1.32 | 590614 | A18-08115 | 4.2 | 0.062 | 1.85 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.004 | 0.012 | 0.005 | CRBT BX |
| PGH-18-09 | 96 | 97 | 1 | 590615 | A18-08115 | 5.06 | 0.065 | 1.95 | 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.013 | < 0.003 | CRBT BX |
| PGH-18-09 | 100.36 | 101.43 | 1.07 | 590616 | A18-08115 | 7.53 | 0.032 | 2.69 | < 0.003 | 0.003 | 0.013 | < 0.005 | 0.003 | 0.018 | 0.052 | CRBT |
| PGH-18-09 | 101.43 | 102.57 | 1.14 | 590617 | A18-08115 | 3.68 | 0.013 | 0.51 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.005 | GRAN + CRBT |
| PGH-18-09 | 102.57 | 103 | 0.43 | 590618 | A18-08115 | 5.09 | 0.044 | 5.13 | < 0.003 | 0.004 | 0.012 | 0.005 | < 0.003 | 0.018 | 0.059 | CRBT |
| PGH-18-09 | 103 | 104 | 1 | 590619 | A18-08115 | 4.84 | 0.03 | 1.39 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.003 | 0.009 | 0.005 | CRBT BX |
| PGH-18-09 | 112 | 113 | 1 | 590620 | A18-08115 | 4.93 | 0.061 | 3.58 | < 0.003 | < 0.003 | 0.012 | 0.005 | 0.003 | 0.026 | < 0.003 | CRBT |
| PGH-18-09 | 113 | 114 | 1 | 590621 | A18-08115 | 5.34 | 0.039 | 0.33 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.004 | < 0.003 | CRBT |
| PGH-18-09 | 114 | 115 | 1 | 590622 | A18-08115 | 6.24 | 0.081 | 0.33 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.005 | 0.017 | CRBT |
| PGH-18-09 | 115 | 115.87 | 0.87 | 590623 | A18-08115 | 4.53 | 0.057 | 0.39 | < 0.003 | 0.004 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.003 | CRBT + GRAN |
| PGH-18-09 | 115.87 | 116.78 | 0.91 | 590624 | A18-08115 | 4.7 | 0.099 | 6.83 | < 0.003 | 0.005 | 0.01 | 0.006 | 0.004 | 0.026 | 0.019 | CRBT |
| PGH-18-09 | 122.35 | 123.58 | 1.23 | 590625 | A18-08115 | 8.57 | 0.029 | 0.2 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.009 | FEN BX + CRBT |
| PGH-18-09 | 123.58 | 125 | 1.42 | 590626 | A18-08115 | 7.1 | 0.054 | 3.64 | < 0.003 | 0.004 | 0.009 | < 0.005 | < 0.003 | 0.024 | 0.005 | FEN BX + CRBT |
| PGH-18-09 | 125 | 126.08 | 1.08 | 590627 | A18-08115 | 6.9 | 0.024 | 0.48 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.004 | FEN BX + CRBT |
| PGH-18-09 | 126.08 | 127.35 | 1.27 | 590629 | A18-08115 | 7.92 | 0.01 | 0.19 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.012 | FEN BX CRBT |
| PGH-18-09 | 127.35 | 128.85 | 1.5 | 590630 | A18-08115 | 7.83 | 0.038 | 0.29 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.005 | 0.004 | FEN BX CRBT |
| PGH-18-09 | 128.85 | 130.38 | 1.53 | 590631 | A18-08115 | 7.62 | 0.052 | 1.22 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.003 | FEN BX CRBT |
| PGH-18-09 | 130.38 | 131.58 | 1.2 | 590632 | A18-08115 | 8.12 | 0.022 | 0.1 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.005 | FEN BX CRBT |
| PGH-18-09 | 131.58 | 132.65 | 1.07 | 590633 | A18-08115 | 8.34 | 0.038 | 0.42 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.007 | < 0.003 | FEN BX CRBT |
| PGH-18-09 | 132.65 | 133.28 | 0.63 | 590634 | A18-08115 | 7.4 | 0.017 | 0.97 | 0.004 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.006 | GRAN / FEN |
| PGH-18-09 | 133.28 | 134.6 | 1.32 | 590635 | A18-08115 | 5.59 | 0.006 | 0.1 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.011 | GRAN / FEN |
| PGH-18-09 | 134.6 | 135.15 | 0.55 | 590636 | A18-08115 | 5.8 | 0.096 | 5.37 | < 0.003 | 0.003 | 0.01 | < 0.005 | < 0.003 | 0.016 | < 0.003 | CRBT |
| PGH-18-09 | 141 | 142.07 | 1.07 | 590637 | A18-08115 | 8.47 | 0.247 | 1.06 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.008 | 0.007 | CRBT BX |
| PGH-18-09 | 142.07 | 143.25 | 1.18 | 590639 | A18-08115 | 4.29 | 0.045 | 5.8 | < 0.003 | 0.003 | 0.016 | 0.006 | 0.003 | 0.034 | 0.004 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|---------------|
| PGH-18-09 | 143.25 | 144.5 | 1.25 | 590640 | A18-08115 | 8.81 | 0.041 | 2.27 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.009 | 0.025 | CRBT BX |
| PGH-18-09 | 144.5 | 145.9 | 1.4 | 590641 | A18-08115 | 6.89 | 0.237 | 4.28 | < 0.003 | 0.004 | 0.011 | 0.005 | 0.003 | 0.023 | 0.004 | CRBT BX |
| PGH-18-09 | 145.9 | 146.38 | 0.48 | 590642 | A18-08115 | 9.36 | 0.015 | 0.24 | 0.003 | < 0.003 | 0.008 | < 0.005 | 0.003 | 0.006 | 0.01 | FEN |
| PGH-18-09 | 146.38 | 147.82 | 1.44 | 590643 | A18-08115 | 9.36 | 0.016 | 0.18 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.005 | 0.005 | FEN + CRBT |
| PGH-18-09 | 147.82 | 148.75 | 0.93 | 590644 | A18-08115 | 7.38 | 0.009 | 0.02 | < 0.003 | < 0.003 | 0.019 | < 0.005 | < 0.003 | 0.005 | < 0.003 | CRBT |
| PGH-18-09 | 159.48 | 160.38 | 0.9 | 590645 | A18-08115 | 4.89 | 0.398 | 0.54 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.008 | 0.004 | CRBT |
| PGH-18-09 | 160.38 | 161.3 | 0.92 | 590646 | A18-08115 | 5.66 | 0.015 | 0.08 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.012 | SYN |
| PGH-18-09 | 161.3 | 162.33 | 1.03 | 590647 | A18-08115 | 6.76 | 0.187 | 2.29 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-09 | 162.33 | 163.22 | 0.89 | 590648 | A18-08115 | 8.83 | 0.12 | 2.56 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.015 | < 0.003 | CRBT BX |
| PGH-18-09 | 163.22 | 164.7 | 1.48 | 590649 | A18-08115 | 9.83 | 0.021 | 0.46 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.01 | FEN |
| PGH-18-09 | 164.7 | 165.2 | 0.5 | 590650 | A18-08115 | 9.07 | 0.094 | 1.22 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-09 | 165.2 | 166.4 | 1.2 | 590651 | A18-08115 | 10.81 | 0.044 | 0.86 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.006 | BX CRBT |
| PGH-18-09 | 166.4 | 167.75 | 1.35 | 590652 | A18-08115 | 9.57 | 0.06 | 0.92 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | 0.011 | CRBT + BX |
| PGH-18-09 | 167.75 | 169.04 | 1.29 | 590653 | A18-08115 | 10.41 | 0.037 | 0.77 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.007 | FEN |
| PGH-18-09 | 169.04 | 169.72 | 0.68 | 590654 | A18-08115 | 2.74 | 0.008 | 0.73 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.019 | < 0.003 | CRBT + BX |
| PGH-18-09 | 169.72 | 170.18 | 0.46 | 590655 | A18-08115 | 10.3 | 0.335 | 1.39 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | 0.008 | CRBT |
| PGH-18-09 | 170.18 | 171.63 | 1.45 | 590656 | A18-08115 | 3.89 | 0.274 | 7.58 | < 0.003 | 0.004 | 0.013 | 0.007 | 0.003 | 0.016 | 0.045 | SYN BX |
| PGH-18-09 | 171.63 | 172.37 | 0.74 | 590658 | A18-08115 | 7.26 | 0.019 | 1.54 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.009 | SYN BX |
| PGH-18-09 | 172.37 | 173.5 | 1.13 | 590659 | A18-08115 | 1.7 | < 0.003 | 0.09 | < 0.003 | < 0.003 | 0.012 | 0.008 | 0.003 | 0.014 | | CRBT |
| PGH-18-09 | 173.5 | 175 | 1.5 | 590660 | A18-08115 | 2.21 | < 0.003 | 0.2 | < 0.003 | 0.003 | 0.017 | < 0.005 | 0.003 | 0.018 | < 0.003 | CRBT |
| PGH-18-09 | 175 | 175.75 | 0.75 | 590661 | A18-08115 | 1.56 | < 0.003 | 0.03 | < 0.003 | < 0.003 | 0.012 | 0.005 | < 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-09 | 175.75 | 176.8 | 1.05 | 590662 | A18-08115 | 10.65 | 0.048 | 0.65 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.01 | BX SYN + CRBT |
| PGH-18-09 | 176.8 | 177.48 | 0.68 | 590663 | A18-08115 | 6.9 | 0.04 | 0.51 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.009 | 0.015 | CRBT |
| PGH-18-09 | 177.48 | 178.56 | 1.08 | 590664 | A18-08115 | 10.7 | 0.128 | 1.54 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.011 | 0.092 | BX + CRBT |
| PGH-18-09 | 178.56 | 179.5 | 0.94 | 590665 | A18-08115 | 13.76 | 0.088 | 0.57 | < 0.003 | 0.004 | 0.009 | < 0.005 | < 0.003 | 0.008 | 0.059 | FEN |
| PGH-18-09 | 179.5 | 180.4 | 0.9 | 590666 | A18-08115 | 13.01 | 0.135 | 0.48 | 0.005 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.007 | 0.022 | FEN + CRBT |
| PGH-18-09 | 180.4 | 180.88 | 0.48 | 590667 | A18-08115 | 4.29 | 0.203 | 4.43 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.004 | 0.02 | < 0.003 | FEN + CRBT |
| PGH-18-09 | 180.88 | 182 | 1.12 | 590668 | A18-08115 | 3.48 | 0.006 | 0.43 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.01 | CRBT |
| PGH-18-09 | 182 | 183 | 1 | 590669 | A18-08115 | 13.8 | 0.084 | 0.86 | 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | 0.056 | SYN |
| PGH-18-09 | 183 | 184.5 | 1.5 | 590670 | A18-08115 | 13.8 | 0.139 | 0.66 | 0.004 | 0.005 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.089 | MD crb alt |
| PGH-18-09 | 184.5 | 186 | 1.5 | 590671 | A18-08115 | 7.32 | 0.128 | 4.66 | < 0.003 | < 0.003 | 0.016 | 0.009 | < 0.003 | 0.028 | 0.028 | MD crb alt |
| PGH-18-09 | 186 | 186.5 | 0.5 | 590672 | A18-08115 | 6.87 | 0.043 | 0.9 | < 0.003 | 0.004 | 0.018 | < 0.005 | < 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-09 | 186.5 | 187.08 | 0.58 | 590673 | A18-08115 | 7.28 | 0.011 | 4.46 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.044 | < 0.003 | CRBT |
| PGH-18-09 | 187.08 | 187.83 | 0.75 | 590674 | A18-08115 | 5.56 | 0.058 | 5.91 | < 0.003 | < 0.003 | 0.017 | 0.009 | 0.003 | 0.038 | < 0.003 | CRBT |
| PGH-18-09 | 187.83 | 189 | 1.17 | 590676 | A18-08115 | 14.32 | 0.045 | 1.69 | < 0.003 | 0.004 | 0.012 | < 0.005 | < 0.003 | 0.011 | 0.079 | CRBT |
| PGH-18-09 | 201.08 | 202 | 0.92 | 590677 | A18-08115 | 13.24 | 0.104 | 0.88 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.025 | MD |
| PGH-18-09 | 202 | 203.15 | 1.15 | 590678 | A18-08115 | 14.76 | 0.091 | 1.77 | < 0.003 | 0.003 | 0.011 | < 0.005 | < 0.003 | 0.01 | 0.064 | MD |
| PGH-18-09 | 203.15 | 204 | 0.85 | 590679 | A18-08115 | 9.46 | 0.152 | 3.14 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.012 | 0.034 | mott bx + MD |
| PGH-18-09 | 204 | 204.65 | 0.65 | 590680 | A18-08115 | 5.44 | 0.066 | 0.38 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.005 | 0.007 | CRBT BX + MD |
| PGH-18-09 | 204.65 | 206 | 1.35 | 590681 | A18-08115 | 5.08 | < 0.003 | 0.39 | < 0.003 | < 0.003 | 0.033 | < 0.005 | < 0.003 | 0.016 | 0.012 | SYN |
| PGH-18-09 | 206 | 207 | 1 | 590682 | A18-08115 | 4.92 | < 0.003 | 0.22 | < 0.003 | < 0.003 | 0.019 | < 0.005 | < 0.003 | 0.009 | < 0.003 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|---------------|
| PGH-18-09 | 207 | 207.7 | 0.7 | 590683 | A18-08115 | 4.83 | < 0.003 | 0.22 | < 0.003 | < 0.003 | 0.022 | < 0.005 | < 0.003 | 0.012 | 0.006 | CRBT |
| PGH-18-09 | 207.7 | 208.27 | 0.57 | 590684 | A18-08115 | 3.88 | 0.015 | 0.58 | < 0.003 | 0.004 | 0.017 | < 0.005 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 208.27 | 208.91 | 0.64 | 590686 | A18-08115 | 5.84 | 0.036 | 0.26 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.01 | CRBT |
| PGH-18-09 | 208.91 | 210.25 | 1.34 | 590687 | A18-08115 | 3.67 | 0.021 | 0.43 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.013 | SYN |
| PGH-18-09 | 210.25 | 211.47 | 1.22 | 590688 | A18-08115 | 1.56 | < 0.003 | 0.23 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.013 | < 0.003 | SYN |
| PGH-18-09 | 211.47 | 212 | 0.53 | 590689 | A18-08115 | 5.66 | 0.03 | 6.36 | < 0.003 | < 0.003 | 0.026 | < 0.005 | < 0.003 | 0.039 | 0.008 | CRBT |
| PGH-18-09 | 216.5 | 217.08 | 0.58 | 590690 | A18-08115 | 7.2 | 0.579 | 6.39 | < 0.003 | < 0.003 | 0.011 | 0.007 | 0.003 | 0.015 | 0.004 | CRBT BX |
| PGH-18-09 | 223.63 | 224.03 | 0.4 | 590691 | A18-08115 | 2.78 | 0.867 | 3.34 | < 0.003 | < 0.003 | 0.011 | 0.007 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-09 | 225.72 | 227.17 | 1.45 | 590692 | A18-08115 | 3.56 | 0.031 | 2.33 | < 0.003 | < 0.003 | 0.011 | 0.007 | < 0.003 | 0.02 | < 0.003 | CRBT |
| PGH-18-09 | 234.35 | 235.85 | 1.5 | 590693 | A18-08115 | 4.19 | 0.083 | 3.86 | < 0.003 | < 0.003 | 0.007 | 0.005 | 0.004 | 0.012 | < 0.003 | CRBT |
| PGH-18-09 | 235.85 | 237.3 | 1.45 | 590694 | A18-08115 | 6.04 | 0.034 | 0.99 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.003 | CRBT BX |
| PGH-18-09 | 237.3 | 238.2 | 0.9 | 590695 | A18-08115 | 6.4 | 0.032 | 4.78 | < 0.003 | 0.003 | 0.021 | < 0.005 | 0.003 | 0.025 | < 0.003 | CRBT BX |
| PGH-18-09 | 238.2 | 238.94 | 0.74 | 590696 | A18-08115 | 8.31 | 0.059 | 1.81 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.009 | 0.022 | CRBT |
| PGH-18-09 | 243.63 | 244.58 | 0.95 | 590697 | A18-08115 | 2.47 | 0.008 | 1.02 | < 0.003 | < 0.003 | 0.013 | 0.006 | < 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-09 | 249.4 | 250.9 | 1.5 | 590698 | A18-08115 | 6.01 | 0.223 | 3.2 | < 0.003 | < 0.003 | 0.014 | 0.005 | 0.004 | 0.018 | < 0.003 | CRBT BX |
| PGH-18-09 | 250.9 | 252.4 | 1.5 | 590700 | A18-08115 | 5.86 | 0.157 | 3.75 | < 0.003 | < 0.003 | 0.016 | 0.005 | 0.003 | 0.024 | < 0.003 | CRBT BX |
| PGH-18-09 | 252.4 | 253.13 | 0.73 | 590701 | A18-08115 | 2.4 | 0.007 | 0.13 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.008 | SYN |
| PGH-18-09 | 253.13 | 254 | 0.87 | 590702 | A18-08115 | 6.82 | 0.122 | 4.75 | < 0.003 | 0.004 | 0.021 | 0.006 | < 0.003 | 0.026 | 0.011 | CRBT BX |
| PGH-18-09 | 254 | 254.63 | 0.63 | 590703 | A18-08115 | 4.87 | 0.017 | 0.29 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.006 | SYN |
| PGH-18-09 | 254.63 | 255.23 | 0.6 | 590704 | A18-08115 | 8.6 | 0.023 | 0.63 | < 0.003 | < 0.003 | 0.044 | < 0.005 | < 0.003 | 0.016 | < 0.003 | CRBT BX |
| PGH-18-09 | 255.23 | 256 | 0.77 | 590705 | A18-08115 | 4.92 | 0.011 | 0.04 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.003 | 0.01 | SYN |
| PGH-18-09 | 256 | 256.7 | 0.7 | 590706 | A18-08115 | 4.67 | 0.085 | 1.68 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.018 | < 0.003 | CRBT BX |
| PGH-18-09 | 266.27 | 267.76 | 1.49 | 590707 | A18-08115 | 6.08 | 0.066 | 2.68 | 0.004 | 0.003 | 0.013 | < 0.005 | < 0.003 | 0.015 | 0.005 | CRT BX + SYN |
| PGH-18-09 | 267.76 | 268.56 | 0.8 | 590708 | A18-08115 | 11.98 | 0.109 | 0.31 | < 0.003 | 0.005 | 0.008 | < 0.005 | 0.004 | 0.005 | 0.061 | MD ? CRBT |
| PGH-18-09 | 268.56 | 269.85 | 1.29 | 590709 | A18-08115 | 4.6 | 0.067 | 0.88 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.006 | 0.003 | CRBT BX |
| PGH-18-09 | 269.85 | 270.36 | 0.51 | 590710 | A18-08115 | 4.11 | 0.081 | 1.83 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | 0.003 | CRBT BX |
| PGH-18-09 | 270.36 | 271.15 | 0.79 | 590711 | A18-08115 | 4.3 | 0.009 | 0.92 | 0.004 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.024 | SYN |
| PGH-18-09 | 271.15 | 271.8 | 0.65 | 590712 | A18-08115 | 1.65 | < 0.003 | 0.51 | < 0.003 | 0.004 | 0.009 | 0.01 | 0.003 | 0.012 | | CRBT |
| PGH-18-09 | 271.8 | 272.56 | 0.76 | 590713 | A18-08115 | 4.07 | 0.014 | 0.67 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | < 0.003 | SYN |
| PGH-18-09 | 272.56 | 273.2 | 0.64 | 590715 | A18-08115 | 1.6 | 0.007 | 0.22 | < 0.003 | < 0.003 | 0.012 | 0.008 | < 0.003 | 0.013 | | CRBT |
| PGH-18-09 | 273.2 | 274 | 0.8 | 590716 | A18-08115 | 5.29 | 0.04 | 1.45 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.012 | SYN BX + CRBT |
| PGH-18-09 | 292.81 | 294 | 1.19 | 590717 | A18-08115 | 7.39 | 0.118 | 1.34 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.011 | 0.003 | CRBT |
| PGH-18-09 | 294 | 294.95 | 0.95 | 590718 | A18-08115 | 12.94 | 0.036 | 0.56 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.015 | CRBT |
| PGH-18-09 | 294.95 | 295.45 | 0.5 | 590720 | A18-08115 | 6.25 | 0.485 | 4.16 | < 0.003 | 0.003 | 0.011 | 0.01 | < 0.003 | 0.011 | 0.088 | CRBT |
| PGH-18-09 | 295.45 | 296.51 | 1.06 | 590721 | A18-08115 | 2.75 | 0.059 | 1.59 | < 0.003 | 0.003 | 0.014 | 0.005 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 296.51 | 297.35 | 0.84 | 590723 | A18-08115 | 3.24 | 0.352 | 4.24 | < 0.003 | 0.004 | 0.012 | 0.016 | < 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-09 | 309 | 310.3 | 1.3 | 590724 | A18-08115 | 6.18 | 0.043 | 0.27 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.007 | 0.004 | CRBT |
| PGH-18-09 | 313.2 | 313.85 | 0.65 | 590725 | A18-08115 | 1.93 | < 0.003 | 0.53 | < 0.003 | < 0.003 | 0.012 | 0.006 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 313.85 | 314.52 | 0.67 | 590727 | A18-08115 | 10.87 | 0.033 | 0.53 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.016 | SYN BX + CRBT |
| PGH-18-09 | 314.52 | 315.82 | 1.3 | 590728 | A18-08115 | 2.87 | 0.256 | 2.16 | < 0.003 | < 0.003 | 0.012 | 0.008 | 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 315.82 | 317 | 1.18 | 590729 | A18-08115 | 8.64 | 0.021 | 0.13 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.005 | 0.01 | BX CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-------------------|
| PGH-18-09 | 317 | 318.5 | 1.5 | 590730 | A18-08115 | 7.74 | 0.02 | 0.17 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.013 | QTZ SYN |
| PGH-18-09 | 318.5 | 320 | 1.5 | 590731 | A18-08115 | 7.92 | 0.025 | 0.17 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.005 | 0.028 | SYN BX |
| PGH-18-09 | 320 | 320.65 | 0.65 | 590732 | A18-08115 | 7.69 | 0.055 | 1.92 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.022 | 0.022 | BX + CRBT |
| PGH-18-09 | 320.65 | 322 | 1.35 | 590733 | A18-08115 | 7.98 | 0.045 | 0.17 | < 0.003 | < 0.003 | 0.017 | < 0.005 | < 0.003 | 0.007 | 0.008 | CRBT |
| PGH-18-09 | 322 | 323 | 1 | 590734 | A18-08115 | 7.82 | 0.158 | 0.47 | < 0.003 | < 0.003 | 0.034 | 0.005 | < 0.003 | 0.017 | 0.01 | CRBT |
| PGH-18-09 | 323 | 323.83 | 0.83 | 590735 | A18-08115 | 4.7 | 0.155 | 3 | < 0.003 | < 0.003 | 0.025 | 0.006 | < 0.003 | 0.022 | 0.009 | CRBT |
| PGH-18-09 | 323.83 | 324.7 | 0.87 | 590736 | A18-08115 | 2.96 | 0.04 | 4.08 | < 0.003 | 0.004 | 0.013 | 0.006 | 0.003 | 0.018 | 0.043 | CRBT |
| PGH-18-09 | 324.7 | 325.37 | 0.67 | 590737 | A18-08115 | 6.62 | 0.059 | 0.05 | 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.015 | SYN BX |
| PGH-18-09 | 331.5 | 332.78 | 1.28 | 590738 | A18-08115 | 2.33 | 0.059 | 1.52 | < 0.003 | < 0.003 | 0.018 | 0.005 | 0.003 | 0.017 | < 0.003 | CRBT |
| PGH-18-09 | 332.78 | 334.22 | 1.44 | 590739 | A18-08115 | 2.85 | 0.057 | 1.18 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.018 | 0.006 | CRBT |
| PGH-18-09 | 334.22 | 335.3 | 1.08 | 590740 | A18-08115 | 3.44 | 0.084 | 3.62 | < 0.003 | 0.003 | 0.025 | 0.005 | < 0.003 | 0.034 | 0.02 | CRBT |
| PGH-18-09 | 335.3 | 336.2 | 0.9 | 590741 | A18-08115 | 6.21 | 0.022 | 0.23 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.012 | QTZ SYN |
| PGH-18-09 | 336.2 | 336.8 | 0.6 | 590742 | A18-08115 | 8.79 | 0.023 | 0.03 | < 0.003 | < 0.003 | 0.051 | < 0.005 | < 0.003 | 0.007 | 0.006 | CRBT |
| PGH-18-09 | 336.8 | 338 | 1.2 | 590743 | A18-08115 | 7.21 | 0.065 | 0.54 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | 0.004 | QTZ SYN BX + CRBT |
| PGH-18-09 | 338 | 339.5 | 1.5 | 590744 | A18-08115 | 7.14 | 0.03 | 0.04 | < 0.003 | < 0.003 | 0.016 | < 0.005 | < 0.003 | 0.004 | < 0.003 | QTZ SYN BX |
| PGH-18-09 | 339.5 | 340.2 | 0.7 | 590745 | A18-08115 | 6.64 | 0.03 | 0.45 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.004 | 0.008 | QTZ SYN BX |
| PGH-18-09 | 340.2 | 341.2 | 1 | 590746 | A18-08115 | 11 | 0.04 | 0.88 | < 0.003 | < 0.003 | 0.072 | 0.005 | 0.003 | 0.014 | 0.028 | CRBT |
| PGH-18-09 | 341.2 | 342 | 0.8 | 590747 | A18-08115 | 6.95 | 0.013 | 0.94 | < 0.003 | < 0.003 | 0.019 | < 0.005 | 0.003 | 0.01 | < 0.003 | QTZ SYN / CRBT |
| PGH-18-09 | 345 | 345.75 | 0.75 | 590748 | A18-08115 | 7.03 | 0.06 | 0.56 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.005 | 0.006 | GRAN + CRBT |
| PGH-18-09 | 345.75 | 346.77 | 1.02 | 590749 | A18-08115 | 4.51 | 0.028 | 2.1 | < 0.003 | < 0.003 | 0.016 | < 0.005 | 0.003 | 0.032 | < 0.003 | CRBT |
| PGH-18-09 | 346.77 | 347.21 | 0.44 | 590751 | A18-08115 | 4.85 | 0.103 | 0.85 | < 0.003 | < 0.003 | 0.01 | 0.006 | < 0.003 | 0.02 | < 0.003 | GRAN + CRBT |
| PGH-18-09 | 352 | 352.45 | 0.45 | 590752 | A18-08115 | 5.69 | 0.013 | 1.67 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.01 | 0.004 | CRBT + GRAN |
| PGH-18-09 | 352.45 | 353.06 | 0.61 | 590753 | A18-08115 | 6.67 | 0.008 | 0.52 | < 0.003 | 0.004 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.023 | GRAN |
| PGH-18-09 | 353.06 | 354.26 | 1.2 | 590754 | A18-08115 | 4.29 | 0.084 | 1.57 | < 0.003 | < 0.003 | 0.011 | 0.005 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 364.3 | 365 | 0.7 | 590755 | A18-08115 | 3.64 | 0.016 | 3.6 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.013 | < 0.003 | GRAN BX + CRBT |
| PGH-18-09 | 368.55 | 370.05 | 1.5 | 590756 | A18-08115 | 6.88 | 0.259 | 3.43 | < 0.003 | < 0.003 | 0.009 | 0.005 | < 0.003 | 0.015 | 0.005 | GRAN BX + CRBT |
| PGH-18-09 | 370.05 | 370.82 | 0.77 | 590757 | A18-08115 | 4.06 | 0.171 | 3.98 | < 0.003 | 0.004 | 0.012 | 0.011 | 0.003 | 0.018 | 0.009 | CRBT |
| PGH-18-09 | 370.82 | 371.35 | 0.53 | 590758 | A18-08115 | 6.7 | 0.038 | 0.81 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.003 | GRAN |
| PGH-18-09 | 371.35 | 371.94 | 0.59 | 590760 | A18-08115 | 3.27 | 0.095 | 3.06 | < 0.003 | 0.004 | 0.01 | 0.013 | < 0.003 | 0.013 | 0.023 | CRBT |
| PGH-18-09 | 375.36 | 376 | 0.64 | 590761 | A18-08115 | 5.38 | 0.158 | 1.46 | < 0.003 | < 0.003 | 0.013 | 0.005 | 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-09 | 376 | 376.84 | 0.84 | 590762 | A18-08115 | 2.95 | 0.121 | 2.32 | < 0.003 | 0.003 | 0.011 | 0.009 | 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-09 | 376.84 | 378.2 | 1.36 | 590763 | A18-08115 | 2.67 | 0.136 | 1.91 | < 0.003 | < 0.003 | 0.015 | 0.009 | 0.003 | 0.017 | | CRBT |
| PGH-18-09 | 378.2 | 378.7 | 0.5 | 590764 | A18-08115 | 3.92 | 0.009 | 0.27 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.009 | CRBT |
| PGH-18-09 | 378.7 | 380.15 | 1.45 | 590765 | A18-08115 | 6.59 | 0.047 | 3.03 | < 0.003 | 0.004 | 0.008 | 0.007 | 0.003 | 0.012 | 0.039 | CRBT |
| PGH-18-09 | 380.15 | 381 | 0.85 | 590766 | A18-08115 | 5.81 | 0.022 | 0.65 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.016 | GRAN |
| PGH-18-09 | 381 | 381.93 | 0.93 | 590767 | A18-08115 | 5.32 | 0.024 | 0.09 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | GRAN |
| PGH-18-09 | 381.93 | 382.52 | 0.59 | 590768 | A18-08115 | 6.29 | 0.088 | 1.89 | < 0.003 | < 0.003 | 0.017 | 0.008 | 0.003 | 0.017 | 0.018 | MD / CRBT |
| PGH-18-09 | 382.52 | 383.2 | 0.68 | 590769 | A18-08115 | 11.74 | 0.068 | 2.42 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.011 | 0.184 | MD? |
| PGH-18-09 | 390.62 | 391.87 | 1.25 | 590770 | A18-08115 | 3.47 | 0.068 | 1.25 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.009 | < 0.003 | CRBT / GRAN |
| PGH-18-09 | 393.87 | 395 | 1.13 | 590772 | A18-08115 | 4.97 | 0.041 | 1.78 | < 0.003 | 0.003 | 0.007 | 0.005 | 0.013 | 0.008 | < 0.003 | CRBT + GRAN |
| PGH-18-09 | 395 | 396 | 1 | 590773 | A18-08115 | 10.09 | 0.096 | 3.24 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.013 | 0.112 | CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|-------------------|
| PGH-18-09 | 396 | 397 | 1 | 590774 | A18-08115 | 7.09 | 0.048 | 1.77 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.066 | GRAN + CRBT |
| PGH-18-09 | 399.8 | 401.3 | 1.5 | 590775 | A18-08115 | 5.81 | 0.082 | 2.43 | < 0.003 | < 0.003 | 0.013 | 0.009 | 0.003 | 0.016 | < 0.003 | CRBT BX |
| PGH-18-09 | 426.77 | 428.23 | 1.46 | 590777 | A18-08115 | 10.3 | 0.042 | 1.38 | < 0.003 | 0.004 | 0.008 | < 0.005 | 0.003 | 0.008 | < 0.003 | CRBT BX |
| PGH-18-09 | 428.23 | 429.44 | 1.21 | 590778 | A18-08115 | 7.78 | 0.018 | 0.52 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.009 | FEN |
| PGH-18-09 | 429.44 | 430.5 | 1.06 | 590779 | A18-08115 | 7.12 | 0.064 | 1.12 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | < 0.003 | CRBT BX |
| PGH-18-09 | 430.5 | 432 | 1.5 | 590780 | A18-08115 | 8.29 | 0.042 | 1.23 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | < 0.003 | FEN BX + CRBT |
| PGH-18-09 | 432 | 433 | 1 | 590781 | A18-08115 | 5.79 | 0.021 | 0.15 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.007 | GRAN CRBT |
| PGH-18-09 | 433 | 434.5 | 1.5 | 590782 | A18-08115 | 6.5 | 0.044 | 1.84 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | < 0.003 | GRAN + CRBT |
| PGH-18-09 | 434.5 | 436 | 1.5 | 590783 | A18-08115 | 5.33 | 0.1 | 2.1 | < 0.003 | < 0.003 | 0.01 | 0.007 | 0.004 | 0.011 | < 0.003 | CRBT BX |
| PGH-18-09 | 436 | 437.4 | 1.4 | 590784 | A18-08115 | 3.67 | 0.222 | 2.87 | < 0.003 | 0.005 | 0.014 | 0.008 | < 0.003 | 0.016 | < 0.003 | CRBT |
| PGH-18-09 | 445 | 446.17 | 1.17 | 590785 | A18-08115 | 4.61 | 0.066 | 1.19 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | < 0.003 | CRBT BX |
| PGH-18-09 | 446.17 | 447.67 | 1.5 | 590787 | A18-08115 | 4.49 | 0.111 | 1.45 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | < 0.003 | CRBT BX |
| PGH-18-09 | 447.67 | 449 | 1.33 | 590788 | A18-08115 | 1.93 | 0.2 | 3.46 | < 0.003 | 0.003 | 0.011 | 0.008 | < 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-09 | 449 | 449.9 | 0.9 | 590790 | A18-08115 | 2.1 | 0.119 | 2.17 | < 0.003 | 0.004 | 0.011 | 0.011 | < 0.003 | 0.014 | | CRBT |
| PGH-18-09 | 449.9 | 451 | 1.1 | 590791 | A18-08115 | 7.3 | 0.115 | 3.5 | < 0.003 | < 0.003 | 0.018 | 0.01 | 0.003 | 0.021 | | CRBT |
| PGH-18-09 | 451 | 452 | 1 | 590792 | A18-08115 | 2.85 | 0.099 | 2.39 | < 0.003 | < 0.003 | 0.013 | 0.011 | < 0.003 | 0.015 | | CRBT |
| PGH-18-09 | 452 | 453 | 1 | 590793 | A18-08115 | 2.62 | 0.12 | 2.99 | < 0.003 | < 0.003 | 0.012 | 0.01 | < 0.003 | 0.015 | < 0.003 | CRBT |
| PGH-18-09 | 453 | 454.4 | 1.4 | 590794 | A18-08115 | 3.17 | 0.306 | 3.73 | < 0.003 | 0.004 | 0.018 | 0.009 | < 0.003 | 0.02 | < 0.003 | CRBT |
| PGH-18-09 | 454.4 | 455.4 | 1 | 590796 | A18-08115 | 13.06 | 0.065 | 0.78 | < 0.003 | 0.005 | 0.006 | < 0.005 | 0.004 | 0.003 | 0.078 | CRBT / MD? |
| PGH-18-09 | 455.4 | 456.13 | 0.73 | 590797 | A18-08115 | 11.53 | 0.066 | 1.47 | < 0.003 | 0.004 | 0.01 | < 0.005 | 0.003 | 0.007 | 0.054 | CRBT / MD? |
| PGH-18-09 | 456.13 | 457 | 0.87 | 590798 | A18-08115 | 2.69 | 0.306 | 3.72 | < 0.003 | 0.004 | 0.015 | 0.011 | < 0.003 | 0.017 | 0.016 | CRBT |
| PGH-18-09 | 457 | 458.25 | 1.25 | 590799 | A18-08115 | 2.03 | 0.211 | 4.4 | < 0.003 | 0.006 | 0.017 | 0.025 | < 0.003 | 0.018 | 0.062 | CRBT |
| PGH-18-09 | 458.25 | 459.15 | 0.9 | 590800 | A18-08115 | 1.73 | 0.2 | 3.66 | < 0.003 | 0.007 | 0.016 | 0.018 | < 0.003 | 0.015 | 0.016 | CRBT |
| PGH-18-09 | 459.15 | 459.65 | 0.5 | 590801 | A18-08115 | 4.22 | 0.162 | 1.65 | < 0.003 | < 0.003 | 0.011 | 0.009 | < 0.003 | 0.012 | < 0.003 | CRBT + cct ap cum |
| PGH-18-09 | 459.65 | 460.81 | 1.16 | 590802 | A18-08115 | 7.58 | 0.05 | 0.25 | < 0.003 | < 0.003 | 0.008 | 0.006 | 0.003 | 0.005 | 0.003 | FEN + CRBT |
| PGH-18-09 | 465.5 | 466.65 | 1.15 | 590803 | A18-08115 | 8.03 | 0.127 | 0.94 | < 0.003 | 0.003 | 0.012 | < 0.005 | < 0.003 | 0.008 | < 0.003 | CRBT + FEN |
| PGH-18-09 | 466.65 | 467.45 | 0.8 | 590804 | A18-08115 | 9.58 | 0.07 | 0.37 | < 0.003 | 0.003 | 0.011 | < 0.005 | < 0.003 | 0.006 | < 0.003 | CRBT + FEN |
| PGH-18-09 | 467.45 | 468.65 | 1.2 | 590805 | A18-08115 | 11.67 | 0.036 | 0.17 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | < 0.003 | < 0.003 | FEN + CRBT |
| PGH-18-09 | 474.62 | 475.48 | 0.86 | 590806 | A18-08115 | 5.45 | 0.024 | 1.2 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.01 | < 0.003 | CRBT + GRAN |
| PGH-18-09 | 475.48 | 476.52 | 1.04 | 590807 | A18-08115 | 7.32 | 0.06 | 0.09 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.004 | 0.013 | CRBT BX + GRAN |
| PGH-18-09 | 476.52 | 477.26 | 0.74 | 590809 | A18-08115 | 8.49 | 0.087 | 0.42 | < 0.003 | < 0.003 | 0.016 | 0.008 | 0.003 | 0.004 | < 0.003 | CRBT |
| PGH-18-09 | 477.26 | 478.5 | 1.24 | 590810 | A18-08115 | 2.19 | 0.009 | 0.19 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.003 | GRAN |
| PGH-18-09 | 478.5 | 479.14 | 0.64 | 590811 | A18-08115 | 4.14 | 0.159 | 3.76 | < 0.003 | 0.003 | 0.018 | 0.008 | < 0.003 | 0.02 | < 0.003 | CRBT |
| PGH-18-09 | 479.14 | 479.95 | 0.81 | 590812 | A18-08115 | 3.29 | 0.018 | 0.13 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.029 | GRAN |
| PGH-18-09 | 479.95 | 480.42 | 0.47 | 590813 | A18-08115 | 4.92 | 0.064 | 3.35 | < 0.003 | < 0.003 | 0.015 | < 0.005 | < 0.003 | 0.019 | 0.027 | CRBT |
| PGH-18-09 | 480.42 | 481.14 | 0.72 | 590814 | A18-08115 | 3.47 | 0.013 | 0.26 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.003 | < 0.003 | GRAN |
| PGH-18-09 | 481.14 | 482.33 | 1.19 | 590815 | A18-08115 | 1.78 | 0.026 | 3.25 | < 0.003 | 0.003 | 0.01 | 0.006 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-09 | 482.33 | 482.89 | 0.56 | 590816 | A18-08115 | 8.85 | 0.142 | 1.39 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.009 | < 0.003 | CRBT BX |
| PGH-18-09 | 487.1 | 488 | 0.9 | 590817 | A18-08115 | 3 | 0.063 | 1.48 | < 0.003 | 0.003 | 0.011 | 0.008 | < 0.003 | 0.011 | < 0.003 | CRBT |
| PGH-18-09 | 488 | 488.75 | 0.75 | 590818 | A18-08115 | 5.55 | 0.338 | 5.04 | < 0.003 | 0.005 | 0.013 | 0.015 | 0.003 | 0.013 | < 0.003 | CRBT |
| PGH-18-09 | 488.75 | 489.5 | 0.75 | 590819 | A18-08115 | 6.73 | 0.029 | 0.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.012 | GRAN BX + CRBT |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) | Description |
|-----------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|----------------|
| PGH-18-09 | 489.5 | 490.25 | 0.75 | 590820 | A18-08115 | 2.84 | 0.275 | 2.8 | < 0.003 | 0.004 | 0.014 | 0.016 | 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 490.25 | 490.86 | 0.61 | 590821 | A18-08115 | 4.84 | 0.155 | 3.2 | < 0.003 | 0.004 | 0.011 | 0.012 | < 0.003 | 0.012 | < 0.003 | CRBT |
| PGH-18-09 | 490.86 | 491.6 | 0.74 | 590822 | A18-08115 | 3.45 | 0.121 | 2.82 | < 0.003 | < 0.003 | 0.01 | 0.011 | < 0.003 | 0.014 | < 0.003 | CRBT |
| PGH-18-09 | 491.6 | 492.39 | 0.79 | 590823 | A18-08115 | 2.1 | 0.149 | 3.69 | < 0.003 | 0.004 | 0.013 | 0.017 | < 0.003 | 0.016 | < 0.003 | CRBT |
| PGH-18-09 | 492.39 | 492.96 | 0.57 | 590824 | A18-08115 | 3.53 | 0.191 | 4.11 | < 0.003 | 0.003 | 0.021 | 0.015 | 0.004 | 0.025 | < 0.003 | CRBT |
| PGH-18-09 | 492.96 | 493.62 | 0.66 | 590825 | A18-08115 | 6.1 | 0.036 | 0.13 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.013 | GRAN BX + CRBT |
| PGH-18-09 | 493.62 | 495 | 1.38 | 590826 | A18-08115 | 9.89 | 0.053 | 2.06 | < 0.003 | 0.003 | 0.01 | < 0.005 | < 0.003 | 0.013 | 0.126 | CRBT + MD? |
| PGH-18-09 | 500.18 | 501.35 | 1.17 | 590827 | A18-08115 | 4.7 | 0.14 | 2.55 | < 0.003 | 0.004 | 0.015 | 0.005 | < 0.003 | 0.019 | < 0.003 | CRBT BX |
| PGH-18-09 | 503.72 | 504.7 | 0.98 | 590828 | A18-08115 | 4.7 | 0.14 | 1.86 | < 0.003 | < 0.003 | 0.013 | 0.007 | 0.005 | 0.013 | < 0.003 | CRBT |
| PGH-18-09 | 504.7 | 505.56 | 0.86 | 590830 | A18-08115 | 5.68 | 0.042 | 1.63 | < 0.003 | 0.004 | 0.017 | 0.007 | < 0.003 | 0.012 | < 0.003 | CRBT |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|------------------|---------------|---------------|-----------|---------------|------------------|-----------------|------------------|------------|-------------|
| PGH-18-09 | 61 | 61 | 0 | 590607 | A18-08115 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-09 | 125 | 126.08 | 1.08 | 590627 | A18-08115 | N/A | ORIGINAL SAMPLE | 0.48 | 0.024 |
| PGH-18-09 | 125 | 126.08 | 1.08 | 590628 | A18-08115 | DUPLICATE | DUP 590627 | 0.15 | 0.019 |
| PGH-18-09 | 142.07 | 142.07 | 0 | 590638 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 171.63 | 171.63 | 0 | 590657 | A18-08115 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-09 | 187.83 | 187.83 | 0 | 590675 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 208.27 | 208.27 | 0 | 590685 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 250.9 | 250.9 | 0 | 590699 | A18-08115 | STANDARD | Oka 1 | 2.41 | 0.524 |
| PGH-18-09 | 272.56 | 272.56 | 0 | 590714 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 294.95 | 294.95 | 0 | 590719 | A18-08115 | STANDARD | Oka 1 | 2.48 | 0.528 |
| PGH-18-09 | 296.51 | 296.51 | 0 | 590722 | A18-08115 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-09 | 313.85 | 313.85 | 0 | 590726 | A18-08115 | STANDARD | Oka 1 | 1.3 | 0.02 |
| PGH-18-09 | 346.77 | 346.77 | 0 | 590750 | A18-08115 | STANDARD | Oka 1 | 2.5 | 0.554 |
| PGH-18-09 | 371.35 | 371.35 | 0 | 590759 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 391.87 | 391.87 | 0 | 590771 | A18-08115 | STANDARD | Oka 1 | 2.48 | 0.533 |
| PGH-18-09 | 401.3 | 401.3 | 0 | 590776 | A18-08115 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-09 | 446.17 | 446.17 | 0 | 590786 | A18-08115 | BLANK | Marble | 0.01 | < 0.003 |
| PGH-18-09 | 449 | 449 | 0 | 590789 | A18-08115 | STANDARD | Oka 1 | 2.45 | 0.523 |
| PGH-18-09 | 453 | 454.4 | 1.4 | 590794 | A18-08115 | N/A | ORIGINAL SAMPLE | 3.73 | 0.306 |
| PGH-18-09 | 453 | 454.4 | 1.4 | 590795 | A18-08115 | DUPLICATE | DUP 590794 | 3.51 | 0.278 |
| PGH-18-09 | 476.52 | 476.52 | 0 | 590808 | A18-08115 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-09 | 504.7 | 504.7 | 0 | 590829 | A18-08115 | BLANK | Marble | 0.01 | < 0.003 |



| | | | |
|---------------------|------------------------------|---------------|-------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 20-May-2018 |
| Township/Area: | Killala Lake Area | End Date: | 21-May-2018 |
| Claims (converted): | 307858 | Described by: | n/a |
| Claims (legacy): | TB 4256251 | Log date: | n/a |

Collar

Azimuth: 341.00°
 Plunge: -60.00°
 Length: 60.0 m

COORDINATES UTM (NAD83 zone 16)

Easting: 519604
 Northing: 5432445
 Elevation: 319.0m

Core size: HQ Cemented: No
 Casing: Pulled Stored: Yes

Down hole surveys

Description

Hole abandoned at 60m to adjust azimuth.



| | | | |
|---------------------|------------------------------|---------------|------------------------|
| Drilled by: | Chibougamau Diamond Drilling | Start Date: | 21-May-2018 |
| Township/Area: | Killala Lake Area | End Date: | 25-May-2018 |
| Claims (converted): | 307858, 230752 | Described by: | L.A. Giroux, MSc, PGeo |
| Claims (legacy): | TB 4256251 | Log date: | 4-Jun-2018 |

Collar

| | | | | | | | |
|------------------|--|-------------------|--|------------|--------|-----------|-----|
| Azimuth: 341.00° | | Easting: 519604 | | Core size: | HQ | Cemented: | No |
| Plunge: -60.00° | | Northing: 5432445 | | Casing: | Pulled | Stored: | Yes |
| Length: 435.0 m | | Elevation: 319.0m | | | | | |

COORDINATES UTM (NAD83 zone 16)

Down hole surveys

| Drill Hole | Type | Depth (m) | Azimuth Corrected (°) | Dip (°) | Mag |
|------------|--------|-----------|-----------------------|---------|-------|
| PGH-18-10A | Reflex | 18 | 340.8 | -60.8 | 58398 |
| PGH-18-10A | Reflex | 69 | 340.5 | -60.9 | 57961 |
| PGH-18-10A | Reflex | 120 | 341.4 | -61 | 57856 |
| PGH-18-10A | Reflex | 174 | 341.8 | -61.3 | 57914 |
| PGH-18-10A | Reflex | 225 | 341.9 | -61.3 | 57635 |
| PGH-18-10A | Reflex | 279 | 341.1 | -61 | 58111 |
| PGH-18-10A | Reflex | 327 | 338.6 | -61 | 57163 |
| PGH-18-10A | Reflex | 378 | 344.3 | -61.3 | 58222 |
| PGH-18-10A | Reflex | 435 | 343.7 | -61.4 | 57810 |

Description

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|-------|-------|------------|-----------------|--|
| PGH-18-10A | 0 | 3 | OVB | Casing | |
| PGH-18-10A | 3 | 25.7 | SYE | Syenite | <p>Medium pink Syenite to Granite (white fspar + qtz increasing below ~15m). Abundant patched & veins of bright green epidote alt'n and blue-grey amph. Carb veining ~10-20%. Locally weakly to moderately bx'td. Mg-Cg. Moderate micaceous fabric developed locally below 18m (gneissic). Lesser carb veining downhole.</p> <p>4.6-4.97m: Vfg spotted unknown grey dykes/veins ribboned w/ vfg carb veinlets (extensional fract). UCT at 15/?, LCT ~35/? (irregular, banded).</p> <p>7.72-7.86m: Same unknown dyke. UCT at 55/270, LCT at 70/250 (sharp, irregular).</p> <p>10.08-10.75m: Diabase Dyke. Vfg aphanitic dark grey matrix. Plag phenocrysts up to 3mm (typically). UCT at 45/090, LCT at 25/090 (sharp, chilled).</p> <p>14.26-14.49m: Diabase Dyke. Similar. UCT at 35/050, LCT at 45/050 (broken).</p> |
| PGH-18-10A | 25.7 | 29.77 | CRBT | Carbonatite | <p>Fg purplish-grey massive carbonatite. Multiple carbonate phases. ~1% blebby to cubic pyrite. Locally core is pitted. Bands of vfg apatite under UV. No obvious pyrochlore. UCT at 65deg (irreg, bx'td), LCT gradational, banded w/ Mdyke.</p> <p>29.32-29.5m: hematite coated fract + pitting</p> |
| PGH-18-10A | 29.77 | 31.54 | MDYKE | Mafic Dyke | Vfg, med blueish-grey to brownish-grey mafic dyke? Irregularly banded. Fg biotite (locally cg). |
| PGH-18-10A | 31.54 | 45 | GRAN | Granite | <p>Granite to Quartz-Syenite. Med to coarse grained, med pink to blueish-grey colour. Weak foliation defined by biotite + black/green pyx? <5% carbonate veining. Very weak bx'tn texture only locally.</p> <p>32.1-32.28m, 32.54-32.73m = Vfg zones/dykes perpendicular to CA. Grey spotted with white (carb) & green. Fine blebs sulph.</p> |
| PGH-18-10A | 45 | 45.95 | SYE-BX | Syenite-Breccia | Amalgamated' bx. Orangy-pink rubbly breccia, local pitted. Only minor ap noted under UV. Kspar is deep reddish (hematized) colour. With fine grained carb+biot. Rare fluorite patches. Bx'td irregular contacts. Orangy-brown limonite(?) coating on fractures. |
| PGH-18-10A | 45.95 | 55.26 | GRAN | Granite | Mg to cg, locally white fspar >> kspar where coarser grained (w/ biot+green pyx?). Lesser quartz. Weakly foliated. <<5% carb veining overall, typically very fine ribbony veins, absent where cg. Carb banding perpendicular to CA at gradual lower contact. |
| PGH-18-10A | 55.26 | 56.1 | CRBT | Carbonatite | Fg yellowish-grey, banded (irreg) by fg ap (UV). Spotted by fg kspar + <1% blebs/cubes py. Banding ~// to LCT. LCT at 52/230. No pych noted. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|-------|-------|------------|--------------|---|
| PGH-18-10A | 56.1 | 89.13 | GRAN | Granite | <p>Granite to Qtz-Syenite. Mg to vcg, med pink to spotted blue-grey/pink/green-black in colour. Qtz content variable (<5%-30%). Generally minor carb veining (<1cm wide x-cutting veins) with the exception of:</p> <p>63.4-64.05m: low angle irregular vein w/ 10-15% py+hem, possible pych.</p> <p>65.72-66.0m: at ~65/300, fg, yellowish, bands of fine deep red kspar xtals?</p> <p>68.55-68.72, 70.4-70.5m and 72.07-72.18m: Minor veins ~perp to CA, greyish-purple, fg.</p> <p>Carb veining increasing downhole, veins up to 5-10cm wide (below ~75m).</p> <p>82.32-83.07m: Bx Crbt vein spotted w/ 10-20% deep red hem? alt'n. At ~15dtca (UCT bx'td, LCT highly irregular).</p> <p>86.07-86.17m: Fg white Crbt w/ coarse (1cm) blebs py at contacts (~60dtca, irregular, bx'td).</p> <p>86.57-86.75m: Bx zone w/ micaceous alt'n at contacts.</p> <p>At 76.84m, Minor FZ at 25/115. Core is weakly bx'td & chloritic (along fract's) from ~76.5-79m.</p> <p>Apatite noted (UV) from ~77.5-77.8m in low angle irregular banded carb vein.</p> |
| PGH-18-10A | 89.13 | 91.67 | DIAB | Diabase Dyke | <p>Strongly magnetic. Vfg, dark grey, 5% up to 0.5cm white plag phenocrysts. Includes 2 'clasts' up to 18cm wide of granitic material. UCT at 25/240 (sharp, near planar, open). LCT at 30-35/030 (sharp, slightly irreg, closed).</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|-------------------------------------|--|
| PGH-18-10A | 91.67 | 135 | MIX ZONE | Syenite-Breccia/Granite/Carbonatite | <p>Heavily mixed interval of syenite-breccia, unbx'td sye/gran and massive crbt veins/dykes. Bx'tn texture only locally (w/ micaceous reaction alteration rims around kspar clasts) w/ patches & veins of blue-black amphibole alt'n locally. Banded by change in rock type at metre-scale.</p> <p>Apatite & fluorite in bands/patches associated w/ CRBT. Crbt veins vary from massive white to pink, banded.</p> <p>100.58-100.8m and 110.7-110.89m: Fg, banded MDYKE?. Non magnetic. Upper is greenish-grey, lower is darker-grey. 20-30% carb + green-black pyx + mica? Sulph and fluorite noted on fract.</p> <p>At 111.5m: Purple to red banding at 35/280.</p> <p>At 111.75m: 2 x 4cm fluorite patches.</p> <p>112.8-113.0m: PEGMATITE/SYE. Very vcg (up to 2cm) pinky-orange kspar + white fspar (plag or kspar? - no obvious striations) + lesser black pyx. Minor epidote.</p> <p>117.0-118.6m: CRBT/BX. Low angle (~// to CA) carbonatite breccia vein. Orangy pink strongly deformed/undulating section w/ low angle carb veining containing highly irregular, mixed orange-red syenitic clasts & deep purple hematized clasts. Fluorite present. Chloritic vuggy fractures at top of interval.</p> <p>118.6-118.9m: CRBT. Light grey w/ vfg deep purple alt'd patches & veinlets. Sharp, bx'td contacts.</p> <p>121.3-121.65m: GRAN. Massive, cg, white to light pink granite spotted w/ ~10% biot + dark green pyx, 30-40% qtz, 30% white to pale peach fspar.</p> <p>125.14-125.67m: CRBT w/ 10cm cg SYE clast. Fg, grey. UCT at 55/080 (sharp, minor rxn rim).</p> <p>125.67-126.54m: DIABASE dyke. Typical, 1-2% fg white phenocrysts. UCT at ~50/220. LCT at 30/240. Both broken, near-planar, greasy chloritic coating.</p> <p>126.54-127.0m: CRBT/ Massive, light grey to beige, faintly banded perpendicular to CA. LCT at 55/070 (somewhat bx'td).</p> |
| PGH-18-10A | 135 | 150.1 | GRAN | Granite | <p>With <10% x-cutting carbonatite veins typically <1cm thick. Granite is mg-cg, spotted blue-pink-dark green. Upwards of 30% quartz (>40% locally) with pink & white (locally) kspar, black mica and dark green pyx. Where coarse grained, mica + pyx define a weak foliation (gneissocity) sub-parallel to CA.</p> <p>From ~144.4m, carbonate veining increasing along with associated alteration (micaceous brownish alteration envelopes flanking veins and increased alkalic alteration).</p> <p>Brecciation texture developed at LCT. Fluorite noted in carbonate veining.</p> |
| PGH-18-10A | 150.1 | 152 | CRBT | Carbonatite | Low angle CRBT vein (~// to CA). Highly variable from light blue-grey to pinkish-purple in colour. Fg. Apatite bands noted under UV. |
| PGH-18-10A | 152 | 155.51 | GRAN | Granite | <p>Granite as above except:</p> <p>154.81-155.12m: MAFIC DYKE. Fg, med-grey spotted by black, green & white (carb?), possible neph. Non mag (mag susc - 0.45). UCT at 75/100. LCT at 75/180. Both sharp, sub-planar.</p> |
| PGH-18-10A | 155.51 | 157.04 | CRBT | Carbonatite | Medium grained, strongly pitted, moderately banded carbonatite. ~25-20% deep purple fluorite over 10cm near UCT. Apatite-rich banding (UV). UCT and banding at 55-60/240-250. LCT bx'td, sharp, ~perpendicular to CA. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|------------------------|---|
| PGH-18-10A | 157.04 | 162.45 | CRBT-BX | Carbonatite/Syenite-Bx | Mixed zone w/ 50% massive carbonatite zone, 50% breccia with syenitic clasts up to 30cm wide. Carbonatite intervals up to 1m long w/ common bands of apatite, lesser patches of fluorite (within bands). Syenite variable from fg to cg. Banding (typically parallel to contacts) is 65/260 at 158.5m. From 157.37-157.66m: Vfg light to med greenish-grey MAFIC DYKE w/ minor carbonate veinlets. Contacts approx. perpendicular to core axis, sharp, irregular/non-planar, banded. |
| PGH-18-10A | 162.45 | 170.06 | SYE | Syenite/Carbonatite | Mixed zone w/ ~85% Syenite + 15% Carbonatite. CRBT sections up to 40cm wide, highly variable. Fg, banded (apatite) to cg massive. Often bands of py+po+ap at contacts. SYE is cg and comprised predominantly of kspar w/ lesser mafic component. Qtz noted only locally. Pervasive (20-30%) sodic (blue amph) & lesser epidote alteration. |
| PGH-18-10A | 170.06 | 174.35 | GRAN | Granite | Relatively unaltered cg granite (~30% qtz) w/ qtz+kspar+biot+pyx. Faint gneissic banding. Deep mottled pink & blue-grey colour. |
| PGH-18-10A | 174.35 | 177.5 | SYE-BX | Fenite/Carbonatite | 174.35-175.4m: Deep orangy-red cg fenite (alkalic+sodic metasomatism) - essentially kspar + blue amph w/ << epidote locally. 145.4-175.95m: Extensional CRBT vein. Very fine ribbony veining/banding // to contacts. Highly variable colouration from pale grey to green to red to dark purple. UCT at 75/330 (sodic alt'n, planar). LCT at 45/340 (sodic alt'n, highly irregular). 175.95-177.5m: Fenitized granite as before CRBT interval. |
| PGH-18-10A | 177.5 | 178.9 | CRBT-BX | Carbonatite/Breccia | ~75cm cg massive pink Carbonatite flanked by breccia zones. Apatite noted in bx zones and bands at contact w/ CRBT but not in massive CRBT section. Coarse blebs py (<1%). |
| PGH-18-10A | 178.9 | 181.73 | GRAN | Granite | Granite as above. Weak foliation defined by mafics. Minor carb veining. |
| PGH-18-10A | 181.73 | 182.63 | CRBT | Carbonatite | Light grey, cg at start, sharp transition to fg at 182.1m at open fracture. 'Dalmatian' spotting by fine black mineral (pyx?). Fine disseminated pyrite. UCT at 65/310 (sharp, sub planar). LCT at 45-50/290 (sharp, undulating). |
| PGH-18-10A | 182.63 | 188 | GRAN | Granite | Granite w/ ~5% CRBT veining. Typically coarse grained, variably fenitized. Weakly brecciated locally by carb veining. Apatite noted in carb veins. |
| PGH-18-10A | 188 | 190.45 | GRAN | Granite | Coarse grained, whiter in colour. Qtz (30-40%), 10-20% kspar + white fsp? + mafics. Weakly foliated. Minimal carb veining. Relatively unaltered. |
| PGH-18-10A | 190.45 | 204.8 | GRAN | Granite/Syenite | Variable quartz content w/ variable degrees of fenitization. Typically coarse grained. 185.43-188.0m: Crosscutting apatite bearing carb veins including 30cm massive CRBT. 188.0-190.5m: 'White' granite w/ pale coloured/white fspar. Wavy gneissic fabric sub-parallel to CA. 191.43-193.75m: Breccia/Fault Zone. Rubbly looking, variably chloritized (slickensided fractures) w/ deep purple to red alteration. Apatite noted in carbonate matrix. 197-199.56m: Low angle (~// to CA) carb vein. No apatite under UV. Blue amphibole associated with vein. Chloritic alteration throughout (interstitial to fspar grains) gives rock granular texture. Mixed pale pink to dark pink kspars. |
| PGH-18-10A | 204.8 | 205.65 | PEG | Pegmatite | Granitic Pegmatite. Possible dyke. Up to 5cm quartz crystals plus pale pink feldspars with interstitial pistachio green epidote alt'd mineral. Pyrite along fractures. UCT (w/ GRAN) at 30/270 (sharp, planar, closed). LCT less well defined w/ abundant blue-grey amph alt'n. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|---------------------|--|
| PGH-18-10A | 205.65 | 210.4 | SYE-BX | Syenite-Breccia | Variably assimilated breccia. Abundant qtz locally. Deep orange (alkalized) colour. Apatite-carbonate veining/matrix. 207.6-208.05m: Massive fg purplish-grey carbonatite w/ apatite banding at contacts + bands of py/po. |
| PGH-18-10A | 210.4 | 237 | GRAN | Granite | Predominantly massive cg granite to granitic gneiss w/ lesser zones of carbonatite and breccia. More blueish in colour due to qtz + paler coloured fspars. 30% dark green to black mica defined foliation/banding. Weakly developed breccia locally where crosscut by wispy white carb veins. At 210.5m: 2cm wide chl-carb bx vein at 55/020. 214.75-214.9m: Apatite in carb veining. 215.58-215.9m: CRBT. Pale beige, ap at contacts. 219.13-219.22m: DIABASE DYKE. Vfg, dark green, aphanitic, mod magnetic. Chilled, sharp, planar. At 45/215. 221.44-221.6m: Mafic Dyke? Fg, green, chloritic interval with biotite books. Ribbony very fine carb veining. Non mag. At ~25-30dtca. 227.0-227.6m: CRBT. UCT at 15/220, sharp, irregular, banded by ap+amph. LCT at 20/270, irregular, alt'd. 230.58-230.73m: Fg, banded Mafic Dyke? Perpendicular to CA. Greenish to grey colour. Sugary texture. Wavy banding & contacts. Fg carb + kspar?, neph?, chl? 231.2-231.5m: CRBT. Fg, yellowish-beige colour. Mod banded by ap at 70/230 (irregular). Banding // to contacts. 235.67-236.0m: CRBT. Massive, generally cg, white w/ coarse blebs & bands of po+py+/-mt (strongly magnetic) (~10% overall). UCT at 25/180 (near planar, amph-chl banding). LCT at 40/180. |
| PGH-18-10A | 237 | 239.5 | CRBT-BX | Carbonatite-Breccia | Carbonatite w/ up to 20cm clast of altered granite. Crbt is white to pink. SMSS locally (10-20% overall). Strongly developed micaceous alteration haloes around clasts. Apatite band noted at LCT. UCT at 20/180. LCT at 20/170 (bx'td, irreg, amph alt'n). |
| PGH-18-10A | 239.5 | 245.5 | GRAN | Granite | Cg granite to granitic gneiss w/ minor epidote alteration locally. Occasional 1-4cm wide carb veins (+/- apatite) w/ sodic alt'n envelopes. At 241.77m: 1cm wide vein w/ 1cm thick envelopes is flanked by 2-3cm of vcg pegmatitic granite. |
| PGH-18-10A | 245.5 | 252.7 | GRAN | Granite | Typical. With increasing carbonate veining and brecciation. Generally strongly developed alt'n envelopes around clasts and flanking carb veins (up to 3cm wide). Variable kspar alt'n. Lesser blue amph-carb veining (sodic alt'n). 245.57-245.8m: CRBT banded w/ fluorite and py at centre, finer grained towards contacts. 252-252.7m: Well developed BX due to x-cutting carb veins. |
| PGH-18-10A | 252.7 | 254.1 | CRBT | Carbonatite | Mg, purplish grey. Includes 7cm & 13cm wide bands of vfg kspar-rich clasts/bands subparallel to contacts (faint red, green & blue-grey spotted). Trace to 1% cubic to subhedral pyrite disseminated and in masses weakly aligned w/ banding. Fine (<1mm) pych? in weakly defined bands (<<1% overall). UCT at 55/180 (sharp, irreg, blue amph alt'n). LCT at 60/190 (banded, sub planar). |
| PGH-18-10A | 254.1 | 256.35 | SYE | Granite to Syenite | Typically cg, orangy pink in colour, spotted by up to 30% dark green-black pyx+mica, variable quartz. Minor carb veining (w/ alt'n rims). |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|---------------------|--|
| PGH-18-10A | 256.35 | 256.82 | CRBT | Carbonatite | Carbonatite w/ alkalic clasts w/ chloritic alteration haloes and chloritic slickensided fractures. CRBT is cg and deep pink in colour. UCT at 45/170 (planar, banded). LCT at 50/180 (near planar). Several cm-scale bands perpendicular to core axis, vfg greenish-grey. Flanked by purple fluorite and apatite. |
| PGH-18-10A | 256.82 | 269.6 | MIX_ZONE | Mixed Zone | Mixed zone of ~40% granite/syenite (variably fenitized/alkalized), 50% breccia (syenite clasts in crbt matrix) and 10% massive carbonatite. Carbonatite is typically yellowish-grey in colour w/ apatite and abundant fluorite. Patchy/interstitial an veins of epidote and/or blue-grey amphibole alteration. Dark brown to black alt'n rims common around alkalic clasts in breccia. Breccia is locally assimilated. 262.74-263.19m: CRBT, Cg, white w/ 1-2% fluorite. UCT at 55/340 (open, chloritic). LCT at 80/330 (closed, sharp, sub planar). 263.88-264.88m: CRBT. Banded, yellowish-grey to reddish-purple (hem?). Ap bands under UV. UCT bx'td, angle difficult to determine. LCT at 55/330 (closed, sharp, planar). At 264.5m: 2-3cm wide irregular bands of near massive fluorite. |
| PGH-18-10A | 269.6 | 271 | UNKN | Unknown Dyke | Fg, greenish-grey dyke w/ zoned cm-scale wispy banding. Up to 20% carbonate in matrix. Slightly coarser biotite books. Plus includes up to 20cm wide CRBT zones/bands (banding // to contacts). Non mag. Zones by gran size. Wispy extensional carb veins. |
| PGH-18-10A | 271 | 289.5 | MIX_ZONE | Mixed Zone | Mixed zone as above w/ 5% massive CRBT, 40% un-brecciated granite/syenite and 45% breccia. |
| PGH-18-10A | 289.5 | 291.08 | MDYKE | Mafic Dyke | Very strongly magnetic (mag susc up to 200 where cg mag present). Vfg, dark grey, slightly coarser biotite. Interbanded w/ green & reddish spotted carbonate rich sections. LCT at 70/030 (sharp, planar). UCT irregular, gradual. 290.85-291.08m: Cg (0.5cm) magnetite's 7-10%. |
| PGH-18-10A | 291.08 | 292.45 | SYE | Syenite/Carbonatite | 291.08-292.45m: 18cm CRBT (grey, fg) followed by massive syenite. |
| PGH-18-10A | 292.45 | 294.8 | MDYKE | Mafic Dyke | Strongly magnetic (mag susc up to 165, typically <100). Single 1.5cm ring of magnetite noted at 293.4m. Fg matrix w/ coarser biotite books up to 1cm. Occasional up to 3cm wide rounded micaceous 'clasts'. Very fine carb veining/ribbons - 5-7% white carbonate. Pyroxenite? UCT at 35/100 (sharp, chilled). LCT bx'td, broken. |
| PGH-18-10A | 294.8 | 298.73 | SYE | Syenite | Syenite to Syenite-Breccia locally. Typically bright pink alkalic interval w/ x-cutting carb veining. Carb associated w/ thick black alteration envelopes/rims. |
| PGH-18-10A | 298.73 | 302.37 | CRBT | Carbonatite | Massive, light greyish-pink, fg apatite throughout. Faintly banded. <<1% blebby to cubic pyrite. UCT at 55/350 (bx'td, banded w/ ap). LCT at 45/290 (sharp, wavy, banded). |
| PGH-18-10A | 302.37 | 306.29 | SYE | Syenite | Medium pink alkalic interval. Very minimal carb veining (sub perpendicular to CA, up to 2cm wide). Moderately chloritized. Weak foliation/gneissosity. |
| PGH-18-10A | 306.29 | 308.86 | MDYKE | Mafic Dyke | Mafic Dyke or Pyroxenite as above. Strongly magnetic. Increasing carbonate and breccia texture downhole. Cg magnetite up to 1cm. From 307.5m: Breccia Dyke. Rounded mafic (biotite-rich, variably magnetic) clasts up to 5cm wide. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|------------------------|---|
| PGH-18-10A | 308.86 | 313.55 | SYE | Syenite | Lighter pink w/ lighter coloured feldspars. Pervasive blue amph +/- chl alteration. Lesser epidote. Cg, massive with very minor carb veining. |
| PGH-18-10A | 313.55 | 316.5 | SYE-BX | Syenite-Breccia | As above Sye w/ weak to moderate bx'tn by x-cutting carb veins (+/- alt'n envelopes). 314.65-315.27m: CRBT. Near massive w/ wispy blue amph. 10cm mafic band associated w/ sulph masses towards centre. |
| PGH-18-10A | 316.5 | 321.77 | SYE | Syenite | Syenite to Quartz-Syenite. Med pink, mg to cg. Minor carb veining - generally <0.5cm wide. Weak foliation defined by mafics (biot-pyx up to 30% locally). |
| PGH-18-10A | 321.77 | 327.68 | MDYKE/CRBT | Mafic Dyke/Carbonatite | Interbanded intervals of Carbonatite to Silicocarbonatite and medium greenish-grey to dark-grey Mafic Dyke. Mdyke variably magnetic (non to strongly mag). Cut by fine stacked ribbony carbonate veins (extensional). Coarser mica/biotite books locally. Carbonatite is fg, spotted purplish-grey colour. Ap noted in carb. Upper 40cm bx'td by carb. |
| PGH-18-10A | 327.68 | 330.52 | CRBT-BX | Carbonatite/Syenite-Bx | Top 1 metre is 'assimilated' breccia or carbonatized syenite. Remnant alkalic clast shape preserved only faintly. Includes up to 20cm CRBT (w/ ap) bands. |
| PGH-18-10A | 330.52 | 333 | DIAB | Diabase Dyke | Fg, dark grey to black, strongly magnetic mafic dyke. UCT at 30-35/270 (sharp, stepped, chilled). LCT at 20/260 (open, chlorite coated, 1cm wide carb vein // to contact). Up to 5-10% light grey to black 'phenocrysts' up to 0.5cm in size - no xtal habit on broken surfaces - pyx? |
| PGH-18-10A | 333 | 334.36 | SYE-BX | Syenite-Breccia | Typical. Coarsely bx'td by x-cutting carb veins w/ rxn envelopes. Carb veins generally <1cm wide. 333.46-333.6m: CRBT vein. Banded // to contacts (60-65/180) (near planar, irregular, banded). Banded at mm- to cm-scale by wispy blue amph + apatite (UV). |
| PGH-18-10A | 334.36 | 335.95 | MDYKE | Mafic Dyke | Mafic Dyke or Pyroxenite. Dark grey, fg mafic unit w/ 1-2% coarser biotite books (up to 4mm). Generally non-magnetic w/ exception of sulphide patch/vein at ~334.65m. ~10% fine ribbony carb veins. UCT near planar, wavy, more micaceous at 35/280. |
| PGH-18-10A | 335.95 | 337.85 | MIX_ZONE | Mixed Zone | Mixed interval w/ 'Pyroxenite' bx'td by carbonatite; zones of banded 'PYX' and unknown light vfg greenish-grey sugary textures silicate-rich dykes? (very minimal carb) finely spotted by pale pink neph(?) flanked by PYX. |
| PGH-18-10A | 337.85 | 341 | SYE | Fenite/Syenite | Abundant blue amph (sodic alt'n). Carb veining w/ associated blue amph + brown mica/chl alt'n. Unbrecciated. |
| PGH-18-10A | 341 | 345.56 | MDYKE | Mafic Dyke | Mafic Dyke or Pyroxenite. As above, vfg, dark grey, fine ribbony carb veining (typically perpendicular to CA) with some coarser patches and veins up to 1cm thick. Non magnetic. Apatite in carb near lower contact. Coarser biotite books from ~345m. Bx'td more micaceous lower contact. |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|--------|------------|-------------|---|
| PGH-18-10A | 345.56 | 364.24 | MIX ZONE | Mixed Zone | <p>Mixed zone comprised of ~15% Carbonatite, 50% unbrecciated Syenite/Fenitized Granite and 35% Breccia (weak to moderately developed).</p> <p>Syenite is med to dark pink in colour, mg-cg, spotted by up to 25% mica (black) + pyx (green). Predominantly pinkish kspar w/ lesser white fspar. Quartz locally. Locally very coarse grained. Alteration consists of dark blue sodic amph in veins & replacing pyx? Only minor patches epidotization locally.</p> <p>In Breccia sections the Syenite is x-cut by carb veining w/ micaceous reaction rims defining weak to moderate bx texture.</p> <p>Carbonatite==></p> <p>349.94-350.57m: Bx'td UCT & LCT. Cg, white, some wispy blue amph veins, cg ap under UV.</p> <p>353.44-353.95m: UCT at 40/220 (sharp, stepped/bx'td). LCT at 15-20/290 (banded, irregular, near planar). Coarse grained, tr-1% sulph, apatite associated w/ wispy blue amph bands.</p> <p>360.58-361.6m: Cg, light grey to purple. UCT at 60/290 (near planar). LCT bx'td, irregular. Only minor ap/amph bands.</p> |
| PGH-18-10A | 364.24 | 391.91 | CRBT | Carbonatite | <p>A carbonatite ranging from fg to cg, white/light grey to pink. Wispy bands of fg blue amph common (often associated w/ apatite). Apatite typically fg. Cg xtals (up to 1cm) noted at ~368.5m, 378m and 387m (darker apple green colour). Tr-1% pyrite +/- pyrrhotite, fine magnetite only locally (mag susc up to 60). UCT at 30/030 (sub planar, banded, sharp).</p> <p>365.92-369.07m: Sye clast w/ rxn rims.</p> <p>367.13m: At 35/075. 3cm wide chloritic zone (+kspar). Minor slippage along clast. Minor FZ?</p> <p>367.9-368.12m: Fg, dark grey MAFIC DYKE. Non mag. Very wavy irregular UCT sub perpendicular to CA. LCT at 55/170 (irreg, micaceous).</p> <p>366.7m: 1cm wide reddish-brown bx-vein in pink Crbt (<1mm carb clasts).</p> <p>378.9-379.6m: Finely banded by fg apatite, amph at 50-55 dtca (not oriented).</p> <p>387.24-387.34m: Cg, darker apple green apatite on open powdery white surface, w/ fg euhedral pyrochlores. Silvery + pyritic sulphides n cavities/pitting on outer core surface.</p> |
| PGH-18-10A | 391.91 | 419.04 | MIX ZONE | Mixed Zone | <p>Predominantly GRAN/SYE (variably fenitized) w/ much lesser massive CRBT (<5%) and Alkalic Breccia (15%). Brecciation decreases downhole. Apatite in massive carbonatite/veins. Blue amph often associated w/ carb veining.</p> |
| PGH-18-10A | 419.04 | 424.54 | CRBT | Carbonatite | <p>Massive, white to blueish (amph-rich). UCT bx'td at 25-30/220-230. UCT includes 5cm wide SYE clasts // to contacts. LCT bx'td at ~35/200-240. SYE very strongly fenitized over ~60cm below.</p> <p>Banding at 55-60/200 (419.75m), 45-50/180 (421.3m). 1-2% fine blebby sulphides often aligned in banding (w/ wispy blue amph +/- dark brown mica, apatite).</p> |

LITHOLOGY

| DDH | From | To | Litho_Code | Litho_Title | Description |
|------------|--------|-----|------------|---------------------|--|
| PGH-18-10A | 424.54 | 435 | SYE | Granite/Carbonatite | <p>Massive to weakly foliated (by mafics) GRAN to SYE (abundant qtz locally ~30%).</p> <p>424.54-425.92m: Fenitized (sodic) gran/sye, bx'td at contacts.</p> <p>425.92-428.5m: Massive white to light grey cg CRBT w/ rimmed sye clasts up to 15-20cm in top third of section. Otherwise unbx'td.</p> <p>428.5-431.3m: SYE w/ minor carb-amph veining.</p> <p>431.3-433.23m: Low angle CRBT vein & associated bx.</p> <p>431.7-432.0m: BX vein. Stacked low angle bx-veins. White angular carbonate clasts in black chloritic matrix.</p> <p>432.43-432.77m: Bx vein. Within greater bx zone from 432.0-433.24m. Coarse to small angular carbonatite and alkalic clasts in chloritic matrix. Angle difficult to determine.</p> <p>433.24-435.0m: Well foliated mafic rich Syenite. 50-60% kspar, 40-50% biot+pyx (black). Chlorite commonly coating fractures. Single zoned blue amph vein w/ green epidote (blue at centre, green edges).</p> <p>EOH at 435.0m.</p> |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 4.36 | 5.44 | 1.08 | 590851 | A18-08117 | 7.93 | 0.069 | 2.73 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.012 | 0.021 |
| PGH-18-10A | 5.44 | 6.76 | 1.32 | 590852 | A18-08117 | 6.48 | 0.03 | 1.11 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.021 |
| PGH-18-10A | 6.76 | 7.88 | 1.12 | 590853 | A18-08117 | 7.65 | 0.025 | 1.1 | 0.005 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.005 |
| PGH-18-10A | 7.88 | 9 | 1.12 | 590854 | A18-08117 | 5.47 | 0.017 | 0.5 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.012 |
| PGH-18-10A | 9 | 10.07 | 1.07 | 590855 | A18-08117 | 6.25 | 0.04 | 1.18 | < 0.003 | 0.005 | 0.006 | < 0.005 | 0.003 | 0.005 | 0.004 |
| PGH-18-10A | 10.07 | 10.75 | 0.68 | 590856 | A18-08117 | 15.23 | 0.02 | 1.38 | 0.004 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.037 |
| PGH-18-10A | 10.75 | 12 | 1.25 | 590857 | A18-08117 | 7.08 | 0.053 | 2 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.009 | 0.011 |
| PGH-18-10A | 12 | 13.22 | 1.22 | 590858 | A18-08117 | 6.71 | 0.028 | 0.56 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.014 |
| PGH-18-10A | 13.22 | 14.52 | 1.3 | 590860 | A18-08117 | 7.66 | 0.03 | 0.48 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.013 |
| PGH-18-10A | 14.52 | 15.62 | 1.1 | 590861 | A18-08117 | 7.38 | 0.024 | 0.3 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.014 |
| PGH-18-10A | 15.62 | 16.49 | 0.87 | 590863 | A18-08117 | 6.89 | 0.089 | 1.83 | < 0.003 | 0.004 | 0.01 | < 0.005 | < 0.003 | 0.009 | 0.011 |
| PGH-18-10A | 16.49 | 17.75 | 1.26 | 590864 | A18-08117 | 7.99 | 0.033 | 0.2 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.021 |
| PGH-18-10A | 17.75 | 19 | 1.25 | 590865 | A18-08117 | 6.93 | 0.069 | 0.47 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.004 |
| PGH-18-10A | 19 | 20.2 | 1.2 | 590866 | A18-08117 | 6.74 | 0.026 | 0.37 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.011 |
| PGH-18-10A | 20.2 | 21.48 | 1.28 | 590867 | A18-08117 | 6.22 | 0.041 | 0.58 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-10A | 21.48 | 22.26 | 0.78 | 590868 | A18-08117 | 6.77 | 0.032 | 0.15 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.009 |
| PGH-18-10A | 22.26 | 23.4 | 1.14 | 590870 | A18-08117 | 6.43 | 0.013 | 0.45 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.013 |
| PGH-18-10A | 23.4 | 24.55 | 1.15 | 590871 | A18-08117 | 5.15 | 0.008 | 0.31 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.031 |
| PGH-18-10A | 24.55 | 25.72 | 1.17 | 590872 | A18-08117 | 5.61 | 0.017 | 0.4 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.019 |
| PGH-18-10A | 25.72 | 26.87 | 1.15 | 590873 | A18-08117 | 4.88 | 0.107 | 1.27 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 26.87 | 27.9 | 1.03 | 590874 | A18-08117 | 4.16 | 0.058 | 1.41 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-10A | 27.9 | 28.86 | 0.96 | 590875 | A18-08117 | 5.57 | 0.058 | 11.23 | < 0.003 | 0.003 | 0.011 | < 0.005 | 0.003 | 0.03 | 0.02 |
| PGH-18-10A | 28.86 | 30 | 1.14 | 590876 | A18-08117 | 8.18 | 0.072 | 5.14 | < 0.003 | 0.006 | 0.009 | 0.009 | 0.003 | 0.013 | 0.117 |
| PGH-18-10A | 45 | 45.95 | 0.95 | 590877 | A18-08117 | 8.58 | 0.049 | 1.65 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.016 | 0.007 |
| PGH-18-10A | 53.9 | 55.07 | 1.17 | 590878 | A18-08117 | 7.04 | 0.013 | 0.33 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.003 | 0.013 |
| PGH-18-10A | 55.07 | 56.09 | 1.02 | 590879 | A18-08117 | 7.03 | 0.037 | 1.89 | < 0.003 | 0.003 | 0.013 | 0.007 | 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 63.38 | 64.04 | 0.66 | 590880 | A18-08117 | 9.37 | 0.102 | 1.73 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 65.7 | 66 | 0.3 | 590881 | A18-08117 | 6.83 | 0.047 | 1.6 | < 0.003 | 0.004 | 0.009 | 0.005 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 77.35 | 77.85 | 0.5 | 590882 | A18-08117 | 8.4 | 0.037 | 1.77 | < 0.003 | 0.003 | 0.006 | 0.006 | < 0.003 | 0.007 | 0.01 |
| PGH-18-10A | 82.21 | 83.23 | 1.02 | 590883 | A18-08117 | 6.8 | 0.036 | 1.52 | < 0.003 | < 0.003 | 0.053 | 0.007 | < 0.003 | 0.022 | < 0.003 |
| PGH-18-10A | 86.05 | 87.14 | 1.09 | 590884 | A18-08117 | 6.83 | 0.021 | 0.29 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.017 |
| PGH-18-10A | 92.36 | 93.55 | 1.19 | 590885 | A18-08117 | 3.5 | 0.096 | 2.4 | < 0.003 | < 0.003 | 0.011 | 0.007 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 93.55 | 94.79 | 1.24 | 590886 | A18-08117 | 6.96 | 0.015 | 0.6 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.01 |
| PGH-18-10A | 94.79 | 96.06 | 1.27 | 590887 | A18-08117 | 7.75 | 0.027 | 0.43 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.011 |
| PGH-18-10A | 96.06 | 97.36 | 1.3 | 590888 | A18-08117 | 8.87 | 0.106 | 1 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.004 | 0.005 | 0.009 |
| PGH-18-10A | 97.36 | 98.64 | 1.28 | 590889 | A18-08117 | 6.02 | 0.021 | 0.45 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.036 |
| PGH-18-10A | 98.64 | 100 | 1.36 | 590890 | A18-08117 | 6.57 | 0.018 | 0.47 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.018 | 0.005 | 0.021 |
| PGH-18-10A | 100 | 100.84 | 0.84 | 590891 | A18-08117 | 8.37 | 0.021 | 0.14 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.004 | 0.029 |
| PGH-18-10A | 100.84 | 101.88 | 1.04 | 590892 | A18-08117 | 6.44 | 0.043 | 1.47 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.003 | 0.009 | 0.008 |
| PGH-18-10A | 101.88 | 103.06 | 1.18 | 590893 | A18-08117 | 6.99 | 0.018 | 0.27 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.012 |
| PGH-18-10A | 103.06 | 104.31 | 1.25 | 590894 | A18-08117 | 6.03 | 0.012 | 0.2 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.015 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 104.31 | 105.56 | 1.25 | 590895 | A18-08117 | 5.98 | 0.014 | 0.14 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.005 |
| PGH-18-10A | 105.56 | 106.8 | 1.24 | 590896 | A18-08117 | 4.12 | 0.004 | 0.62 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.003 |
| PGH-18-10A | 106.8 | 107.33 | 0.53 | 590897 | A18-08117 | 5.71 | 0.004 | 0.36 | < 0.003 | < 0.003 | 0.017 | 0.01 | < 0.003 | 0.008 | |
| PGH-18-10A | 107.33 | 108.12 | 0.79 | 590898 | A18-08117 | 5.38 | 0.011 | 0.32 | 0.005 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.03 |
| PGH-18-10A | 108.12 | 108.59 | 0.47 | 590899 | A18-08117 | 5.05 | 0.03 | 0.02 | < 0.003 | < 0.003 | 0.012 | 0.009 | < 0.003 | 0.005 | < 0.003 |
| PGH-18-10A | 108.59 | 109.45 | 0.86 | 590901 | A18-08117 | 5.51 | 0.011 | 0.14 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | < 0.003 | 0.007 |
| PGH-18-10A | 109.45 | 110.23 | 0.78 | 590902 | A18-08117 | 8.1 | 0.182 | 3.51 | < 0.003 | 0.003 | 0.01 | 0.006 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 110.23 | 110.71 | 0.48 | 590903 | A18-08117 | 6.13 | 0.044 | 6.22 | < 0.003 | < 0.003 | 0.018 | 0.017 | 0.003 | 0.03 | |
| PGH-18-10A | 110.71 | 111.18 | 0.47 | 590904 | A18-08117 | 8.89 | 0.045 | 4.43 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.019 | 0.03 |
| PGH-18-10A | 111.18 | 111.91 | 0.73 | 590905 | A18-08117 | 5.62 | 0.017 | 3.96 | < 0.003 | < 0.003 | 0.02 | 0.014 | < 0.003 | 0.034 | |
| PGH-18-10A | 111.91 | 113.18 | 1.27 | 590906 | A18-08117 | 6.22 | 0.015 | 0.63 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.006 | 0.017 |
| PGH-18-10A | 113.18 | 114.45 | 1.27 | 590907 | A18-08117 | 6.24 | 0.019 | 0.27 | < 0.003 | < 0.003 | 0.01 | 0.008 | 0.003 | 0.006 | < 0.003 |
| PGH-18-10A | 114.45 | 115.85 | 1.4 | 590908 | A18-08117 | 6.18 | 0.053 | 0.16 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.022 |
| PGH-18-10A | 115.85 | 117 | 1.15 | 590909 | A18-08117 | 6.03 | 0.009 | 0.29 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.008 | 0.029 |
| PGH-18-10A | 117 | 117.85 | 0.85 | 590910 | A18-08117 | 5.56 | 0.015 | 0.49 | < 0.003 | 0.004 | 0.012 | < 0.005 | < 0.003 | 0.008 | 0.015 |
| PGH-18-10A | 117.85 | 118.9 | 1.05 | 590911 | A18-08117 | 7 | 0.047 | 3.28 | < 0.003 | 0.003 | 0.021 | 0.007 | 0.004 | 0.023 | 0.013 |
| PGH-18-10A | 125.13 | 125.65 | 0.52 | 590912 | A18-08117 | 4.44 | 0.021 | 3.45 | < 0.003 | < 0.003 | 0.01 | 0.005 | < 0.003 | 0.011 | 0.027 |
| PGH-18-10A | 126.54 | 127 | 0.46 | 590913 | A18-08117 | 5.71 | 0.067 | 4.87 | < 0.003 | 0.003 | 0.012 | 0.009 | < 0.003 | 0.018 | < 0.003 |
| PGH-18-10A | 128.59 | 129.55 | 0.96 | 590914 | A18-08117 | 7.52 | 0.026 | 0.91 | < 0.003 | < 0.003 | 0.008 | 0.006 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-10A | 129.55 | 130.78 | 1.23 | 590915 | A18-08117 | 6.59 | 0.016 | 0.66 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.011 |
| PGH-18-10A | 130.78 | 131.3 | 0.52 | 590916 | A18-08117 | 5.91 | 0.036 | 0.71 | < 0.003 | < 0.003 | 0.014 | 0.022 | < 0.003 | 0.004 | |
| PGH-18-10A | 131.3 | 132.35 | 1.05 | 590918 | A18-08117 | 2.57 | 0.014 | 1.59 | < 0.003 | < 0.003 | 0.005 | 0.007 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 139.85 | 140.45 | 0.6 | 590919 | A18-08117 | 7.01 | 0.036 | 1.25 | < 0.003 | < 0.003 | 0.007 | 0.005 | < 0.003 | 0.01 | 0.013 |
| PGH-18-10A | 146 | 147.32 | 1.32 | 590920 | A18-08117 | 6.84 | 0.071 | 0.34 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.011 |
| PGH-18-10A | 147.32 | 148.9 | 1.58 | 590922 | A18-08117 | 6.01 | 0.009 | 0.42 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.006 | 0.005 | 0.035 |
| PGH-18-10A | 148.9 | 150.08 | 1.18 | 590923 | A18-08117 | 6.51 | 0.053 | 1.03 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.007 | 0.01 |
| PGH-18-10A | 150.08 | 151.01 | 0.93 | 590924 | A18-08117 | 7.52 | 0.055 | 5.04 | < 0.003 | < 0.003 | 0.01 | 0.005 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 151.01 | 152 | 0.99 | 590925 | A18-08117 | 7.06 | 0.003 | 0.57 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-10A | 155.53 | 156 | 0.47 | 590926 | A18-08117 | 6.13 | 0.048 | 3.84 | < 0.003 | 0.003 | 0.01 | 0.005 | 0.003 | 0.016 | 0.005 |
| PGH-18-10A | 156 | 157.04 | 1.04 | 590927 | A18-08117 | 6.3 | < 0.003 | 4.21 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 157.04 | 157.83 | 0.79 | 590928 | A18-08117 | 9.75 | 0.025 | 0.29 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.035 |
| PGH-18-10A | 157.83 | 158.95 | 1.12 | 590929 | A18-08117 | 4.75 | 0.042 | 3.3 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.014 | 0.01 |
| PGH-18-10A | 158.95 | 159.75 | 0.8 | 590930 | A18-08117 | 5.48 | 0.214 | 2.8 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | 0.008 |
| PGH-18-10A | 159.75 | 160.44 | 0.69 | 590931 | A18-08117 | 4.89 | 0.096 | 1.75 | < 0.003 | < 0.003 | 0.01 | 0.008 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 160.44 | 160.92 | 0.48 | 590932 | A18-08117 | 7.61 | 0.11 | 0.28 | < 0.003 | < 0.003 | 0.01 | 0.005 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-10A | 160.92 | 161.87 | 0.95 | 590933 | A18-08117 | 7.3 | 0.085 | 0.77 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.018 |
| PGH-18-10A | 161.87 | 162.48 | 0.61 | 590934 | A18-08117 | 4.71 | 0.414 | 4.86 | < 0.003 | 0.003 | 0.01 | 0.011 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 162.48 | 163.78 | 1.3 | 590935 | A18-08117 | 7.67 | 0.031 | 0.51 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.004 | 0.021 |
| PGH-18-10A | 163.78 | 165.08 | 1.3 | 590936 | A18-08117 | 7.11 | 0.017 | 0.48 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.012 |
| PGH-18-10A | 165.08 | 166.37 | 1.29 | 590937 | A18-08117 | 6.48 | 0.031 | 0.87 | < 0.003 | 0.003 | 0.005 | 0.006 | 0.021 | 0.005 | < 0.003 |
| PGH-18-10A | 166.37 | 167.49 | 1.12 | 590938 | A18-08117 | 6.57 | 0.025 | 1.27 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.005 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 167.49 | 168.72 | 1.23 | 590940 | A18-08117 | 7.2 | 0.016 | 0.25 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.02 |
| PGH-18-10A | 168.72 | 168.94 | 0.22 | 590941 | A18-08117 | 4.05 | 0.401 | 2.18 | < 0.003 | < 0.003 | 0.011 | 0.007 | 0.004 | 0.014 | < 0.003 |
| PGH-18-10A | 168.94 | 169.58 | 0.64 | 590942 | A18-08117 | 7.23 | 0.076 | 0.91 | < 0.003 | 0.003 | 0.007 | 0.006 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-10A | 169.58 | 170.06 | 0.48 | 590943 | A18-08117 | 6.93 | 0.032 | 0.37 | < 0.003 | < 0.003 | 0.008 | 0.006 | < 0.003 | 0.008 | < 0.003 |
| PGH-18-10A | 170.06 | 171.08 | 1.02 | 590944 | A18-08117 | 6.72 | 0.016 | 0.4 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.015 |
| PGH-18-10A | 174.35 | 175.42 | 1.07 | 590945 | A18-08117 | 6.43 | 0.02 | 0.47 | < 0.003 | < 0.003 | 0.006 | 0.005 | 0.016 | 0.004 | < 0.003 |
| PGH-18-10A | 175.42 | 175.95 | 0.53 | 590946 | A18-08117 | 11.93 | 0.088 | 1.74 | < 0.003 | < 0.003 | 0.007 | 0.005 | < 0.003 | 0.008 | 0.067 |
| PGH-18-10A | 175.95 | 176.77 | 0.82 | 590947 | A18-08117 | 4.41 | 0.013 | 0.51 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | < 0.003 |
| PGH-18-10A | 176.77 | 177.5 | 0.73 | 590948 | A18-08117 | 4.46 | 0.008 | 0.44 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.012 |
| PGH-18-10A | 177.5 | 177.77 | 0.27 | 590949 | A18-08117 | 7.19 | 0.328 | 1.51 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.011 |
| PGH-18-10A | 177.77 | 178.52 | 0.75 | 590950 | A18-08117 | 1.79 | 0.081 | 0.4 | < 0.003 | < 0.003 | 0.009 | 0.006 | 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 178.52 | 178.91 | 0.39 | 590951 | A18-08117 | 7.31 | 0.279 | 1.23 | < 0.003 | 0.003 | 0.009 | < 0.005 | 0.003 | 0.007 | 0.003 |
| PGH-18-10A | 178.91 | 180 | 1.09 | 590952 | A18-08117 | 6.59 | 0.025 | 0.45 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.014 |
| PGH-18-10A | 181.73 | 182.63 | 0.9 | 590953 | A18-08117 | 7.53 | < 0.003 | 0.01 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.005 | < 0.003 |
| PGH-18-10A | 185.43 | 186.58 | 1.15 | 590954 | A18-08117 | 6.72 | 0.056 | 0.38 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 |
| PGH-18-10A | 186.58 | 187 | 0.42 | 590955 | A18-08117 | 4.73 | 0.011 | 0.8 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-10A | 187 | 187.9 | 0.9 | 590956 | A18-08117 | 6.75 | 0.183 | 0.61 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.013 |
| PGH-18-10A | 191.4 | 192.66 | 1.26 | 590957 | A18-08117 | 6.46 | 0.02 | 0.62 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.035 |
| PGH-18-10A | 192.66 | 193.76 | 1.1 | 590958 | A18-08117 | 6.97 | 0.036 | 1.16 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.006 | 0.015 |
| PGH-18-10A | 200.74 | 202.06 | 1.32 | 590959 | A18-08117 | 6.8 | 0.083 | 2.34 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.013 | 0.005 |
| PGH-18-10A | 205.94 | 206.77 | 0.83 | 590960 | A18-08117 | 6.8 | 0.038 | 0.8 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.007 | 0.009 |
| PGH-18-10A | 206.77 | 207.65 | 0.88 | 590961 | A18-08117 | 4.72 | 0.032 | 0.62 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.004 | 0.019 |
| PGH-18-10A | 207.65 | 208.04 | 0.39 | 590962 | A18-08117 | 4.85 | 0.041 | 1.1 | < 0.003 | < 0.003 | 0.01 | < 0.005 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 208.04 | 209.18 | 1.14 | 590963 | A18-08117 | 5.16 | 0.04 | 0.52 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.018 |
| PGH-18-10A | 209.18 | 210.3 | 1.12 | 590964 | A18-08117 | 4.46 | 0.02 | 0.61 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.01 |
| PGH-18-10A | 214 | 215 | 1 | 590965 | A18-08117 | 6.59 | 0.124 | 2.33 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.013 | 0.006 |
| PGH-18-10A | 215 | 216 | 1 | 590966 | A18-08117 | 5 | 0.043 | 0.59 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.007 | 0.017 |
| PGH-18-10A | 219.54 | 220.63 | 1.09 | 590968 | A18-08117 | 6.87 | 0.044 | 0.72 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | 0.01 |
| PGH-18-10A | 220.63 | 221.74 | 1.11 | 590970 | A18-08117 | 7.8 | 0.102 | 1.28 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.023 |
| PGH-18-10A | 225.14 | 225.98 | 0.84 | 590971 | A18-08117 | 6.26 | 0.032 | 0.95 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.014 |
| PGH-18-10A | 225.98 | 226.85 | 0.87 | 590972 | A18-08117 | 7.42 | 0.061 | 1.08 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.009 |
| PGH-18-10A | 226.85 | 227.77 | 0.92 | 590973 | A18-08117 | 4.11 | 0.205 | 0.8 | < 0.003 | < 0.003 | 0.008 | 0.006 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-10A | 231.17 | 231.51 | 0.34 | 590974 | A18-08117 | 7.41 | 0.036 | 2.33 | < 0.003 | < 0.003 | 0.01 | 0.005 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 235.67 | 236.06 | 0.39 | 590975 | A18-08117 | 9.3 | 0.018 | 0.81 | < 0.003 | < 0.003 | 0.006 | 0.008 | 0.003 | 0.007 | < 0.003 |
| PGH-18-10A | 236.06 | 236.94 | 0.88 | 590976 | A18-08117 | 8.37 | 0.015 | 0.68 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.02 |
| PGH-18-10A | 236.94 | 237.76 | 0.82 | 590977 | A18-08117 | 15.71 | 0.015 | 1.02 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.012 |
| PGH-18-10A | 237.76 | 238.78 | 1.02 | 590978 | A18-08117 | 14.62 | 0.016 | 1.4 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | < 0.003 |
| PGH-18-10A | 238.78 | 239.65 | 0.87 | 590979 | A18-08117 | 6.66 | 0.157 | 2.11 | < 0.003 | < 0.003 | 0.007 | 0.005 | 0.004 | 0.011 | < 0.003 |
| PGH-18-10A | 245.5 | 245.8 | 0.3 | 590980 | A18-08117 | 8.01 | 0.008 | 1.33 | < 0.003 | < 0.003 | 0.013 | 0.01 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-10A | 245.8 | 246.88 | 1.08 | 590981 | A18-08117 | 6.29 | 0.01 | 0.48 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.017 |
| PGH-18-10A | 246.88 | 247.85 | 0.97 | 590982 | A18-08117 | 7.32 | 0.081 | 2.22 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.008 | 0.009 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 247.85 | 249 | 1.15 | 590983 | A18-08117 | 8.89 | 0.041 | 0.73 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.004 |
| PGH-18-10A | 249 | 250 | 1 | 590984 | A18-08117 | 5.8 | 0.059 | 2.45 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 250 | 251.15 | 1.15 | 590985 | A18-08117 | 6.97 | 0.03 | 0.35 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.016 |
| PGH-18-10A | 251.15 | 252 | 0.85 | 590986 | A18-08117 | 7.21 | 0.093 | 0.66 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.005 | 0.012 |
| PGH-18-10A | 252 | 252.71 | 0.71 | 590987 | A18-08117 | 7.93 | 0.431 | 2.45 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.015 |
| PGH-18-10A | 252.71 | 254.13 | 1.42 | 590988 | A18-08117 | 3.81 | 0.263 | 3.67 | < 0.003 | < 0.003 | 0.009 | 0.005 | < 0.003 | 0.018 | 0.024 |
| PGH-18-10A | 256.32 | 256.83 | 0.51 | 590989 | A18-08117 | 4.3 | 0.087 | 0.82 | < 0.003 | < 0.003 | 0.01 | 0.005 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 259.75 | 260.89 | 1.14 | 590990 | A18-08117 | 6.83 | 0.067 | 0.98 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.007 | 0.015 |
| PGH-18-10A | 260.89 | 261.56 | 0.67 | 590991 | A18-08117 | 5.69 | 0.006 | 0.38 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.006 | 0.035 |
| PGH-18-10A | 261.56 | 262.94 | 1.38 | 590992 | A18-08117 | 5.82 | 0.018 | 1.39 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.009 | 0.028 |
| PGH-18-10A | 262.94 | 263.22 | 0.28 | 590993 | A18-08117 | 7.92 | < 0.003 | 0.04 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.006 | < 0.003 |
| PGH-18-10A | 263.22 | 263.89 | 0.67 | 590994 | A18-08117 | 5.84 | 0.016 | 0.26 | < 0.003 | 0.005 | 0.005 | < 0.005 | 0.003 | 0.004 | 0.014 |
| PGH-18-10A | 263.89 | 264.83 | 0.94 | 590995 | A18-08117 | 6.21 | 0.021 | 2.85 | < 0.003 | 0.003 | 0.014 | < 0.005 | 0.003 | 0.02 | < 0.003 |
| PGH-18-10A | 264.83 | 265.95 | 1.12 | 590996 | A18-08117 | 7.73 | 0.072 | 0.46 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.013 |
| PGH-18-10A | 265.95 | 267 | 1.05 | 590997 | A18-08117 | 6.53 | 0.223 | 1.32 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.005 |
| PGH-18-10A | 267 | 268.08 | 1.08 | 590998 | A18-08117 | 7.63 | 0.759 | 0.76 | < 0.003 | 0.004 | 0.01 | 0.005 | 0.003 | 0.005 | 0.02 |
| PGH-18-10A | 268.08 | 269.55 | 1.47 | 590999 | A18-08117 | 5.85 | 0.129 | 0.5 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.015 |
| PGH-18-10A | 269.55 | 271 | 1.45 | 591000 | A18-08117 | 9.95 | 0.049 | 2.48 | < 0.003 | 0.004 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.107 |
| PGH-18-10A | 271 | 272.15 | 1.15 | 655401 | A18-08117 | 6.51 | 0.048 | 1.12 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.023 |
| PGH-18-10A | 272.15 | 273.47 | 1.32 | 655402 | A18-08117 | 7.17 | 0.08 | 1.16 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.011 |
| PGH-18-10A | 275.85 | 276.78 | 0.93 | 655403 | A18-08117 | 8.79 | 0.168 | 2.13 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.009 | 0.011 |
| PGH-18-10A | 276.78 | 277.83 | 1.05 | 655404 | A18-08117 | 7.42 | 0.064 | 0.85 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.004 |
| PGH-18-10A | 277.83 | 279 | 1.17 | 655405 | A18-08117 | 8.01 | 0.059 | 1.38 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.003 | 0.003 | < 0.003 |
| PGH-18-10A | 279 | 280.15 | 1.15 | 655406 | A18-08117 | 6.05 | 0.104 | 1.22 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | < 0.003 |
| PGH-18-10A | 280.15 | 281.24 | 1.09 | 655407 | A18-08117 | 8 | 0.124 | 3.12 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.022 |
| PGH-18-10A | 281.24 | 282.38 | 1.14 | 655408 | A18-08117 | 7.96 | 0.162 | 2.27 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.01 |
| PGH-18-10A | 282.38 | 283.43 | 1.05 | 655409 | A18-08117 | 5.09 | 0.185 | 1.21 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 286.14 | 287.39 | 1.25 | 655411 | A18-08117 | 7.25 | 0.096 | 1.02 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.011 |
| PGH-18-10A | 287.39 | 288.5 | 1.11 | 655412 | A18-08117 | 6.76 | 0.035 | 0.65 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.006 | 0.006 |
| PGH-18-10A | 288.5 | 289.5 | 1 | 655413 | A18-08117 | 7.48 | 0.035 | 1.47 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | 0.023 |
| PGH-18-10A | 289.5 | 290.31 | 0.81 | 655414 | A18-08117 | 10.07 | 0.04 | 4.15 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.012 | 0.106 |
| PGH-18-10A | 290.31 | 291.26 | 0.95 | 655415 | A18-08117 | 15.5 | 0.053 | 3.12 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.008 | 0.086 |
| PGH-18-10A | 294.8 | 296.23 | 1.43 | 655416 | A18-08117 | 8.1 | 0.076 | 1.93 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.01 |
| PGH-18-10A | 296.23 | 297.49 | 1.26 | 655417 | A18-08117 | 8.3 | 0.211 | 1.72 | 0.003 | < 0.003 | 0.006 | 0.006 | < 0.003 | 0.007 | 0.015 |
| PGH-18-10A | 297.49 | 298.7 | 1.21 | 655418 | A18-08117 | 7.99 | 0.048 | 0.18 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 |
| PGH-18-10A | 298.7 | 300 | 1.3 | 655419 | A18-08117 | 2.79 | 0.076 | 2.15 | < 0.003 | < 0.003 | 0.009 | 0.005 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 300 | 301 | 1 | 655420 | A18-08117 | 2.74 | 0.115 | 3.61 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 301 | 302 | 1 | 655421 | A18-08117 | 1.71 | 0.056 | 1.98 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 302 | 303 | 1 | 655423 | A18-08117 | 5.22 | 0.012 | 2.3 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.011 | 0.019 |
| PGH-18-10A | 307.88 | 308.88 | 1 | 655424 | A18-08117 | 16.43 | 0.03 | 2.22 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.072 |
| PGH-18-10A | 313.55 | 314.64 | 1.09 | 655425 | A18-08117 | 8.17 | 0.077 | 1.61 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.027 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 314.64 | 315.27 | 0.63 | 655426 | A18-08117 | 7.74 | 0.061 | 1.58 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.005 | 0.01 | < 0.003 |
| PGH-18-10A | 315.27 | 316.52 | 1.25 | 655427 | A18-08117 | 8.72 | 0.04 | 1.38 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.017 |
| PGH-18-10A | 321.77 | 322.9 | 1.13 | 655428 | A18-08117 | 11.13 | 0.523 | 4.37 | < 0.003 | 0.005 | 0.012 | < 0.005 | < 0.003 | 0.008 | 0.039 |
| PGH-18-10A | 322.9 | 324.04 | 1.14 | 655429 | A18-08117 | 12.1 | 0.196 | 0.48 | < 0.003 | 0.004 | 0.011 | < 0.005 | 0.003 | 0.003 | 0.057 |
| PGH-18-10A | 324.04 | 325.23 | 1.19 | 655430 | A18-08117 | 13.94 | 0.094 | 0.75 | < 0.003 | 0.005 | 0.007 | < 0.005 | < 0.003 | 0.005 | 0.064 |
| PGH-18-10A | 325.23 | 326.45 | 1.22 | 655431 | A18-08117 | 14.66 | 0.151 | 2.28 | < 0.003 | 0.004 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.08 |
| PGH-18-10A | 326.45 | 327.69 | 1.24 | 655432 | A18-08117 | 13.86 | 0.073 | 2.57 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.01 | 0.112 |
| PGH-18-10A | 327.69 | 328.78 | 1.09 | 655433 | A18-08117 | 7.55 | 0.032 | 1.7 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | 0.016 |
| PGH-18-10A | 328.78 | 329.55 | 0.77 | 655434 | A18-08117 | 7.26 | 0.039 | 1.04 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.016 |
| PGH-18-10A | 329.55 | 330.5 | 0.95 | 655435 | A18-08117 | 9.25 | 0.075 | 0.92 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.056 |
| PGH-18-10A | 333.07 | 334.34 | 1.27 | 655436 | A18-08117 | 7.98 | 0.158 | 1.48 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.029 |
| PGH-18-10A | 334.34 | 335.56 | 1.22 | 655437 | A18-08117 | 14.43 | 0.108 | 0.84 | < 0.003 | 0.004 | 0.006 | < 0.005 | 0.003 | 0.004 | 0.051 |
| PGH-18-10A | 335.56 | 336.78 | 1.22 | 655438 | A18-08117 | 11.36 | 0.064 | 1.19 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.057 |
| PGH-18-10A | 336.78 | 337.85 | 1.07 | 655439 | A18-08117 | 12.17 | 0.096 | 1.3 | < 0.003 | 0.003 | 0.007 | < 0.005 | 0.003 | 0.007 | 0.063 |
| PGH-18-10A | 345 | 346.26 | 1.26 | 655440 | A18-08117 | 10.96 | 0.306 | 3.88 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.079 |
| PGH-18-10A | 346.26 | 347.57 | 1.31 | 655441 | A18-08117 | 7.14 | 0.077 | 1.1 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.008 | 0.039 |
| PGH-18-10A | 347.57 | 348.81 | 1.24 | 655442 | A18-08117 | 6.8 | 0.046 | 1.3 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.008 | 0.016 |
| PGH-18-10A | 348.81 | 349.94 | 1.13 | 655443 | A18-08117 | 6.52 | 0.019 | 0.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.036 |
| PGH-18-10A | 349.94 | 350.68 | 0.74 | 655444 | A18-08117 | 3.74 | 0.143 | 1.08 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 350.68 | 351.61 | 0.93 | 655445 | A18-08117 | 6.1 | 0.028 | 0.33 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.021 |
| PGH-18-10A | 351.61 | 352.54 | 0.93 | 655446 | A18-08117 | 7.11 | 0.041 | 0.66 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.027 |
| PGH-18-10A | 352.54 | 353.44 | 0.9 | 655447 | A18-08117 | 7.85 | 0.066 | 0.59 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.018 |
| PGH-18-10A | 353.44 | 354 | 0.56 | 655448 | A18-08117 | 3.53 | 0.044 | 2.04 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 354 | 355.17 | 1.17 | 655449 | A18-08117 | 5.36 | 0.024 | 0.4 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.027 |
| PGH-18-10A | 355.17 | 356.4 | 1.23 | 655450 | A18-08117 | 5.5 | 0.018 | 0.57 | 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.025 |
| PGH-18-10A | 356.4 | 357.61 | 1.21 | 655451 | A18-08117 | 5.91 | 0.055 | 1.18 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.016 |
| PGH-18-10A | 357.61 | 358.82 | 1.21 | 655452 | A18-08117 | 5 | 0.203 | 1.64 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.015 |
| PGH-18-10A | 358.82 | 360.08 | 1.26 | 655453 | A18-08117 | 5.72 | 0.428 | 4.76 | < 0.003 | 0.004 | 0.006 | < 0.005 | 0.003 | 0.009 | 0.015 |
| PGH-18-10A | 360.08 | 360.58 | 0.5 | 655454 | A18-08117 | 5.08 | 0.035 | 0.26 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.009 |
| PGH-18-10A | 360.58 | 361.64 | 1.06 | 655455 | A18-08117 | 2.11 | 0.022 | 0.75 | < 0.003 | < 0.003 | 0.01 | 0.007 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 361.64 | 363 | 1.36 | 655456 | A18-08117 | 6.12 | 0.024 | 0.39 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.065 |
| PGH-18-10A | 363 | 364.24 | 1.24 | 655457 | A18-08117 | 6.35 | 0.033 | 0.56 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.03 |
| PGH-18-10A | 364.24 | 365.26 | 1.02 | 655458 | A18-08117 | 5.39 | 0.325 | 3.05 | < 0.003 | < 0.003 | 0.008 | 0.005 | 0.004 | 0.012 | < 0.003 |
| PGH-18-10A | 365.26 | 366.44 | 1.18 | 655459 | A18-08117 | 2.34 | 0.454 | 3.35 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.005 | 0.012 | < 0.003 |
| PGH-18-10A | 366.44 | 367.66 | 1.22 | 655461 | A18-08117 | 2.64 | 0.633 | 3.96 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.013 | 0.011 |
| PGH-18-10A | 367.66 | 368.85 | 1.19 | 655462 | A18-08117 | 4.63 | 0.509 | 6.6 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.012 | 0.039 |
| PGH-18-10A | 368.85 | 370.11 | 1.26 | 655463 | A18-08117 | 1.21 | 0.211 | 0.57 | < 0.003 | < 0.003 | 0.008 | 0.007 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 370.11 | 371.32 | 1.21 | 655465 | A18-08117 | 2.98 | 0.184 | 3.21 | < 0.003 | < 0.003 | 0.007 | 0.007 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 371.32 | 372.54 | 1.22 | 655466 | A18-08117 | 3.11 | 0.383 | 3.14 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.014 | < 0.003 |
| PGH-18-10A | 372.54 | 373.74 | 1.2 | 655467 | A18-08117 | 3 | 0.481 | 3.86 | < 0.003 | 0.003 | 0.01 | 0.008 | 0.003 | 0.015 | 0.013 |
| PGH-18-10A | 373.74 | 374.95 | 1.21 | 655468 | A18-08117 | 2.03 | 0.384 | 3.43 | < 0.003 | 0.004 | 0.01 | 0.01 | 0.003 | 0.013 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 374.95 | 376.1 | 1.15 | 655470 | A18-08117 | 3.79 | 0.198 | 3.18 | < 0.003 | 0.004 | 0.009 | 0.007 | < 0.003 | 0.012 | 0.022 |
| PGH-18-10A | 376.1 | 377.3 | 1.2 | 655471 | A18-08117 | 3.75 | 0.545 | 3.52 | < 0.003 | 0.006 | 0.009 | 0.01 | < 0.003 | 0.012 | 0.036 |
| PGH-18-10A | 377.3 | 378.57 | 1.27 | 655472 | A18-08117 | 2.53 | 0.209 | 5.11 | < 0.003 | < 0.003 | 0.008 | 0.007 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 378.57 | 379.76 | 1.19 | 655473 | A18-08117 | 3.97 | 0.222 | 4.61 | < 0.003 | 0.004 | 0.007 | 0.005 | < 0.003 | 0.015 | 0.037 |
| PGH-18-10A | 379.76 | 381 | 1.24 | 655475 | A18-08117 | 1.88 | 0.076 | 2.28 | < 0.003 | < 0.003 | 0.01 | 0.006 | < 0.003 | 0.014 | 0.008 |
| PGH-18-10A | 381 | 382.2 | 1.2 | 655476 | A18-08117 | 2.09 | 0.161 | 2.94 | < 0.003 | 0.003 | 0.009 | 0.008 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 382.2 | 383.42 | 1.22 | 655477 | A18-08117 | 2.72 | 0.263 | 3.43 | < 0.003 | 0.004 | 0.01 | 0.01 | < 0.003 | 0.016 | 0.006 |
| PGH-18-10A | 383.42 | 384.65 | 1.23 | 655478 | A18-08117 | 2.31 | 0.137 | 1.56 | < 0.003 | 0.003 | 0.01 | < 0.005 | 0.004 | 0.014 | < 0.003 |
| PGH-18-10A | 384.65 | 385.85 | 1.2 | 655479 | A18-08117 | 1.71 | 0.113 | 1.65 | < 0.003 | 0.003 | 0.007 | 0.005 | < 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 385.85 | 387 | 1.15 | 655480 | A18-08117 | 2.14 | 0.215 | 3.43 | < 0.003 | < 0.003 | 0.01 | < 0.005 | 0.003 | 0.015 | 0.003 |
| PGH-18-10A | 387 | 387.71 | 0.71 | 655481 | A18-08117 | 5.06 | 0.747 | 5.51 | < 0.003 | 0.003 | 0.016 | 0.009 | < 0.003 | 0.03 | 0.019 |
| PGH-18-10A | 387.71 | 388.81 | 1.1 | 655482 | A18-08117 | 2.55 | 0.599 | 4.18 | < 0.003 | 0.004 | 0.013 | 0.007 | < 0.003 | 0.017 | 0.003 |
| PGH-18-10A | 388.81 | 390 | 1.19 | 655483 | A18-08117 | 1.89 | 0.155 | 1.96 | < 0.003 | < 0.003 | 0.009 | 0.006 | 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 390 | 391.05 | 1.05 | 655485 | A18-08117 | 5.12 | 0.268 | 0.69 | < 0.003 | < 0.003 | 0.014 | 0.005 | < 0.003 | 0.009 | 0.008 |
| PGH-18-10A | 391.05 | 391.92 | 0.87 | 655486 | A18-08117 | 2.65 | 0.387 | 3.47 | < 0.003 | 0.003 | 0.011 | 0.005 | < 0.003 | 0.015 | < 0.003 |
| PGH-18-10A | 391.92 | 393 | 1.08 | 655487 | A18-08117 | 5.52 | 0.185 | 1.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.006 |
| PGH-18-10A | 393 | 393.81 | 0.81 | 655488 | A18-08117 | 6.55 | 0.068 | 0.6 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.028 |
| PGH-18-10A | 393.81 | 394.63 | 0.82 | 655489 | A18-08117 | 5.71 | 0.009 | 0.28 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.036 |
| PGH-18-10A | 394.63 | 395.51 | 0.88 | 655490 | A18-08117 | 4.21 | 0.618 | 4.11 | < 0.003 | < 0.003 | 0.011 | 0.005 | < 0.003 | 0.015 | 0.004 |
| PGH-18-10A | 395.51 | 396.24 | 0.73 | 655491 | A18-08117 | 5.66 | 0.283 | 2.38 | < 0.003 | < 0.003 | 0.01 | 0.005 | 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 396.24 | 397.4 | 1.16 | 655492 | A18-08117 | 7.33 | 0.072 | 0.85 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.003 | 0.004 | 0.018 |
| PGH-18-10A | 397.4 | 398.61 | 1.21 | 655493 | A18-08117 | 5.68 | 0.025 | 0.51 | 0.007 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.027 |
| PGH-18-10A | 398.61 | 399.83 | 1.22 | 655494 | A18-08117 | 5.29 | 0.011 | 0.74 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.007 | 0.023 |
| PGH-18-10A | 399.83 | 400.83 | 1 | 655495 | A18-08117 | 6.11 | 0.027 | 0.54 | 0.005 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.019 |
| PGH-18-10A | 402.9 | 403.59 | 0.69 | 655496 | A18-08117 | 7.8 | 0.061 | 0.29 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.022 |
| PGH-18-10A | 403.59 | 404.59 | 1 | 655497 | A18-08117 | 5.74 | 0.326 | 4.22 | < 0.003 | < 0.003 | 0.01 | 0.006 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 404.59 | 405.71 | 1.12 | 655498 | A18-08117 | 6.48 | 0.317 | 5.21 | < 0.003 | 0.003 | 0.011 | 0.006 | < 0.003 | 0.018 | < 0.003 |
| PGH-18-10A | 405.71 | 406.91 | 1.2 | 655499 | A18-08117 | 4.75 | 0.316 | 3.94 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.009 | < 0.003 |
| PGH-18-10A | 406.91 | 408.02 | 1.11 | 655500 | A18-08117 | 5.96 | 0.126 | 2.05 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.012 |
| PGH-18-10A | 408.02 | 409.08 | 1.06 | 655351 | A18-08117 | 4.36 | 0.044 | 1.42 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.017 |
| PGH-18-10A | 409.08 | 410.26 | 1.18 | 655352 | A18-08117 | 5.51 | 0.015 | 0.52 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.027 |
| PGH-18-10A | 410.26 | 411.34 | 1.08 | 655353 | A18-08117 | 6.28 | 0.075 | 1.69 | < 0.003 | 0.004 | 0.005 | < 0.005 | 0.003 | 0.006 | 0.022 |
| PGH-18-10A | 411.34 | 412.42 | 1.08 | 655354 | A18-08117 | 6.27 | 0.017 | 0.38 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.036 |
| PGH-18-10A | 412.42 | 413.51 | 1.09 | 655355 | A18-08117 | 4.82 | 0.014 | 0.35 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.007 | 0.013 |
| PGH-18-10A | 413.51 | 414.83 | 1.32 | 655356 | A18-08117 | 7.14 | 0.033 | 0.93 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.007 | 0.036 |
| PGH-18-10A | 414.83 | 416 | 1.17 | 655357 | A18-08117 | 6.43 | 0.111 | 2.49 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.01 | 0.012 |
| PGH-18-10A | 418.05 | 418.78 | 0.73 | 655358 | A18-08117 | 5.22 | 0.068 | 0.86 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.022 |
| PGH-18-10A | 418.78 | 419.95 | 1.17 | 655359 | A18-08117 | 2.68 | 0.25 | 2.34 | < 0.003 | < 0.003 | 0.008 | 0.009 | 0.003 | 0.012 | < 0.003 |
| PGH-18-10A | 419.95 | 420.97 | 1.02 | 655361 | A18-08117 | 1.92 | 0.196 | 2.02 | < 0.003 | < 0.003 | 0.008 | 0.008 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 420.97 | 421.96 | 0.99 | 655362 | A18-08117 | 2.16 | 0.062 | 1.32 | < 0.003 | < 0.003 | 0.006 | 0.008 | 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 421.96 | 423.02 | 1.06 | 655364 | A18-08117 | 1.96 | 0.07 | 1.01 | < 0.003 | < 0.003 | 0.007 | 0.006 | < 0.003 | 0.01 | < 0.003 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | BatchID | Fe2O3T (%) | Nb2O5 (%) | P2O5 (%) | SnO2 (%) | Ta2O5 (%) | ThO2 (%) | U3O8 (%) | WO3 (%) | Y2O3 (%) | ZrO2 (%) |
|------------|--------|--------|-----------|----------|-----------|------------|-----------|----------|----------|-----------|----------|----------|---------|----------|----------|
| PGH-18-10A | 423.02 | 423.83 | 0.81 | 655365 | A18-08117 | 1.92 | 0.117 | 2.11 | < 0.003 | < 0.003 | 0.007 | 0.006 | < 0.003 | 0.01 | < 0.003 |
| PGH-18-10A | 423.83 | 424.6 | 0.77 | 655366 | A18-08117 | 2.67 | 0.148 | 1.3 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.011 | < 0.003 |
| PGH-18-10A | 424.6 | 425.7 | 1.1 | 655367 | A18-08117 | 5.91 | 0.039 | 0.71 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.011 |
| PGH-18-10A | 425.7 | 426.7 | 1 | 655368 | A18-08117 | 5.67 | 0.215 | 1.5 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.005 | 0.004 |
| PGH-18-10A | 426.7 | 427.62 | 0.92 | 655369 | A18-08117 | 2.85 | 0.077 | 2.95 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.013 | < 0.003 |
| PGH-18-10A | 427.62 | 428.5 | 0.88 | 655370 | A18-08117 | 2.1 | 0.211 | 4.8 | < 0.003 | < 0.003 | 0.009 | 0.005 | < 0.003 | 0.017 | < 0.003 |
| PGH-18-10A | 428.5 | 429.56 | 1.06 | 655371 | A18-08117 | 6.03 | 0.104 | 0.62 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.004 | 0.016 |
| PGH-18-10A | 429.56 | 430.67 | 1.11 | 655372 | A18-08117 | 5.1 | 0.048 | 1.39 | < 0.003 | 0.003 | < 0.005 | < 0.005 | 0.003 | 0.008 | 0.005 |
| PGH-18-10A | 430.67 | 431.57 | 0.9 | 655373 | A18-08117 | 4.62 | 0.128 | 2.25 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.01 | 0.005 |
| PGH-18-10A | 431.57 | 432.43 | 0.86 | 655374 | A18-08117 | 3.46 | 0.124 | 1.39 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.004 | 0.009 | < 0.003 |
| PGH-18-10A | 432.43 | 433.24 | 0.81 | 655375 | A18-08117 | 4.36 | 0.402 | 4.12 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.016 | 0.004 |
| PGH-18-10A | 433.24 | 434.24 | 1 | 655376 | A18-08117 | 8.14 | 0.069 | 0.76 | 0.004 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.02 |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|---|
| PGH-18-10A | 4.36 | 5.44 | 1.08 | 590851 | sy + unkn dyke, crbt veining |
| PGH-18-10A | 5.44 | 6.76 | 1.32 | 590852 | sy (kspar) w/ minor carb veining |
| PGH-18-10A | 6.76 | 7.88 | 1.12 | 590853 | crt --> sy w/ 14cm unkn dyke |
| PGH-18-10A | 7.88 | 9 | 1.12 | 590854 | sy w/ carb + blue amph veining |
| PGH-18-10A | 9 | 10.07 | 1.07 | 590855 | sy to carb at lct |
| PGH-18-10A | 10.07 | 10.75 | 0.68 | 590856 | diab dyke |
| PGH-18-10A | 10.75 | 12 | 1.25 | 590857 | low angle crt-bx vein (~// to CA), ap in crt |
| PGH-18-10A | 12 | 13.22 | 1.22 | 590858 | qtz-sy/gran, cg, carb + blue amph veins/patches |
| PGH-18-10A | 13.22 | 14.52 | 1.3 | 590860 | same, weakly bx'td, 25cm diab at end |
| PGH-18-10A | 14.52 | 15.62 | 1.1 | 590861 | cg-vcg crt-sy to gran, variably bx'td by crt |
| PGH-18-10A | 15.62 | 16.49 | 0.87 | 590863 | banded crt (pitted), <1% blebby py |
| PGH-18-10A | 16.49 | 17.75 | 1.26 | 590864 | sy to gran, 2x <15cm wide green-grey mafic dyke, min carb veining |
| PGH-18-10A | 17.75 | 19 | 1.25 | 590865 | gran w/ ~30cm 'assimilated' bx |
| PGH-18-10A | 19 | 20.2 | 1.2 | 590866 | gran, min carb |
| PGH-18-10A | 20.2 | 21.48 | 1.28 | 590867 | gran to sy |
| PGH-18-10A | 21.48 | 22.26 | 0.78 | 590868 | ~40cm bx zone, cg pch? (non mag) |
| PGH-18-10A | 22.26 | 23.4 | 1.14 | 590870 | cg gran |
| PGH-18-10A | 23.4 | 24.55 | 1.15 | 590871 | cg gran |
| PGH-18-10A | 24.55 | 25.72 | 1.17 | 590872 | cg gran w/ 15cm crt vein |
| PGH-18-10A | 25.72 | 26.87 | 1.15 | 590873 | crt |
| PGH-18-10A | 26.87 | 27.9 | 1.03 | 590874 | crt |
| PGH-18-10A | 27.9 | 28.86 | 0.96 | 590875 | crt |
| PGH-18-10A | 28.86 | 30 | 1.14 | 590876 | crt, banded MD at lct |
| PGH-18-10A | 45 | 45.95 | 0.95 | 590877 | assimilated' bx |
| PGH-18-10A | 53.9 | 55.07 | 1.17 | 590878 | sy/gran w/ carb bands perp to CA |
| PGH-18-10A | 55.07 | 56.09 | 1.02 | 590879 | massive crt (ap bands) |
| PGH-18-10A | 63.38 | 64.04 | 0.66 | 590880 | low angle crt + py vein |
| PGH-18-10A | 65.7 | 66 | 0.3 | 590881 | bnd crt vein |
| PGH-18-10A | 77.35 | 77.85 | 0.5 | 590882 | low angle carb-ap vein in sy |
| PGH-18-10A | 82.21 | 83.23 | 1.02 | 590883 | hem spotted bx'td carb vein |
| PGH-18-10A | 86.05 | 87.14 | 1.09 | 590884 | carb veining + bx zone in sy (minor ap+py n carb) |
| PGH-18-10A | 92.36 | 93.55 | 1.19 | 590885 | massive crt (faint banding, yellowish-grey) |
| PGH-18-10A | 93.55 | 94.79 | 1.24 | 590886 | sy w/ carb veining, coarsely bx'td from ~94.25m |
| PGH-18-10A | 94.79 | 96.06 | 1.27 | 590887 | sy, minor carb veins w/ rxn rims, chl at lct |
| PGH-18-10A | 96.06 | 97.36 | 1.3 | 590888 | sy-bx w/ rxn rims, ap in carb matrix |
| PGH-18-10A | 97.36 | 98.64 | 1.28 | 590889 | massive sy w/ x-cut carb veins |
| PGH-18-10A | 98.64 | 100 | 1.36 | 590890 | same w/ cg white fsp |
| PGH-18-10A | 100 | 100.84 | 0.84 | 590891 | sy to unkn dyke |
| PGH-18-10A | 100.84 | 101.88 | 1.04 | 590892 | sy w/ up to 20cm wide crt+sulph veins |
| PGH-18-10A | 101.88 | 103.06 | 1.18 | 590893 | sy to sy-bx w/ rxn rims |
| PGH-18-10A | 103.06 | 104.31 | 1.25 | 590894 | sy w/ crt veins (low angle) |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|--|
| PGH-18-10A | 104.31 | 105.56 | 1.25 | 590895 | same |
| PGH-18-10A | 105.56 | 106.8 | 1.24 | 590896 | same (irreg low angle crbt vein) |
| PGH-18-10A | 106.8 | 107.33 | 0.53 | 590897 | crbt vein w/ sulph masses (purple at contacts) |
| PGH-18-10A | 107.33 | 108.12 | 0.79 | 590898 | cg sye (un bx'td) |
| PGH-18-10A | 108.12 | 108.59 | 0.47 | 590899 | fg grey crbt w/ clasts of sye (fen) (low angle vein) |
| PGH-18-10A | 108.59 | 109.45 | 0.86 | 590901 | fen/sye bx'td by low angle crbt vein |
| PGH-18-10A | 109.45 | 110.23 | 0.78 | 590902 | fen/sye w/ ap in crbt matrix |
| PGH-18-10A | 110.23 | 110.71 | 0.48 | 590903 | purple banded crbt |
| PGH-18-10A | 110.71 | 111.18 | 0.47 | 590904 | unkn dyke |
| PGH-18-10A | 111.18 | 111.91 | 0.73 | 590905 | banded crbt (reddish) w/ fluorite patches |
| PGH-18-10A | 111.91 | 113.18 | 1.27 | 590906 | sye, <1cm carb veining w/ rxn rims + pegmatite zone |
| PGH-18-10A | 113.18 | 114.45 | 1.27 | 590907 | mixed sye-crbt-bx |
| PGH-18-10A | 114.45 | 115.85 | 1.4 | 590908 | sye w/ decreasing carb veining |
| PGH-18-10A | 115.85 | 117 | 1.15 | 590909 | sye, chl-bx'td at lct |
| PGH-18-10A | 117 | 117.85 | 0.85 | 590910 | low angle carb bx'tn (fz?) |
| PGH-18-10A | 117.85 | 118.9 | 1.05 | 590911 | same as last w/ 25cm crbt at end |
| PGH-18-10A | 125.13 | 125.65 | 0.52 | 590912 | crbt above diab |
| PGH-18-10A | 126.54 | 127 | 0.46 | 590913 | crbt below diab |
| PGH-18-10A | 128.59 | 129.55 | 0.96 | 590914 | sye w/ 20m crbt + 10-20% carb veins (w/ rxn rims) |
| PGH-18-10A | 129.55 | 130.78 | 1.23 | 590915 | sye w/ carb veining |
| PGH-18-10A | 130.78 | 131.3 | 0.52 | 590916 | crbt w/ reddish purple patches, sulph. 14cm sye clast (mostly kspar) |
| PGH-18-10A | 131.3 | 132.35 | 1.05 | 590918 | sye (mostly kspar) w/ 20cm crbt |
| PGH-18-10A | 139.85 | 140.45 | 0.6 | 590919 | ~60% crbt, 40% sye |
| PGH-18-10A | 146 | 147.32 | 1.32 | 590920 | sye w/ x-cut carb veining (alt'n envelopes), ~20cm crbt at end |
| PGH-18-10A | 147.32 | 148.9 | 1.58 | 590922 | gran, minimal carb veins |
| PGH-18-10A | 148.9 | 150.08 | 1.18 | 590923 | gran to sye, bx'td at lct |
| PGH-18-10A | 150.08 | 151.01 | 0.93 | 590924 | bx'td low angle crbt veins, cg and bands ap |
| PGH-18-10A | 151.01 | 152 | 0.99 | 590925 | sye + low angle crbt veins (fg blue-grey) |
| PGH-18-10A | 155.53 | 156 | 0.47 | 590926 | crbt w/ 10cm 30% fluorite (pitted) |
| PGH-18-10A | 156 | 157.04 | 1.04 | 590927 | crbt, banded, pitted |
| PGH-18-10A | 157.04 | 157.83 | 0.79 | 590928 | sye + md |
| PGH-18-10A | 157.83 | 158.95 | 1.12 | 590929 | crbt |
| PGH-18-10A | 158.95 | 159.75 | 0.8 | 590930 | crbt + bx |
| PGH-18-10A | 159.75 | 160.44 | 0.69 | 590931 | crbt |
| PGH-18-10A | 160.44 | 160.92 | 0.48 | 590932 | bx |
| PGH-18-10A | 160.92 | 161.87 | 0.95 | 590933 | sye |
| PGH-18-10A | 161.87 | 162.48 | 0.61 | 590934 | crbt w/ irreg ap bands |
| PGH-18-10A | 162.48 | 163.78 | 1.3 | 590935 | sye |
| PGH-18-10A | 163.78 | 165.08 | 1.3 | 590936 | sye (x-cut carb veins) |
| PGH-18-10A | 165.08 | 166.37 | 1.29 | 590937 | sye w/ up to 20cm crbt veins |
| PGH-18-10A | 166.37 | 167.49 | 1.12 | 590938 | sye w/ carb veins |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|--|
| PGH-18-10A | 167.49 | 168.72 | 1.23 | 590940 | sy |
| PGH-18-10A | 168.72 | 168.94 | 0.22 | 590941 | crbt |
| PGH-18-10A | 168.94 | 169.58 | 0.64 | 590942 | sy |
| PGH-18-10A | 169.58 | 170.06 | 0.48 | 590943 | crbt w/ smss at uct in bx |
| PGH-18-10A | 170.06 | 171.08 | 1.02 | 590944 | sy |
| PGH-18-10A | 174.35 | 175.42 | 1.07 | 590945 | sy, 8cm carb+ap |
| PGH-18-10A | 175.42 | 175.95 | 0.53 | 590946 | ext. crbt zone |
| PGH-18-10A | 175.95 | 176.77 | 0.82 | 590947 | fen/sy |
| PGH-18-10A | 176.77 | 177.5 | 0.73 | 590948 | sy |
| PGH-18-10A | 177.5 | 177.77 | 0.27 | 590949 | bx zone, partly assimilated |
| PGH-18-10A | 177.77 | 178.52 | 0.75 | 590950 | crbt, ap only at contacts |
| PGH-18-10A | 178.52 | 178.91 | 0.39 | 590951 | bx zone w/ ap |
| PGH-18-10A | 178.91 | 180 | 1.09 | 590952 | sy/fen, carb vein w/ rxn zone near lct |
| PGH-18-10A | 181.73 | 182.63 | 0.9 | 590953 | grey crbt |
| PGH-18-10A | 185.43 | 186.58 | 1.15 | 590954 | sy w/ low ang carb vein (ap noted) |
| PGH-18-10A | 186.58 | 187 | 0.42 | 590955 | 30cm crbt + lower bx'td contact |
| PGH-18-10A | 187 | 187.9 | 0.9 | 590956 | sy/fen w/ x-cut carb-ap veins |
| PGH-18-10A | 191.4 | 192.66 | 1.26 | 590957 | bx/fz |
| PGH-18-10A | 192.66 | 193.76 | 1.1 | 590958 | bx/fz w/ ap in carb veins |
| PGH-18-10A | 200.74 | 202.06 | 1.32 | 590959 | sy-bx', ap noted UV |
| PGH-18-10A | 205.94 | 206.77 | 0.83 | 590960 | assimilated' bx w/ ap |
| PGH-18-10A | 206.77 | 207.65 | 0.88 | 590961 | sy-bx w/ ap-carb veins |
| PGH-18-10A | 207.65 | 208.04 | 0.39 | 590962 | massive crbt |
| PGH-18-10A | 208.04 | 209.18 | 1.14 | 590963 | sy-bx locally 'assimilated' |
| PGH-18-10A | 209.18 | 210.3 | 1.12 | 590964 | same |
| PGH-18-10A | 214 | 215 | 1 | 590965 | carb-ap veining |
| PGH-18-10A | 215 | 216 | 1 | 590966 | 33cm crbt w/ ap at contacts in sy |
| PGH-18-10A | 219.54 | 220.63 | 1.09 | 590968 | sy-bx (weak) |
| PGH-18-10A | 220.63 | 221.74 | 1.11 | 590970 | same w/ 15cm mafic? dyke |
| PGH-18-10A | 225.14 | 225.98 | 0.84 | 590971 | sy w/ carb-ap veins (un bx'td) |
| PGH-18-10A | 225.98 | 226.85 | 0.87 | 590972 | same, low angle carb vein |
| PGH-18-10A | 226.85 | 227.77 | 0.92 | 590973 | crbt, massive |
| PGH-18-10A | 231.17 | 231.51 | 0.34 | 590974 | crbt (ap bands) |
| PGH-18-10A | 235.67 | 236.06 | 0.39 | 590975 | massive crbt w/ sulphides |
| PGH-18-10A | 236.06 | 236.94 | 0.88 | 590976 | sy w/ min x-cut carb veins |
| PGH-18-10A | 236.94 | 237.76 | 0.82 | 590977 | crbt w/ smass + micaceous alt'd clasts |
| PGH-18-10A | 237.76 | 238.78 | 1.02 | 590978 | same |
| PGH-18-10A | 238.78 | 239.65 | 0.87 | 590979 | crbt w/ abund sulph (less clasts) |
| PGH-18-10A | 245.5 | 245.8 | 0.3 | 590980 | crbt |
| PGH-18-10A | 245.8 | 246.88 | 1.08 | 590981 | gran/sy |
| PGH-18-10A | 246.88 | 247.85 | 0.97 | 590982 | sy w/ x-cut carb veins |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|-------------------------------------|
| PGH-18-10A | 247.85 | 249 | 1.15 | 590983 | same --> bx |
| PGH-18-10A | 249 | 250 | 1 | 590984 | gran w/ carb veining |
| PGH-18-10A | 250 | 251.15 | 1.15 | 590985 | gran w/ min carb veins |
| PGH-18-10A | 251.15 | 252 | 0.85 | 590986 | gran/sye --> bx (weak) |
| PGH-18-10A | 252 | 252.71 | 0.71 | 590987 | sye-bx |
| PGH-18-10A | 252.71 | 254.13 | 1.42 | 590988 | crbt |
| PGH-18-10A | 256.32 | 256.83 | 0.51 | 590989 | crbt w/ min sye-bx |
| PGH-18-10A | 259.75 | 260.89 | 1.14 | 590990 | gran/sye w/ carb veining |
| PGH-18-10A | 260.89 | 261.56 | 0.67 | 590991 | gran |
| PGH-18-10A | 261.56 | 262.94 | 1.38 | 590992 | gran/sye w/ carb veining |
| PGH-18-10A | 262.94 | 263.22 | 0.28 | 590993 | crbt w/ fluorite |
| PGH-18-10A | 263.22 | 263.89 | 0.67 | 590994 | sye/alk |
| PGH-18-10A | 263.89 | 264.83 | 0.94 | 590995 | crbt w/ fluorite |
| PGH-18-10A | 264.83 | 265.95 | 1.12 | 590996 | sye-bx w/ fluorite |
| PGH-18-10A | 265.95 | 267 | 1.05 | 590997 | sye - crbt - sye-bx |
| PGH-18-10A | 267 | 268.08 | 1.08 | 590998 | bx w/ ap, mod 'assimilation' |
| PGH-18-10A | 268.08 | 269.55 | 1.47 | 590999 | gran/sye w/ carb veining |
| PGH-18-10A | 269.55 | 271 | 1.45 | 591000 | unkn dyke |
| PGH-18-10A | 271 | 272.15 | 1.15 | 655401 | gran w/ carb veining |
| PGH-18-10A | 272.15 | 273.47 | 1.32 | 655402 | sye/alk w/ carb veins --> bx |
| PGH-18-10A | 275.85 | 276.78 | 0.93 | 655403 | sye-bx |
| PGH-18-10A | 276.78 | 277.83 | 1.05 | 655404 | gran/sye - x-cut carb veins common |
| PGH-18-10A | 277.83 | 279 | 1.17 | 655405 | gran/sye w/ x-cut carb veining |
| PGH-18-10A | 279 | 280.15 | 1.15 | 655406 | gran/sye w/ x-cut carb veining |
| PGH-18-10A | 280.15 | 281.24 | 1.09 | 655407 | gran --> bx, x-cut carb |
| PGH-18-10A | 281.24 | 282.38 | 1.14 | 655408 | sye-bx |
| PGH-18-10A | 282.38 | 283.43 | 1.05 | 655409 | crbt w/ lesser alt'd alk clasts |
| PGH-18-10A | 286.14 | 287.39 | 1.25 | 655411 | sye to sye-bx |
| PGH-18-10A | 287.39 | 288.5 | 1.11 | 655412 | sye-bx to sye w/ 15-20cm crbt veins |
| PGH-18-10A | 288.5 | 289.5 | 1 | 655413 | sye w/ x-cut carb veins |
| PGH-18-10A | 289.5 | 290.31 | 0.81 | 655414 | mixed MD/CRBT |
| PGH-18-10A | 290.31 | 291.26 | 0.95 | 655415 | MD - mt rich zone, 18cm crbt at end |
| PGH-18-10A | 294.8 | 296.23 | 1.43 | 655416 | sye w/ carb veining |
| PGH-18-10A | 296.23 | 297.49 | 1.26 | 655417 | sye w/ carb veining |
| PGH-18-10A | 297.49 | 298.7 | 1.21 | 655418 | sye w/ carb veining |
| PGH-18-10A | 298.7 | 300 | 1.3 | 655419 | massive crbt |
| PGH-18-10A | 300 | 301 | 1 | 655420 | massive crbt |
| PGH-18-10A | 301 | 302 | 1 | 655421 | massive crbt |
| PGH-18-10A | 302 | 303 | 1 | 655423 | sye w/ crbt veins (bx'td UCT) |
| PGH-18-10A | 307.88 | 308.88 | 1 | 655424 | mafic/mag bx dyke w/ carb in matrix |
| PGH-18-10A | 313.55 | 314.64 | 1.09 | 655425 | sye-bx |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|--|
| PGH-18-10A | 314.64 | 315.27 | 0.63 | 655426 | crbt |
| PGH-18-10A | 315.27 | 316.52 | 1.25 | 655427 | sy-bx, ap in carb veins |
| PGH-18-10A | 321.77 | 322.9 | 1.13 | 655428 | bx to crbt / unkn dyke |
| PGH-18-10A | 322.9 | 324.04 | 1.14 | 655429 | crbt / unkn mafic dyke |
| PGH-18-10A | 324.04 | 325.23 | 1.19 | 655430 | mafic dyke w/ carb veining |
| PGH-18-10A | 325.23 | 326.45 | 1.22 | 655431 | same w/ ap patches |
| PGH-18-10A | 326.45 | 327.69 | 1.24 | 655432 | crbt/ap over ~17cm then mdyke |
| PGH-18-10A | 327.69 | 328.78 | 1.09 | 655433 | 18c crbt+ap and other ap bands in assimilated bx |
| PGH-18-10A | 328.78 | 329.55 | 0.77 | 655434 | sy w/ carb veins |
| PGH-18-10A | 329.55 | 330.5 | 0.95 | 655435 | coarsely bx'td sye |
| PGH-18-10A | 333.07 | 334.34 | 1.27 | 655436 | sy-bx w/ ap+amph banded crbt vein |
| PGH-18-10A | 334.34 | 335.56 | 1.22 | 655437 | pyx |
| PGH-18-10A | 335.56 | 336.78 | 1.22 | 655438 | crbt/bx pyx |
| PGH-18-10A | 336.78 | 337.85 | 1.07 | 655439 | silic dyke? |
| PGH-18-10A | 345 | 346.26 | 1.26 | 655440 | pyroxenite' to crbt(+ap) w/ sye+pyx clasts |
| PGH-18-10A | 346.26 | 347.57 | 1.31 | 655441 | sye to bx (last 15cm) |
| PGH-18-10A | 347.57 | 348.81 | 1.24 | 655442 | sye-bx |
| PGH-18-10A | 348.81 | 349.94 | 1.13 | 655443 | sye w/ x-cut carb veins (+ rxn rims) |
| PGH-18-10A | 349.94 | 350.68 | 0.74 | 655444 | crbt w/ minor sye clasts |
| PGH-18-10A | 350.68 | 351.61 | 0.93 | 655445 | sye w/ minor carb veins |
| PGH-18-10A | 351.61 | 352.54 | 0.93 | 655446 | same |
| PGH-18-10A | 352.54 | 353.44 | 0.9 | 655447 | sye, bx at uct |
| PGH-18-10A | 353.44 | 354 | 0.56 | 655448 | crbt |
| PGH-18-10A | 354 | 355.17 | 1.17 | 655449 | sye w/ 12cm crbt |
| PGH-18-10A | 355.17 | 356.4 | 1.23 | 655450 | sye w/ repeating/stacked crbt veins |
| PGH-18-10A | 356.4 | 357.61 | 1.21 | 655451 | sye w/ crbt veins (minor bx'tn) |
| PGH-18-10A | 357.61 | 358.82 | 1.21 | 655452 | sye w/ carb veins |
| PGH-18-10A | 358.82 | 360.08 | 1.26 | 655453 | sye w/ carb veins, crbt w/ sulph last 30cm |
| PGH-18-10A | 360.08 | 360.58 | 0.5 | 655454 | sye |
| PGH-18-10A | 360.58 | 361.64 | 1.06 | 655455 | crbt |
| PGH-18-10A | 361.64 | 363 | 1.36 | 655456 | sye |
| PGH-18-10A | 363 | 364.24 | 1.24 | 655457 | sye |
| PGH-18-10A | 364.24 | 365.26 | 1.02 | 655458 | crbt w/ sye clast |
| PGH-18-10A | 365.26 | 366.44 | 1.18 | 655459 | crbt |
| PGH-18-10A | 366.44 | 367.66 | 1.22 | 655461 | crbt |
| PGH-18-10A | 367.66 | 368.85 | 1.19 | 655462 | crbt w/ mdyke |
| PGH-18-10A | 368.85 | 370.11 | 1.26 | 655463 | crbt |
| PGH-18-10A | 370.11 | 371.32 | 1.21 | 655465 | crbt, wispy amph |
| PGH-18-10A | 371.32 | 372.54 | 1.22 | 655466 | crbt |
| PGH-18-10A | 372.54 | 373.74 | 1.2 | 655467 | crbt, wispy blue amph |
| PGH-18-10A | 373.74 | 374.95 | 1.21 | 655468 | crbt |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|-----------------------------------|
| PGH-18-10A | 374.95 | 376.1 | 1.15 | 655470 | crbt |
| PGH-18-10A | 376.1 | 377.3 | 1.2 | 655471 | crbt |
| PGH-18-10A | 377.3 | 378.57 | 1.27 | 655472 | crbt, cg ap |
| PGH-18-10A | 378.57 | 379.76 | 1.19 | 655473 | crbt, ap-amph-mt bands |
| PGH-18-10A | 379.76 | 381 | 1.24 | 655475 | crbt |
| PGH-18-10A | 381 | 382.2 | 1.2 | 655476 | crbt |
| PGH-18-10A | 382.2 | 383.42 | 1.22 | 655477 | crbt |
| PGH-18-10A | 383.42 | 384.65 | 1.23 | 655478 | crbt |
| PGH-18-10A | 384.65 | 385.85 | 1.2 | 655479 | crbt |
| PGH-18-10A | 385.85 | 387 | 1.15 | 655480 | crbt |
| PGH-18-10A | 387 | 387.71 | 0.71 | 655481 | cg ap on break/cavity w/ fg pych |
| PGH-18-10A | 387.71 | 388.81 | 1.1 | 655482 | crbt |
| PGH-18-10A | 388.81 | 390 | 1.19 | 655483 | crbt |
| PGH-18-10A | 390 | 391.05 | 1.05 | 655485 | crbt |
| PGH-18-10A | 391.05 | 391.92 | 0.87 | 655486 | crbt, bx at lct |
| PGH-18-10A | 391.92 | 393 | 1.08 | 655487 | sy/sye-bx |
| PGH-18-10A | 393 | 393.81 | 0.81 | 655488 | sy w/ carb veins |
| PGH-18-10A | 393.81 | 394.63 | 0.82 | 655489 | sy w/ carb veins |
| PGH-18-10A | 394.63 | 395.51 | 0.88 | 655490 | crbt |
| PGH-18-10A | 395.51 | 396.24 | 0.73 | 655491 | crbt w/ sye-bx |
| PGH-18-10A | 396.24 | 397.4 | 1.16 | 655492 | sy w/ x-cut carb veins (rxn rims) |
| PGH-18-10A | 397.4 | 398.61 | 1.21 | 655493 | sy w/ min carb veins |
| PGH-18-10A | 398.61 | 399.83 | 1.22 | 655494 | sy w/ slightly more carb veining |
| PGH-18-10A | 399.83 | 400.83 | 1 | 655495 | same, minor bx |
| PGH-18-10A | 402.9 | 403.59 | 0.69 | 655496 | sye-bx |
| PGH-18-10A | 403.59 | 404.59 | 1 | 655497 | crbt w/ sye/micaceous clasts |
| PGH-18-10A | 404.59 | 405.71 | 1.12 | 655498 | same, crbt>alk |
| PGH-18-10A | 405.71 | 406.91 | 1.2 | 655499 | same, crbt>sye-bx |
| PGH-18-10A | 406.91 | 408.02 | 1.11 | 655500 | sy w/ carb (+alt'n) veins |
| PGH-18-10A | 408.02 | 409.08 | 1.06 | 655351 | light pink sye w/ 29cm crbt |
| PGH-18-10A | 409.08 | 410.26 | 1.18 | 655352 | sy w/ min carb veins |
| PGH-18-10A | 410.26 | 411.34 | 1.08 | 655353 | sy w/ carb veins (+ap) |
| PGH-18-10A | 411.34 | 412.42 | 1.08 | 655354 | sy w/ carb veins (+ap) |
| PGH-18-10A | 412.42 | 413.51 | 1.09 | 655355 | sy w/ 30cm crbt |
| PGH-18-10A | 413.51 | 414.83 | 1.32 | 655356 | sy w/ <10cm crbt |
| PGH-18-10A | 414.83 | 416 | 1.17 | 655357 | sye-bx |
| PGH-18-10A | 418.05 | 418.78 | 0.73 | 655358 | sye |
| PGH-18-10A | 418.78 | 419.95 | 1.17 | 655359 | crbt w/ bx'td uct |
| PGH-18-10A | 419.95 | 420.97 | 1.02 | 655361 | crbt |
| PGH-18-10A | 420.97 | 421.96 | 0.99 | 655362 | crbt |
| PGH-18-10A | 421.96 | 423.02 | 1.06 | 655364 | crbt |

ASSAYS

| DDH | From | To | Width (m) | SampleID | Description |
|------------|--------|--------|-----------|----------|---------------------------------------|
| PGH-18-10A | 423.02 | 423.83 | 0.81 | 655365 | crbt |
| PGH-18-10A | 423.83 | 424.6 | 0.77 | 655366 | crbt, sye clast at lct |
| PGH-18-10A | 424.6 | 425.7 | 1.1 | 655367 | sye/fen |
| PGH-18-10A | 425.7 | 426.7 | 1 | 655368 | crbt w/ ~50% large sye clasts |
| PGH-18-10A | 426.7 | 427.62 | 0.92 | 655369 | crbt |
| PGH-18-10A | 427.62 | 428.5 | 0.88 | 655370 | crbt |
| PGH-18-10A | 428.5 | 429.56 | 1.06 | 655371 | sye/gran |
| PGH-18-10A | 429.56 | 430.67 | 1.11 | 655372 | sye/gran |
| PGH-18-10A | 430.67 | 431.57 | 0.9 | 655373 | gran/sye, bx at lct |
| PGH-18-10A | 431.57 | 432.43 | 0.86 | 655374 | bx |
| PGH-18-10A | 432.43 | 433.24 | 0.81 | 655375 | bx |
| PGH-18-10A | 433.24 | 434.24 | 1 | 655376 | sye w/ chl frags, sulph in carb veins |

COMPANY QAQC DATA

| DDH | From | To | Width (m) | SampleID | BatchID | QAQC Type | QAQC Description | P2O5 (%) | Nb2O5 (%) |
|------------|--------|--------|-----------|----------|-----------|-----------|--------------------|----------|-----------|
| PGH-18-10A | 13.22 | 13.22 | 0 | 590859 | A18-08117 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-10A | 15.62 | 15.62 | 0 | 590862 | A18-08117 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-10A | 22.26 | 22.26 | 0 | 590869 | A18-08117 | STANDARD | Oka 1 | 2.52 | 0.531 |
| PGH-18-10A | 108.59 | 108.59 | 0 | 590900 | A18-08117 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-10A | 131.3 | 131.3 | 0 | 590917 | A18-08117 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-10A | 147.32 | 147.32 | 0 | 590921 | A18-08117 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-10A | 167.49 | 167.49 | 0 | 590939 | A18-08117 | STANDARD | Oka 1 | 2.48 | 0.55 |
| PGH-18-10A | 216 | 216 | 0 | 590967 | A18-08117 | STANDARD | Oka 1 | 2.41 | 0.53 |
| PGH-18-10A | 220.63 | 220.63 | 0 | 590969 | A18-08117 | BLANK | Marble | 0.02 | < 0.003 |
| PGH-18-10A | 283.43 | 283.43 | 0 | 655410 | A18-08117 | STANDARD | Oka 1 | 2.49 | 0.536 |
| PGH-18-10A | 302 | 302 | 0 | 655422 | A18-08117 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-10A | 366.44 | 366.44 | 0 | 655460 | A18-08117 | STANDARD | Oka 1 | 2.45 | 0.556 |
| PGH-18-10A | 368.85 | 370.11 | 1.26 | 655463 | A18-08117 | N/A | ORIGINAL SAMPLE | 0.57 | 0.211 |
| PGH-18-10A | 368.85 | 370.11 | 1.26 | 655464 | A18-08117 | DUPLICATE | DUPLICATE (655463) | 0.77 | 0.33 |
| PGH-18-10A | 368.85 | 370.11 | 1.26 | 655474 | A18-08117 | DUPLICATE | DUPLICATE (655473) | 4.4 | 0.205 |
| PGH-18-10A | 374.95 | 374.95 | 0 | 655469 | A18-08117 | BLANK | Marble | 0.03 | < 0.003 |
| PGH-18-10A | 378.57 | 379.76 | 1.19 | 655473 | A18-08117 | N/A | ORIGINAL SAMPLE | 4.61 | 0.222 |
| PGH-18-10A | 390 | 390 | 0 | 655484 | A18-08117 | STANDARD | Oka 1 | 2.48 | 0.55 |
| PGH-18-10A | 419.95 | 419.95 | 0 | 655360 | A18-08117 | STANDARD | Oka 1 | 2.37 | 0.525 |
| PGH-18-10A | 421.96 | 421.96 | 0 | 655363 | A18-08117 | BLANK | Marble | 0.03 | < 0.003 |

APPENDIX B
Laboratory Analytical Certificates



Date Submitted: 20-Mar-18
Invoice No.: A18-03553-Quant
Invoice Date: 06-Jul-18
Your Reference: Good Hope

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

88 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 4LITHO (11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code 4LITHO-Quant(11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code Nb Assay - XRF XRF

REPORT **A18-03553-Quant**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Total includes all elements in % oxide to the left of total.

We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A18-03553

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589001 | 7.36 | 0.86 | 6.24 | 0.579 | 10.37 | 33.27 | 0.11 | 0.63 | 0.721 | 3.69 | 34.33 | 98.16 | 7 | < 1 | 57 | 2852 | 2607 | 100 | 21 | 40 | 14 | 50 | < 10 |
| 589002 | 6.87 | 0.38 | 4.69 | 0.509 | 1.70 | 45.23 | 0.09 | 0.24 | 0.082 | 4.44 | 34.17 | 98.40 | 6 | 6 | 186 | 1026 | 3708 | 99 | 141 | < 20 | < 1 | < 20 | < 10 |
| 589003 | 4.39 | 0.46 | 2.55 | 0.464 | 1.70 | 47.97 | 0.13 | 0.36 | 0.052 | 5.72 | 33.53 | 97.32 | 4 | < 1 | 40 | 872 | 6102 | 99 | 73 | < 20 | 4 | < 20 | < 10 |
| 589004 | 28.34 | 6.29 | 4.36 | 0.353 | 3.52 | 25.18 | 1.18 | 3.69 | 0.106 | 3.53 | 21.70 | 98.26 | 5 | 1 | 103 | 1547 | 1998 | 130 | 58 | < 20 | 2 | < 20 | < 10 |
| 589005 | 1.78 | 0.17 | 2.18 | 0.523 | 0.94 | 50.90 | 0.05 | 0.10 | 0.014 | 1.34 | 39.91 | 97.91 | 3 | < 1 | 16 | 1392 | 2870 | 79 | 6 | < 20 | 3 | < 20 | < 10 |
| 589006 | 23.99 | 5.71 | 3.95 | 0.397 | 2.76 | 29.45 | 0.48 | 4.27 | 0.072 | 0.95 | 26.06 | 98.09 | 6 | 3 | 75 | 2543 | 1953 | 57 | 41 | < 20 | 4 | < 20 | < 10 |
| 589007 | 4.06 | 0.30 | 3.86 | 0.549 | 2.99 | 45.97 | 0.07 | 0.24 | 0.081 | 2.82 | 37.08 | 98.01 | 5 | < 1 | 38 | 3452 | 3229 | 74 | 47 | < 20 | 4 | < 20 | 10 |
| 589008 | 20.25 | 5.20 | 12.64 | 0.484 | 5.42 | 22.66 | 1.19 | 3.69 | 3.351 | 3.12 | 20.59 | 98.59 | 10 | 4 | 305 | 1909 | 2430 | 80 | 948 | < 20 | 19 | < 20 | 20 |
| 589009 | 16.43 | 3.07 | 7.25 | 0.510 | 7.16 | 27.15 | 0.34 | 2.30 | 2.647 | 6.54 | 24.93 | 98.31 | 10 | 1 | 253 | 1662 | 2448 | 228 | 303 | 50 | 13 | 30 | 30 |
| 589010 | 13.02 | 2.71 | 8.08 | 0.409 | 7.29 | 30.98 | 0.41 | 2.49 | 2.826 | 3.36 | 26.84 | 98.43 | 14 | 3 | 260 | 1421 | 4555 | 99 | 377 | 140 | 29 | 140 | 50 |
| 589011 | 13.19 | 2.35 | 5.63 | 0.495 | 8.25 | 30.55 | 0.08 | 2.05 | 0.148 | 3.04 | 32.00 | 97.78 | 9 | < 1 | 58 | 5751 | 1777 | 149 | 71 | < 20 | 6 | 20 | 10 |
| 589012 | 8.88 | 1.66 | 3.78 | 0.457 | 2.49 | 42.51 | 0.41 | 1.14 | 0.234 | 2.98 | 32.64 | 97.17 | 5 | < 1 | 74 | 749 | 5419 | 77 | 191 | < 20 | 6 | < 20 | 10 |
| 589013 | 42.06 | 10.27 | 4.30 | 0.247 | 3.60 | 14.98 | 1.67 | 6.32 | 0.185 | 0.03 | 16.48 | 100.2 | 6 | 2 | 84 | 1821 | 911 | 13 | 58 | < 20 | 6 | < 20 | 20 |
| 589014 | 14.24 | 2.59 | 3.68 | 0.349 | 3.40 | 38.13 | 0.29 | 1.91 | 0.106 | 0.78 | 34.10 | 99.57 | 6 | < 1 | 36 | 566 | 1149 | 51 | 36 | < 20 | 3 | 20 | < 10 |
| 589015 | 41.40 | 8.96 | 4.31 | 0.195 | 3.08 | 17.06 | 2.78 | 4.70 | 0.183 | 1.48 | 15.34 | 99.49 | 13 | 5 | 121 | 2992 | 1025 | 84 | 80 | 30 | 2 | < 20 | 10 |
| 589016 | 32.68 | 8.11 | 4.62 | 0.293 | 3.93 | 21.33 | 1.16 | 5.68 | 0.270 | 0.50 | 21.06 | 99.64 | 10 | 2 | 96 | 1885 | 1039 | 28 | 59 | 50 | 4 | 20 | 10 |
| 589017 | 39.89 | 9.44 | 5.27 | 0.261 | 3.35 | 15.98 | 2.98 | 4.96 | 0.352 | 1.25 | 15.14 | 98.87 | 13 | 4 | 173 | 2392 | 1516 | 63 | 97 | 30 | 4 | < 20 | < 10 |
| 589018 | 41.88 | 10.64 | 4.64 | 0.231 | 3.80 | 15.79 | 4.08 | 3.62 | 0.330 | 0.99 | 13.89 | 99.89 | 11 | 5 | 108 | 1293 | 1315 | 43 | 80 | 50 | 11 | 30 | < 10 |
| 589019 | 56.46 | 14.11 | 5.19 | 0.114 | 3.06 | 5.55 | 5.48 | 3.25 | 0.492 | 0.31 | 4.96 | 98.97 | 11 | 5 | 101 | 966 | 896 | 19 | 110 | 60 | 13 | 30 | < 10 |
| 589020 | 6.22 | 1.79 | 4.03 | 0.770 | 2.09 | 42.62 | 0.41 | 0.70 | 0.222 | 2.42 | 32.05 | 93.32 | 3 | < 1 | 198 | 2786 | > 10000 | 56 | 83 | < 20 | 2 | < 20 | 20 |
| 589021 | 42.15 | 9.93 | 4.58 | 0.225 | 3.45 | 15.29 | 3.62 | 3.70 | 0.321 | 1.04 | 14.13 | 98.42 | 9 | 4 | 99 | 2972 | 1171 | 42 | 119 | 50 | 7 | 30 | 10 |
| 589022 | 57.75 | 13.95 | 5.29 | 0.086 | 3.65 | 5.08 | 6.38 | 2.90 | 0.537 | 0.34 | 4.21 | 100.2 | 11 | 7 | 122 | 709 | 948 | 24 | 181 | 100 | 13 | 40 | < 10 |
| 589023 | 48.10 | 11.84 | 5.58 | 0.147 | 4.70 | 9.26 | 4.27 | 5.30 | 0.390 | 1.53 | 8.87 | 99.98 | 12 | 7 | 157 | 1329 | 1209 | 35 | 138 | 70 | 11 | 40 | < 10 |
| 589024 | 4.75 | 0.51 | 4.77 | 0.322 | 4.27 | 42.94 | 0.11 | 0.44 | 0.230 | 3.53 | 36.26 | 98.13 | 5 | < 1 | 96 | 1735 | 2832 | 71 | 117 | < 20 | 4 | < 20 | < 10 |
| 589025 | 3.20 | 0.21 | 4.48 | 0.285 | 3.63 | 44.82 | 0.14 | 0.14 | 0.222 | 2.33 | 38.75 | 98.20 | 5 | < 1 | 125 | 1057 | 3684 | 52 | 111 | < 20 | 2 | < 20 | < 10 |
| 589026 | 2.20 | 0.08 | 3.18 | 0.426 | 4.00 | 45.67 | 0.07 | 0.06 | 0.111 | 2.71 | 39.27 | 97.77 | 5 | < 1 | 53 | 920 | 5507 | 61 | 12 | < 20 | < 1 | < 20 | 10 |
| 589027 | 2.62 | 0.08 | 4.08 | 0.407 | 4.17 | 45.40 | 0.05 | 0.06 | 0.366 | 2.81 | 38.76 | 98.80 | 5 | < 1 | 63 | 1436 | 3428 | 66 | 99 | < 20 | < 1 | < 20 | < 10 |
| 589028 | 1.43 | 0.07 | 1.94 | 0.294 | 2.06 | 50.70 | 0.05 | 0.05 | 0.065 | 1.64 | 40.74 | 99.03 | 4 | < 1 | 34 | 1147 | 5298 | 51 | 9 | < 20 | < 1 | < 20 | < 10 |
| 589029 | 1.74 | 0.07 | 3.16 | 0.306 | 2.68 | 48.40 | 0.07 | 0.04 | 0.089 | 2.70 | 38.72 | 97.98 | 4 | < 1 | 62 | 713 | 5329 | 66 | 64 | < 20 | 2 | < 20 | < 10 |
| 589030 | 2.02 | 0.06 | 4.45 | 0.376 | 4.03 | 45.78 | 0.05 | 0.03 | 0.282 | 3.95 | 37.01 | 98.07 | 5 | < 1 | 77 | 2616 | 3295 | 95 | 89 | < 20 | 2 | < 20 | 10 |
| 589031 | 2.69 | 0.15 | 4.11 | 0.390 | 3.76 | 45.61 | 0.06 | 0.09 | 0.208 | 3.36 | 37.29 | 97.73 | 4 | < 1 | 57 | 2432 | 3155 | 85 | 53 | < 20 | 4 | < 20 | 10 |
| 589032 | 2.20 | 0.10 | 4.26 | 0.348 | 3.01 | 47.32 | 0.18 | 0.05 | 0.134 | 1.80 | 38.63 | 98.05 | 4 | 2 | 90 | 1758 | 3680 | 54 | 74 | < 20 | 3 | < 20 | < 10 |
| 589033 | 3.81 | 0.43 | 5.55 | 0.378 | 4.46 | 40.74 | 0.17 | 0.32 | 0.626 | 4.20 | 34.13 | 94.81 | 4 | 3 | 155 | 1106 | 3901 | 60 | 321 | < 20 | 4 | < 20 | < 10 |
| 589034 | 2.06 | 0.18 | 4.90 | 0.362 | 3.12 | 43.99 | 0.07 | 0.14 | 0.200 | 3.02 | 36.92 | 94.96 | 3 | < 1 | 64 | 2264 | 3125 | 59 | 72 | < 20 | 2 | < 20 | 10 |
| 589035 | 2.72 | 0.11 | 5.70 | 0.561 | 5.80 | 41.99 | 0.22 | 0.07 | 0.220 | 3.56 | 36.69 | 97.63 | 5 | < 1 | 195 | 2861 | 3584 | 63 | 198 | < 20 | 3 | < 20 | 10 |
| 589036 | 10.34 | 2.24 | 4.79 | 0.300 | 5.46 | 37.92 | 0.19 | 2.09 | 0.188 | 2.50 | 32.22 | 98.23 | 6 | 3 | 163 | 1253 | 2987 | 58 | 235 | < 20 | 3 | < 20 | < 10 |
| 589037 | 13.93 | 2.76 | 7.08 | 0.353 | 6.48 | 31.84 | 0.52 | 2.56 | 1.390 | 4.03 | 28.81 | 99.74 | 11 | 2 | 256 | 1233 | 2846 | 91 | 276 | 30 | 15 | 30 | 70 |
| 589038 | 12.42 | 2.73 | 4.53 | 0.434 | 3.64 | 39.92 | 0.48 | 1.72 | 0.151 | 0.62 | 33.88 | 100.5 | 6 | 1 | 71 | 2010 | 1400 | 38 | 38 | < 20 | 3 | < 20 | < 10 |
| 589039 | 50.19 | 12.73 | 5.76 | 0.203 | 4.27 | 6.68 | 4.14 | 5.39 | 0.527 | 0.41 | 8.85 | 99.13 | 11 | 7 | 171 | 1323 | 974 | 23 | 133 | 250 | 11 | 40 | < 10 |
| 589040 | 11.66 | 2.39 | 4.10 | 0.583 | 4.21 | 38.09 | 0.54 | 1.59 | 0.299 | 3.66 | 30.69 | 97.81 | 5 | 1 | 65 | 1504 | 4950 | 97 | 100 | < 20 | 7 | 20 | 10 |
| 589041 | 39.89 | 9.47 | 5.69 | 0.318 | 5.84 | 13.13 | 2.41 | 5.14 | 0.814 | 0.89 | 15.71 | 99.31 | 7 | 4 | 133 | 3261 | 1356 | 43 | 66 | 200 | 13 | 50 | 30 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589042 | 48.18 | 11.85 | 4.30 | 0.234 | 4.86 | 9.26 | 2.57 | 5.49 | 0.156 | 0.82 | 11.31 | 99.03 | 8 | 5 | 156 | 3608 | 1185 | 36 | 70 | 30 | 3 | < 20 | < 10 |
| 589043 | 1.81 | 0.23 | 3.19 | 0.688 | 12.12 | 33.46 | 0.03 | 0.11 | 0.019 | 2.16 | 40.92 | 94.74 | 5 | < 1 | 23 | 1440 | 3115 | 86 | 12 | < 20 | < 1 | < 20 | < 10 |
| 589044 | 57.32 | 13.56 | 2.91 | 0.123 | 2.55 | 6.78 | 4.22 | 4.51 | 0.186 | 0.22 | 7.90 | 100.3 | 6 | 4 | 99 | 2456 | 1065 | 18 | 65 | < 20 | 3 | < 20 | 20 |
| 589045 | 57.54 | 13.48 | 2.72 | 0.125 | 2.38 | 7.14 | 4.46 | 3.89 | 0.165 | 0.23 | 8.02 | 100.2 | 4 | 4 | 85 | 1631 | 1017 | 16 | 75 | 210 | 4 | < 20 | 20 |
| 589046 | 12.10 | 2.22 | 4.79 | 0.818 | 8.16 | 33.20 | 0.16 | 1.71 | 0.032 | 0.06 | 35.58 | 98.82 | 5 | < 1 | 44 | 8053 | 1407 | 32 | 21 | < 20 | 1 | < 20 | 10 |
| 589047 | 8.19 | 1.61 | 3.47 | 0.584 | 3.33 | 42.76 | 0.19 | 0.90 | 0.564 | 4.66 | 31.70 | 97.95 | 4 | 1 | 69 | 1332 | 5985 | 117 | 75 | < 20 | 5 | < 20 | 20 |
| 589048 | 39.05 | 9.45 | 6.34 | 0.297 | 6.91 | 15.43 | 0.25 | 5.30 | 0.419 | 1.50 | 14.07 | 99.01 | 9 | 3 | 119 | 572 | 3043 | 51 | 61 | 130 | 15 | 40 | 10 |
| 589049 | 1.62 | 0.17 | 4.90 | 0.600 | 4.93 | 43.00 | 0.04 | 0.07 | 0.033 | 2.43 | 38.05 | 95.85 | 5 | < 1 | 82 | 5342 | 2502 | 114 | 22 | < 20 | 2 | < 20 | < 10 |
| 589050 | 6.27 | 1.79 | 4.06 | 0.781 | 2.12 | 45.37 | 0.42 | 0.70 | 0.222 | 2.40 | 32.21 | 96.35 | 3 | < 1 | 199 | 2775 | > 10000 | 58 | 86 | < 20 | 1 | < 20 | 20 |
| 589051 | 17.26 | 3.61 | 5.36 | 0.365 | 6.07 | 29.05 | 0.27 | 2.53 | 0.882 | 2.35 | 28.93 | 96.69 | 6 | 2 | 136 | 1940 | 2022 | 61 | 201 | 40 | 8 | < 20 | 20 |
| 589052 | 10.74 | 2.14 | 2.98 | 0.505 | 2.69 | 41.49 | 0.18 | 1.11 | 0.189 | 2.76 | 32.51 | 97.30 | 3 | 1 | 59 | 733 | 5776 | 81 | 47 | < 20 | 2 | < 20 | 10 |
| 589053 | 33.96 | 7.55 | 7.43 | 0.515 | 5.02 | 19.33 | 1.64 | 4.95 | 0.268 | 1.83 | 16.51 | 99.00 | 9 | 3 | 96 | 2622 | 1991 | 64 | 33 | 140 | 20 | 20 | 10 |
| 589054 | 5.79 | 1.10 | 2.51 | 0.449 | 2.34 | 46.62 | 0.12 | 0.91 | 0.044 | 1.61 | 37.76 | 99.25 | 4 | 1 | 37 | 1380 | 6584 | 90 | 8 | < 20 | < 1 | < 20 | 10 |
| 589055 | 14.37 | 2.55 | 7.92 | 0.659 | 9.04 | 26.70 | 0.24 | 1.75 | 0.123 | 3.52 | 28.55 | 95.41 | 9 | 2 | 99 | 6434 | 2759 | 91 | 54 | 50 | 13 | < 20 | 10 |
| 589056 | 10.02 | 1.63 | 4.45 | 0.704 | 7.90 | 35.40 | 0.51 | 0.82 | 0.070 | 2.00 | 34.30 | 97.80 | 7 | 5 | 51 | 6684 | 4476 | 77 | 18 | < 20 | 3 | < 20 | < 10 |
| 589057 | 1.36 | 0.08 | 5.03 | 0.815 | 13.11 | 33.92 | 0.03 | 0.05 | 0.036 | 2.02 | 40.44 | 96.89 | 3 | < 1 | 48 | 11310 | 2882 | 103 | 11 | < 20 | < 1 | < 20 | < 10 |
| 589058 | 11.13 | 2.00 | 3.06 | 0.343 | 2.26 | 42.55 | 0.56 | 0.97 | 0.102 | 3.40 | 32.28 | 98.66 | 6 | < 1 | 54 | 1264 | 3116 | 86 | 23 | < 20 | < 1 | < 20 | < 10 |
| 589059 | 19.08 | 4.52 | 9.90 | 0.400 | 2.32 | 31.36 | 1.49 | 1.65 | 0.116 | 0.29 | 21.34 | 92.46 | 3 | 3 | 65 | 1155 | 4484 | 45 | 41 | 50 | 38 | < 20 | 20 |
| 589060 | 2.60 | 0.19 | 2.99 | 0.358 | 1.21 | 51.34 | 0.06 | 0.05 | 0.024 | 1.30 | 38.03 | 98.14 | 5 | < 1 | 36 | 809 | 7073 | 63 | 12 | < 20 | 6 | < 20 | 10 |
| 589061 | 2.51 | 0.07 | 1.69 | 0.324 | 1.58 | 50.88 | 0.22 | 0.04 | 0.052 | 4.61 | 35.90 | 97.89 | 3 | < 1 | 41 | 572 | 8479 | 111 | 99 | < 20 | < 1 | < 20 | 10 |
| 589062 | 0.49 | 0.03 | 1.37 | 0.354 | 0.80 | 54.13 | 0.07 | < 0.01 | 0.004 | 0.51 | 41.72 | 99.50 | 1 | < 1 | 10 | 526 | 9426 | 79 | 5 | < 20 | < 1 | < 20 | 10 |
| 589063 | 2.19 | 0.17 | 3.38 | 0.341 | 1.39 | 51.54 | 0.12 | 0.07 | 0.033 | 5.15 | 33.52 | 97.91 | 2 | < 1 | 35 | 343 | 7301 | 93 | 15 | < 20 | 9 | < 20 | 10 |
| 589064 | 2.05 | 0.10 | 3.77 | 0.453 | 2.75 | 48.36 | 0.05 | 0.04 | 0.023 | 2.58 | 36.97 | 97.14 | 4 | < 1 | 33 | 7781 | 4298 | 100 | 16 | < 20 | 4 | < 20 | 20 |
| 589065 | 31.08 | 7.62 | 5.55 | 0.224 | 5.20 | 21.64 | 2.40 | 4.42 | 0.305 | 1.60 | 18.25 | 98.31 | 7 | 4 | 124 | 807 | 3739 | 42 | 126 | 30 | 5 | 20 | < 10 |
| 589066 | 28.81 | 7.78 | 8.16 | 0.330 | 9.86 | 15.29 | 0.42 | 6.03 | 0.499 | 1.60 | 19.44 | 98.23 | 9 | 5 | 137 | 935 | 1795 | 29 | 87 | < 20 | 8 | < 20 | < 10 |
| 589067 | 29.59 | 7.99 | 8.08 | 0.319 | 8.80 | 17.18 | 0.71 | 5.66 | 0.334 | 1.62 | 18.41 | 98.69 | 13 | 5 | 136 | 1891 | 2290 | 44 | 58 | < 20 | 11 | < 20 | 10 |
| 589068 | 55.13 | 13.92 | 4.97 | 0.119 | 3.72 | 6.74 | 4.70 | 4.57 | 0.402 | 0.38 | 5.82 | 100.5 | 8 | 6 | 98 | 1415 | 1226 | 19 | 208 | 60 | 10 | 30 | < 10 |
| 589069 | 47.66 | 11.95 | 6.93 | 0.152 | 6.43 | 7.52 | 4.49 | 5.04 | 0.460 | 0.62 | 8.24 | 99.50 | 11 | 5 | 124 | 833 | 1180 | 18 | 128 | 70 | 10 | 30 | < 10 |
| 589070 | 3.20 | 0.63 | 3.09 | 0.427 | 1.43 | 51.22 | 0.35 | 0.43 | 0.040 | 2.30 | 35.61 | 98.73 | 2 | < 1 | 29 | 440 | > 10000 | 78 | 28 | < 20 | 7 | < 20 | 20 |
| 589071 | 4.15 | 0.75 | 3.22 | 0.392 | 2.19 | 48.83 | 0.31 | 0.69 | 0.074 | 2.96 | 34.83 | 98.40 | 2 | 1 | 35 | 480 | 9419 | 83 | 17 | < 20 | 6 | < 20 | 20 |
| 589072 | 27.32 | 6.76 | 6.47 | 0.257 | 7.76 | 22.38 | 1.57 | 4.74 | 0.339 | 2.68 | 19.57 | 99.86 | 7 | 5 | 103 | 558 | 3452 | 58 | 85 | 20 | 8 | 20 | 10 |
| 589073 | 32.38 | 8.12 | 6.83 | 0.282 | 8.52 | 15.24 | 2.11 | 4.86 | 0.337 | 3.04 | 16.97 | 98.67 | 8 | 23 | 102 | 1077 | 1892 | 75 | 95 | 30 | 6 | < 20 | < 10 |
| 589074 | 24.92 | 5.36 | 6.12 | 0.626 | 5.04 | 25.82 | 1.05 | 3.14 | 0.274 | 1.07 | 24.64 | 98.08 | 10 | 4 | 100 | 6759 | 2484 | 76 | 59 | 40 | 12 | 30 | 10 |
| 589075 | 16.93 | 4.52 | 3.95 | 0.375 | 3.60 | 34.77 | 1.34 | 2.49 | 0.190 | 1.09 | 29.44 | 98.70 | 5 | 3 | 42 | 1144 | 6356 | 81 | 26 | 20 | 7 | 20 | 20 |
| 589076 | 13.07 | 2.73 | 3.86 | 0.372 | 3.47 | 38.47 | 1.12 | 1.35 | 0.169 | 3.22 | 29.94 | 97.78 | 5 | 3 | 60 | 913 | 7689 | 84 | 45 | 30 | 6 | 30 | 20 |
| 589077 | 9.59 | 2.27 | 2.65 | 0.389 | 2.21 | 42.82 | 0.91 | 0.98 | 0.098 | 0.42 | 35.28 | 97.61 | 5 | 1 | 33 | 1563 | 6839 | 83 | 18 | < 20 | 2 | < 20 | 10 |
| 589078 | 7.77 | 1.16 | 3.23 | 0.380 | 3.16 | 44.56 | 0.12 | 1.00 | 0.092 | 3.35 | 34.10 | 98.92 | 5 | 2 | 33 | 915 | 3681 | 123 | 30 | < 20 | 1 | < 20 | 20 |
| 589079 | 11.60 | 3.22 | 3.70 | 0.371 | 3.07 | 38.85 | 0.52 | 2.06 | 0.197 | 1.58 | 32.71 | 97.88 | 4 | 1 | 39 | 1644 | 6601 | 93 | 27 | < 20 | 4 | 20 | 20 |
| 589080 | 10.81 | 1.54 | 7.28 | 0.492 | 5.69 | 33.24 | 0.13 | 1.20 | 0.140 | 7.34 | 26.88 | 94.75 | 8 | < 1 | 64 | 5827 | 3778 | 243 | 73 | 20 | 22 | 30 | 30 |
| 589081 | 7.61 | 1.47 | 5.33 | 0.305 | 3.67 | 39.47 | 0.08 | 1.26 | 0.091 | 3.23 | 31.81 | 94.33 | 6 | < 1 | 55 | 5267 | 2215 | 126 | 102 | < 20 | 10 | 20 | 30 |
| 589082 | 7.07 | 1.22 | 4.74 | 0.320 | 2.79 | 46.10 | 0.15 | 0.85 | 0.103 | 6.27 | 28.68 | 98.28 | 6 | < 1 | 58 | 708 | 5346 | 126 | 25 | < 20 | 14 | 30 | 30 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589083 | 50.48 | 13.60 | 5.89 | 0.177 | 4.29 | 6.17 | 3.35 | 5.43 | 0.516 | 0.21 | 9.00 | 99.12 | 17 | 5 | 121 | 1361 | 995 | 14 | 55 | 90 | 11 | 50 | < 10 |
| 589084 | 17.85 | 3.54 | 7.51 | 0.530 | 6.76 | 26.39 | 0.13 | 3.10 | 0.230 | 4.36 | 25.17 | 95.57 | 10 | < 1 | 68 | 7923 | 2201 | 172 | 46 | < 20 | 10 | < 20 | 10 |
| 589085 | 11.43 | 0.92 | 4.30 | 0.315 | 2.27 | 41.00 | 0.08 | 0.77 | 0.062 | 5.31 | 28.39 | 94.84 | 5 | < 1 | 36 | 3705 | 3295 | 214 | 30 | < 20 | 10 | < 20 | 20 |
| 589086 | 6.29 | 1.85 | 4.19 | 0.780 | 2.18 | 45.52 | 0.43 | 0.73 | 0.229 | 2.46 | 32.16 | 96.81 | 3 | < 1 | 199 | 2834 | > 10000 | 57 | 93 | < 20 | 2 | < 20 | 20 |
| 589087 | 9.45 | 2.22 | 6.30 | 0.382 | 3.83 | 40.36 | 0.11 | 1.78 | 0.188 | 3.26 | 29.55 | 97.43 | 7 | 1 | 71 | 5740 | 3213 | 181 | 57 | < 20 | 17 | 30 | 20 |
| 589088 | 10.84 | 2.54 | 4.94 | 0.348 | 4.08 | 40.51 | 0.15 | 2.00 | 0.203 | 2.41 | 30.63 | 98.64 | 5 | < 1 | 71 | 673 | 4802 | 81 | 40 | < 20 | 12 | 20 | 30 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589001 | 80 | 5 | < 1 | 6 | 13 | 351 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 270 | 598 | 73.1 | 293 | 53.1 | 16.6 | 40.1 | 5.6 | 28.5 | 4.3 | 9.7 |
| 589002 | 70 | 5 | 1 | < 5 | 3 | 101 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 309 | 756 | 96.5 | 397 | 80.6 | 24.4 | 57.4 | 6.7 | 29.8 | 4.0 | 9.0 |
| 589003 | 190 | 7 | < 1 | 7 | 5 | 700 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 332 | 808 | 98.8 | 400 | 70.9 | 20.7 | 47.5 | 5.7 | 26.8 | 4.0 | 9.0 |
| 589004 | 110 | 14 | 1 | < 5 | 52 | 672 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 322 | 746 | 92.3 | 376 | 72.7 | 23.3 | 56.5 | 7.6 | 36.8 | 5.5 | 11.9 |
| 589005 | 140 | 5 | < 1 | 6 | < 2 | 170 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 329 | 786 | 98.7 | 402 | 72.1 | 21.1 | 46.2 | 5.3 | 23.6 | 3.5 | 7.3 |
| 589006 | 220 | 12 | < 1 | 8 | 58 | 440 | 5 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 225 | 516 | 63.0 | 253 | 47.5 | 14.3 | 32.5 | 4.0 | 17.5 | 2.4 | 5.3 |
| 589007 | 220 | 7 | 1 | 13 | 3 | 668 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 471 | 1070 | 129 | 498 | 76.9 | 20.7 | 43.3 | 4.7 | 22.0 | 3.2 | 7.2 |
| 589008 | 170 | 22 | 2 | 7 | 59 | 201 | 25 | 2.9 | < 0.2 | 3 | < 0.5 | 0.8 | 356 | 833 | 108 | 438 | 70.9 | 18.9 | 41.9 | 4.5 | 21.4 | 3.4 | 7.7 |
| 589009 | 140 | 12 | 1 | 8 | 34 | 633 | 10 | 1.0 | < 0.2 | 6 | 0.6 | < 0.5 | 588 | 1160 | 127 | 477 | 89.9 | 29.5 | 74.9 | 11.1 | 58.2 | 9.1 | 19.9 |
| 589010 | 140 | 11 | 1 | 18 | 56 | 334 | < 2 | 1.1 | < 0.2 | 3 | 0.7 | 0.7 | 357 | 643 | 71.0 | 267 | 47.1 | 14.5 | 34.6 | 5.0 | 23.9 | 3.8 | 8.8 |
| 589011 | 100 | 8 | < 1 | < 5 | 31 | 156 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 293 | 629 | 76.8 | 313 | 73.2 | 25.9 | 67.7 | 9.9 | 46.8 | 6.5 | 12.2 |
| 589012 | 180 | 9 | < 1 | 8 | 25 | 142 | 7 | 0.6 | < 0.2 | 1 | < 0.5 | < 0.5 | 345 | 767 | 90.3 | 346 | 63.1 | 18.4 | 43.1 | 5.0 | 22.1 | 3.2 | 7.1 |
| 589013 | 120 | 16 | 1 | < 5 | 88 | 474 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 255 | 578 | 72.1 | 295 | 47.1 | 11.6 | 20.4 | 1.7 | 5.9 | 0.7 | 1.4 |
| 589014 | 60 | 12 | 2 | 6 | 25 | 106 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 584 | 1440 | 176 | 714 | 116 | 31.8 | 63.8 | 5.3 | 18.3 | 2.3 | 4.4 |
| 589015 | 150 | 17 | 2 | < 5 | 59 | 97 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 402 | 885 | 112 | 486 | 125 | 40.7 | 96.8 | 9.8 | 34.3 | 3.7 | 6.6 |
| 589016 | 80 | 16 | 1 | < 5 | 76 | 476 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 315 | 744 | 99.4 | 427 | 81.2 | 21.6 | 42.8 | 3.5 | 11.9 | 1.4 | 2.5 |
| 589017 | 90 | 16 | 1 | < 5 | 65 | 356 | 4 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 221 | 492 | 62.4 | 262 | 63.0 | 19.8 | 46.4 | 5.1 | 21.2 | 2.6 | 4.9 |
| 589018 | 70 | 16 | 1 | < 5 | 56 | 101 | 12 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 162 | 345 | 41.3 | 166 | 31.5 | 9.42 | 22.1 | 2.9 | 12.6 | 1.8 | 3.7 |
| 589019 | 90 | 20 | < 1 | < 5 | 65 | 67 | 10 | < 0.5 | < 0.2 | 2 | < 0.5 | 1.3 | 67.1 | 142 | 17.1 | 68.2 | 12.8 | 3.24 | 8.2 | 1.0 | 4.5 | 0.7 | 1.8 |
| 589020 | 460 | 14 | 1 | 6 | 35 | > 1000 | 14 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1120 | 2050 | 172 | 505 | 54.8 | 14.0 | 24.1 | 2.9 | 13.2 | 2.2 | 5.4 |
| 589021 | 90 | 18 | 1 | < 5 | 58 | 115 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 320 | 684 | 81.9 | 321 | 52.3 | 14.3 | 28.9 | 3.1 | 12.5 | 1.8 | 3.8 |
| 589022 | 80 | 19 | 1 | < 5 | 52 | 37 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.7 | 58.6 | 126 | 15.5 | 63.1 | 12.4 | 3.45 | 8.8 | 1.2 | 5.8 | 0.9 | 2.3 |
| 589023 | 100 | 19 | 1 | < 5 | 86 | 330 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.5 | 143 | 316 | 38.1 | 147 | 25.0 | 7.03 | 16.0 | 2.0 | 9.0 | 1.4 | 3.2 |
| 589024 | 120 | 5 | < 1 | 10 | 8 | 323 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 243 | 509 | 58.7 | 224 | 39.8 | 12.4 | 27.2 | 3.5 | 17.6 | 2.7 | 6.1 |
| 589025 | 50 | 4 | < 1 | 5 | 2 | 109 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 219 | 450 | 52.4 | 200 | 34.5 | 10.6 | 22.8 | 3.0 | 13.5 | 2.0 | 4.7 |
| 589026 | 40 | 4 | < 1 | < 5 | < 2 | 214 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 297 | 628 | 72.8 | 276 | 46.3 | 13.5 | 29.3 | 3.7 | 16.5 | 2.4 | 5.9 |
| 589027 | 60 | 4 | < 1 | < 5 | < 2 | 245 | 8 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 294 | 623 | 72.3 | 278 | 45.0 | 13.2 | 28.2 | 3.8 | 17.8 | 2.7 | 6.3 |
| 589028 | 40 | 3 | < 1 | < 5 | < 2 | 216 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 229 | 493 | 57.4 | 224 | 39.1 | 11.5 | 25.6 | 3.1 | 14.0 | 2.1 | 4.9 |
| 589029 | 70 | 4 | < 1 | 9 | < 2 | 486 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 260 | 557 | 64.0 | 244 | 42.7 | 13.0 | 27.7 | 3.9 | 17.9 | 2.8 | 6.3 |
| 589030 | 80 | 4 | < 1 | 10 | < 2 | 644 | 11 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 292 | 639 | 74.8 | 285 | 50.2 | 15.4 | 34.8 | 5.0 | 24.8 | 3.8 | 8.9 |
| 589031 | 110 | 5 | < 1 | 13 | < 2 | 332 | 14 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 365 | 742 | 83.2 | 311 | 52.9 | 16.2 | 35.8 | 4.9 | 23.6 | 3.6 | 8.1 |
| 589032 | 60 | 4 | 1 | 8 | < 2 | 287 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 258 | 584 | 69.2 | 273 | 48.2 | 14.4 | 31.1 | 3.6 | 16.0 | 2.2 | 4.9 |
| 589033 | 120 | 8 | 1 | 8 | 7 | 842 | 16 | 1.1 | < 0.2 | 2 | 0.5 | < 0.5 | 333 | 723 | 85.4 | 328 | 55.8 | 16.3 | 35.1 | 4.2 | 18.0 | 2.5 | 5.6 |
| 589034 | 100 | 5 | < 1 | 11 | 2 | 851 | 38 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 278 | 648 | 78.1 | 310 | 54.6 | 16.1 | 34.6 | 4.3 | 17.7 | 2.4 | 5.4 |
| 589035 | 100 | 12 | 2 | 11 | < 2 | 707 | 35 | 0.6 | < 0.2 | 3 | < 0.5 | < 0.5 | 1420 | 2280 | 212 | 656 | 72.2 | 18.1 | 34.6 | 4.0 | 17.4 | 2.4 | 5.6 |
| 589036 | 120 | 8 | < 1 | < 5 | 51 | 340 | < 2 | 0.7 | < 0.2 | 2 | 0.8 | 0.6 | 218 | 468 | 55.2 | 215 | 40.7 | 12.4 | 27.8 | 3.3 | 15.4 | 2.3 | 5.3 |
| 589037 | 90 | 11 | < 1 | < 5 | 45 | 252 | 3 | 0.6 | < 0.2 | 2 | < 0.5 | < 0.5 | 261 | 522 | 60.1 | 236 | 46.5 | 14.6 | 35.3 | 4.8 | 22.9 | 3.5 | 7.9 |
| 589038 | 130 | 12 | 1 | 8 | 20 | 245 | 16 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 771 | 1510 | 164 | 594 | 72.8 | 17.9 | 34.1 | 3.1 | 12.7 | 1.7 | 3.5 |
| 589039 | 80 | 21 | 1 | < 5 | 84 | 131 | 9 | < 0.5 | < 0.2 | 7 | < 0.5 | < 0.5 | 156 | 331 | 39.0 | 150 | 23.2 | 6.19 | 13.2 | 1.5 | 6.4 | 0.9 | 2.1 |
| 589040 | 140 | 9 | < 1 | 10 | 36 | 153 | 26 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 329 | 753 | 92.4 | 366 | 64.5 | 18.1 | 42.5 | 5.2 | 25.1 | 4.1 | 9.1 |
| 589041 | 130 | 16 | 1 | < 5 | 94 | 247 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 228 | 495 | 59.3 | 227 | 36.6 | 10.1 | 21.4 | 2.6 | 11.6 | 1.8 | 3.8 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589042 | 190 | 19 | 1 | < 5 | 93 | 157 | < 2 | < 0.5 | < 0.2 | 6 | < 0.5 | < 0.5 | 220 | 448 | 52.5 | 201 | 33.2 | 9.27 | 19.5 | 2.2 | 10.1 | 1.6 | 3.4 |
| 589043 | 50 | 7 | 1 | < 5 | < 2 | 152 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 476 | 1130 | 144 | 573 | 93.2 | 25.0 | 50.5 | 5.3 | 24.7 | 3.6 | 7.8 |
| 589044 | 80 | 18 | < 1 | < 5 | 70 | 80 | 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 227 | 413 | 44.1 | 156 | 24.3 | 7.28 | 14.7 | 1.5 | 5.9 | 0.8 | 1.6 |
| 589045 | 100 | 19 | 1 | < 5 | 68 | 139 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 131 | 257 | 28.6 | 104 | 17.3 | 5.32 | 11.3 | 1.2 | 5.1 | 0.7 | 1.5 |
| 589046 | 120 | 15 | 2 | 6 | 25 | 77 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1290 | 2410 | 253 | 876 | 129 | 34.3 | 63.4 | 4.6 | 14.4 | 1.4 | 2.7 |
| 589047 | 100 | 10 | 1 | 7 | 21 | 270 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 410 | 925 | 112 | 437 | 78.6 | 23.4 | 55.5 | 6.8 | 32.4 | 4.8 | 11.1 |
| 589048 | 150 | 19 | < 1 | 6 | 93 | 250 | 6 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 218 | 501 | 61.7 | 242 | 43.2 | 12.3 | 28.3 | 3.2 | 14.6 | 2.1 | 4.8 |
| 589049 | 80 | 12 | 3 | 11 | < 2 | 325 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 656 | 1530 | 194 | 807 | 163 | 45.3 | 96.6 | 9.6 | 36.9 | 4.9 | 10.2 |
| 589050 | 440 | 15 | 1 | 7 | 35 | > 1000 | 17 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1050 | 1900 | 163 | 488 | 53.2 | 13.4 | 25.8 | 2.8 | 12.8 | 2.2 | 5.8 |
| 589051 | 140 | 11 | 1 | 8 | 37 | 343 | 3 | 0.8 | < 0.2 | 3 | < 0.5 | < 0.5 | 315 | 665 | 79.8 | 309 | 54.6 | 15.4 | 36.2 | 4.2 | 18.0 | 2.5 | 5.5 |
| 589052 | 50 | 8 | < 1 | 5 | 20 | 196 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 287 | 642 | 77.6 | 299 | 51.4 | 14.7 | 36.0 | 4.4 | 20.8 | 3.1 | 7.5 |
| 589053 | 280 | 18 | 2 | 45 | 69 | 276 | 30 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 458 | 1070 | 132 | 526 | 99.6 | 28.0 | 61.4 | 5.9 | 21.3 | 2.8 | 5.8 |
| 589054 | 60 | 6 | < 1 | < 5 | 14 | 430 | 7 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 299 | 664 | 81.1 | 313 | 59.0 | 17.1 | 41.7 | 5.1 | 23.8 | 3.5 | 8.4 |
| 589055 | 260 | 11 | 2 | 12 | 30 | 809 | 39 | < 0.5 | 0.2 | 3 | < 0.5 | < 0.5 | 483 | 1020 | 120 | 489 | 93.6 | 25.9 | 54.8 | 5.6 | 25.0 | 3.7 | 8.6 |
| 589056 | 130 | 32 | 4 | 13 | 22 | 187 | 72 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 3330 | 4800 | 426 | 1310 | 146 | 33.9 | 66.1 | 5.6 | 22.2 | 3.3 | 8.6 |
| 589057 | 240 | 9 | 2 | 7 | < 2 | 143 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 492 | 1150 | 143 | 579 | 98.1 | 27.4 | 59.3 | 6.4 | 27.4 | 4.0 | 9.3 |
| 589058 | 60 | 7 | 1 | < 5 | 19 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 221 | 523 | 65.8 | 262 | 48.6 | 14.7 | 37.2 | 4.8 | 22.7 | 3.4 | 8.1 |
| 589059 | 300 | 8 | < 1 | 14 | 35 | 44 | 7 | < 0.5 | < 0.2 | 2 | 1.7 | < 0.5 | 119 | 268 | 31.8 | 121 | 22.3 | 6.80 | 16.9 | 2.3 | 11.4 | 1.8 | 4.6 |
| 589060 | 40 | 7 | 2 | 11 | < 2 | 252 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 341 | 910 | 124 | 559 | 119 | 31.6 | 65.1 | 5.9 | 20.3 | 2.8 | 6.2 |
| 589061 | 40 | 6 | 1 | 5 | < 2 | > 1000 | 8 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 284 | 685 | 86.3 | 347 | 66.9 | 20.0 | 51.5 | 6.6 | 31.1 | 4.5 | 10.0 |
| 589062 | < 30 | 4 | < 1 | < 5 | < 2 | 109 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 223 | 511 | 61.6 | 239 | 42.2 | 12.4 | 29.9 | 3.9 | 19.0 | 3.0 | 7.6 |
| 589063 | < 30 | 8 | < 1 | 7 | < 2 | 876 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 299 | 736 | 90.7 | 366 | 63.8 | 18.0 | 44.4 | 5.3 | 24.2 | 3.7 | 8.7 |
| 589064 | 70 | 8 | 2 | 17 | < 2 | 123 | 10 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 479 | 1090 | 131 | 525 | 105 | 31.1 | 72.2 | 7.7 | 29.9 | 4.1 | 9.0 |
| 589065 | 80 | 17 | < 1 | < 5 | 82 | 835 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | 1.0 | 134 | 317 | 39.3 | 154 | 27.3 | 7.70 | 18.7 | 2.3 | 10.7 | 1.6 | 4.0 |
| 589066 | 330 | 27 | 1 | 8 | 130 | 530 | 11 | < 0.5 | < 0.2 | 3 | < 0.5 | 1.3 | 276 | 584 | 69.1 | 258 | 43.2 | 11.8 | 25.1 | 2.3 | 8.7 | 1.3 | 3.0 |
| 589067 | 210 | 23 | < 1 | 8 | 123 | 770 | 31 | < 0.5 | < 0.2 | 4 | < 0.5 | 1.1 | 189 | 432 | 53.8 | 220 | 46.9 | 13.9 | 31.9 | 3.4 | 13.7 | 1.9 | 4.2 |
| 589068 | 80 | 19 | < 1 | < 5 | 88 | 136 | < 2 | 0.8 | < 0.2 | 3 | < 0.5 | 1.3 | 58.9 | 129 | 15.4 | 59.7 | 10.8 | 2.90 | 7.8 | 1.0 | 4.7 | 0.8 | 1.8 |
| 589069 | 120 | 23 | < 1 | < 5 | 106 | 382 | 2 | < 0.5 | < 0.2 | 5 | < 0.5 | 1.6 | 70.3 | 162 | 20.3 | 81.0 | 14.3 | 3.86 | 8.9 | 1.0 | 4.5 | 0.7 | 1.7 |
| 589070 | < 30 | 6 | < 1 | 6 | 9 | 391 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 237 | 564 | 69.8 | 272 | 47.7 | 13.7 | 33.2 | 4.2 | 19.9 | 3.0 | 7.5 |
| 589071 | < 30 | 7 | < 1 | 7 | 20 | 479 | 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 230 | 550 | 67.7 | 267 | 47.4 | 13.7 | 33.4 | 4.2 | 20.6 | 3.3 | 7.9 |
| 589072 | 130 | 17 | 1 | < 5 | 119 | 629 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | 1.3 | 166 | 389 | 49.0 | 194 | 35.3 | 10.0 | 25.4 | 3.1 | 14.8 | 2.3 | 5.5 |
| 589073 | 130 | 21 | 1 | < 5 | 115 | 434 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.9 | 268 | 562 | 67.8 | 264 | 47.3 | 14.1 | 36.3 | 4.6 | 21.4 | 3.0 | 6.8 |
| 589074 | 190 | 18 | 2 | 17 | 41 | 150 | 54 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 653 | 1500 | 184 | 731 | 134 | 35.8 | 76.1 | 6.8 | 23.6 | 3.2 | 7.1 |
| 589075 | 90 | 12 | < 1 | 7 | 57 | 187 | 5 | < 0.5 | < 0.2 | 1 | < 0.5 | 0.6 | 238 | 546 | 68.6 | 269 | 48.8 | 13.4 | 32.7 | 4.1 | 19.4 | 3.0 | 7.5 |
| 589076 | 50 | 9 | 1 | 6 | 28 | 601 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 259 | 597 | 73.9 | 290 | 49.2 | 14.0 | 34.1 | 4.3 | 20.6 | 3.2 | 7.5 |
| 589077 | 50 | 8 | < 1 | < 5 | 20 | 138 | 9 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 298 | 617 | 72.4 | 278 | 50.3 | 14.2 | 34.6 | 4.1 | 19.3 | 3.0 | 7.8 |
| 589078 | 60 | 9 | 1 | 5 | 26 | 639 | 6 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 260 | 626 | 79.1 | 322 | 63.9 | 18.8 | 46.9 | 6.2 | 30.2 | 4.6 | 10.6 |
| 589079 | 60 | 12 | 1 | 7 | 42 | 338 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 274 | 649 | 82.3 | 333 | 60.7 | 17.2 | 40.9 | 5.0 | 23.2 | 3.5 | 8.9 |
| 589080 | 210 | 14 | 2 | 31 | 18 | 638 | 11 | 0.8 | < 0.2 | 1 | 0.8 | < 0.5 | 620 | 1340 | 159 | 637 | 128 | 39.5 | 103 | 14.1 | 67.0 | 9.6 | 20.8 |
| 589081 | 140 | 12 | 2 | 17 | 22 | 826 | < 2 | 0.6 | < 0.2 | 1 | < 0.5 | < 0.5 | 347 | 882 | 115 | 488 | 103 | 30.9 | 75.4 | 8.7 | 36.9 | 4.9 | 11.3 |
| 589082 | 90 | 9 | 1 | 14 | 15 | > 1000 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 284 | 699 | 90.2 | 366 | 72.4 | 21.9 | 55.4 | 7.1 | 34.0 | 5.3 | 12.0 |
| 589083 | 180 | 22 | < 1 | 5 | 98 | 192 | 3 | < 0.5 | < 0.2 | 5 | < 0.5 | 0.7 | 117 | 239 | 28.3 | 109 | 19.5 | 5.08 | 11.5 | 1.1 | 4.5 | 0.6 | 1.5 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589084 | 150 | 20 | 2 | 14 | 43 | > 1000 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 661 | 1420 | 169 | 674 | 137 | 40.7 | 98.4 | 11.7 | 49.7 | 7.0 | 15.0 |
| 589085 | 50 | 9 | 1 | 11 | 12 | 737 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 329 | 815 | 105 | 433 | 101 | 33.4 | 89.1 | 12.4 | 59.4 | 8.6 | 18.8 |
| 589086 | 420 | 15 | 1 | 7 | 35 | > 1000 | 15 | 0.6 | < 0.2 | < 1 | < 0.5 | 0.8 | 1050 | 1930 | 166 | 495 | 53.5 | 13.5 | 25.4 | 2.7 | 12.7 | 2.1 | 5.7 |
| 589087 | 120 | 12 | 2 | 22 | 24 | 520 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 363 | 898 | 116 | 508 | 125 | 39.0 | 96.7 | 11.8 | 51.0 | 6.9 | 15.2 |
| 589088 | 90 | 12 | < 1 | 12 | 36 | 534 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 206 | 491 | 60.3 | 239 | 44.2 | 13.0 | 32.6 | 4.2 | 20.4 | 3.1 | 7.7 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589001 | 1.07 | 5.4 | 0.65 | 0.6 | 4.8 | < 1 | < 0.1 | 18 | < 0.4 | 31.1 | 28.6 | 0.099 |
| 589002 | 1.03 | 5.5 | 0.73 | 2.5 | 2.2 | 3 | < 0.1 | 16 | < 0.4 | 40.4 | 18.3 | 0.017 |
| 589003 | 1.01 | 5.6 | 0.78 | 0.8 | 7.1 | < 1 | < 0.1 | 84 | < 0.4 | 19.9 | 47.5 | 0.423 |
| 589004 | 1.23 | 5.9 | 0.69 | 1.1 | 9.1 | 15 | < 0.1 | 20 | < 0.4 | 41.5 | 25.2 | 0.157 |
| 589005 | 0.84 | 4.7 | 0.63 | < 0.2 | 1.1 | < 1 | < 0.1 | 43 | < 0.4 | 43.6 | 11.6 | 0.044 |
| 589006 | 0.59 | 3.2 | 0.42 | 1.0 | 4.0 | < 1 | < 0.1 | 39 | < 0.4 | 36.1 | 15.8 | 0.076 |
| 589007 | 0.78 | 4.3 | 0.57 | 0.8 | 3.7 | 1 | < 0.1 | 41 | < 0.4 | 53.1 | 20.4 | 0.231 |
| 589008 | 0.86 | 4.3 | 0.56 | 11.0 | 7.8 | < 1 | 0.2 | 12 | < 0.4 | 38.9 | 13.1 | 0.053 |
| 589009 | 2.03 | 10.5 | 1.19 | 5.0 | 7.2 | 16 | < 0.1 | 43 | < 0.4 | 48.8 | 26.0 | 0.126 |
| 589010 | 0.98 | 5.1 | 0.61 | 6.8 | 5.3 | 28 | < 0.1 | 16 | < 0.4 | 19.2 | 13.6 | 0.080 |
| 589011 | 1.13 | 4.9 | 0.51 | 1.5 | 6.4 | < 1 | < 0.1 | 29 | < 0.4 | 43.4 | 29.0 | 0.043 |
| 589012 | 0.81 | 4.3 | 0.53 | 1.4 | 1.3 | 9 | < 0.1 | 56 | < 0.4 | 20.0 | 21.7 | 0.042 |
| 589013 | 0.16 | 0.9 | 0.13 | 1.2 | 3.0 | < 1 | 0.2 | 46 | < 0.4 | 25.7 | 9.9 | 0.080 |
| 589014 | 0.42 | 2.0 | 0.26 | 0.8 | 0.6 | < 1 | < 0.1 | 9 | < 0.4 | 70.5 | 7.4 | 0.013 |
| 589015 | 0.58 | 2.5 | 0.29 | 2.6 | 1.2 | < 1 | < 0.1 | 108 | < 0.4 | 63.2 | 5.4 | 0.015 |
| 589016 | 0.27 | 1.5 | 0.23 | 1.5 | 1.6 | < 1 | 0.1 | 13 | < 0.4 | 44.2 | 7.2 | 0.078 |
| 589017 | 0.51 | 2.4 | 0.31 | 2.7 | 3.2 | 3 | < 0.1 | 15 | < 0.4 | 33.7 | 10.7 | 0.063 |
| 589018 | 0.42 | 2.2 | 0.28 | 2.5 | 0.5 | < 1 | 0.1 | 14 | < 0.4 | 16.5 | 5.0 | 0.015 |
| 589019 | 0.23 | 1.4 | 0.20 | 2.6 | 0.4 | 1 | 0.3 | 24 | < 0.4 | 8.0 | 3.8 | 0.010 |
| 589020 | 0.67 | 4.2 | 0.56 | 0.5 | 22.0 | < 1 | < 0.1 | 55 | < 0.4 | 50.9 | 25.2 | 0.514 |
| 589021 | 0.42 | 2.3 | 0.32 | 2.9 | 0.5 | < 1 | 0.1 | 12 | < 0.4 | 19.0 | 7.2 | 0.018 |
| 589022 | 0.28 | 1.6 | 0.22 | 4.0 | 0.3 | 2 | < 0.1 | 8 | < 0.4 | 5.4 | 1.0 | 0.005 |
| 589023 | 0.38 | 2.1 | 0.27 | 3.4 | 1.5 | < 1 | 0.1 | 8 | < 0.4 | 8.9 | 6.7 | 0.057 |
| 589024 | 0.70 | 3.8 | 0.47 | 0.9 | 2.1 | < 1 | < 0.1 | 63 | < 0.4 | 15.4 | 71.9 | 0.106 |
| 589025 | 0.54 | 2.9 | 0.39 | 1.0 | 0.7 | < 1 | < 0.1 | 20 | < 0.4 | 11.2 | 42.9 | 0.025 |
| 589026 | 0.69 | 3.6 | 0.48 | 0.3 | 1.0 | < 1 | < 0.1 | 45 | < 0.4 | 6.9 | 39.4 | 0.085 |
| 589027 | 0.72 | 3.9 | 0.52 | 0.7 | 1.1 | < 1 | < 0.1 | 21 | < 0.4 | 12.0 | 36.0 | 0.082 |
| 589028 | 0.58 | 3.4 | 0.46 | 0.2 | 0.7 | < 1 | < 0.1 | 26 | < 0.4 | 7.5 | 25.9 | 0.062 |
| 589029 | 0.73 | 3.9 | 0.51 | 0.6 | 2.1 | < 1 | < 0.1 | 28 | < 0.4 | 12.8 | 33.0 | 0.173 |
| 589030 | 1.00 | 5.1 | 0.64 | 0.8 | 3.2 | 3 | < 0.1 | 63 | < 0.4 | 27.3 | 58.3 | 0.191 |
| 589031 | 0.94 | 4.8 | 0.60 | 0.6 | 1.9 | 2 | < 0.1 | 73 | 0.4 | 23.8 | 67.8 | 0.128 |
| 589032 | 0.56 | 3.0 | 0.43 | 0.9 | 1.0 | < 1 | < 0.1 | 30 | < 0.4 | 15.9 | 42.3 | 0.104 |
| 589033 | 0.61 | 3.3 | 0.41 | 2.5 | 5.6 | < 1 | < 0.1 | 112 | < 0.4 | 14.1 | 102 | 0.226 |
| 589034 | 0.59 | 3.1 | 0.40 | 0.8 | 2.5 | < 1 | 0.2 | 24 | < 0.4 | 25.7 | 36.6 | 0.246 |
| 589035 | 0.70 | 3.7 | 0.49 | 1.6 | 2.9 | < 1 | 0.1 | 54 | < 0.4 | 34.3 | 53.4 | 0.202 |
| 589036 | 0.65 | 3.4 | 0.46 | 1.6 | 0.7 | < 1 | < 0.1 | 20 | < 0.4 | 17.3 | 22.7 | 0.157 |
| 589037 | 0.92 | 4.7 | 0.58 | 3.9 | 2.0 | < 1 | < 0.1 | 15 | < 0.4 | 13.5 | 19.9 | 0.070 |
| 589038 | 0.37 | 2.0 | 0.29 | 0.9 | < 0.1 | < 1 | < 0.1 | 15 | < 0.4 | 30.3 | 8.7 | 0.091 |
| 589039 | 0.24 | 1.3 | 0.16 | 4.4 | 0.7 | < 1 | 0.2 | 6 | < 0.4 | 9.7 | 4.2 | 0.019 |
| 589040 | 1.05 | 5.7 | 0.68 | 1.4 | 2.1 | < 1 | < 0.1 | 55 | < 0.4 | 16.2 | 21.4 | 0.045 |
| 589041 | 0.39 | 1.8 | 0.22 | 2.5 | 1.9 | 2 | 0.1 | 19 | < 0.4 | 16.7 | 14.4 | 0.040 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589042 | 0.37 | 1.8 | 0.24 | 2.9 | 1.2 | 2 | 0.2 | 31 | < 0.4 | 15.7 | 7.4 | 0.023 |
| 589043 | 0.82 | 4.0 | 0.48 | 0.3 | 0.2 | < 1 | < 0.1 | 16 | < 0.4 | 32.5 | 12.7 | 0.063 |
| 589044 | 0.18 | 1.0 | 0.13 | 2.1 | 0.6 | 2 | < 0.1 | 11 | < 0.4 | 15.1 | 2.6 | 0.013 |
| 589045 | 0.16 | 0.8 | 0.11 | 2.1 | 0.6 | < 1 | 0.1 | 12 | < 0.4 | 11.0 | 3.5 | 0.021 |
| 589046 | 0.29 | 1.5 | 0.20 | 0.5 | 1.6 | < 1 | < 0.1 | 13 | < 0.4 | 58.3 | 5.7 | 0.008 |
| 589047 | 1.26 | 6.5 | 0.84 | 1.1 | 4.0 | < 1 | < 0.1 | 39 | < 0.4 | 17.8 | 26.0 | 0.072 |
| 589048 | 0.55 | 2.7 | 0.33 | 1.8 | 1.4 | < 1 | < 0.1 | 11 | < 0.4 | 22.3 | 10.0 | 0.038 |
| 589049 | 1.05 | 5.1 | 0.62 | 0.6 | 0.2 | 6 | < 0.1 | 25 | < 0.4 | 57.2 | 11.1 | 0.109 |
| 589050 | 0.70 | 4.0 | 0.56 | 0.4 | 13.7 | 2 | 0.2 | 46 | < 0.4 | 47.1 | 26.0 | 0.500 |
| 589051 | 0.63 | 3.2 | 0.40 | 2.1 | 4.6 | 8 | 0.1 | 15 | < 0.4 | 22.0 | 16.8 | 0.080 |
| 589052 | 0.89 | 4.9 | 0.64 | 0.7 | 3.1 | 2 | < 0.1 | 18 | < 0.4 | 8.0 | 18.7 | 0.046 |
| 589053 | 0.62 | 3.1 | 0.42 | 1.0 | 1.8 | 5 | 0.2 | 51 | < 0.4 | 73.6 | 9.0 | 0.041 |
| 589054 | 1.00 | 5.4 | 0.73 | 0.3 | 0.1 | 2 | < 0.1 | 16 | < 0.4 | 26.6 | 12.3 | 0.142 |
| 589055 | 0.95 | 5.2 | 0.66 | 0.9 | 1.9 | < 1 | 0.2 | 101 | 0.6 | 46.5 | 50.8 | 0.245 |
| 589056 | 0.83 | 4.5 | 0.65 | 0.5 | 0.2 | < 1 | 0.1 | 35 | < 0.4 | 46.5 | 22.0 | 0.048 |
| 589057 | 0.87 | 4.3 | 0.50 | 0.3 | < 0.1 | 1 | < 0.1 | 18 | < 0.4 | 44.2 | 11.8 | 0.034 |
| 589058 | 0.99 | 5.2 | 0.70 | 0.5 | 4.1 | < 1 | < 0.1 | 21 | < 0.4 | 26.3 | 20.7 | 0.356 |
| 589059 | 0.60 | 3.3 | 0.46 | 1.0 | < 0.1 | 13 | 0.9 | 13 | < 0.4 | 7.5 | 5.2 | 0.004 |
| 589060 | 0.73 | 4.0 | 0.54 | 0.3 | 0.9 | 22 | < 0.1 | 19 | < 0.4 | 53.9 | 9.8 | 0.084 |
| 589061 | 1.15 | 5.7 | 0.71 | 1.0 | 8.2 | < 1 | < 0.1 | 25 | < 0.4 | 19.7 | 31.6 | 0.543 |
| 589062 | 0.92 | 5.1 | 0.66 | < 0.2 | 0.2 | < 1 | < 0.1 | < 5 | < 0.4 | 2.9 | 0.9 | 0.010 |
| 589063 | 1.01 | 5.1 | 0.66 | 0.3 | 2.0 | < 1 | < 0.1 | 7 | < 0.4 | 6.1 | 7.7 | 0.211 |
| 589064 | 1.00 | 5.0 | 0.65 | 0.4 | 0.4 | < 1 | < 0.1 | 26 | < 0.4 | 46.3 | 9.4 | 0.018 |
| 589065 | 0.47 | 2.4 | 0.32 | 2.1 | 3.5 | < 1 | 0.2 | 10 | < 0.4 | 7.0 | 10.1 | 0.169 |
| 589066 | 0.35 | 1.8 | 0.23 | 1.3 | 1.6 | 8 | 0.4 | 18 | < 0.4 | 29.9 | 15.4 | 0.094 |
| 589067 | 0.49 | 2.6 | 0.37 | 1.2 | 2.2 | 2 | 0.6 | 26 | < 0.4 | 38.4 | 16.3 | 0.144 |
| 589068 | 0.22 | 1.3 | 0.19 | 4.2 | 0.5 | 3 | 0.3 | 11 | < 0.4 | 10.0 | 2.3 | 0.021 |
| 589069 | 0.21 | 1.2 | 0.16 | 2.2 | 0.8 | < 1 | 0.3 | < 5 | < 0.4 | 5.5 | 2.2 | 0.060 |
| 589070 | 0.87 | 4.8 | 0.62 | 0.4 | 0.6 | 1 | < 0.1 | 7 | < 0.4 | 3.2 | 3.6 | 0.144 |
| 589071 | 0.97 | 5.3 | 0.68 | 0.4 | 0.3 | 6 | < 0.1 | 7 | < 0.4 | 5.9 | 4.4 | 0.125 |
| 589072 | 0.65 | 3.7 | 0.50 | 1.4 | 1.3 | 13 | 0.3 | 10 | < 0.4 | 11.2 | 10.6 | 0.132 |
| 589073 | 0.76 | 3.8 | 0.48 | 1.5 | 1.2 | < 1 | 0.3 | 7 | < 0.4 | 28.8 | 8.7 | 0.073 |
| 589074 | 0.78 | 3.7 | 0.47 | 1.3 | 0.9 | 4 | 0.2 | 123 | < 0.4 | 66.9 | 9.3 | 0.021 |
| 589075 | 0.94 | 5.2 | 0.68 | 0.6 | 0.3 | 3 | 0.2 | 11 | < 0.4 | 21.0 | 2.9 | 0.025 |
| 589076 | 0.90 | 4.9 | 0.62 | 0.9 | 0.5 | < 1 | < 0.1 | 18 | < 0.4 | 17.0 | 6.9 | 0.210 |
| 589077 | 0.98 | 5.9 | 0.78 | 0.5 | 0.3 | 1 | < 0.1 | 9 | < 0.4 | 26.3 | 2.3 | 0.018 |
| 589078 | 1.30 | 6.4 | 0.80 | 0.6 | 0.8 | < 1 | < 0.1 | 13 | < 0.4 | 42.2 | 15.4 | 0.220 |
| 589079 | 1.09 | 6.3 | 0.80 | 0.5 | 0.5 | 6 | 0.2 | 19 | < 0.4 | 33.1 | 7.9 | 0.086 |
| 589080 | 2.17 | 11.4 | 1.43 | 1.4 | 1.1 | 6 | 0.1 | 435 | 0.5 | 110 | 50.1 | 0.178 |
| 589081 | 1.32 | 6.7 | 0.84 | 1.7 | 0.6 | 10 | < 0.1 | 44 | < 0.4 | 84.8 | 30.1 | 0.233 |
| 589082 | 1.43 | 7.5 | 0.92 | 0.8 | 1.8 | 1 | 0.1 | 34 | < 0.4 | 46.7 | 35.6 | 0.531 |
| 589083 | 0.17 | 1.0 | 0.14 | 1.8 | 1.2 | 8 | 0.4 | 12 | < 0.4 | 16.0 | 6.5 | 0.029 |

Results

Activation Laboratories Ltd.

Report: A18-03553

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589084 | 1.56 | 7.2 | 0.85 | 0.9 | 2.3 | 3 | 0.1 | 19 | < 0.4 | 128 | 38.4 | 0.272 |
| 589085 | 2.02 | 10.1 | 1.19 | 0.7 | 1.5 | 3 | < 0.1 | 23 | < 0.4 | 87.9 | 41.8 | 0.225 |
| 589086 | 0.72 | 4.1 | 0.55 | 0.5 | 15.4 | < 1 | 0.2 | 46 | < 0.4 | 49.4 | 24.8 | 0.492 |
| 589087 | 1.68 | 8.1 | 0.98 | 1.1 | 0.2 | 3 | < 0.1 | 25 | < 0.4 | 81.0 | 19.7 | 0.087 |
| 589088 | 0.92 | 5.3 | 0.70 | 0.7 | 0.4 | 11 | 0.1 | 21 | < 0.4 | 20.4 | 14.1 | 0.164 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu | |
|-----------------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|----|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS | |
| NIST 694 Meas | 11.40 | 1.86 | 0.78 | 0.010 | 0.35 | 42.84 | 0.88 | 0.55 | 0.110 | 30.19 | | | | | 1593 | | | | | | | | | |
| NIST 694 Cert | 11.2 | 1.80 | 0.790 | 0.0116 | 0.330 | 43.6 | 0.860 | 0.510 | 0.110 | 30.2 | | | | | 1740 | | | | | | | | | |
| DNC-1 Meas | 47.57 | 18.11 | 10.03 | 0.150 | 10.26 | 11.48 | 1.93 | 0.22 | 0.470 | 0.08 | | | 31 | | 152 | 106 | 148 | 16 | 36 | 280 | 58 | 240 | 110 | |
| DNC-1 Cert | 47.15 | 18.34 | 9.97 | 0.150 | 10.13 | 11.49 | 1.890 | 0.234 | 0.480 | 0.070 | | | 31 | | 148 | 118 | 144.0 | 18.0 | 38 | 270 | 57 | 247 | 100 | |
| GBW 07113 Meas | 71.28 | 12.72 | 3.32 | 0.150 | 0.15 | 0.59 | 2.44 | 5.39 | 0.280 | 0.04 | | | 5 | 4 | < 5 | 500 | 42 | 46 | 391 | | | | | |
| GBW 07113 Cert | 72.8 | 13.0 | 3.21 | 0.140 | 0.160 | 0.590 | 2.57 | 5.43 | 0.300 | 0.0500 | | | 5.00 | 4.00 | 5.00 | 506 | 43.0 | 43.0 | 403 | | | | | |
| LKSD-3 Meas | | | | | | | | | | | | | | | | | | | | 80 | 30 | 50 | 30 | |
| LKSD-3 Cert | | | | | | | | | | | | | | | | | | | | 87.0 | 30.0 | 47.0 | 35.0 | |
| TDB-1 Meas | | | | | | | | | | | | | | | | | | | | 250 | | | 330 | |
| TDB-1 Cert | | | | | | | | | | | | | | | | | | | | 251 | | | 323 | |
| AC-E Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| AC-E Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 53.11 | 15.20 | 11.08 | 0.160 | 6.46 | 11.03 | 2.21 | 0.64 | 1.070 | 0.14 | | | 35 | < 1 | 270 | 177 | 200 | 19 | 93 | 90 | 44 | 60 | 110 | |
| W-2a Cert | 52.4 | 15.4 | 10.7 | 0.163 | 6.37 | 10.9 | 2.14 | 0.626 | 1.06 | 0.140 | | | 36.0 | 1.30 | 262 | 182 | 190 | 24.0 | 94.0 | 92.0 | 43.0 | 70.0 | 110 | |
| SY-4 Meas | 49.93 | 20.23 | 6.10 | 0.110 | 0.51 | 8.11 | 6.89 | 1.66 | 0.280 | 0.13 | | | 1 | 3 | 8 | 340 | 1180 | 114 | 531 | | | | | |
| SY-4 Cert | 49.9 | 20.69 | 6.21 | 0.108 | 0.54 | 8.05 | 7.10 | 1.66 | 0.287 | 0.131 | | | 1.1 | 2.6 | 8.0 | 340 | 1191 | 119 | 517 | | | | | |
| CTA-AC-1 Meas | | | | | | | | | | | | | | | | | | | | | | | 60 | |
| CTA-AC-1 Cert | | | | | | | | | | | | | | | | | | | | | | | 54.0 | |
| BIR-1a Meas | 48.56 | 15.88 | 11.60 | 0.170 | 9.80 | 13.53 | 1.87 | 0.02 | 0.980 | 0.02 | | | 44 | < 1 | 331 | 7 | 113 | 14 | 15 | 370 | 49 | 170 | 120 | |
| BIR-1a Cert | 47.96 | 15.50 | 11.30 | 0.175 | 9.700 | 13.30 | 1.82 | 0.030 | 0.96 | 0.021 | | | 44 | 0.58 | 310 | 6 | 110 | 16 | 18 | 370 | 52 | 170 | 125 | |
| NCS DC86312 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC86312 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | | | | | | | | | | | | | | | | | | | | 30 | 3 | | 1040 | |
| NCS DC70009 (GBW07241) Cert | | | | | | | | | | | | | | | | | | | | 30 | 3.7 | | 960 | |
| OREAS 100a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 17 | | 170 | |
| OREAS 100a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 18.1 | | 169 | |
| OREAS 101a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 48 | | 440 | |
| OREAS 101a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 48.8 | | 430 | |
| OREAS 101b (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 45 | < 20 | 420 | |
| OREAS 101b (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 47 | 9 | 420 | |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|-----------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Meas | | | | | | | | | | | | | | | | | | | | | | < 20 | < 20 |
| JR-1 Cert | | | | | | | | | | | | | | | | | | | | | 2.83 | | 1.67 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| AMIS 0104 Meas | 18.16 | 2.29 | 20.86 | 45.93 | | 1.31 | | 0.27 | 0.281 | | | | | | | 28910 | | | | | | | |
| AMIS 0104 Cert | 18.30 | 2.20 | 20.78 | 45.580 | | 1.34 | | 0.26 | 0.27 | | | | | | | 28600 | | | | | | | |
| 589015 Orig | 41.30 | 9.02 | 4.29 | 0.195 | 3.09 | 16.94 | 2.78 | 4.69 | 0.183 | 1.48 | 15.32 | 99.29 | 13 | 5 | 120 | 2993 | 1021 | 84 | 79 | 30 | 2 | < 20 | 10 |
| 589015 Dup | 41.50 | 8.89 | 4.32 | 0.196 | 3.07 | 17.18 | 2.79 | 4.70 | 0.183 | 1.49 | 15.36 | 99.68 | 13 | 5 | 122 | 2991 | 1029 | 84 | 82 | 30 | 2 | 20 | 10 |
| 589032 Orig | 2.19 | 0.10 | 4.26 | 0.347 | 2.98 | 47.35 | 0.17 | 0.05 | 0.138 | 1.79 | 38.65 | 98.03 | 4 | 2 | 89 | 1734 | 3717 | 54 | 74 | < 20 | 3 | < 20 | 10 |
| 589032 Dup | 2.22 | 0.10 | 4.27 | 0.349 | 3.03 | 47.30 | 0.19 | 0.06 | 0.130 | 1.82 | 38.61 | 98.07 | 4 | 2 | 90 | 1783 | 3644 | 54 | 75 | < 20 | 3 | < 20 | < 10 |
| 589051 Orig | 17.26 | 3.61 | 5.36 | 0.365 | 6.07 | 29.05 | 0.27 | 2.53 | 0.882 | 2.35 | 28.93 | 96.69 | 6 | 2 | 136 | 1940 | 2022 | 61 | 201 | 40 | 8 | < 20 | 20 |
| 589051 Split PREP DUP | 17.11 | 3.51 | 5.44 | 0.371 | 6.37 | 27.91 | 0.28 | 2.49 | 0.816 | 2.49 | 28.71 | 95.51 | 7 | 2 | 135 | 1700 | 2068 | 61 | 203 | < 20 | 9 | < 20 | 20 |
| 589062 Orig | 0.50 | 0.03 | 1.37 | 0.355 | 0.81 | 54.40 | 0.07 | < 0.01 | 0.005 | 0.51 | 41.74 | 99.80 | 2 | < 1 | 10 | 533 | 9444 | 79 | 5 | < 20 | < 1 | < 20 | 10 |
| 589062 Dup | 0.49 | 0.04 | 1.36 | 0.354 | 0.79 | 53.87 | 0.07 | < 0.01 | 0.004 | 0.52 | 41.70 | 99.19 | 1 | < 1 | 11 | 519 | 9409 | 79 | 5 | < 20 | < 1 | < 20 | 10 |
| 589079 Orig | 11.64 | 3.19 | 3.70 | 0.370 | 3.05 | 38.76 | 0.52 | 2.07 | 0.200 | 1.59 | 32.70 | 97.80 | 4 | 1 | 38 | 1649 | 6610 | 93 | 25 | < 20 | 4 | 20 | 20 |
| 589079 Dup | 11.55 | 3.24 | 3.71 | 0.372 | 3.09 | 38.94 | 0.51 | 2.05 | 0.193 | 1.57 | 32.72 | 97.95 | 4 | 1 | 39 | 1640 | 6592 | 92 | 28 | < 20 | 4 | 20 | 20 |
| Method Blank | < 0.01 | 0.01 | 0.01 | 0.002 | < 0.01 | < 0.01 | 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | 5 | < 5 | < 2 | < 2 | < 1 | < 2 | < 20 | < 1 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | < 0.01 | 0.001 | 0.01 | 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | 2 | < 2 | < 1 | 2 | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er | |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | |
| NIST 694 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| DNC-1 Meas | 70 | | | | | | | | | | 0.9 | | 3.8 | | | 5.0 | | 0.60 | | | | | | |
| DNC-1 Cert | 70 | | | | | | | | | | 0.96 | | 3.6 | | | 5.20 | | 0.59 | | | | | | |
| GBW 07113 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| GBW 07113 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| LKSD-3 Meas | 140 | | | 23 | 80 | | < 2 | 2.5 | | 2 | 2.0 | 2.2 | 51.5 | 98.9 | | 44.3 | 7.2 | 1.50 | | | | 5.0 | | |
| LKSD-3 Cert | 152 | | | 27.0 | 78.0 | | 2.00 | 2.70 | | 3.00 | 1.30 | 2.30 | 52.0 | 90.0 | | 44.0 | 8.00 | 1.50 | | | | 4.90 | | |
| TDB-1 Meas | 150 | | | | 21 | | | | | | | | 18.2 | 42.6 | | 24.3 | | 2.00 | | | | | | |
| TDB-1 Cert | 155 | | | | 23 | | | | | | | | 17 | 41 | | 23 | | 2.1 | | | | | | |
| AC-E Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| AC-E Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 80 | 17 | < 1 | < 5 | 20 | 8 | < 2 | | | | | | 11.0 | 25.1 | | 13.1 | 3.3 | 1.00 | | | 0.6 | 3.8 | 0.8 | |
| W-2a Cert | 80.0 | 17.0 | 1.00 | 1.20 | 21.0 | 7.90 | 0.600 | | | | | | 10.0 | 23.0 | | 13.0 | 3.30 | 1.00 | | | 0.630 | 3.60 | 0.760 | |
| SY-4 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Meas | 40 | | | | | | | | | | | | 2280 | 3420 | | 1120 | 167 | 49.8 | | 117 | 13.7 | | | |
| CTA-AC-1 Cert | 38.0 | | | | | | | | | | | | 2176 | 3326 | | 1087 | 162 | 46.7 | | 124 | 13.9 | | | |
| BIR-1a Meas | 70 | 15 | | < 5 | | | | | | | | | 0.6 | 2.0 | | 2.4 | 1.0 | 0.53 | | 2.0 | | | | |
| BIR-1a Cert | 70 | 16 | | 0.44 | | | | | | | | | 0.63 | 1.9 | | 2.5 | 1.1 | 0.55 | | 2.0 | | | | |
| NCS DC86312 Meas | | | | | | | | | | | | | 2360 | 191 | | 1610 | | | | 218 | 31.2 | 198 | 34.8 | 99.1 |
| NCS DC86312 Cert | | | | | | | | | | | | | 2360 | 190 | | 1600 | | | | 225.0 | 34.6 | 183 | 36 | 96.2 |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | 110 | 16 | 11 | 65 | 505 | | | 1.7 | 1.0 | > 1000 | 3.2 | 41.5 | 23.8 | 65.5 | 7.80 | 33.5 | 13.1 | 0.15 | 15.3 | 3.3 | 20.5 | 4.4 | 13.5 | |
| NCS DC70009 (GBW07241) Cert | 100 | 16.5 | 11.2 | 69.9 | 500 | | | 1.8 | 1.3 | 1700 | 3.1 | 41 | 23.7 | 60.3 | 7.9 | 32.9 | 12.5 | 0.16 | 14.8 | 3.3 | 20.7 | 4.5 | 13.4 | |
| OREAS 100a (Fusion) Meas | | | | | | | 24 | | | | | | 277 | 506 | 51.0 | 154 | 24.3 | 3.96 | 22.5 | 3.8 | 23.0 | 5.0 | 15.3 | |
| OREAS 100a (Fusion) Cert | | | | | | | 24.1 | | | | | | 260 | 463 | 47.1 | 152 | 23.6 | 3.71 | 23.6 | 3.80 | 23.2 | 4.81 | 14.9 | |
| OREAS 101a (Fusion) Meas | | | | | | | | 23 | | | | | 812 | 1390 | 139 | 403 | 52.8 | 8.71 | 40.7 | 5.7 | 33.2 | 6.2 | 19.8 | |
| OREAS 101a (Fusion) Cert | | | | | | | | 21.9 | | | | | 816 | 1396 | 134 | 403 | 48.8 | 8.06 | 43.4 | 5.92 | 33.3 | 6.46 | 19.5 | |
| OREAS 101b (Fusion) Meas | | | | | | | | 22 | | | | | 796 | 1320 | 131 | 371 | 49.0 | 7.92 | | | 32.3 | 6.4 | 19.2 | |
| OREAS 101b (Fusion) Cert | | | | | | | | 21 | | | | | 789 | 1331 | 127 | 378 | 48 | 7.77 | | | 32.1 | 6.34 | 18.7 | |
| JR-1 Meas | 30 | 17 | 2 | 16 | 247 | 15 | 3 | | < 0.2 | 3 | 1.1 | 20.1 | 20.9 | 51.0 | 5.60 | 23.7 | 5.9 | 0.28 | | | 1.1 | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Cert | 30.6 | 16.1 | 1.88 | 16.3 | 257 | 15.2 | 3.25 | | 0.028 | 2.86 | 1.19 | 20.8 | 19.7 | 47.2 | 5.58 | 23.3 | 6.03 | 0.30 | | 1.01 | | | |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| AMIS 0104 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| AMIS 0104 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589015 Orig | 120 | 17 | 2 | < 5 | 58 | 98 | 3 | < 0.5 | < 0.2 | 4 | 0.5 | < 0.5 | 399 | 880 | 111 | 487 | 125 | 40.5 | 96.1 | 9.8 | 33.9 | 3.6 | 6.4 |
| 589015 Dup | 180 | 17 | 2 | < 5 | 59 | 96 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 404 | 891 | 113 | 485 | 125 | 40.8 | 97.6 | 9.8 | 34.7 | 3.7 | 6.7 |
| 589032 Orig | 60 | 4 | 1 | 8 | < 2 | 280 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 254 | 578 | 68.0 | 270 | 48.0 | 14.4 | 31.2 | 3.6 | 16.0 | 2.2 | 4.9 |
| 589032 Dup | 60 | 4 | 1 | 7 | < 2 | 294 | 7 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 262 | 591 | 70.4 | 275 | 48.4 | 14.5 | 31.0 | 3.6 | 16.1 | 2.2 | 4.9 |
| 589051 Orig | 140 | 11 | 1 | 8 | 37 | 343 | 3 | 0.8 | < 0.2 | 3 | < 0.5 | < 0.5 | 315 | 665 | 79.8 | 309 | 54.6 | 15.4 | 36.2 | 4.2 | 18.0 | 2.5 | 5.5 |
| 589051 Split PREP DUP | 140 | 13 | 1 | 8 | 39 | 298 | 5 | 0.8 | < 0.2 | 2 | < 0.5 | < 0.5 | 339 | 717 | 87.1 | 337 | 59.2 | 16.8 | 39.8 | 4.6 | 19.6 | 2.7 | 6.1 |
| 589062 Orig | < 30 | 4 | < 1 | < 5 | < 2 | 102 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 508 | 61.4 | 238 | 42.3 | 12.2 | 29.9 | 3.9 | 19.0 | 3.1 | 7.6 |
| 589062 Dup | < 30 | 4 | < 1 | < 5 | < 2 | 115 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 223 | 514 | 61.8 | 239 | 42.1 | 12.5 | 29.9 | 3.9 | 19.0 | 3.0 | 7.5 |
| 589079 Orig | 60 | 12 | 1 | 7 | 42 | 338 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 279 | 658 | 83.7 | 337 | 61.2 | 17.4 | 40.9 | 5.0 | 23.5 | 3.6 | 8.9 |
| 589079 Dup | 60 | 12 | 1 | 7 | 42 | 337 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 270 | 639 | 80.8 | 328 | 60.2 | 16.9 | 40.9 | 5.0 | 22.9 | 3.5 | 9.0 |
| Method Blank | < 30 | < 1 | < 1 | < 5 | < 2 | < 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| NIST 694 Meas | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | |
| DNC-1 Meas | | 2.0 | | | | | | 6 | | | | |
| DNC-1 Cert | | 2.0 | | | | | | 6.3 | | | | |
| GBW 07113 Meas | | | | | | | | | | | | |
| GBW 07113 Cert | | | | | | | | | | | | |
| LKSD-3 Meas | | 2.6 | 0.43 | | | | | | | 11.8 | 4.3 | |
| LKSD-3 Cert | | 2.70 | 0.400 | | | | | | | 11.4 | 4.60 | |
| TDB-1 Meas | | 3.4 | | | | | | | | 2.9 | | |
| TDB-1 Cert | | 3.4 | | | | | | | | 2.7 | | |
| AC-E Meas | | | | | | | | | | | | 0.014 |
| AC-E Cert | | | | | | | | | | | | 0.016 |
| W-2a Meas | | 2.1 | 0.31 | 2.8 | 0.5 | < 1 | 0.1 | | < 0.4 | 2.4 | 0.5 | |
| W-2a Cert | | 2.10 | 0.330 | 2.60 | 0.500 | 0.300 | 0.200 | | 0.0300 | 2.40 | 0.530 | |
| SY-4 Meas | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | |
| CTA-AC-1 Meas | | 11.5 | | | | | | | | | 4.2 | |
| CTA-AC-1 Cert | | 11.4 | | | | | | | | | 4.4 | |
| BIR-1a Meas | | 1.6 | | 0.6 | | | | | | | | |
| BIR-1a Cert | | 1.7 | | 0.60 | | | | | | | | |
| NCS DC86312 Meas | 13.0 | 87.7 | 12.7 | | | | | | | 25.8 | | |
| NCS DC86312 Cert | 15.1 | 87.79 | 11.96 | | | | | | | 23.6 | | |
| VS-N Meas | | | | | | | | | | | | 0.102 |
| VS-N Cert | | | | | | | | | | | | 0.10 |
| NCS DC70009 (GBW07241) Meas | 2.30 | | 2.44 | | | 2250 | | | | | | |
| NCS DC70009 (GBW07241) Cert | 2.2 | | 2.4 | | | 2200 | | | | | | |
| OREAS 100a (Fusion) Meas | 2.38 | | 2.23 | | | | | | | 56.2 | 143 | |
| OREAS 100a (Fusion) Cert | 2.31 | | 2.26 | | | | | | | 51.6 | 135 | |
| OREAS 101a (Fusion) Meas | 2.70 | 19.2 | 2.65 | | | | | | | 37.6 | 422 | |
| OREAS 101a (Fusion) Cert | 2.90 | 17.5 | 2.66 | | | | | | | 36.6 | 422 | |
| OREAS 101b (Fusion) Meas | 2.72 | 17.6 | 2.53 | | | | | | | 38.0 | 396 | |
| OREAS 101b (Fusion) Cert | 2.66 | 17.6 | 2.58 | | | | | | | 37.1 | 396 | |
| JR-1 Meas | 0.70 | | 0.76 | 4.6 | 1.9 | 2 | 1.5 | 20 | 0.6 | | 9.2 | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| JR-1 Cert | 0.67 | | 0.71 | 4.51 | 1.86 | 1.59 | 1.56 | 19.3 | 0.56 | | 8.88 | |
| SX18-01 Meas | | | | | | | | | | | | 0.688 |
| SX18-01 Cert | | | | | | | | | | | | 0.695 |
| SARM 3 Meas | | | | | | | | | | | | 0.139 |
| SARM 3 Cert | | | | | | | | | | | | 0.14 |
| AMIS 0104 Meas | | | | | | | | | | | | |
| AMIS 0104 Cert | | | | | | | | | | | | |
| 589015 Orig | 0.56 | 2.5 | 0.28 | 2.4 | 1.2 | < 1 | < 0.1 | 14 | < 0.4 | 62.8 | 5.3 | 0.016 |
| 589015 Dup | 0.60 | 2.5 | 0.30 | 2.7 | 1.2 | < 1 | < 0.1 | 201 | < 0.4 | 63.5 | 5.5 | 0.015 |
| 589032 Orig | 0.57 | 3.1 | 0.43 | 0.9 | 1.0 | 5 | < 0.1 | 27 | < 0.4 | 15.8 | 42.2 | 0.101 |
| 589032 Dup | 0.56 | 3.0 | 0.43 | 0.9 | 1.1 | < 1 | < 0.1 | 33 | < 0.4 | 15.9 | 42.4 | 0.106 |
| 589051 Orig | 0.63 | 3.2 | 0.40 | 2.1 | 4.6 | 8 | 0.1 | 15 | < 0.4 | 22.0 | 16.8 | 0.080 |
| 589051 Split PREP DUP | 0.67 | 3.4 | 0.44 | 1.9 | 4.5 | 7 | 0.1 | 16 | < 0.4 | 23.9 | 18.1 | 0.074 |
| 589062 Orig | 0.94 | 5.1 | 0.66 | < 0.2 | 0.1 | 2 | < 0.1 | < 5 | < 0.4 | 2.9 | 0.9 | 0.011 |
| 589062 Dup | 0.90 | 5.2 | 0.66 | < 0.2 | 0.2 | < 1 | < 0.1 | < 5 | < 0.4 | 2.9 | 0.9 | 0.010 |
| 589079 Orig | 1.05 | 6.2 | 0.79 | 0.5 | 0.5 | 2 | 0.2 | 20 | < 0.4 | 33.7 | 8.0 | 0.086 |
| 589079 Dup | 1.13 | 6.3 | 0.81 | 0.5 | 0.5 | 9 | 0.2 | 17 | < 0.4 | 32.5 | 7.8 | 0.086 |
| Method Blank | < 0.05 | < 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | < 0.1 | < 0.1 | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | < 0.003 |



Date Submitted: 28-Mar-18
Invoice No.: A18-03918-Quant
Invoice Date: 06-Jul-18
Your Reference: Good Hope

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

112 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 4LITHO (11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code 4LITHO-Quant(11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code Nb Assay - XRF XRF

REPORT **A18-03918-Quant**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Total includes all elements in % oxide to the left of total.

We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

Footnote: Litho Nb may be unreliable due to high P2O5.

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589089 | 8.68 | 1.22 | 7.23 | 1.212 | 13.38 | 27.27 | 0.09 | 0.79 | 0.145 | 2.45 | 34.92 | 97.38 | 6 | 1 | 54 | 8626 | 3251 | 90 | 17 | < 20 | 5 | < 20 | 30 |
| 589090 | 22.01 | 4.70 | 5.70 | 0.305 | 6.68 | 27.31 | 0.25 | 3.56 | 0.298 | 1.89 | 26.51 | 99.20 | 8 | 3 | 118 | 629 | 2832 | 62 | 70 | 30 | 6 | < 20 | < 10 |
| 589091 | 20.07 | 4.11 | 6.40 | 0.440 | 8.17 | 26.04 | 0.17 | 3.03 | 0.234 | 4.50 | 23.79 | 96.96 | 9 | 5 | 94 | 11310 | 2282 | 161 | 53 | 30 | 5 | < 20 | 30 |
| 589092 | 30.92 | 6.78 | 6.64 | 0.409 | 10.53 | 15.22 | 0.63 | 5.24 | 0.293 | 1.13 | 21.30 | 99.10 | 11 | 4 | 146 | 1100 | 1744 | 44 | 106 | 40 | 6 | < 20 | < 10 |
| 589093 | 0.31 | 0.05 | 5.18 | 1.238 | 16.32 | 29.72 | < 0.01 | < 0.01 | 0.018 | 0.02 | 38.73 | 91.60 | 5 | 2 | 40 | 12170 | 5421 | 25 | 5 | < 20 | < 1 | < 20 | 20 |
| 589094 | 34.57 | 8.20 | 6.13 | 0.542 | 9.72 | 13.60 | 1.66 | 4.47 | 0.319 | 0.33 | 20.42 | 99.95 | 10 | 5 | 129 | 3594 | 1902 | 23 | 73 | 50 | 6 | 20 | < 10 |
| 589095 | 10.54 | 0.78 | 6.06 | 0.463 | 6.61 | 33.69 | 0.08 | 0.61 | 0.768 | 8.09 | 27.29 | 94.97 | 6 | < 1 | 80 | 6481 | 3055 | 232 | 162 | 30 | 11 | 30 | 30 |
| 589096 | 7.04 | 1.01 | 5.07 | 0.476 | 5.12 | 39.34 | 0.05 | 0.44 | 0.210 | 4.35 | 33.08 | 96.18 | 5 | 1 | 70 | 5502 | 3758 | 126 | 223 | < 20 | 5 | < 20 | 40 |
| 589097 | 4.68 | 0.44 | 4.42 | 0.353 | 2.73 | 43.36 | 0.08 | 0.22 | 0.398 | 3.19 | 34.38 | 94.26 | 5 | < 1 | 67 | 1628 | 4817 | 114 | 208 | < 20 | 10 | 20 | 40 |
| 589098 | 9.58 | 1.14 | 3.53 | 0.322 | 2.36 | 45.14 | 0.11 | 0.09 | 0.085 | 3.20 | 33.63 | 99.17 | 2 | < 1 | 58 | 649 | 7108 | 76 | 48 | < 20 | 8 | < 20 | 20 |
| 589099 | 6.86 | 1.55 | 2.78 | 0.377 | 2.05 | 45.61 | 0.28 | 1.14 | 0.090 | 2.10 | 35.11 | 97.95 | 4 | < 1 | 49 | 1590 | 6696 | 79 | 17 | < 20 | 2 | < 20 | < 10 |
| 589100 | 0.46 | 0.08 | 3.51 | 0.622 | 3.25 | 47.70 | 0.04 | 0.05 | 0.040 | 0.27 | 41.81 | 97.84 | 7 | < 1 | 27 | 4995 | 4356 | 74 | 9 | < 20 | < 1 | < 20 | < 10 |
| 589101 | 2.58 | 0.40 | 4.80 | 0.694 | 7.81 | 37.53 | 0.07 | 0.21 | 0.024 | 3.04 | 37.69 | 94.83 | 6 | 1 | 41 | 7480 | 2932 | 176 | 38 | < 20 | < 1 | < 20 | 20 |
| 589102 | 5.18 | 0.73 | 5.30 | 0.552 | 4.16 | 39.15 | 0.22 | 0.30 | 0.073 | 4.50 | 32.78 | 92.94 | 7 | < 1 | 41 | 8606 | 2953 | 206 | 13 | < 20 | 4 | < 20 | 10 |
| 589103 | 2.06 | 0.09 | 4.74 | 0.518 | 3.40 | 44.60 | 0.02 | 0.04 | 0.047 | 2.20 | 36.40 | 94.12 | 6 | < 1 | 31 | 3520 | 2789 | 110 | 14 | < 20 | 11 | < 20 | 20 |
| 589104 | 29.43 | 6.63 | 7.97 | 0.449 | 6.77 | 17.70 | 0.79 | 4.76 | 0.243 | 1.66 | 21.63 | 98.03 | 11 | 1 | 119 | 2728 | 1382 | 79 | 76 | < 20 | 7 | < 20 | 20 |
| 589105 | 2.66 | 0.54 | 2.46 | 0.384 | 1.66 | 49.10 | 0.08 | 0.44 | 0.025 | 0.62 | 39.46 | 97.43 | 5 | < 1 | 30 | 1556 | 4710 | 91 | 12 | < 20 | 5 | < 20 | < 10 |
| 589106 | 34.67 | 8.73 | 3.89 | 0.193 | 2.23 | 23.65 | 3.55 | 2.33 | 0.201 | 1.95 | 16.79 | 98.19 | 4 | 3 | 64 | 852 | 4243 | 52 | 71 | < 20 | 10 | < 20 | < 10 |
| 589107 | 14.15 | 2.63 | 3.97 | 0.325 | 3.89 | 36.87 | 0.78 | 1.22 | 0.112 | 5.26 | 27.07 | 96.27 | 6 | 3 | 80 | 1233 | 5790 | 114 | 37 | < 20 | 4 | < 20 | 20 |
| 589108 | 3.74 | 0.49 | 3.26 | 0.315 | 2.82 | 47.45 | 0.15 | 0.44 | 0.104 | 4.32 | 34.94 | 98.02 | 4 | < 1 | 41 | 996 | 5923 | 113 | 46 | < 20 | 5 | < 20 | < 10 |
| 589109 | 2.17 | 0.17 | 3.07 | 0.314 | 1.53 | 50.54 | 0.20 | 0.14 | 0.038 | 3.47 | 35.82 | 97.47 | 3 | < 1 | 29 | 414 | 9144 | 88 | 13 | < 20 | 8 | < 20 | < 10 |
| 589110 | 1.31 | 0.08 | 3.41 | 0.331 | 0.97 | 52.20 | 0.17 | 0.08 | 0.016 | 0.86 | 37.87 | 97.29 | 2 | < 1 | 17 | 436 | > 10000 | 78 | 5 | < 20 | 15 | < 20 | 10 |
| 589111 | 6.81 | 1.78 | 4.06 | 0.775 | 2.10 | 45.08 | 0.42 | 0.68 | 0.221 | 2.43 | 31.91 | 96.26 | 3 | < 1 | 193 | 2681 | > 10000 | 58 | 84 | < 20 | 3 | < 20 | 10 |
| 589112 | 1.38 | 0.16 | 2.34 | 0.336 | 1.08 | 51.04 | 0.17 | 0.14 | 0.028 | 1.30 | 39.38 | 97.33 | 2 | < 1 | 15 | 424 | 9463 | 84 | 11 | < 20 | 7 | < 20 | < 10 |
| 589113 | 4.03 | 0.30 | 3.63 | 0.236 | 1.74 | 47.99 | 0.36 | 0.30 | 0.236 | 4.68 | 33.94 | 97.45 | 3 | 1 | 97 | 341 | 7519 | 103 | 164 | < 20 | 3 | < 20 | < 10 |
| 589114 | 4.37 | 0.50 | 2.24 | 0.290 | 2.09 | 48.15 | 0.34 | 0.48 | 0.147 | 3.02 | 36.77 | 98.40 | 3 | < 1 | 36 | 445 | 8202 | 93 | 85 | < 20 | 2 | < 20 | < 10 |
| 589115 | 4.08 | 0.12 | 2.04 | 0.302 | 1.47 | 48.54 | 0.25 | 0.12 | 0.040 | 2.65 | 38.02 | 97.63 | 2 | < 1 | 32 | 460 | 7971 | 93 | 30 | < 20 | 2 | < 20 | < 10 |
| 589116 | 8.88 | 1.60 | 12.92 | 0.316 | 4.37 | 35.25 | 0.46 | 1.53 | 1.889 | 4.91 | 22.28 | 94.41 | 3 | 3 | 350 | 451 | 5697 | 72 | 635 | < 20 | 20 | < 20 | 30 |
| 589117 | 4.16 | 0.29 | 2.69 | 0.285 | 1.92 | 47.74 | 0.31 | 0.31 | 0.137 | 2.66 | 36.43 | 96.93 | 3 | 1 | 47 | 392 | 7960 | 88 | 359 | < 20 | 4 | < 20 | < 10 |
| 589118 | 0.68 | 0.13 | 3.16 | 0.322 | 1.59 | 47.34 | 0.05 | 0.07 | 0.101 | 1.97 | 38.10 | 93.50 | 4 | < 1 | 49 | 422 | 3608 | 90 | 176 | < 20 | 3 | < 20 | 20 |
| 589119 | 2.28 | 0.13 | 2.48 | 0.413 | 1.92 | 49.26 | 0.13 | 0.11 | 0.083 | 1.93 | 39.43 | 98.17 | 3 | < 1 | 30 | 335 | 4748 | 91 | 74 | < 20 | 2 | < 20 | < 10 |
| 589120 | 3.00 | 0.10 | 2.25 | 0.332 | 1.50 | 49.44 | 0.28 | 0.12 | 0.193 | 3.10 | 37.00 | 97.32 | 2 | < 1 | 37 | 382 | 8592 | 92 | 74 | < 20 | 3 | < 20 | < 10 |
| 589121 | 5.91 | 0.15 | 2.85 | 0.323 | 2.39 | 46.70 | 0.61 | 0.27 | 0.448 | 4.78 | 33.49 | 97.93 | 2 | 1 | 57 | 341 | 7688 | 86 | 114 | < 20 | 2 | < 20 | < 10 |
| 589122 | 3.92 | 0.13 | 1.96 | 0.306 | 1.79 | 48.96 | 0.41 | 0.18 | 0.098 | 3.68 | 36.41 | 97.85 | 3 | 1 | 38 | 517 | 7381 | 92 | 301 | < 20 | < 1 | < 20 | < 10 |
| 589123 | 10.28 | 1.04 | 7.58 | 0.269 | 4.05 | 43.23 | 0.88 | 1.12 | 0.741 | 6.27 | 23.30 | 98.76 | 3 | 3 | 99 | 366 | 6101 | 85 | 896 | < 20 | 25 | < 20 | 30 |
| 589124 | 2.25 | 0.05 | 1.72 | 0.320 | 1.21 | 50.99 | 0.33 | 0.09 | 0.032 | 2.24 | 38.36 | 97.60 | 2 | < 1 | 28 | 434 | > 10000 | 84 | 46 | < 20 | 3 | < 20 | < 10 |
| 589125 | 2.73 | 0.06 | 1.77 | 0.329 | 1.43 | 50.09 | 0.27 | 0.07 | 0.041 | 3.00 | 37.89 | 97.69 | 2 | < 1 | 33 | 468 | 7899 | 91 | 140 | < 20 | < 1 | < 20 | < 10 |
| 589126 | 1.69 | 0.10 | 2.76 | 0.409 | 1.88 | 48.97 | 0.23 | 0.09 | 0.032 | 2.35 | 38.49 | 97.00 | 3 | < 1 | 32 | 3744 | 6495 | 90 | 25 | < 20 | < 1 | < 20 | < 10 |
| 589127 | 2.64 | 0.13 | 2.35 | 0.312 | 1.72 | 50.40 | 0.50 | 0.19 | 0.081 | 4.82 | 34.29 | 97.43 | 2 | < 1 | 36 | 444 | 9583 | 88 | 68 | < 20 | 4 | < 20 | < 10 |
| 589128 | 1.38 | 0.13 | 1.81 | 0.321 | 1.31 | 51.74 | 0.43 | 0.17 | 0.052 | 2.76 | 37.60 | 97.69 | 1 | < 1 | 28 | 474 | > 10000 | 83 | 119 | < 20 | < 1 | < 20 | < 10 |
| 589129 | 1.27 | 0.14 | 2.39 | 0.323 | 1.29 | 51.27 | 0.34 | 0.19 | 0.021 | 1.34 | 38.25 | 96.83 | 2 | < 1 | 20 | 463 | > 10000 | 77 | 9 | < 20 | 6 | < 20 | 10 |

Results

Activation Laboratories Ltd.

Report: A18-03918

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589130 | < 0.01 | 0.07 | 1.22 | 0.310 | 0.84 | 53.98 | 0.25 | 0.07 | 0.013 | 1.59 | 40.10 | 98.42 | 1 | < 1 | 9 | 480 | > 10000 | 83 | 11 | < 20 | < 1 | < 20 | < 10 |
| 589131 | 2.06 | 0.26 | 2.57 | 0.321 | 1.82 | 49.63 | 0.32 | 0.25 | 0.060 | 1.67 | 37.97 | 96.94 | 3 | < 1 | 32 | 505 | 9569 | 80 | 15 | < 20 | 7 | < 20 | 10 |
| 589132 | 14.82 | 3.59 | 6.81 | 0.227 | 3.33 | 35.79 | 1.01 | 1.65 | 0.435 | 4.08 | 25.49 | 97.23 | 3 | 3 | 316 | 900 | 6091 | 72 | 151 | < 20 | 5 | < 20 | 30 |
| 589133 | 1.19 | 0.06 | 3.64 | 0.288 | 1.21 | 50.74 | 0.29 | 0.08 | 0.233 | 2.32 | 37.46 | 97.51 | 1 | < 1 | 170 | 380 | 9921 | 83 | 39 | < 20 | 2 | < 20 | < 10 |
| 589134 | 1.02 | 0.12 | 2.70 | 0.331 | 1.03 | 51.71 | 0.17 | 0.10 | 0.047 | 1.15 | 38.83 | 97.21 | 2 | < 1 | 25 | 406 | > 10000 | 81 | 13 | < 20 | 6 | < 20 | 10 |
| 589135 | 7.01 | 1.06 | 3.46 | 0.280 | 2.59 | 45.48 | 0.60 | 0.92 | 0.261 | 5.24 | 30.06 | 96.96 | 2 | 1 | 47 | 404 | 8673 | 80 | 41 | < 20 | 5 | < 20 | < 10 |
| 589136 | 50.00 | 14.63 | 4.82 | 0.108 | 3.18 | 9.04 | 4.68 | 4.32 | 0.475 | 0.82 | 7.76 | 99.84 | 2 | 5 | 83 | 1220 | 1658 | 21 | 196 | < 20 | 7 | < 20 | 30 |
| 589137 | 3.78 | 0.51 | 4.57 | 0.321 | 2.11 | 46.13 | 0.25 | 0.40 | 0.265 | 2.97 | 36.16 | 97.47 | 4 | < 1 | 78 | 472 | 5677 | 105 | 183 | < 20 | 4 | < 20 | < 10 |
| 589138 | 6.09 | 1.05 | 6.11 | 0.373 | 3.40 | 42.40 | 0.41 | 0.83 | 0.891 | 3.41 | 33.07 | 98.04 | 4 | 2 | 122 | 660 | 5357 | 94 | 327 | < 20 | 9 | < 20 | 10 |
| 589139 | 43.71 | 12.59 | 8.67 | 0.167 | 6.27 | 10.31 | 4.07 | 3.50 | 0.788 | 1.19 | 7.60 | 98.85 | 18 | 7 | 181 | 2156 | 1504 | 36 | 106 | < 20 | 23 | < 20 | 30 |
| 589140 | 16.78 | 4.32 | 4.27 | 0.393 | 5.46 | 32.03 | 1.39 | 1.61 | 0.313 | 2.40 | 28.35 | 97.32 | 5 | 2 | 70 | 5640 | 5295 | 64 | 62 | < 20 | 4 | < 20 | 20 |
| 589141 | 36.03 | 9.30 | 6.86 | 0.309 | 7.90 | 13.15 | 2.91 | 3.87 | 0.827 | 0.50 | 16.55 | 98.21 | 15 | 6 | 158 | 1983 | 1928 | 34 | 144 | 50 | 23 | 40 | 20 |
| 589142 | 7.05 | 1.63 | 3.92 | 0.422 | 2.99 | 42.04 | 0.27 | 0.93 | 0.209 | 2.30 | 34.52 | 96.27 | 6 | < 1 | 52 | 2816 | 3207 | 138 | 145 | < 20 | 2 | < 20 | 20 |
| 589143 | 47.10 | 11.59 | 5.71 | 0.165 | 4.79 | 10.53 | 5.15 | 3.34 | 0.463 | 0.49 | 9.47 | 98.80 | 10 | 7 | 115 | 931 | 1769 | 24 | 194 | 110 | 12 | 60 | 60 |
| 589144 | 13.40 | 2.60 | 2.82 | 0.344 | 2.93 | 40.30 | 0.88 | 1.11 | 0.116 | 1.15 | 31.91 | 97.54 | 3 | 2 | 46 | 677 | 7222 | 70 | 28 | < 20 | < 1 | < 20 | 30 |
| 589145 | 58.76 | 12.44 | 5.95 | 0.090 | 3.09 | 3.91 | 5.85 | 5.89 | 0.359 | 0.28 | 3.41 | 100.0 | 6 | 7 | 153 | 447 | 767 | 16 | 184 | 30 | 4 | < 20 | 70 |
| 589146 | 3.38 | 0.29 | 1.54 | 0.305 | 1.74 | 48.97 | 0.43 | 0.29 | 0.057 | 2.77 | 37.26 | 97.03 | 2 | 1 | 33 | 450 | 9580 | 85 | 93 | < 20 | < 1 | < 20 | < 10 |
| 589147 | 4.55 | 0.33 | 3.03 | 0.271 | 2.17 | 47.36 | 0.52 | 0.32 | 0.487 | 2.82 | 35.47 | 97.33 | 3 | 2 | 48 | 428 | 9470 | 88 | 86 | 30 | 9 | 30 | 20 |
| 589148 | 7.92 | 1.29 | 5.92 | 0.275 | 2.16 | 41.89 | 0.80 | 0.39 | 0.420 | 3.72 | 30.96 | 95.76 | 2 | 2 | 368 | 502 | 7835 | 80 | 78 | < 20 | 2 | < 20 | 30 |
| 589149 | 12.70 | 0.18 | 0.16 | 0.015 | 4.08 | 46.28 | 0.06 | 0.03 | 0.011 | 0.04 | 35.36 | 98.90 | < 1 | < 1 | 7 | 18 | 78 | 4 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589150 | 41.94 | 9.40 | 6.17 | 0.182 | 5.30 | 13.67 | 4.13 | 3.67 | 0.331 | 1.66 | 11.68 | 98.13 | 6 | 6 | 144 | 745 | 3713 | 36 | 235 | 40 | 7 | < 20 | < 10 |
| 589151 | 1.71 | 0.22 | 1.69 | 0.318 | 1.28 | 50.61 | 0.34 | 0.17 | 0.034 | 2.75 | 37.88 | 97.00 | 2 | < 1 | 21 | 544 | > 10000 | 89 | 44 | < 20 | < 1 | < 20 | < 10 |
| 589152 | 52.53 | 11.59 | 5.05 | 0.136 | 4.01 | 7.78 | 5.05 | 4.06 | 0.315 | 0.69 | 7.70 | 98.89 | 7 | 7 | 122 | 926 | 2005 | 26 | 161 | 50 | 8 | 30 | 20 |
| 589153 | 15.47 | 2.94 | 5.50 | 0.320 | 6.00 | 32.25 | 0.77 | 1.82 | 0.317 | 6.11 | 24.38 | 95.86 | 3 | 3 | 87 | 682 | 5321 | 117 | 167 | < 20 | 5 | < 20 | 20 |
| 589154 | 4.34 | 0.58 | 3.49 | 0.352 | 2.42 | 47.46 | 0.38 | 0.55 | 0.090 | 3.51 | 34.40 | 97.57 | 3 | 3 | 42 | 768 | 9099 | 91 | 28 | < 20 | 9 | < 20 | 10 |
| 589155 | 6.10 | 1.74 | 3.99 | 0.777 | 2.10 | 46.87 | 0.42 | 0.69 | 0.220 | 2.36 | 31.90 | 97.17 | 3 | < 1 | 200 | 2734 | > 10000 | 56 | 84 | < 20 | 2 | < 20 | 10 |
| 589156 | 54.06 | 13.62 | 5.39 | 0.134 | 4.49 | 5.72 | 5.25 | 3.24 | 0.486 | 0.41 | 6.03 | 98.81 | 12 | 6 | 128 | 1233 | 1657 | 24 | 148 | 100 | 14 | 50 | 160 |
| 589157 | 6.85 | 1.23 | 7.40 | 0.964 | 13.49 | 27.67 | 0.22 | 0.85 | 0.226 | 0.05 | 38.42 | 97.36 | 3 | < 1 | 59 | 3327 | 3824 | 25 | 89 | 20 | 8 | 20 | 10 |
| 589158 | 57.16 | 13.74 | 4.27 | 0.119 | 3.73 | 4.97 | 5.75 | 3.58 | 0.315 | 0.18 | 6.20 | 100.0 | 7 | 8 | 120 | 992 | 1878 | 14 | 114 | 50 | 7 | 30 | < 10 |
| 589159 | 16.59 | 3.05 | 5.13 | 0.307 | 6.22 | 32.25 | 0.38 | 1.60 | 0.277 | 5.10 | 26.33 | 97.22 | 5 | 3 | 80 | 714 | 6472 | 104 | 72 | 20 | 1 | < 20 | 20 |
| 589160 | 18.64 | 2.98 | 11.85 | 0.268 | 7.70 | 23.73 | 1.70 | 2.42 | 3.701 | 2.77 | 22.60 | 98.36 | 17 | 6 | 317 | 866 | 3795 | 71 | 457 | 130 | 40 | 130 | 120 |
| 589161 | 19.50 | 4.10 | 8.87 | 0.465 | 8.23 | 22.14 | 0.54 | 3.24 | 1.459 | 4.28 | 23.77 | 96.60 | 9 | 2 | 151 | 1291 | 3894 | 195 | 46 | 60 | 9 | 30 | 30 |
| 589162 | 28.05 | 6.25 | 5.92 | 0.231 | 7.11 | 21.17 | 1.30 | 4.44 | 0.410 | 4.80 | 18.29 | 97.96 | 6 | 3 | 107 | 829 | 5417 | 93 | 173 | 50 | 8 | 20 | < 10 |
| 589163 | 42.46 | 9.74 | 6.36 | 0.193 | 5.91 | 12.60 | 3.25 | 4.69 | 0.430 | 1.54 | 12.80 | 99.96 | 10 | 6 | 136 | 775 | 3885 | 52 | 162 | 90 | 11 | 30 | 20 |
| 589164 | 34.44 | 7.38 | 7.44 | 0.239 | 7.97 | 13.90 | 1.59 | 5.34 | 0.439 | 0.99 | 18.99 | 98.72 | 8 | 5 | 133 | 538 | 3338 | 32 | 171 | 60 | 7 | 20 | 80 |
| 589165 | 18.35 | 3.28 | 4.47 | 0.231 | 1.68 | 35.44 | 1.02 | 1.20 | 0.213 | 3.18 | 25.00 | 94.06 | 4 | 1 | 37 | 5969 | 3892 | 192 | 23 | 20 | 10 | < 20 | 60 |
| 589166 | 11.78 | 2.90 | 3.39 | 0.299 | 3.32 | 39.76 | 0.66 | 1.87 | 0.138 | 2.85 | 30.75 | 97.73 | 3 | 1 | 33 | 763 | 5585 | 83 | 15 | < 20 | 4 | < 20 | < 10 |
| 589167 | 26.26 | 6.17 | 10.24 | 0.544 | 7.22 | 17.40 | 0.44 | 4.68 | 0.586 | 0.52 | 22.55 | 96.60 | 13 | 1 | 133 | 2446 | 1072 | 38 | 60 | 80 | 23 | 40 | 30 |
| 589168 | 12.39 | 2.03 | 8.14 | 0.490 | 4.85 | 32.82 | 0.09 | 1.59 | 0.347 | 5.30 | 26.03 | 94.08 | 6 | < 1 | 58 | 3089 | 2031 | 241 | 37 | 30 | 20 | 30 | 30 |
| 589169 | 14.79 | 2.82 | 4.69 | 0.343 | 3.82 | 36.08 | 1.13 | 1.43 | 0.912 | 1.83 | 30.06 | 97.91 | 5 | 3 | 102 | 559 | 6039 | 73 | 134 | 60 | 11 | 50 | 20 |
| 589170 | 1.00 | 0.05 | 1.52 | 0.410 | 1.24 | 50.00 | 0.03 | 0.02 | 0.021 | 2.23 | 39.12 | 95.64 | 3 | < 1 | 16 | 595 | 4708 | 91 | 59 | < 20 | < 1 | < 20 | 20 |

Results

Activation Laboratories Ltd.

Report: A18-03918

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589171 | 8.25 | 1.86 | 3.47 | 0.329 | 2.88 | 40.35 | 0.46 | 1.00 | 0.259 | 1.55 | 34.67 | 95.09 | 4 | 1 | 42 | 1722 | 7338 | 98 | 50 | < 20 | 2 | < 20 | 30 |
| 589172 | 26.85 | 6.06 | 7.22 | 0.294 | 6.10 | 22.44 | 1.99 | 3.18 | 1.263 | 2.68 | 20.53 | 98.60 | 7 | 4 | 160 | 807 | 4467 | 67 | 538 | < 20 | 7 | < 20 | < 10 |
| 589173 | 49.62 | 11.81 | 5.40 | 0.146 | 3.67 | 9.63 | 5.14 | 3.65 | 0.372 | 0.72 | 9.69 | 99.85 | 6 | 6 | 137 | 644 | 2171 | 27 | 122 | 40 | 5 | < 20 | 30 |
| 589174 | 11.59 | 2.21 | 4.14 | 0.376 | 3.04 | 38.52 | 0.63 | 1.27 | 0.247 | 2.81 | 30.42 | 95.25 | 5 | 1 | 59 | 1113 | 5143 | 121 | 80 | 30 | 12 | 20 | 50 |
| 589175 | 13.14 | 0.15 | 0.14 | 0.018 | 5.09 | 45.15 | 0.05 | 0.02 | 0.009 | 0.03 | 35.02 | 98.81 | < 1 | < 1 | 7 | 21 | 60 | 3 | 5 | < 20 | < 1 | < 20 | < 10 |
| 589176 | 54.71 | 10.47 | 7.33 | 0.161 | 6.87 | 6.34 | 4.55 | 4.23 | 0.525 | 0.13 | 4.40 | 99.71 | 13 | 8 | 115 | 1341 | 1192 | 23 | 130 | 540 | 24 | 180 | < 10 |
| 589177 | 20.50 | 3.87 | 3.92 | 0.312 | 3.76 | 32.47 | 1.06 | 2.37 | 0.194 | 2.51 | 26.99 | 97.96 | 6 | 2 | 74 | 742 | 4684 | 108 | 38 | 70 | 5 | 30 | < 10 |
| 589178 | 14.75 | 3.33 | 3.32 | 0.310 | 2.02 | 36.31 | 1.15 | 0.97 | 0.154 | 2.72 | 28.72 | 93.75 | 4 | 1 | 47 | 668 | 4567 | 72 | 44 | < 20 | 8 | 20 | 30 |
| 589179 | 13.15 | 3.09 | 5.37 | 0.364 | 2.18 | 41.28 | 0.95 | 0.77 | 0.154 | 3.14 | 27.34 | 97.80 | 8 | 1 | 54 | 2301 | 5187 | 145 | 24 | 30 | 22 | 20 | 30 |
| 589180 | 10.43 | 1.60 | 2.44 | 0.262 | 1.30 | 44.48 | 0.17 | 1.20 | 0.035 | 0.35 | 36.24 | 98.51 | 4 | < 1 | 25 | 3914 | 776 | 47 | 42 | < 20 | < 1 | < 20 | < 10 |
| 589181 | 3.08 | 0.61 | 2.57 | 0.421 | 1.84 | 48.21 | 0.17 | 0.57 | 0.072 | 1.87 | 38.00 | 97.40 | 4 | < 1 | 24 | 912 | 6437 | 109 | 10 | < 20 | 3 | < 20 | 10 |
| 589182 | 12.26 | 2.77 | 3.60 | 0.429 | 3.43 | 39.02 | 0.78 | 1.75 | 0.139 | 3.45 | 30.61 | 98.23 | 5 | 2 | 73 | 3309 | 4882 | 96 | 98 | < 20 | 3 | < 20 | < 10 |
| 589183 | 28.84 | 6.53 | 3.63 | 0.375 | 3.24 | 26.99 | 1.58 | 3.80 | 0.131 | 0.99 | 23.85 | 99.95 | 7 | 2 | 73 | 1204 | 1506 | 57 | 25 | < 20 | 5 | < 20 | 10 |
| 589184 | 13.70 | 2.52 | 6.43 | 0.356 | 6.24 | 29.95 | 0.23 | 2.03 | 1.255 | 2.66 | 30.86 | 96.22 | 11 | 1 | 140 | 1659 | 1776 | 104 | 155 | 50 | 14 | 40 | 60 |
| 589185 | 4.08 | 0.22 | 2.26 | 0.219 | 1.56 | 40.02 | < 0.01 | 0.11 | 0.050 | 0.13 | 39.37 | 88.02 | 4 | < 1 | 20 | 7205 | 906 | 24 | 3 | < 20 | < 1 | < 20 | 70 |
| 589186 | 27.77 | 5.99 | 6.07 | 0.349 | 6.77 | 20.84 | 0.73 | 4.13 | 0.273 | 2.27 | 23.11 | 98.31 | 11 | 2 | 111 | 1794 | 1374 | 98 | 106 | < 20 | 6 | < 20 | 10 |
| 589187 | 17.47 | 3.50 | 4.80 | 0.353 | 4.02 | 32.92 | 0.60 | 1.96 | 0.174 | 2.30 | 28.15 | 96.26 | 5 | 1 | 64 | 772 | 2100 | 94 | 26 | 30 | 9 | < 20 | 40 |
| 589188 | 12.61 | 2.95 | 5.19 | 0.378 | 3.97 | 37.95 | 0.75 | 1.23 | 0.598 | 0.74 | 32.01 | 98.37 | 10 | 2 | 131 | 1898 | 2506 | 67 | 107 | 160 | 14 | 100 | 40 |
| 589189 | 13.43 | 3.05 | 2.52 | 0.355 | 0.73 | 39.40 | 1.03 | 0.82 | 0.080 | 0.75 | 30.62 | 92.78 | 4 | < 1 | 33 | 1146 | 2345 | 69 | 23 | < 20 | 12 | < 20 | 40 |
| 589190 | 7.01 | 1.28 | 2.46 | 0.371 | 1.62 | 44.69 | 0.38 | 0.59 | 0.054 | 2.01 | 35.63 | 96.10 | 4 | < 1 | 33 | 890 | 4095 | 110 | 28 | < 20 | 3 | < 20 | < 10 |
| 589191 | 2.03 | 0.32 | 1.40 | 0.345 | 0.91 | 50.96 | 0.06 | 0.23 | 0.035 | 1.36 | 40.50 | 98.14 | 4 | < 1 | 22 | 770 | 1771 | 93 | 9 | < 20 | < 1 | < 20 | < 10 |
| 589192 | 47.64 | 10.56 | 4.86 | 0.243 | 4.35 | 9.35 | 2.69 | 5.49 | 0.342 | 0.60 | 11.95 | 98.08 | 9 | 3 | 128 | 1870 | 945 | 45 | 85 | 30 | 6 | < 20 | 10 |
| 589193 | 50.33 | 10.91 | 3.25 | 0.230 | 2.90 | 11.18 | 3.36 | 3.98 | 0.129 | 0.85 | 11.31 | 98.43 | 6 | 4 | 90 | 1898 | 1117 | 52 | 48 | < 20 | 3 | < 20 | < 10 |
| 589194 | 0.29 | 0.08 | 1.46 | 0.419 | 1.03 | 53.03 | 0.09 | 0.06 | 0.007 | 0.71 | 41.71 | 98.88 | 2 | < 1 | 17 | 422 | 6474 | 75 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589195 | 1.16 | 0.22 | 2.40 | 0.405 | 1.62 | 50.60 | 0.07 | 0.17 | 0.072 | 3.60 | 37.75 | 98.07 | 4 | < 1 | 31 | 656 | 4073 | 128 | 73 | < 20 | 2 | < 20 | < 10 |
| 589196 | 0.20 | 0.06 | 1.81 | 0.403 | 1.16 | 52.37 | 0.06 | 0.04 | 0.020 | 1.36 | 41.07 | 98.55 | 4 | < 1 | 18 | 314 | 2343 | 92 | 7 | < 20 | < 1 | < 20 | < 10 |
| 589197 | 0.91 | 0.12 | 3.19 | 0.463 | 2.35 | 49.18 | 0.08 | 0.09 | 0.025 | 3.06 | 38.15 | 97.61 | 5 | < 1 | 28 | 670 | 3217 | 128 | 7 | < 20 | 3 | < 20 | < 10 |
| 589198 | 1.64 | 0.18 | 2.38 | 0.406 | 1.53 | 50.33 | 0.09 | 0.15 | 0.025 | 3.68 | 37.44 | 97.85 | 3 | < 1 | 24 | 1678 | 4249 | 111 | 9 | < 20 | < 1 | < 20 | < 10 |
| 589199 | 1.75 | 0.19 | 2.02 | 0.389 | 1.76 | 50.26 | 0.14 | 0.13 | 0.038 | 5.26 | 36.16 | 98.10 | 3 | < 1 | 28 | 1041 | 6354 | 157 | 20 | < 20 | < 1 | < 20 | < 10 |
| 589200 | 62.88 | 14.15 | 3.38 | 0.086 | 2.58 | 4.97 | 5.55 | 2.52 | 0.247 | 0.23 | 3.74 | 100.3 | 5 | 5 | 58 | 769 | 801 | 17 | 104 | 90 | 9 | 70 | < 10 |

Results

Activation Laboratories Ltd.

Report: A18-03918

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589089 | 130 | 25 | 3 | 14 | 16 | 436 | 23 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 2180 | 3220 | 273 | 874 | 116 | 29.1 | 58.2 | 5.9 | 25.4 | 3.4 | 7.3 |
| 589090 | 90 | 15 | < 1 | < 5 | 69 | 359 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 204 | 487 | 59.1 | 236 | 41.4 | 11.3 | 26.6 | 3.2 | 15.7 | 2.4 | 5.8 |
| 589091 | 130 | 18 | 2 | 7 | 62 | 468 | 3 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 617 | 1060 | 101 | 354 | 63.4 | 19.5 | 49.6 | 7.4 | 38.0 | 6.0 | 13.5 |
| 589092 | 180 | 20 | < 1 | < 5 | 122 | 410 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.7 | 679 | 1060 | 101 | 334 | 47.6 | 12.6 | 26.4 | 2.7 | 12.3 | 1.8 | 4.4 |
| 589093 | 430 | 38 | 5 | 20 | < 2 | 8 | 44 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 3910 | 5750 | 530 | 1550 | 190 | 45.4 | 78.4 | 5.0 | 13.5 | 1.3 | 2.3 |
| 589094 | 190 | 19 | < 1 | < 5 | 88 | 149 | 14 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 1090 | 1710 | 156 | 490 | 56.4 | 13.3 | 24.7 | 2.1 | 7.3 | 0.9 | 2.1 |
| 589095 | 120 | 10 | 2 | 19 | 10 | > 1000 | 5 | 0.7 | < 0.2 | 2 | < 0.5 | < 0.5 | 499 | 1100 | 120 | 467 | 86.5 | 25.6 | 62.3 | 9.2 | 50.5 | 8.4 | 21.5 |
| 589096 | 150 | 12 | 1 | 11 | 9 | 385 | 5 | 1.0 | < 0.2 | < 1 | < 0.5 | < 0.5 | 375 | 926 | 105 | 415 | 70.5 | 19.7 | 46.0 | 5.8 | 29.1 | 4.7 | 10.4 |
| 589097 | 130 | 9 | 1 | 15 | 4 | 338 | 7 | 1.0 | < 0.2 | < 1 | < 0.5 | < 0.5 | 304 | 828 | 94.9 | 387 | 78.1 | 23.3 | 53.9 | 6.6 | 29.8 | 4.4 | 9.6 |
| 589098 | 40 | 6 | < 1 | 5 | 2 | > 1000 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 237 | 572 | 68.7 | 275 | 49.1 | 13.6 | 32.7 | 4.1 | 20.0 | 3.1 | 7.3 |
| 589099 | 40 | 4 | < 1 | < 5 | 19 | 554 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 204 | 496 | 60.5 | 242 | 45.1 | 13.0 | 29.9 | 3.7 | 18.1 | 2.9 | 6.6 |
| 589100 | 130 | 4 | < 1 | < 5 | < 2 | 46 | 9 | < 0.5 | 0.3 | < 1 | < 0.5 | < 0.5 | 1060 | 1920 | 197 | 686 | 94.5 | 24.9 | 51.3 | 5.4 | 22.0 | 3.0 | 7.1 |
| 589101 | 230 | 16 | 2 | 10 | 4 | 145 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1310 | 2260 | 212 | 732 | 104 | 28.4 | 62.3 | 8.1 | 41.0 | 6.5 | 14.9 |
| 589102 | 60 | 16 | 3 | 15 | 6 | > 1000 | 22 | < 0.5 | 0.2 | 2 | < 0.5 | < 0.5 | 1090 | 2040 | 197 | 702 | 119 | 36.5 | 89.9 | 12.1 | 56.9 | 8.2 | 16.5 |
| 589103 | 130 | 13 | 2 | 20 | < 2 | 597 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 921 | 1770 | 175 | 630 | 104 | 29.7 | 65.8 | 7.6 | 33.1 | 4.5 | 9.6 |
| 589104 | 230 | 19 | < 1 | 7 | 81 | > 1000 | 20 | < 0.5 | 0.2 | 3 | < 0.5 | < 0.5 | 468 | 999 | 115 | 427 | 70.5 | 19.5 | 42.8 | 5.3 | 22.8 | 3.2 | 6.9 |
| 589105 | 50 | 3 | < 1 | 6 | 6 | 136 | 6 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 262 | 592 | 70.4 | 277 | 55.4 | 16.9 | 39.5 | 5.0 | 24.5 | 3.6 | 8.2 |
| 589106 | 110 | 13 | < 1 | < 5 | 47 | 745 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.6 | 144 | 353 | 42.9 | 172 | 31.7 | 9.29 | 21.6 | 2.8 | 13.4 | 2.0 | 4.7 |
| 589107 | 100 | 12 | 2 | 12 | 27 | > 1000 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 370 | 984 | 111 | 434 | 75.2 | 21.4 | 49.4 | 6.1 | 29.2 | 4.6 | 10.7 |
| 589108 | 70 | 5 | < 1 | 6 | 12 | 400 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 338 | 802 | 98.1 | 393 | 68.6 | 19.3 | 44.4 | 6.0 | 28.2 | 4.5 | 10.3 |
| 589109 | < 30 | 5 | < 1 | 8 | 2 | 464 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 259 | 631 | 76.7 | 309 | 56.1 | 16.2 | 38.1 | 4.8 | 23.4 | 3.5 | 8.3 |
| 589110 | < 30 | 3 | < 1 | 5 | < 2 | 109 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 215 | 503 | 60.0 | 236 | 41.9 | 12.1 | 29.2 | 4.0 | 18.9 | 3.0 | 7.2 |
| 589111 | 460 | 8 | < 1 | < 5 | 36 | > 1000 | 14 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1090 | 1980 | 167 | 493 | 54.3 | 13.6 | 24.0 | 2.9 | 13.1 | 2.2 | 5.5 |
| 589112 | < 30 | 5 | < 1 | < 5 | < 2 | 269 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 234 | 546 | 64.9 | 257 | 47.2 | 13.4 | 31.2 | 4.1 | 20.6 | 3.2 | 7.6 |
| 589113 | 30 | 7 | < 1 | < 5 | 7 | 894 | 2 | 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 293 | 721 | 89.1 | 360 | 65.3 | 18.0 | 43.5 | 5.7 | 26.0 | 4.0 | 9.1 |
| 589114 | 30 | 7 | < 1 | < 5 | 10 | 563 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 257 | 614 | 74.8 | 302 | 54.8 | 15.8 | 37.3 | 4.6 | 22.7 | 3.5 | 8.3 |
| 589115 | 30 | 4 | < 1 | < 5 | < 2 | 434 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 287 | 683 | 82.3 | 323 | 57.5 | 16.1 | 38.7 | 5.1 | 24.0 | 3.7 | 8.3 |
| 589116 | 130 | 21 | 1 | 10 | 38 | 483 | 5 | 3.3 | < 0.2 | 2 | 0.5 | 0.6 | 252 | 697 | 80.3 | 321 | 57.4 | 16.2 | 37.4 | 4.4 | 19.8 | 2.9 | 7.0 |
| 589117 | < 30 | 7 | < 1 | 5 | 5 | 129 | 4 | 1.2 | < 0.2 | < 1 | < 0.5 | < 0.5 | 256 | 596 | 71.5 | 286 | 51.4 | 15.1 | 35.0 | 4.5 | 21.2 | 3.3 | 7.8 |
| 589118 | < 30 | 10 | 2 | 14 | < 2 | 65 | 4 | 0.8 | < 0.2 | < 1 | < 0.5 | < 0.5 | 470 | 1170 | 143 | 640 | 144 | 42.5 | 91.4 | 9.2 | 34.0 | 4.2 | 8.3 |
| 589119 | 150 | 3 | < 1 | < 5 | < 2 | 153 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 309 | 744 | 92.8 | 391 | 81.9 | 25.2 | 60.0 | 7.3 | 29.5 | 4.0 | 7.5 |
| 589120 | < 30 | 4 | < 1 | < 5 | < 2 | 551 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 249 | 599 | 72.7 | 288 | 53.3 | 15.1 | 36.5 | 4.6 | 22.9 | 3.5 | 8.4 |
| 589121 | < 30 | 6 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 270 | 667 | 82.0 | 331 | 59.4 | 16.6 | 38.6 | 4.7 | 22.2 | 3.4 | 8.0 |
| 589122 | < 30 | 5 | < 1 | < 5 | < 2 | 696 | < 2 | 1.0 | < 0.2 | < 1 | < 0.5 | < 0.5 | 278 | 677 | 82.8 | 334 | 60.7 | 17.5 | 41.1 | 5.0 | 23.1 | 3.5 | 8.5 |
| 589123 | 60 | 13 | < 1 | 15 | 26 | 754 | 5 | 3.4 | < 0.2 | 1 | < 0.5 | < 0.5 | 267 | 663 | 82.3 | 340 | 60.4 | 17.4 | 40.1 | 4.9 | 22.8 | 3.4 | 8.0 |
| 589124 | < 30 | 2 | < 1 | < 5 | < 2 | 386 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 595 | 71.0 | 280 | 50.9 | 14.4 | 33.8 | 4.2 | 20.6 | 3.2 | 7.9 |
| 589125 | < 30 | 3 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 277 | 665 | 79.9 | 316 | 57.0 | 17.0 | 39.6 | 4.9 | 23.5 | 3.6 | 8.3 |
| 589126 | 140 | 4 | < 1 | < 5 | < 2 | 623 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 408 | 1020 | 127 | 513 | 88.2 | 24.4 | 53.7 | 6.6 | 27.0 | 3.9 | 8.3 |
| 589127 | < 30 | 5 | < 1 | < 5 | < 2 | > 1000 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 279 | 682 | 83.6 | 337 | 60.2 | 16.8 | 38.6 | 4.8 | 22.3 | 3.5 | 7.8 |
| 589128 | < 30 | 4 | < 1 | < 5 | < 2 | 971 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 259 | 617 | 74.0 | 291 | 50.8 | 14.5 | 33.8 | 4.3 | 20.6 | 3.1 | 7.6 |
| 589129 | < 30 | 5 | < 1 | < 5 | 3 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 227 | 529 | 62.6 | 249 | 44.4 | 12.7 | 29.4 | 3.8 | 18.9 | 2.9 | 7.3 |

Results

Activation Laboratories Ltd.

Report: A18-03918

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589130 | < 30 | 3 | < 1 | < 5 | < 2 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 243 | 568 | 67.9 | 267 | 47.1 | 13.8 | 32.1 | 4.1 | 20.2 | 3.1 | 7.8 |
| 589131 | < 30 | 5 | < 1 | 6 | 4 | 130 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 576 | 68.2 | 267 | 47.5 | 13.3 | 31.7 | 4.0 | 19.4 | 3.1 | 7.1 |
| 589132 | 70 | 18 | 1 | 14 | 39 | > 1000 | 2 | 0.7 | < 0.2 | 2 | < 0.5 | 0.6 | 262 | 696 | 78.1 | 304 | 51.8 | 14.7 | 34.1 | 4.0 | 18.4 | 2.9 | 6.8 |
| 589133 | < 30 | 4 | < 1 | 5 | < 2 | 249 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 248 | 582 | 69.4 | 274 | 48.5 | 13.7 | 32.0 | 4.2 | 20.1 | 3.1 | 7.4 |
| 589134 | < 30 | 4 | < 1 | 47 | < 2 | 126 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 216 | 503 | 60.2 | 237 | 43.8 | 12.7 | 29.9 | 4.1 | 19.9 | 3.1 | 7.4 |
| 589135 | 80 | 14 | < 1 | < 5 | 23 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 269 | 665 | 81.1 | 324 | 56.3 | 15.7 | 36.8 | 4.6 | 20.7 | 3.1 | 7.3 |
| 589136 | 60 | 22 | < 1 | 6 | 106 | 411 | 3 | 0.7 | < 0.2 | 2 | < 0.5 | 2.4 | 156 | 323 | 35.0 | 127 | 17.8 | 4.30 | 10.2 | 1.2 | 5.1 | 0.8 | 1.9 |
| 589137 | 50 | 9 | < 1 | 9 | 8 | 272 | 3 | 1.1 | < 0.2 | 1 | < 0.5 | < 0.5 | 348 | 805 | 101 | 400 | 73.6 | 21.2 | 49.3 | 6.2 | 30.2 | 4.7 | 10.8 |
| 589138 | 160 | 11 | < 1 | 6 | 19 | 353 | 4 | 1.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 436 | 917 | 106 | 405 | 68.3 | 19.3 | 45.3 | 5.7 | 26.7 | 4.1 | 9.4 |
| 589139 | 150 | 24 | < 1 | < 5 | 117 | 658 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 | 4.8 | 149 | 297 | 35.0 | 133 | 23.8 | 5.67 | 15.5 | 2.0 | 9.4 | 1.5 | 3.9 |
| 589140 | 70 | 14 | < 1 | < 5 | 40 | 917 | 24 | < 0.5 | < 0.2 | 1 | < 0.5 | 0.7 | 558 | 979 | 102 | 352 | 54.9 | 15.9 | 35.1 | 4.3 | 19.4 | 2.8 | 6.5 |
| 589141 | 100 | 19 | 1 | < 5 | 110 | 187 | 11 | 0.6 | < 0.2 | 2 | < 0.5 | 1.8 | 613 | 948 | 90.8 | 298 | 39.3 | 10.2 | 20.8 | 2.5 | 10.7 | 1.5 | 3.6 |
| 589142 | 100 | 14 | 2 | 12 | 18 | 311 | 4 | 0.7 | < 0.2 | < 1 | < 0.5 | < 0.5 | 557 | 1390 | 165 | 695 | 146 | 42.8 | 96.1 | 10.9 | 44.9 | 6.0 | 12.5 |
| 589143 | 120 | 19 | < 1 | 5 | 81 | 93 | 3 | 0.8 | < 0.2 | 3 | < 0.5 | 1.0 | 132 | 240 | 26.1 | 93.6 | 15.7 | 4.32 | 10.1 | 1.3 | 6.3 | 1.0 | 2.4 |
| 589144 | 60 | 9 | 1 | < 5 | 23 | 117 | 4 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 357 | 764 | 76.3 | 276 | 45.7 | 12.9 | 29.7 | 3.6 | 17.0 | 2.8 | 6.6 |
| 589145 | 90 | 20 | < 1 | < 5 | 88 | 86 | 12 | 0.8 | < 0.2 | 7 | < 0.5 | < 0.5 | 248 | 418 | 44.0 | 151 | 22.0 | 5.40 | 10.7 | 1.0 | 4.3 | 0.6 | 1.4 |
| 589146 | < 30 | 5 | < 1 | < 5 | 5 | 276 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 268 | 620 | 75.2 | 292 | 52.5 | 15.3 | 35.9 | 4.8 | 22.8 | 3.5 | 8.1 |
| 589147 | < 30 | 7 | < 1 | < 5 | 8 | 489 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 271 | 635 | 76.6 | 298 | 53.2 | 15.4 | 37.6 | 5.1 | 23.7 | 3.6 | 8.4 |
| 589148 | 50 | 11 | 1 | 7 | 9 | 791 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 335 | 831 | 89.9 | 346 | 59.1 | 16.8 | 37.2 | 4.4 | 20.1 | 3.1 | 7.4 |
| 589149 | < 30 | < 1 | 1 | < 5 | < 2 | 6 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 2.2 | 3.0 | 0.46 | 1.8 | 0.3 | 0.09 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589150 | 120 | 21 | < 1 | 7 | 71 | 734 | 6 | 0.8 | < 0.2 | 6 | < 0.5 | 0.7 | 206 | 408 | 46.2 | 172 | 28.8 | 7.95 | 18.0 | 2.2 | 9.6 | 1.5 | 3.4 |
| 589151 | < 30 | 6 | < 1 | < 5 | 3 | 288 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 282 | 653 | 78.9 | 304 | 55.1 | 15.8 | 37.7 | 5.2 | 23.9 | 3.7 | 8.8 |
| 589152 | 100 | 22 | < 1 | < 5 | 77 | 272 | 5 | 0.6 | < 0.2 | 5 | < 0.5 | < 0.5 | 109 | 246 | 30.2 | 117 | 20.3 | 5.57 | 12.7 | 1.6 | 7.2 | 1.1 | 2.6 |
| 589153 | 120 | 19 | 2 | 8 | 42 | > 1000 | 2 | 0.9 | < 0.2 | 3 | < 0.5 | < 0.5 | 364 | 951 | 106 | 412 | 78.3 | 23.0 | 55.2 | 6.9 | 31.4 | 4.8 | 10.6 |
| 589154 | 100 | 7 | < 1 | 7 | 14 | 770 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 300 | 673 | 79.5 | 303 | 54.6 | 15.9 | 38.7 | 5.4 | 24.5 | 3.8 | 9.2 |
| 589155 | 470 | 13 | 1 | 6 | 36 | > 1000 | 16 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1230 | 2160 | 188 | 548 | 59.5 | 15.0 | 25.7 | 3.1 | 14.8 | 2.5 | 6.2 |
| 589156 | 110 | 21 | < 1 | 6 | 70 | 249 | 4 | 0.6 | < 0.2 | 3 | < 0.5 | 0.9 | 104 | 215 | 25.2 | 97.6 | 18.8 | 4.93 | 12.1 | 1.4 | 6.5 | 1.0 | 2.3 |
| 589157 | 120 | 17 | 3 | 25 | 13 | 150 | 31 | < 0.5 | < 0.2 | < 1 | 0.6 | < 0.5 | 1580 | 2970 | 345 | 1280 | 206 | 53.2 | 97.0 | 6.1 | 15.3 | 1.1 | 2.0 |
| 589158 | 80 | 22 | < 1 | < 5 | 68 | 62 | 6 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 146 | 265 | 28.9 | 105 | 17.6 | 5.06 | 10.8 | 1.1 | 4.4 | 0.6 | 1.2 |
| 589159 | 90 | 17 | 1 | 5 | 39 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 282 | 731 | 79.9 | 310 | 56.3 | 15.8 | 38.8 | 5.3 | 25.4 | 4.0 | 9.5 |
| 589160 | 200 | 16 | 1 | 15 | 67 | 232 | 2 | 1.8 | < 0.2 | 3 | 0.6 | 1.2 | 247 | 536 | 65.1 | 252 | 47.0 | 13.8 | 33.0 | 4.2 | 20.4 | 3.1 | 6.7 |
| 589161 | 280 | 21 | 2 | 9 | 51 | > 1000 | 52 | 0.5 | 0.2 | 2 | 0.5 | < 0.5 | 280 | 826 | 105 | 478 | 126 | 40.5 | 99.9 | 12.5 | 54.1 | 7.6 | 15.2 |
| 589162 | 130 | 21 | < 1 | < 5 | 116 | > 1000 | < 2 | 0.7 | < 0.2 | 3 | < 0.5 | 0.7 | 242 | 587 | 72.4 | 282 | 49.4 | 13.6 | 33.2 | 4.4 | 22.6 | 3.7 | 9.3 |
| 589163 | 130 | 21 | < 1 | < 5 | 101 | 407 | 3 | 0.6 | < 0.2 | 4 | < 0.5 | 0.7 | 117 | 271 | 33.2 | 130 | 24.4 | 7.07 | 18.2 | 2.4 | 12.9 | 2.1 | 5.0 |
| 589164 | 140 | 24 | 1 | 6 | 118 | 966 | < 2 | 0.9 | < 0.2 | 4 | < 0.5 | 0.6 | 201 | 536 | 58.9 | 223 | 33.2 | 8.04 | 16.3 | 1.9 | 8.0 | 1.2 | 2.8 |
| 589165 | 50 | 14 | 2 | 17 | 21 | 177 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 496 | 1320 | 162 | 708 | 160 | 47.5 | 108 | 12.5 | 54.4 | 7.4 | 14.4 |
| 589166 | 80 | 10 | < 1 | < 5 | 46 | 169 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 247 | 586 | 72.1 | 285 | 54.6 | 16.1 | 38.7 | 4.8 | 22.5 | 3.3 | 7.7 |
| 589167 | 350 | 17 | 2 | 19 | 63 | 338 | 47 | 0.6 | 0.2 | 3 | < 0.5 | < 0.5 | 221 | 630 | 81.8 | 377 | 74.4 | 18.8 | 35.7 | 3.3 | 11.4 | 1.5 | 3.0 |
| 589168 | 80 | 12 | 2 | 22 | 22 | 463 | 27 | 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 321 | 914 | 113 | 504 | 124 | 40.3 | 101 | 13.8 | 64.7 | 9.3 | 18.9 |
| 589169 | 40 | 9 | < 1 | < 5 | 29 | 228 | 2 | 0.6 | < 0.2 | 2 | < 0.5 | < 0.5 | 233 | 532 | 65.0 | 251 | 43.9 | 12.8 | 30.2 | 3.8 | 19.4 | 3.0 | 6.9 |
| 589170 | < 30 | 6 | 1 | 7 | < 2 | 351 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 312 | 835 | 94.1 | 370 | 65.5 | 18.6 | 41.8 | 4.9 | 23.1 | 3.4 | 7.5 |
| 589171 | 110 | 10 | 1 | 10 | 20 | 180 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 595 | 68.7 | 286 | 60.7 | 18.0 | 43.1 | 5.4 | 24.9 | 3.7 | 8.0 |

Results

Activation Laboratories Ltd.

Report: A18-03918

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589172 | 130 | 21 | < 1 | < 5 | 72 | 891 | 2 | 2.0 | < 0.2 | 2 | < 0.5 | 0.6 | 227 | 496 | 59.5 | 230 | 46.1 | 13.8 | 32.7 | 4.1 | 19.4 | 2.9 | 6.4 |
| 589173 | 90 | 19 | 1 | 5 | 64 | 147 | 5 | 0.6 | < 0.2 | 5 | < 0.5 | < 0.5 | 93.8 | 214 | 26.1 | 101 | 18.2 | 5.41 | 12.5 | 1.5 | 6.9 | 1.0 | 2.2 |
| 589174 | 140 | 9 | 1 | 16 | 24 | 233 | 6 | 0.6 | < 0.2 | < 1 | 0.6 | < 0.5 | 262 | 696 | 79.3 | 324 | 67.0 | 20.1 | 49.1 | 6.5 | 30.9 | 4.7 | 10.4 |
| 589175 | < 30 | < 1 | < 1 | < 5 | < 2 | 4 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.6 | 1.8 | 0.31 | 1.3 | 0.3 | 0.07 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589176 | 140 | 19 | 1 | < 5 | 81 | 47 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.7 | 108 | 204 | 23.0 | 85.3 | 14.8 | 3.73 | 9.4 | 1.1 | 5.2 | 0.8 | 2.2 |
| 589177 | 90 | 10 | < 1 | < 5 | 47 | 274 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 220 | 511 | 62.5 | 245 | 45.9 | 13.7 | 34.3 | 5.0 | 25.9 | 4.1 | 9.6 |
| 589178 | 90 | 9 | 1 | 11 | 23 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 240 | 640 | 70.3 | 272 | 47.7 | 13.5 | 31.4 | 3.8 | 18.1 | 2.7 | 6.5 |
| 589179 | 50 | 7 | < 1 | 13 | 19 | 418 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 247 | 580 | 71.3 | 282 | 60.1 | 19.4 | 52.5 | 8.1 | 38.8 | 5.8 | 12.8 |
| 589180 | 70 | 8 | 1 | 7 | 18 | 117 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 550 | 1310 | 162 | 650 | 110 | 29.0 | 54.9 | 5.0 | 18.0 | 2.2 | 4.3 |
| 589181 | 140 | 5 | < 1 | 5 | 22 | 131 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 252 | 576 | 68.5 | 260 | 47.5 | 14.4 | 36.3 | 5.1 | 26.3 | 4.1 | 10.1 |
| 589182 | 150 | 9 | < 1 | 6 | 34 | 153 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 388 | 845 | 99.8 | 375 | 66.5 | 19.2 | 45.3 | 5.5 | 25.5 | 3.8 | 9.0 |
| 589183 | 120 | 13 | < 1 | < 5 | 62 | 536 | 6 | < 0.5 | < 0.2 | 1 | 0.6 | < 0.5 | 260 | 584 | 69.3 | 259 | 42.1 | 12.1 | 27.8 | 3.5 | 16.8 | 2.4 | 5.4 |
| 589184 | 170 | 11 | 1 | 9 | 35 | 137 | < 2 | 0.7 | < 0.2 | 1 | 0.5 | < 0.5 | 277 | 685 | 75.2 | 296 | 56.5 | 17.1 | 41.6 | 5.4 | 25.9 | 3.9 | 9.1 |
| 589185 | 70 | 13 | 3 | 12 | < 2 | 54 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 708 | 1670 | 192 | 805 | 142 | 35.4 | 62.1 | 4.3 | 11.5 | 1.3 | 2.4 |
| 589186 | 140 | 13 | < 1 | < 5 | 76 | 282 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 270 | 568 | 66.6 | 254 | 53.4 | 17.0 | 41.3 | 5.4 | 26.1 | 3.7 | 8.5 |
| 589187 | 160 | 9 | 1 | 9 | 35 | 462 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 582 | 65.2 | 252 | 50.5 | 16.6 | 40.6 | 5.5 | 25.6 | 3.7 | 8.5 |
| 589188 | 550 | 9 | < 1 | 6 | 31 | 290 | 26 | < 0.5 | < 0.2 | 1 | 0.8 | 1.1 | 213 | 484 | 58.8 | 234 | 48.8 | 15.2 | 35.1 | 4.0 | 17.6 | 2.5 | 6.2 |
| 589189 | 580 | 8 | < 1 | 17 | 18 | 56 | 23 | < 0.5 | < 0.2 | < 1 | 1.2 | < 0.5 | 227 | 562 | 60.0 | 229 | 42.4 | 13.0 | 30.7 | 3.9 | 17.8 | 2.7 | 6.6 |
| 589190 | 180 | 6 | < 1 | 5 | 10 | 284 | 48 | < 0.5 | < 0.2 | < 1 | 1.1 | < 0.5 | 305 | 714 | 88.1 | 348 | 68.6 | 21.1 | 50.8 | 6.4 | 30.3 | 4.4 | 9.8 |
| 589191 | 40 | 4 | < 1 | < 5 | 4 | 127 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 305 | 701 | 84.6 | 329 | 63.9 | 20.8 | 51.0 | 6.3 | 27.2 | 3.7 | 7.9 |
| 589192 | 150 | 18 | < 1 | < 5 | 94 | 505 | 6 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 150 | 324 | 38.8 | 151 | 33.0 | 10.5 | 25.1 | 3.0 | 13.9 | 1.8 | 3.8 |
| 589193 | 130 | 18 | 1 | < 5 | 69 | 103 | 7 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.5 | 268 | 518 | 58.5 | 220 | 46.4 | 14.8 | 34.0 | 4.0 | 16.3 | 2.1 | 4.6 |
| 589194 | < 30 | 4 | < 1 | < 5 | < 2 | 115 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 234 | 525 | 61.5 | 232 | 40.9 | 12.2 | 29.1 | 3.8 | 19.0 | 2.9 | 7.3 |
| 589195 | 80 | 5 | < 1 | < 5 | 3 | 160 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 285 | 672 | 81.7 | 316 | 58.5 | 17.6 | 43.3 | 6.0 | 29.7 | 4.9 | 11.3 |
| 589196 | 40 | 4 | < 1 | < 5 | < 2 | 56 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 341 | 777 | 93.9 | 360 | 61.4 | 17.9 | 39.3 | 4.8 | 23.2 | 3.6 | 8.3 |
| 589197 | 90 | 6 | < 1 | 5 | < 2 | 177 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 362 | 824 | 99.8 | 387 | 73.6 | 22.4 | 52.6 | 6.6 | 31.6 | 4.9 | 10.9 |
| 589198 | 100 | 7 | < 1 | < 5 | < 2 | 236 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 338 | 799 | 98.9 | 388 | 66.5 | 19.5 | 43.7 | 5.7 | 26.9 | 4.3 | 9.8 |
| 589199 | 60 | 5 | < 1 | < 5 | 2 | 590 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 314 | 743 | 90.9 | 347 | 64.6 | 19.6 | 48.1 | 6.9 | 36.4 | 6.0 | 13.8 |
| 589200 | 60 | 17 | < 1 | < 5 | 55 | 91 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 1.3 | 27.1 | 58.8 | 7.12 | 26.8 | 5.5 | 1.78 | 4.3 | 0.7 | 3.6 | 0.6 | 1.5 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589089 | 0.86 | 4.8 | 0.64 | 0.5 | 0.5 | 3 | < 0.1 | 22 | < 0.4 | 56.5 | 46.7 | 0.167 |
| 589090 | 0.74 | 4.0 | 0.55 | 1.7 | 0.9 | 11 | < 0.1 | 11 | < 0.4 | 23.4 | 14.4 | 0.180 |
| 589091 | 1.61 | 9.4 | 1.22 | 1.4 | 1.2 | 3 | < 0.1 | 20 | < 0.4 | 48.1 | 38.5 | 0.119 |
| 589092 | 0.53 | 3.0 | 0.42 | 2.4 | 1.2 | 4 | 0.1 | 10 | < 0.4 | 27.4 | 12.6 | 0.083 |
| 589093 | 0.26 | 1.7 | 0.30 | 0.2 | < 0.1 | 1 | < 0.1 | 9 | < 0.4 | 55.4 | 5.7 | < 0.003 |
| 589094 | 0.26 | 1.7 | 0.27 | 2.3 | 0.5 | 5 | < 0.1 | 10 | < 0.4 | 30.1 | 12.0 | 0.026 |
| 589095 | 2.56 | 13.8 | 1.74 | 2.0 | 4.2 | 6 | < 0.1 | 35 | < 0.4 | 77.0 | 73.0 | 0.456 |
| 589096 | 1.32 | 7.9 | 1.04 | 2.3 | 1.6 | 2 | < 0.1 | 32 | < 0.4 | 43.0 | 34.8 | 0.155 |
| 589097 | 1.15 | 6.4 | 0.78 | 1.8 | 1.6 | 2 | < 0.1 | 30 | < 0.4 | 28.3 | 28.7 | 0.150 |
| 589098 | 0.84 | 5.0 | 0.63 | 0.8 | 2.8 | 2 | < 0.1 | 15 | < 0.4 | 15.2 | 14.8 | 0.665 |
| 589099 | 0.82 | 4.8 | 0.59 | 0.3 | 0.6 | 4 | < 0.1 | 9 | < 0.4 | 13.6 | 4.8 | 0.265 |
| 589100 | 0.87 | 4.5 | 0.57 | < 0.2 | 0.3 | 5 | < 0.1 | 34 | < 0.4 | 77.7 | 9.2 | 0.004 |
| 589101 | 1.62 | 8.6 | 1.04 | 0.8 | 0.2 | < 1 | < 0.1 | 89 | < 0.4 | 76.8 | 26.7 | 0.102 |
| 589102 | 1.70 | 8.8 | 1.05 | 0.6 | 2.6 | 2 | < 0.1 | 20 | < 0.4 | 88.9 | 25.8 | 0.637 |
| 589103 | 1.02 | 5.1 | 0.65 | 0.4 | 0.8 | < 1 | < 0.1 | 65 | < 0.4 | 66.8 | 13.6 | 0.239 |
| 589104 | 0.70 | 3.3 | 0.42 | 1.4 | 2.7 | 7 | < 0.1 | 47 | < 0.4 | 63.2 | 12.3 | 0.330 |
| 589105 | 0.95 | 5.4 | 0.71 | 0.2 | 0.2 | 4 | < 0.1 | 24 | < 0.4 | 34.4 | 6.7 | 0.024 |
| 589106 | 0.57 | 3.0 | 0.37 | 1.5 | 2.4 | 3 | < 0.1 | 50 | < 0.4 | 14.7 | 4.0 | 0.171 |
| 589107 | 1.20 | 6.0 | 0.77 | 0.8 | 11.6 | < 1 | < 0.1 | 22 | < 0.4 | 16.7 | 31.3 | 0.558 |
| 589108 | 1.19 | 6.1 | 0.76 | 0.5 | 2.6 | 2 | < 0.1 | 25 | < 0.4 | 21.1 | 21.3 | 0.165 |
| 589109 | 0.93 | 4.9 | 0.65 | 0.3 | 1.4 | 4 | < 0.1 | 15 | < 0.4 | 8.9 | 9.3 | 0.207 |
| 589110 | 0.84 | 5.2 | 0.65 | < 0.2 | 0.2 | 4 | < 0.1 | 8 | < 0.4 | 4.4 | 2.3 | 0.018 |
| 589111 | 0.71 | 4.0 | 0.57 | 0.4 | 16.1 | 4 | < 0.1 | 49 | < 0.4 | 47.6 | 24.6 | 0.527 |
| 589112 | 0.88 | 5.0 | 0.67 | 0.2 | 0.5 | 5 | < 0.1 | 10 | < 0.4 | 10.3 | 7.5 | 0.133 |
| 589113 | 1.05 | 5.4 | 0.65 | 1.4 | 4.2 | 2 | < 0.1 | 19 | < 0.4 | 22.9 | 31.4 | 0.337 |
| 589114 | 0.91 | 5.1 | 0.69 | 0.8 | 2.4 | 2 | < 0.1 | 15 | < 0.4 | 14.8 | 14.3 | 0.242 |
| 589115 | 0.97 | 5.1 | 0.68 | 0.4 | 2.8 | 3 | < 0.1 | 16 | < 0.4 | 14.5 | 19.9 | 0.186 |
| 589116 | 0.82 | 4.1 | 0.52 | 4.6 | 9.1 | < 1 | < 0.1 | 13 | < 0.4 | 12.0 | 28.6 | 0.144 |
| 589117 | 0.88 | 5.0 | 0.65 | 2.2 | 3.3 | 4 | < 0.1 | 27 | < 0.4 | 8.2 | 40.3 | 0.050 |
| 589118 | 0.96 | 4.6 | 0.59 | 1.5 | 1.2 | 7 | < 0.1 | 16 | < 0.4 | 48.5 | 31.8 | 0.037 |
| 589119 | 0.89 | 5.1 | 0.62 | 0.7 | 1.4 | 6 | < 0.1 | 22 | < 0.4 | 34.9 | 19.4 | 0.058 |
| 589120 | 0.95 | 5.5 | 0.74 | 0.6 | 4.2 | 7 | < 0.1 | 19 | < 0.4 | 9.4 | 14.6 | 0.201 |
| 589121 | 0.96 | 5.2 | 0.69 | 1.2 | 7.0 | 6 | < 0.1 | 12 | < 0.4 | 10.9 | 20.0 | 0.353 |
| 589122 | 0.98 | 5.3 | 0.69 | 2.0 | 6.7 | 5 | < 0.1 | 23 | < 0.4 | 14.7 | 34.5 | 0.270 |
| 589123 | 0.96 | 4.8 | 0.63 | 4.9 | 6.5 | 2 | < 0.1 | 22 | < 0.4 | 15.5 | 37.0 | 0.295 |
| 589124 | 0.92 | 5.1 | 0.70 | 0.6 | 3.5 | 3 | < 0.1 | 13 | < 0.4 | 10.1 | 22.4 | 0.173 |
| 589125 | 1.04 | 5.3 | 0.68 | 1.2 | 6.8 | 3 | < 0.1 | 17 | < 0.4 | 24.8 | 28.9 | 0.412 |
| 589126 | 0.94 | 4.9 | 0.62 | 0.4 | 2.5 | 3 | < 0.1 | 35 | < 0.4 | 53.4 | 15.8 | 0.243 |
| 589127 | 0.94 | 5.1 | 0.64 | 0.7 | 5.3 | 3 | < 0.1 | 12 | < 0.4 | 16.5 | 15.7 | 0.542 |
| 589128 | 0.92 | 4.9 | 0.68 | 1.1 | 3.3 | 4 | < 0.1 | 9 | < 0.4 | 15.5 | 12.7 | 0.361 |
| 589129 | 0.83 | 5.0 | 0.66 | < 0.2 | 0.3 | 8 | < 0.1 | < 5 | < 0.4 | 2.6 | 1.3 | 0.023 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589130 | 0.96 | 5.2 | 0.69 | 0.2 | 0.6 | 4 | < 0.1 | < 5 | < 0.4 | 4.0 | 4.7 | 0.054 |
| 589131 | 0.84 | 4.9 | 0.61 | 0.3 | 0.4 | 4 | < 0.1 | 9 | < 0.4 | 8.1 | 9.5 | 0.055 |
| 589132 | 0.78 | 4.1 | 0.52 | 1.3 | 22.0 | 1 | < 0.1 | 31 | < 0.4 | 23.4 | 92.9 | 0.458 |
| 589133 | 0.90 | 5.1 | 0.66 | 0.5 | 6.1 | 3 | < 0.1 | 34 | < 0.4 | 7.7 | 58.0 | 0.130 |
| 589134 | 0.90 | 5.2 | 0.70 | 0.3 | 1.2 | 4 | < 0.1 | 11 | < 0.4 | 4.3 | 15.2 | 0.046 |
| 589135 | 0.87 | 4.6 | 0.57 | 0.6 | 3.6 | 6 | < 0.1 | 20 | < 0.4 | 23.1 | 8.6 | 0.543 |
| 589136 | 0.22 | 1.2 | 0.18 | 3.5 | 1.6 | 4 | 0.2 | 8 | < 0.4 | 20.0 | 7.3 | 0.086 |
| 589137 | 1.24 | 6.4 | 0.83 | 1.6 | 2.9 | < 1 | 0.9 | 25 | < 0.4 | 16.2 | 27.0 | 0.131 |
| 589138 | 1.12 | 5.6 | 0.69 | 4.0 | 5.5 | < 1 | 0.6 | 20 | < 0.4 | 16.7 | 25.7 | 0.126 |
| 589139 | 0.48 | 2.9 | 0.42 | 2.6 | 3.1 | 2 | 0.8 | 13 | < 0.4 | 9.8 | 7.2 | 0.115 |
| 589140 | 0.73 | 3.9 | 0.55 | 0.9 | 3.4 | 1 | 0.4 | 30 | < 0.4 | 34.5 | 23.9 | 0.355 |
| 589141 | 0.43 | 2.2 | 0.30 | 2.7 | 1.8 | 5 | 0.6 | 15 | < 0.4 | 19.3 | 7.0 | 0.030 |
| 589142 | 1.39 | 6.9 | 0.85 | 1.3 | 2.7 | 3 | < 0.1 | 18 | < 0.4 | 46.5 | 26.2 | 0.144 |
| 589143 | 0.30 | 1.8 | 0.26 | 3.9 | 1.0 | 5 | 0.5 | 6 | < 0.4 | 7.1 | 2.5 | 0.016 |
| 589144 | 0.84 | 4.4 | 0.58 | 0.7 | 1.4 | 2 | < 0.1 | 5 | < 0.4 | 6.5 | 5.6 | 0.037 |
| 589145 | 0.16 | 0.8 | 0.11 | 2.2 | 1.0 | < 1 | 0.4 | 7 | < 0.4 | 10.3 | 2.0 | 0.020 |
| 589146 | 0.97 | 5.4 | 0.70 | 0.8 | 4.9 | < 1 | 0.2 | 46 | < 0.4 | 8.6 | 66.0 | 0.138 |
| 589147 | 1.01 | 5.4 | 0.69 | 1.1 | 7.0 | 9 | 0.2 | 33 | < 0.4 | 11.4 | 49.2 | 0.197 |
| 589148 | 0.86 | 4.6 | 0.56 | 0.9 | 13.7 | 1 | < 0.1 | 24 | < 0.4 | 10.6 | 68.9 | 0.297 |
| 589149 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | 0.1 | < 5 | < 0.4 | 0.1 | 0.3 | < 0.003 |
| 589150 | 0.40 | 2.3 | 0.30 | 3.1 | 9.0 | < 1 | 0.4 | 31 | < 0.4 | 13.3 | 35.9 | 0.133 |
| 589151 | 1.05 | 6.0 | 0.75 | 0.5 | 1.2 | 9 | 0.1 | 17 | < 0.4 | 13.1 | 18.2 | 0.158 |
| 589152 | 0.31 | 1.7 | 0.23 | 3.0 | 2.9 | < 1 | 0.3 | 14 | < 0.4 | 12.8 | 12.4 | 0.051 |
| 589153 | 1.16 | 5.8 | 0.70 | 1.9 | 27.5 | < 1 | < 0.1 | 53 | < 0.4 | 50.8 | 172 | 0.852 |
| 589154 | 1.09 | 5.8 | 0.75 | 0.5 | 3.1 | < 1 | 0.1 | 55 | < 0.4 | 26.9 | 39.2 | 0.363 |
| 589155 | 0.77 | 4.4 | 0.58 | 0.5 | 16.8 | < 1 | 0.2 | 54 | < 0.4 | 55.1 | 27.9 | 0.519 |
| 589156 | 0.30 | 1.8 | 0.26 | 3.6 | 1.7 | < 1 | 0.3 | 23 | < 0.4 | 15.6 | 6.1 | 0.052 |
| 589157 | 0.26 | 1.4 | 0.22 | 1.7 | < 0.1 | 5 | 0.2 | 29 | < 0.4 | 135 | 4.1 | 0.028 |
| 589158 | 0.14 | 0.9 | 0.14 | 3.4 | 0.3 | 1 | 0.3 | 19 | < 0.4 | 12.7 | 2.5 | 0.013 |
| 589159 | 1.10 | 5.6 | 0.68 | 0.9 | 10.3 | 4 | < 0.1 | 24 | < 0.4 | 42.3 | 45.8 | 0.536 |
| 589160 | 0.73 | 3.9 | 0.48 | 8.0 | 6.1 | 6 | 0.3 | 36 | < 0.4 | 31.4 | 16.5 | 0.060 |
| 589161 | 1.66 | 7.5 | 0.80 | 1.4 | 8.3 | 5 | < 0.1 | 26 | 0.7 | 76.5 | 18.6 | 0.502 |
| 589162 | 1.07 | 5.7 | 0.70 | 2.3 | 6.9 | 2 | 0.3 | 20 | < 0.4 | 55.9 | 25.6 | 0.761 |
| 589163 | 0.59 | 3.2 | 0.38 | 3.6 | 1.3 | 2 | 0.3 | 12 | < 0.4 | 17.5 | 9.4 | 0.060 |
| 589164 | 0.35 | 2.1 | 0.27 | 2.5 | 3.2 | 6 | < 0.1 | 10 | < 0.4 | 20.2 | 9.8 | 0.177 |
| 589165 | 1.57 | 7.4 | 0.80 | 0.9 | 1.4 | 3 | < 0.1 | 27 | < 0.4 | 77.6 | 10.8 | 0.054 |
| 589166 | 0.90 | 4.9 | 0.65 | 0.4 | < 0.1 | < 1 | 0.2 | 15 | < 0.4 | 13.0 | 8.7 | 0.056 |
| 589167 | 0.34 | 1.9 | 0.25 | 1.7 | 2.3 | 6 | < 0.1 | 50 | 0.8 | 43.6 | 6.9 | 0.061 |
| 589168 | 2.07 | 9.9 | 1.15 | 0.9 | 2.4 | 6 | < 0.1 | 25 | < 0.4 | 77.6 | 30.9 | 0.157 |
| 589169 | 0.80 | 4.2 | 0.59 | 2.4 | 3.7 | < 1 | 0.2 | 12 | < 0.4 | 6.9 | 11.5 | 0.073 |
| 589170 | 0.89 | 5.2 | 0.68 | 0.7 | 4.2 | 2 | < 0.1 | 11 | < 0.4 | 8.5 | 18.0 | 0.172 |
| 589171 | 0.92 | 5.3 | 0.66 | 0.7 | 0.3 | 4 | < 0.1 | 20 | < 0.4 | 21.5 | 6.0 | 0.117 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589172 | 0.67 | 3.6 | 0.49 | 5.7 | 5.9 | 4 | 0.3 | 15 | < 0.4 | 34.1 | 14.1 | 0.255 |
| 589173 | 0.27 | 1.6 | 0.21 | 3.3 | 0.5 | 8 | < 0.1 | 8 | < 0.4 | 8.0 | 2.4 | 0.030 |
| 589174 | 1.19 | 6.4 | 0.82 | 1.4 | 1.0 | 3 | < 0.1 | 46 | 0.5 | 23.6 | 6.7 | 0.111 |
| 589175 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | 0.1 | 0.1 | < 0.003 |
| 589176 | 0.30 | 2.0 | 0.29 | 3.1 | 0.5 | 8 | 0.4 | 10 | < 0.4 | 6.8 | 1.0 | 0.009 |
| 589177 | 1.07 | 5.5 | 0.71 | 1.1 | 0.4 | < 1 | 0.2 | 24 | < 0.4 | 23.2 | 9.6 | 0.097 |
| 589178 | 0.72 | 4.1 | 0.54 | 0.8 | 1.4 | 2 | < 0.1 | 42 | < 0.4 | 21.3 | 10.8 | 0.484 |
| 589179 | 1.50 | 8.1 | 1.03 | 0.7 | 1.0 | 1 | 0.2 | 22 | < 0.4 | 46.7 | 14.0 | 0.137 |
| 589180 | 0.45 | 2.4 | 0.32 | 0.9 | 0.7 | 4 | < 0.1 | 8 | < 0.4 | 112 | 5.2 | 0.015 |
| 589181 | 1.23 | 6.8 | 0.87 | 0.2 | < 0.1 | < 1 | < 0.1 | 76 | < 0.4 | 24.1 | 8.2 | 0.072 |
| 589182 | 0.99 | 5.2 | 0.64 | 1.1 | 2.9 | < 1 | 0.2 | 86 | < 0.4 | 22.4 | 41.7 | 0.062 |
| 589183 | 0.62 | 3.2 | 0.42 | 0.9 | 1.7 | < 1 | 0.2 | 14 | < 0.4 | 34.2 | 8.3 | 0.115 |
| 589184 | 1.13 | 5.8 | 0.75 | 2.3 | 1.6 | 8 | < 0.1 | 40 | < 0.4 | 32.8 | 13.5 | 0.052 |
| 589185 | 0.26 | 1.5 | 0.24 | < 0.2 | 0.5 | 3 | < 0.1 | 18 | < 0.4 | 99.8 | 4.7 | 0.006 |
| 589186 | 0.97 | 4.5 | 0.54 | 1.9 | 2.8 | 5 | 0.3 | 13 | < 0.4 | 46.7 | 14.1 | 0.056 |
| 589187 | 0.98 | 5.0 | 0.62 | 0.7 | 2.3 | 3 | < 0.1 | 49 | < 0.4 | 41.0 | 12.5 | 0.154 |
| 589188 | 0.71 | 4.0 | 0.55 | 2.0 | 1.1 | 1 | 0.4 | 100 | < 0.4 | 53.2 | 16.8 | 0.112 |
| 589189 | 0.79 | 4.4 | 0.55 | 0.7 | < 0.1 | 2 | < 0.1 | 99 | 0.5 | 28.0 | 14.6 | 0.006 |
| 589190 | 1.13 | 5.7 | 0.72 | 0.6 | 0.7 | < 1 | 0.3 | 75 | < 0.4 | 51.2 | 40.9 | 0.122 |
| 589191 | 0.89 | 4.5 | 0.58 | 0.3 | 0.2 | < 1 | 0.1 | 32 | < 0.4 | 61.6 | 16.5 | 0.046 |
| 589192 | 0.39 | 1.9 | 0.24 | 2.6 | 2.3 | 4 | 0.3 | 17 | < 0.4 | 34.1 | 9.6 | 0.087 |
| 589193 | 0.48 | 2.2 | 0.25 | 1.4 | 1.2 | 4 | 0.3 | 17 | < 0.4 | 47.7 | 4.1 | 0.018 |
| 589194 | 0.91 | 5.1 | 0.66 | < 0.2 | < 0.1 | < 1 | < 0.1 | 9 | < 0.4 | 9.3 | 1.7 | 0.021 |
| 589195 | 1.29 | 6.5 | 0.81 | 0.9 | 1.1 | < 1 | < 0.1 | 55 | < 0.4 | 30.7 | 18.4 | 0.067 |
| 589196 | 0.95 | 4.5 | 0.59 | 0.2 | 0.7 | < 1 | < 0.1 | 15 | < 0.4 | 35.6 | 4.6 | 0.007 |
| 589197 | 1.18 | 5.6 | 0.70 | 0.2 | 0.4 | < 1 | < 0.1 | 35 | < 0.4 | 48.0 | 8.3 | 0.076 |
| 589198 | 1.09 | 5.5 | 0.69 | 0.3 | 0.5 | < 1 | < 0.1 | 26 | < 0.4 | 35.4 | 5.6 | 0.081 |
| 589199 | 1.63 | 8.1 | 0.96 | 0.4 | 1.8 | < 1 | < 0.1 | 31 | < 0.4 | 44.3 | 10.5 | 0.253 |
| 589200 | 0.20 | 1.2 | 0.15 | 2.7 | 0.8 | < 1 | 0.3 | 9 | < 0.4 | 5.9 | 2.0 | 0.016 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu | |
|-----------------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|-----|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 | |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS | |
| NIST 694 Meas | 11.45 | 1.82 | 0.77 | 0.013 | 0.34 | 42.74 | 0.88 | 0.54 | 0.117 | 30.13 | | | | | 1595 | | | | | | | | | |
| NIST 694 Cert | 11.2 | 1.80 | 0.790 | 0.0116 | 0.330 | 43.6 | 0.860 | 0.510 | 0.110 | 30.2 | | | | | 1740 | | | | | | | | | |
| DNC-1 Meas | 48.05 | 18.49 | 10.02 | 0.148 | 10.13 | 11.48 | 1.92 | 0.22 | 0.489 | 0.08 | | | 31 | 154 | 105 | 143 | 17 | 37 | | 59 | 270 | 100 | | |
| DNC-1 Cert | 47.15 | 18.34 | 9.97 | 0.150 | 10.13 | 11.49 | 1.890 | 0.234 | 0.480 | 0.070 | | | 31 | 148 | 118 | 144.0 | 18.0 | 38 | | 57 | 247 | 100 | | |
| LKSD-3 Meas | | | | | | | | | | | | | | | | | | | | 80 | 31 | | 40 | |
| LKSD-3 Cert | | | | | | | | | | | | | | | | | | | | 87.0 | 30.0 | | 35.0 | |
| TDB-1 Meas | | | | | | | | | | | | | | | | | | | | 250 | | 90 | 330 | |
| TDB-1 Cert | | | | | | | | | | | | | | | | | | | | 251 | | 92 | 323 | |
| W-2a Meas | 53.21 | 15.16 | 10.84 | 0.167 | 6.27 | 11.04 | 2.21 | 0.61 | 1.071 | 0.16 | | | 35 | < 1 | 268 | 172 | 194 | 20 | 94 | 90 | 44 | 70 | 110 | |
| W-2a Cert | 52.4 | 15.4 | 10.7 | 0.163 | 6.37 | 10.9 | 2.14 | 0.626 | 1.06 | 0.140 | | | 36.0 | 1.30 | 262 | 182 | 190 | 24.0 | 94.0 | 92.0 | 43.0 | 70.0 | 110 | |
| SY-4 Meas | 51.05 | 20.34 | 6.06 | 0.106 | 0.51 | 8.16 | 6.88 | 1.65 | 0.284 | 0.14 | | | 2 | 3 | 8 | 341 | 1198 | 117 | 546 | | | | | |
| SY-4 Cert | 49.9 | 20.69 | 6.21 | 0.108 | 0.54 | 8.05 | 7.10 | 1.66 | 0.287 | 0.131 | | | 1.1 | 2.6 | 8.0 | 340 | 1191 | 119 | 517 | | | | | |
| CTA-AC-1 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| BIR-1a Meas | 48.90 | 15.44 | 11.61 | 0.171 | 9.60 | 13.55 | 1.83 | 0.02 | 0.953 | 0.05 | | | 43 | < 1 | 325 | 7 | 108 | 15 | 15 | 380 | 54 | 180 | 130 | |
| BIR-1a Cert | 47.96 | 15.50 | 11.30 | 0.175 | 9.700 | 13.30 | 1.82 | 0.030 | 0.96 | 0.021 | | | 44 | 0.58 | 310 | 6 | 110 | 16 | 18 | 370 | 52 | 170 | 125 | |
| NCS DC86312 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC86312 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | | | | | | | | | | | | | | | | | | | | | | | 1010 | |
| NCS DC70009 (GBW07241) Cert | | | | | | | | | | | | | | | | | | | | | | | 960 | |
| OREAS 100a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 17 | 180 | |
| OREAS 100a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 18.1 | 169 | |
| OREAS 101a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 47 | 440 | |
| OREAS 101a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 48.8 | 430 | |
| OREAS 101b (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 46 | < 20 | 420 |
| OREAS 101b (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 47 | 9 | 420 |
| JR-1 Meas | | | | | | | | | | | | | | | | | | | | | | | < 20 | |
| JR-1 Cert | | | | | | | | | | | | | | | | | | | | | | | 1.67 | |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|-----------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| SX18-04 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589103 Orig | 2.02 | 0.09 | 4.72 | 0.519 | 3.40 | 44.82 | 0.02 | 0.04 | 0.047 | 2.22 | 36.41 | 94.31 | 6 | < 1 | 31 | 3543 | 2784 | 111 | 14 | < 20 | 11 | < 20 | 20 |
| 589103 Dup | 2.09 | 0.09 | 4.76 | 0.518 | 3.40 | 44.38 | 0.01 | 0.05 | 0.047 | 2.19 | 36.40 | 93.93 | 6 | < 1 | 30 | 3497 | 2795 | 109 | 14 | < 20 | 10 | < 20 | 20 |
| 589120 Orig | 3.10 | 0.10 | 2.24 | 0.332 | 1.49 | 49.14 | 0.28 | 0.12 | 0.197 | 3.11 | 37.02 | 97.12 | 2 | < 1 | 36 | 378 | 8445 | 93 | 76 | < 20 | 3 | < 20 | < 10 |
| 589120 Dup | 2.90 | 0.11 | 2.26 | 0.332 | 1.51 | 49.75 | 0.28 | 0.12 | 0.189 | 3.10 | 36.98 | 97.53 | 2 | < 1 | 38 | 385 | 8740 | 91 | 73 | < 20 | 3 | < 20 | < 10 |
| 589138 Orig | 6.09 | 1.05 | 6.11 | 0.373 | 3.40 | 42.40 | 0.41 | 0.83 | 0.891 | 3.41 | 33.07 | 98.04 | 4 | 2 | 122 | 660 | 5357 | 94 | 327 | < 20 | 9 | < 20 | 10 |
| 589138 Split PREP DUP | 6.11 | 1.06 | 6.14 | 0.372 | 3.50 | 42.63 | 0.41 | 0.84 | 0.906 | 3.36 | 33.04 | 98.37 | 4 | 2 | 120 | 667 | 5258 | 93 | 354 | < 20 | 9 | < 20 | 10 |
| 589150 Orig | 41.60 | 9.47 | 6.21 | 0.182 | 5.34 | 13.65 | 4.12 | 3.66 | 0.329 | 1.66 | 11.68 | 97.89 | 6 | 6 | 143 | 739 | 3515 | 35 | 235 | 40 | 6 | < 20 | < 10 |
| 589150 Dup | 42.28 | 9.33 | 6.13 | 0.182 | 5.26 | 13.69 | 4.15 | 3.68 | 0.332 | 1.66 | 11.67 | 98.36 | 6 | 6 | 144 | 750 | 3910 | 37 | 236 | 50 | 7 | < 20 | < 10 |
| 589167 Orig | 26.28 | 6.21 | 10.24 | 0.544 | 7.25 | 17.47 | 0.44 | 4.66 | 0.588 | 0.53 | 22.56 | 96.77 | 13 | 2 | 132 | 2459 | 1041 | 38 | 58 | 80 | 23 | 40 | 40 |
| 589167 Dup | 26.25 | 6.13 | 10.24 | 0.544 | 7.18 | 17.32 | 0.44 | 4.70 | 0.584 | 0.52 | 22.54 | 96.44 | 13 | 1 | 134 | 2434 | 1104 | 38 | 62 | 80 | 22 | 40 | 30 |
| 589188 Orig | 12.61 | 2.95 | 5.19 | 0.378 | 3.97 | 37.95 | 0.75 | 1.23 | 0.598 | 0.74 | 32.01 | 98.37 | 10 | 2 | 131 | 1898 | 2506 | 67 | 107 | 160 | 14 | 100 | 40 |
| 589188 Split PREP DUP | 11.86 | 2.85 | 5.05 | 0.376 | 3.79 | 38.10 | 0.68 | 1.14 | 0.563 | 0.75 | 32.41 | 97.57 | 11 | 2 | 124 | 1862 | 2570 | 68 | 101 | 150 | 14 | 100 | 40 |
| Method Blank | < 0.01 | < 0.01 | 0.01 | 0.003 | < 0.01 | 0.01 | < 0.01 | < 0.01 | 0.001 | 0.03 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | 3 | < 20 | < 1 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | 0.01 | 0.002 | 0.01 | 0.01 | < 0.01 | < 0.01 | 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | 2 | < 2 | < 1 | 2 | | | | |
| Method Blank | < 0.01 | 0.01 | 0.02 | 0.002 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.002 | 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| NIST 694 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| DNC-1 Meas | 70 | 14 | | | | 3 | | | | | 0.9 | | 3.8 | | | 5.1 | | 0.61 | | | | | |
| DNC-1 Cert | 70 | 15 | | | | 3 | | | | | 0.96 | | 3.6 | | | 5.20 | | 0.59 | | | | | |
| LKSD-3 Meas | 150 | | | 29 | 77 | | < 2 | 2.5 | | | | 2.2 | 49.1 | 91.5 | | 45.6 | 8.0 | 1.40 | | | | 5.3 | |
| LKSD-3 Cert | 152 | | | 27.0 | 78.0 | | 2.00 | 2.70 | | | | 2.30 | 52.0 | 90.0 | | 44.0 | 8.00 | 1.50 | | | | 4.90 | |
| TDB-1 Meas | 150 | | | | | | | | | | | | 17.6 | 41.2 | | 24.5 | | 2.10 | | | | | |
| TDB-1 Cert | 155 | | | | | | | | | | | | 17 | 41 | | 23 | | 2.1 | | | | | |
| W-2a Meas | 70 | 18 | 1 | | 19 | | < 2 | | | | | | 10.8 | 24.2 | | 12.9 | 3.4 | | | 0.6 | 3.9 | 0.8 | |
| W-2a Cert | 80.0 | 17.0 | 1.00 | | 21.0 | | 0.600 | | | | | | 10.0 | 23.0 | | 13.0 | 3.30 | | | 0.630 | 3.60 | 0.760 | |
| SY-4 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Meas | 40 | | | | | | | | | | | | > 2000 | > 3000 | | 1190 | 169 | 47.3 | 132 | 14.6 | | | |
| CTA-AC-1 Cert | 38.0 | | | | | | | | | | | | 2176 | 3326 | | 1087 | 162 | 46.7 | 124 | 13.9 | | | |
| BIR-1a Meas | 70 | 16 | | | | | | | | | | | 0.7 | 2.0 | | 2.5 | 1.1 | 0.53 | 2.0 | | | | |
| BIR-1a Cert | 70 | 16 | | | | | | | | | | | 0.63 | 1.9 | | 2.5 | 1.1 | 0.55 | 2.0 | | | | |
| NCS DC86312 Meas | | | | | | | | | | | | | > 2000 | 178 | | 1620 | | | 228 | 32.6 | 201 | 36.2 | 103 |
| NCS DC86312 Cert | | | | | | | | | | | | | 2360 | 190 | | 1600 | | | 225.0 | 34.6 | 183 | 36 | 96.2 |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | 100 | 17 | 10 | 65 | 481 | | | 1.9 | 1.0 | > 1000 | 2.8 | 40.7 | 24.6 | 60.3 | 8.10 | 32.9 | 12.8 | | 16.1 | 3.2 | 20.9 | 4.5 | 14.0 |
| NCS DC70009 (GBW07241) Cert | 100 | 16.5 | 11.2 | 69.9 | 500 | | | 1.8 | 1.3 | 1700 | 3.1 | 41 | 23.7 | 60.3 | 7.9 | 32.9 | 12.5 | | 14.8 | 3.3 | 20.7 | 4.5 | 13.4 |
| OREAS 100a (Fusion) Meas | | | | | | | 22 | | | | | | 273 | 471 | 47.2 | 157 | 24.4 | 3.72 | 21.8 | 3.5 | 25.0 | 5.1 | 15.4 |
| OREAS 100a (Fusion) Cert | | | | | | | 24.1 | | | | | | 260 | 463 | 47.1 | 152 | 23.6 | 3.71 | 23.6 | 3.80 | 23.2 | 4.81 | 14.9 |
| OREAS 101a (Fusion) Meas | | | | | | | 21 | | | | | | 822 | 1410 | 131 | 403 | 49.8 | 8.09 | 46.6 | 5.8 | 33.8 | 6.7 | 19.7 |
| OREAS 101a (Fusion) Cert | | | | | | | 21.9 | | | | | | 816 | 1396 | 134 | 403 | 48.8 | 8.06 | 43.4 | 5.92 | 33.3 | 6.46 | 19.5 |
| OREAS 101b (Fusion) Meas | | | | | | | 20 | | | | | | 811 | 1400 | 128 | 384 | 50.0 | 8.11 | | 5.2 | 31.9 | 6.3 | 18.8 |
| OREAS 101b (Fusion) Cert | | | | | | | 21 | | | | | | 789 | 1331 | 127 | 378 | 48 | 7.77 | | 5.37 | 32.1 | 6.34 | 18.7 |
| JR-1 Meas | < 30 | 17 | | 16 | 235 | 14 | 3 | | < 0.2 | 3 | | 19.6 | 21.0 | 48.2 | 6.00 | 24.8 | 6.0 | 0.29 | 5.1 | 1.0 | 5.8 | 1.2 | 3.3 |
| JR-1 Cert | 30.6 | 16.1 | | 16.3 | 257 | 15.2 | 3.25 | | 0.028 | 2.86 | | 20.8 | 19.7 | 47.2 | 5.58 | 23.3 | 6.03 | 0.30 | 5.06 | 1.01 | 5.69 | 1.11 | 3.61 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Meas | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| SX18-04 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589103 Orig | 130 | 13 | 2 | 20 | < 2 | 604 | 13 | < 0.5 | 0.2 | < 1 | < 0.5 | < 0.5 | 928 | 1790 | 175 | 633 | 105 | 29.7 | 66.0 | 7.7 | 33.3 | 4.5 | 9.2 |
| 589103 Dup | 130 | 12 | 2 | 19 | < 2 | 589 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 914 | 1760 | 174 | 628 | 103 | 29.7 | 65.6 | 7.6 | 32.9 | 4.5 | 10.0 |
| 589120 Orig | < 30 | 4 | < 1 | < 5 | < 2 | 538 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 247 | 597 | 72.0 | 287 | 52.9 | 15.1 | 35.9 | 4.5 | 22.6 | 3.5 | 8.4 |
| 589120 Dup | < 30 | 4 | < 1 | 5 | < 2 | 563 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 600 | 73.3 | 290 | 53.7 | 15.0 | 37.1 | 4.7 | 23.2 | 3.6 | 8.3 |
| 589138 Orig | 160 | 11 | < 1 | 6 | 19 | 353 | 4 | 1.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 436 | 917 | 106 | 405 | 68.3 | 19.3 | 45.3 | 5.7 | 26.7 | 4.1 | 9.4 |
| 589138 Split PREP DUP | 90 | 11 | < 1 | 7 | 18 | 399 | 5 | 1.4 | < 0.2 | 1 | < 0.5 | < 0.5 | 425 | 889 | 103 | 387 | 66.7 | 19.0 | 44.0 | 5.5 | 26.4 | 4.0 | 9.2 |
| 589150 Orig | 110 | 21 | < 1 | 7 | 70 | 676 | 6 | 0.8 | < 0.2 | 5 | < 0.5 | 0.7 | 206 | 409 | 46.0 | 170 | 28.5 | 7.92 | 17.9 | 2.1 | 9.7 | 1.4 | 3.4 |
| 589150 Dup | 120 | 21 | < 1 | 6 | 72 | 791 | 6 | 0.8 | < 0.2 | 6 | < 0.5 | 0.7 | 206 | 408 | 46.3 | 175 | 29.0 | 7.99 | 18.2 | 2.2 | 9.6 | 1.5 | 3.4 |
| 589167 Orig | 350 | 17 | 2 | 18 | 63 | 340 | 47 | 0.6 | 0.2 | 3 | < 0.5 | < 0.5 | 226 | 642 | 83.3 | 384 | 76.0 | 19.1 | 36.3 | 3.3 | 11.7 | 1.5 | 3.0 |
| 589167 Dup | 350 | 17 | 2 | 20 | 63 | 335 | 47 | 0.7 | 0.2 | 3 | 0.6 | < 0.5 | 216 | 617 | 80.2 | 370 | 72.9 | 18.5 | 35.1 | 3.2 | 11.2 | 1.4 | 3.1 |
| 589188 Orig | 550 | 9 | < 1 | 6 | 31 | 290 | 26 | < 0.5 | < 0.2 | 1 | 0.8 | 1.1 | 213 | 484 | 58.8 | 234 | 48.8 | 15.2 | 35.1 | 4.0 | 17.6 | 2.5 | 6.2 |
| 589188 Split PREP DUP | 570 | 8 | < 1 | 6 | 30 | 291 | 26 | < 0.5 | < 0.2 | 1 | 0.7 | 1.1 | 220 | 503 | 61.6 | 243 | 51.1 | 15.7 | 35.9 | 4.1 | 17.9 | 2.6 | 6.1 |
| Method Blank | < 30 | < 1 | < 1 | < 5 | < 2 | < 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| NIST 694 Meas | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | |
| DNC-1 Meas | | 2.1 | | | | | | | | | | |
| DNC-1 Cert | | 2.0 | | | | | | | | | | |
| LKSD-3 Meas | | 2.8 | 0.41 | 4.5 | 0.7 | | | | | 11.1 | 4.6 | |
| LKSD-3 Cert | | 2.70 | 0.400 | 4.80 | 0.700 | | | | | 11.4 | 4.60 | |
| TDB-1 Meas | | 3.2 | | | | | | | | 2.7 | | |
| TDB-1 Cert | | 3.4 | | | | | | | | 2.7 | | |
| W-2a Meas | | 2.1 | 0.31 | 2.5 | | < 1 | < 0.1 | | < 0.4 | 2.2 | 0.5 | |
| W-2a Cert | | 2.10 | 0.330 | 2.60 | | 0.300 | 0.200 | | 0.0300 | 2.40 | 0.530 | |
| SY-4 Meas | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | |
| CTA-AC-1 Meas | | 11.5 | 1.15 | 1.2 | 2.5 | | | | | 23.9 | 4.3 | |
| CTA-AC-1 Cert | | 11.4 | 1.08 | 1.13 | 2.65 | | | | | 21.8 | 4.4 | |
| BIR-1a Meas | | 1.7 | | 0.6 | | | | | | | | |
| BIR-1a Cert | | 1.7 | | 0.60 | | | | | | | | |
| NCS DC86312 Meas | 14.2 | 90.3 | 12.6 | | | | | | | 23.3 | | |
| NCS DC86312 Cert | 15.1 | 87.79 | 11.96 | | | | | | | 23.6 | | |
| VS-N Meas | | | | | | | | | | | | 0.102 |
| VS-N Cert | | | | | | | | | | | | 0.10 |
| NCS DC70009 (GBW07241) Meas | 2.30 | 14.7 | 2.36 | | | 2330 | 1.9 | | | 30.3 | | |
| NCS DC70009 (GBW07241) Cert | 2.2 | 14.9 | 2.4 | | | 2200 | 1.8 | | | 28.3 | | |
| OREAS 100a (Fusion) Meas | 2.34 | 15.5 | 2.24 | | | | | | | 53.4 | 145 | |
| OREAS 100a (Fusion) Cert | 2.31 | 14.9 | 2.26 | | | | | | | 51.6 | 135 | |
| OREAS 101a (Fusion) Meas | 2.90 | 18.7 | 2.60 | | | | | | | 36.2 | 432 | |
| OREAS 101a (Fusion) Cert | 2.90 | 17.5 | 2.66 | | | | | | | 36.6 | 422 | |
| OREAS 101b (Fusion) Meas | 2.69 | 17.8 | 2.56 | | | | | | | 36.1 | 397 | |
| OREAS 101b (Fusion) Cert | 2.66 | 17.6 | 2.58 | | | | | | | 37.1 | 396 | |
| JR-1 Meas | 0.66 | 4.5 | 0.75 | 4.3 | 1.9 | | | 18 | 0.6 | 28.1 | 9.5 | |
| JR-1 Cert | 0.67 | 4.55 | 0.71 | 4.51 | 1.86 | | | 19.3 | 0.56 | 26.7 | 8.88 | |
| SX18-01 Meas | | | | | | | | | | | | 0.691 |
| SX18-01 Cert | | | | | | | | | | | | 0.695 |
| SX18-04 Meas | | | | | | | | | | | | 1.312 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| SX18-04 Cert | | | | | | | | | | | | 1.32 |
| SX18-05 Meas | | | | | | | | | | | | 0.957 |
| SX18-05 Cert | | | | | | | | | | | | 0.973 |
| 589103 Orig | 0.98 | 5.2 | 0.66 | 0.5 | 0.8 | < 1 | < 0.1 | 75 | < 0.4 | 67.6 | 13.7 | 0.242 |
| 589103 Dup | 1.06 | 5.1 | 0.65 | 0.4 | 0.8 | < 1 | < 0.1 | 55 | < 0.4 | 65.9 | 13.6 | 0.236 |
| 589120 Orig | 0.96 | 5.5 | 0.72 | 0.7 | 4.0 | 6 | < 0.1 | 15 | < 0.4 | 9.3 | 14.4 | 0.200 |
| 589120 Dup | 0.95 | 5.5 | 0.75 | 0.6 | 4.3 | 7 | < 0.1 | 23 | < 0.4 | 9.4 | 14.8 | 0.202 |
| 589138 Orig | 1.12 | 5.6 | 0.69 | 4.0 | 5.5 | < 1 | 0.6 | 20 | < 0.4 | 16.7 | 25.7 | 0.126 |
| 589138 Split PREP DUP | 1.05 | 5.3 | 0.68 | 4.2 | 5.8 | 13 | 0.5 | 23 | < 0.4 | 16.6 | 25.8 | 0.123 |
| 589150 Orig | 0.39 | 2.2 | 0.29 | 3.2 | 8.9 | 4 | 0.4 | 31 | < 0.4 | 13.0 | 35.2 | 0.132 |
| 589150 Dup | 0.42 | 2.3 | 0.30 | 3.0 | 9.2 | < 1 | 0.4 | 31 | < 0.4 | 13.5 | 36.6 | 0.134 |
| 589167 Orig | 0.33 | 1.9 | 0.25 | 1.7 | 2.3 | 7 | < 0.1 | 49 | 0.8 | 43.7 | 6.9 | 0.066 |
| 589167 Dup | 0.34 | 1.9 | 0.25 | 1.6 | 2.2 | 5 | < 0.1 | 51 | 0.8 | 43.5 | 6.9 | 0.057 |
| 589188 Orig | 0.71 | 4.0 | 0.55 | 2.0 | 1.1 | 1 | 0.4 | 100 | < 0.4 | 53.2 | 16.8 | 0.112 |
| 589188 Split PREP DUP | 0.74 | 4.0 | 0.55 | 1.9 | 1.1 | 2 | 0.4 | 99 | < 0.4 | 54.6 | 16.8 | 0.101 |
| Method Blank | < 0.05 | < 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | < 0.1 | < 0.1 | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | < 0.003 |



Date Submitted: 06-Apr-18
Invoice No.: A18-04296
Invoice Date: 23-May-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

163 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 4C1*+ 4C1** XRF Pressed Pellet

Code 4LITHO (11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code Nb Assay - XRF XRF

REPORT **A18-04296**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed.

We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589201 | 55.47 | 8.91 | 6.77 | 0.166 | 4.42 | 5.94 | 4.22 | 3.63 | 0.506 | 0.07 | 8.52 | 98.61 | 13 | 7 | 158 | 725 | 685 | 10 | 115 | 90 | 7 | 30 | < 10 |
| 589202 | 26.95 | 4.07 | 5.06 | 0.428 | 4.72 | 26.88 | 1.63 | 3.12 | 0.197 | 2.15 | 22.75 | 97.95 | 9 | 4 | 111 | 2646 | 2192 | 91 | 49 | 60 | 10 | 30 | 10 |
| 589203 | 48.74 | 7.95 | 6.21 | 0.268 | 4.32 | 11.98 | 2.82 | 5.93 | 0.344 | 0.43 | 11.36 | 100.3 | 16 | 7 | 145 | 1707 | 1024 | 35 | 98 | 180 | 10 | 50 | < 10 |
| 589204 | 60.72 | 12.20 | 4.21 | 0.132 | 2.97 | 4.89 | 5.40 | 3.50 | 0.288 | 0.29 | 5.36 | 99.97 | 4 | 8 | 107 | 911 | 815 | 16 | 148 | < 20 | 3 | < 20 | < 10 |
| 589205 | 19.45 | 3.64 | 5.10 | 0.350 | 4.98 | 33.35 | 1.04 | 2.73 | 0.341 | 3.29 | 25.52 | 99.80 | 4 | 4 | 102 | 936 | 3897 | 82 | 154 | < 20 | 4 | < 20 | < 10 |
| 589206 | 30.65 | 5.90 | 7.21 | 0.314 | 6.40 | 20.42 | 1.99 | 4.02 | 0.898 | 2.48 | 19.13 | 99.40 | 6 | 7 | 183 | 618 | 2412 | 70 | 192 | < 20 | 8 | < 20 | 20 |
| 589207 | 45.00 | 8.70 | 6.05 | 0.200 | 5.35 | 11.85 | 2.79 | 3.75 | 0.306 | 1.41 | 12.77 | 98.19 | 4 | 6 | 144 | 739 | 1520 | 32 | 158 | < 20 | 4 | < 20 | < 10 |
| 589208 | 21.57 | 3.66 | 5.69 | 0.320 | 6.72 | 29.66 | 0.59 | 3.17 | 0.263 | 2.05 | 25.93 | 99.62 | 5 | 3 | 133 | 640 | 3703 | 61 | 78 | < 20 | 5 | < 20 | < 10 |
| 589209 | 39.03 | 7.11 | 5.76 | 0.220 | 7.41 | 15.03 | 1.82 | 4.42 | 0.330 | 1.90 | 15.31 | 98.35 | 5 | 6 | 149 | 1306 | 1528 | 57 | 106 | < 20 | 4 | < 20 | < 10 |
| 589210 | 30.24 | 5.42 | 4.96 | 0.357 | 5.50 | 25.00 | 1.15 | 2.91 | 0.189 | 2.03 | 22.88 | 100.6 | 5 | 4 | 113 | 1338 | 1796 | 75 | 63 | < 20 | 3 | < 20 | < 10 |
| 589211 | 68.84 | 12.68 | 2.52 | 0.050 | 1.63 | 3.45 | 5.23 | 1.82 | 0.244 | 0.09 | 3.12 | 99.67 | 2 | 5 | 62 | 578 | 679 | 5 | 105 | < 20 | 4 | < 20 | < 10 |
| 589212 | 42.81 | 9.24 | 4.61 | 0.279 | 4.81 | 14.24 | 2.77 | 3.56 | 0.277 | 1.07 | 14.69 | 98.35 | 5 | 5 | 117 | 1200 | 1126 | 59 | 83 | < 20 | 4 | < 20 | < 10 |
| 589213 | 19.89 | 2.53 | 3.74 | 0.404 | 3.10 | 35.59 | 0.24 | 2.20 | 0.171 | 4.66 | 26.80 | 99.33 | 9 | 2 | 122 | 6944 | 1641 | 230 | 57 | 20 | 2 | < 20 | 20 |
| 589214 | < 0.01 | 0.03 | 2.24 | 0.450 | 0.99 | 52.84 | 0.15 | 0.01 | 0.007 | 0.31 | 41.04 | 97.83 | 2 | < 1 | 9 | 1922 | 7367 | 86 | 3 | < 20 | 3 | < 20 | 10 |
| 589215 | 2.69 | 0.24 | 5.52 | 0.495 | 2.09 | 47.36 | 0.20 | 0.14 | 0.066 | 5.78 | 34.88 | 99.46 | 4 | < 1 | 28 | 2468 | 6523 | 303 | 21 | < 20 | 19 | < 20 | 20 |
| 589216 | 5.01 | 0.75 | 4.54 | 0.693 | 3.82 | 44.27 | 0.25 | 0.60 | 0.079 | 2.00 | 36.62 | 98.62 | 6 | < 1 | 27 | 4450 | 2926 | 155 | 15 | < 20 | < 1 | < 20 | < 10 |
| 589217 | 49.97 | 10.35 | 5.34 | 0.313 | 4.14 | 10.21 | 4.03 | 4.68 | 0.592 | 0.68 | 9.67 | 99.99 | 4 | 6 | 99 | 2665 | 1411 | 45 | 223 | < 20 | 5 | < 20 | 40 |
| 589218 | 20.08 | 3.79 | 6.28 | 0.558 | 3.25 | 33.12 | 1.38 | 2.44 | 0.286 | 2.58 | 24.03 | 97.80 | 8 | 3 | 69 | 3165 | 3808 | 144 | 52 | < 20 | 7 | < 20 | 20 |
| 589219 | < 0.01 | 0.04 | 1.88 | 0.469 | 0.82 | 54.29 | 0.18 | 0.02 | 0.041 | 0.16 | 41.53 | 99.27 | 3 | < 1 | 10 | 841 | 7162 | 82 | 4 | < 20 | 2 | < 20 | 10 |
| 589220 | 10.58 | 0.12 | 0.17 | 0.016 | 5.56 | 47.40 | 0.08 | 0.01 | 0.008 | < 0.01 | 37.01 | 101.0 | < 1 | < 1 | 7 | 17 | 65 | 3 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589221 | 21.14 | 3.72 | 4.64 | 0.505 | 3.50 | 32.69 | 1.48 | 2.29 | 0.279 | 0.42 | 27.93 | 98.61 | 7 | 3 | 58 | 1874 | 4334 | 80 | 47 | < 20 | 5 | < 20 | 10 |
| 589222 | 17.09 | 3.10 | 3.07 | 0.381 | 1.88 | 39.92 | 1.15 | 1.44 | 0.200 | 1.78 | 29.54 | 99.54 | 3 | 2 | 42 | 1621 | 5025 | 77 | 52 | < 20 | 4 | < 20 | 20 |
| 589223 | 32.50 | 6.52 | 5.14 | 0.287 | 4.07 | 24.16 | 3.06 | 2.38 | 0.305 | 0.61 | 20.36 | 99.40 | 4 | 6 | 133 | 1522 | 3639 | 55 | 115 | < 20 | 1 | < 20 | < 10 |
| 589224 | 10.44 | 2.01 | 3.80 | 0.375 | 3.72 | 39.98 | 0.42 | 1.59 | 0.605 | 1.56 | 33.47 | 97.96 | 2 | 1 | 49 | 977 | 5849 | 79 | 54 | < 20 | 6 | 20 | 20 |
| 589225 | 52.08 | 10.91 | 4.65 | 0.148 | 3.34 | 7.89 | 3.29 | 5.70 | 0.798 | 0.90 | 8.89 | 98.60 | 4 | 5 | 123 | 2083 | 1272 | 29 | 167 | < 20 | 7 | < 20 | 30 |
| 589226 | 27.30 | 5.06 | 4.44 | 0.307 | 4.52 | 27.33 | 0.74 | 3.16 | 0.242 | 1.85 | 23.75 | 98.69 | 5 | 2 | 107 | 1525 | 2186 | 71 | 71 | < 20 | 5 | < 20 | 10 |
| 589227 | 42.96 | 10.58 | 5.52 | 0.339 | 5.45 | 9.86 | 1.35 | 6.68 | 0.594 | 0.74 | 14.11 | 98.17 | 5 | 3 | 108 | 3240 | 1345 | 39 | 118 | < 20 | 8 | < 20 | < 10 |
| 589228 | 35.69 | 7.88 | 5.91 | 0.511 | 7.70 | 14.57 | 0.70 | 5.39 | 0.914 | 1.01 | 19.96 | 100.2 | 6 | 2 | 114 | 3113 | 1508 | 40 | 87 | < 20 | 8 | 20 | < 10 |
| 589229 | 53.73 | 11.65 | 3.68 | 0.204 | 3.48 | 8.27 | 3.38 | 3.99 | 0.293 | 0.81 | 8.93 | 98.42 | 7 | 4 | 103 | 893 | 948 | 38 | 107 | 60 | 8 | 50 | < 10 |
| 589230 | 5.95 | 0.99 | 6.35 | 1.099 | 8.77 | 34.51 | 0.19 | 0.54 | 0.137 | 3.01 | 35.76 | 97.30 | 6 | 1 | 82 | 13300 | 1849 | 135 | 10 | < 20 | 4 | < 20 | < 10 |
| 589231 | 63.97 | 12.31 | 2.63 | 0.097 | 1.52 | 5.15 | 3.99 | 3.73 | 0.260 | 0.27 | 5.41 | 99.33 | 4 | 5 | 85 | 957 | 791 | 15 | 78 | < 20 | 2 | < 20 | < 10 |
| 589232 | 54.98 | 11.13 | 3.94 | 0.125 | 3.20 | 8.51 | 3.98 | 4.37 | 0.180 | 0.32 | 8.84 | 99.56 | 3 | 6 | 129 | 956 | 1436 | 24 | 97 | < 20 | 2 | < 20 | < 10 |
| 589233 | 17.11 | 3.70 | 3.05 | 0.389 | 3.87 | 34.93 | 1.14 | 2.22 | 0.140 | 0.76 | 30.69 | 97.99 | 4 | 2 | 64 | 889 | 4493 | 63 | 33 | 40 | 3 | 40 | < 10 |
| 589234 | 51.40 | 12.61 | 5.49 | 0.146 | 7.16 | 6.94 | 4.76 | 3.68 | 0.423 | 0.30 | 5.67 | 98.60 | 14 | 5 | 118 | 856 | 1128 | 18 | 126 | 270 | 24 | 190 | 10 |
| 589235 | 48.74 | 10.90 | 6.02 | 0.231 | 5.74 | 7.12 | 1.34 | 6.71 | 0.338 | 0.05 | 11.75 | 98.95 | 6 | 7 | 210 | 1228 | 978 | 11 | 149 | < 20 | 4 | < 20 | < 10 |
| 589236 | 4.28 | 0.39 | 2.90 | 0.468 | 2.64 | 47.49 | 0.07 | 0.29 | 0.063 | 4.40 | 35.55 | 98.54 | 4 | < 1 | 38 | 6110 | 2041 | 186 | 14 | < 20 | < 1 | < 20 | 10 |
| 589237 | 7.78 | 1.19 | 3.63 | 0.440 | 3.67 | 43.40 | 0.17 | 0.94 | 0.125 | 6.93 | 29.65 | 97.91 | 5 | 1 | 48 | 6710 | 2792 | 221 | 30 | < 20 | 3 | < 20 | 10 |
| 589238 | 60.02 | 12.05 | 3.91 | 0.096 | 2.67 | 4.90 | 3.80 | 4.37 | 0.297 | 0.19 | 5.70 | 97.99 | 4 | 5 | 109 | 2580 | 988 | 13 | 124 | < 20 | 3 | < 20 | < 10 |
| 589239 | 48.61 | 9.11 | 3.37 | 0.184 | 2.31 | 15.77 | 2.93 | 2.27 | 0.191 | 0.45 | 13.03 | 98.23 | 3 | 3 | 59 | 1651 | 1113 | 28 | 76 | < 20 | 2 | < 20 | < 10 |
| 589240 | 5.82 | 1.62 | 4.09 | 0.823 | 2.13 | 48.53 | 0.37 | 0.60 | 0.216 | 2.37 | 32.14 | 98.71 | 3 | 1 | 193 | 2718 | > 10000 | 55 | 91 | < 20 | 1 | < 20 | 10 |
| 589241 | 21.47 | 4.99 | 2.55 | 0.342 | 1.52 | 36.60 | 1.40 | 2.40 | 0.265 | 1.24 | 27.10 | 99.89 | 4 | 2 | 49 | 1148 | 3979 | 75 | 60 | < 20 | < 1 | < 20 | 40 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589242 | 60.73 | 13.94 | 4.66 | 0.089 | 1.81 | 4.21 | 4.40 | 4.66 | 0.841 | 0.51 | 3.66 | 99.51 | 4 | 4 | 83 | 2078 | 1422 | 21 | 259 | 20 | 8 | 30 | 20 |
| 589243 | 5.82 | 1.01 | 3.12 | 0.498 | 2.67 | 46.35 | 0.13 | 0.80 | 0.108 | 3.04 | 35.19 | 98.72 | 4 | < 1 | 24 | 2558 | 4708 | 151 | 10 | < 20 | < 1 | < 20 | 20 |
| 589244 | 46.26 | 10.01 | 4.96 | 0.266 | 3.58 | 12.89 | 2.57 | 5.47 | 0.658 | 1.28 | 11.94 | 99.90 | 8 | 4 | 126 | 1845 | 2292 | 62 | 85 | < 20 | 7 | < 20 | 40 |
| 589245 | 61.50 | 13.39 | 3.91 | 0.103 | 1.67 | 4.35 | 3.99 | 3.99 | 0.394 | 0.35 | 4.85 | 98.50 | 5 | 4 | 121 | 1290 | 1007 | 16 | 104 | < 20 | 2 | < 20 | < 10 |
| 589246 | 5.76 | 1.05 | 3.89 | 0.479 | 2.10 | 47.49 | 0.22 | 0.60 | 0.098 | 1.42 | 36.77 | 99.89 | 4 | 1 | 51 | 3714 | 2232 | 80 | 11 | < 20 | 3 | < 20 | 10 |
| 589247 | 54.68 | 11.87 | 4.36 | 0.226 | 3.08 | 7.50 | 3.54 | 4.43 | 0.780 | 0.71 | 7.84 | 99.02 | 5 | 3 | 97 | 2363 | 1155 | 24 | 100 | < 20 | 7 | < 20 | 20 |
| 589248 | 12.93 | 2.55 | 2.79 | 0.420 | 2.17 | 41.53 | 0.62 | 1.48 | 0.097 | 3.89 | 30.88 | 99.36 | 3 | 1 | 50 | 1054 | 2951 | 101 | 21 | < 20 | < 1 | < 20 | < 10 |
| 589249 | 59.78 | 12.08 | 4.87 | 0.139 | 2.20 | 4.10 | 4.15 | 5.84 | 0.564 | 0.36 | 4.50 | 98.60 | 4 | 5 | 104 | 1823 | 1270 | 15 | 116 | 20 | 5 | < 20 | 20 |
| 589250 | 43.51 | 8.79 | 9.71 | 0.282 | 4.76 | 11.44 | 3.49 | 4.15 | 0.376 | 1.02 | 11.03 | 98.56 | 11 | 4 | 112 | 530 | 1568 | 29 | 65 | 50 | 25 | 30 | 30 |
| 589251 | 12.17 | 2.18 | 7.68 | 0.378 | 5.32 | 38.60 | 0.58 | 1.96 | 0.172 | 3.19 | 26.29 | 98.50 | 3 | 3 | 56 | 500 | 5801 | 78 | 27 | < 20 | 18 | 20 | 10 |
| 589252 | 38.06 | 7.24 | 9.86 | 0.226 | 5.08 | 15.44 | 2.42 | 3.49 | 0.291 | 2.07 | 13.92 | 98.10 | 8 | 6 | 178 | 1416 | 1697 | 80 | 129 | 20 | 25 | < 20 | < 10 |
| 589253 | 57.97 | 11.70 | 5.83 | 0.214 | 2.75 | 5.60 | 4.39 | 4.02 | 0.366 | 0.20 | 6.30 | 99.35 | 8 | 5 | 106 | 1976 | 1329 | 14 | 103 | 40 | 5 | < 20 | 10 |
| 589254 | 2.53 | 0.23 | 2.58 | 0.457 | 2.29 | 50.18 | 0.09 | 0.16 | 0.031 | 1.32 | 39.51 | 99.38 | 4 | < 1 | 28 | 913 | 3610 | 77 | 8 | < 20 | 1 | < 20 | 10 |
| 589255 | 0.20 | 0.02 | 1.52 | 0.360 | 0.83 | 54.27 | 0.11 | 0.03 | 0.006 | 0.50 | 41.38 | 99.22 | 2 | < 1 | 12 | 440 | 8573 | 70 | 5 | < 20 | 1 | < 20 | 20 |
| 589256 | < 0.01 | < 0.01 | 0.86 | 0.377 | 0.62 | 54.68 | 0.09 | < 0.01 | 0.003 | 0.12 | 42.73 | 99.23 | 1 | < 1 | 7 | 746 | 7108 | 71 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589257 | 0.35 | 0.03 | 1.10 | 0.369 | 0.64 | 54.12 | 0.10 | 0.01 | 0.003 | 0.13 | 42.34 | 99.20 | < 1 | < 1 | 9 | 928 | 6595 | 74 | 4 | < 20 | < 1 | < 20 | 10 |
| 589258 | 0.14 | < 0.01 | 1.04 | 0.380 | 0.66 | 52.87 | 0.11 | 0.01 | 0.001 | 0.06 | 42.54 | 97.83 | 2 | < 1 | 7 | 876 | 7654 | 70 | 3 | < 20 | < 1 | < 20 | 10 |
| 589259 | 0.99 | 0.04 | 1.54 | 0.385 | 1.16 | 51.15 | 0.12 | 0.04 | 0.008 | 0.26 | 41.78 | 97.47 | 2 | < 1 | 18 | 1349 | 8653 | 77 | 5 | < 20 | < 1 | < 20 | 10 |
| 589260 | 9.88 | 0.14 | 0.33 | 0.016 | 4.01 | 48.03 | 0.04 | 0.02 | 0.009 | 0.04 | 38.02 | 100.5 | < 1 | < 1 | < 5 | 23 | 67 | 3 | 7 | < 20 | < 1 | < 20 | 20 |
| 589261 | 39.97 | 7.08 | 6.17 | 0.236 | 4.76 | 16.76 | 2.35 | 4.09 | 0.345 | 1.24 | 15.22 | 98.23 | 7 | 4 | 133 | 862 | 2304 | 48 | 66 | 50 | 5 | 20 | < 10 |
| 589262 | 11.93 | 2.24 | 3.78 | 0.394 | 4.16 | 39.17 | 0.16 | 1.99 | 0.227 | 2.73 | 31.53 | 98.32 | 4 | 2 | 52 | 1211 | 3205 | 79 | 30 | < 20 | 5 | < 20 | 10 |
| 589263 | 53.38 | 12.60 | 5.44 | 0.152 | 4.42 | 5.37 | 3.56 | 6.55 | 0.399 | 0.07 | 8.47 | 100.4 | 7 | 7 | 166 | 1103 | 968 | 9 | 157 | < 20 | 4 | < 20 | < 10 |
| 589264 | 38.20 | 7.67 | 7.23 | 0.298 | 6.09 | 14.48 | 1.64 | 4.26 | 0.311 | 1.04 | 18.61 | 99.85 | 11 | 5 | 203 | 3217 | 1404 | 67 | 115 | < 20 | 7 | < 20 | 10 |
| 589265 | 8.41 | 1.39 | 2.84 | 0.315 | 2.01 | 44.94 | 0.20 | 0.88 | 0.069 | 3.01 | 34.06 | 98.12 | 5 | 1 | 53 | 2692 | 3252 | 94 | 74 | < 20 | 2 | < 20 | 20 |
| 589266 | 0.46 | 0.05 | 2.97 | 0.324 | 1.86 | 51.05 | 0.03 | 0.02 | 0.036 | 0.94 | 41.22 | 98.95 | 4 | < 1 | 20 | 3564 | 1031 | 47 | 12 | < 20 | < 1 | < 20 | < 10 |
| 589267 | 3.06 | 0.42 | 5.25 | 0.626 | 7.01 | 40.71 | 0.05 | 0.31 | 0.454 | 2.15 | 38.52 | 98.54 | 7 | 3 | 72 | 5845 | 1656 | 118 | 51 | < 20 | 7 | 30 | 30 |
| 589268 | 6.50 | 1.05 | 5.76 | 0.390 | 5.69 | 37.65 | 0.08 | 1.07 | 1.216 | 5.44 | 33.26 | 98.11 | 8 | 1 | 96 | 2052 | 2164 | 209 | 407 | 40 | 10 | 40 | 50 |
| 589269 | 19.47 | 3.93 | 4.00 | 0.251 | 4.14 | 31.65 | 0.56 | 3.69 | 0.296 | 4.40 | 26.15 | 98.55 | 5 | 3 | 91 | 913 | 3461 | 96 | 123 | < 20 | 5 | < 20 | 10 |
| 589270 | 5.29 | 1.05 | 3.27 | 0.319 | 3.03 | 46.49 | 0.16 | 0.86 | 0.157 | 5.00 | 32.65 | 98.27 | 3 | 2 | 47 | 823 | 5315 | 77 | 70 | < 20 | 6 | < 20 | 20 |
| 589271 | 6.22 | 1.82 | 4.05 | 0.808 | 2.13 | 45.80 | 0.41 | 0.68 | 0.223 | 2.40 | 32.23 | 96.78 | 3 | < 1 | 195 | 2822 | > 10000 | 56 | 90 | < 20 | 3 | < 20 | 10 |
| 589272 | 10.28 | 1.70 | 4.64 | 0.323 | 5.20 | 38.71 | 0.26 | 1.47 | 0.160 | 7.28 | 29.12 | 99.14 | 6 | 1 | 66 | 1379 | 3004 | 177 | 81 | < 20 | 4 | < 20 | 80 |
| 589273 | 34.87 | 7.49 | 5.10 | 0.279 | 5.58 | 18.18 | 3.05 | 3.30 | 0.328 | 2.89 | 17.75 | 98.83 | 6 | 6 | 98 | 1366 | 1871 | 75 | 102 | < 20 | 6 | < 20 | 30 |
| 589274 | 33.95 | 6.07 | 5.22 | 0.459 | 6.34 | 18.31 | 1.26 | 4.79 | 0.596 | 0.79 | 21.76 | 99.53 | 12 | 3 | 91 | 2547 | 1550 | 58 | 34 | 40 | 7 | 20 | 20 |
| 589275 | 21.07 | 2.81 | 6.10 | 0.490 | 5.88 | 28.29 | 0.45 | 2.37 | 0.430 | 3.06 | 27.00 | 97.95 | 9 | 2 | 78 | 2743 | 2097 | 203 | 20 | 30 | 6 | 20 | 10 |
| 589276 | 6.13 | 0.14 | 0.19 | 0.018 | 5.02 | 48.52 | 0.05 | 0.03 | 0.010 | 0.02 | 39.86 | 99.98 | < 1 | < 1 | 8 | 21 | 71 | 3 | 6 | < 20 | < 1 | < 20 | < 10 |
| 589277 | 17.77 | 2.72 | 4.88 | 0.363 | 4.43 | 34.92 | 0.36 | 2.20 | 0.205 | 5.46 | 25.64 | 98.93 | 7 | 2 | 66 | 7458 | 2085 | 268 | 28 | < 20 | 5 | < 20 | 60 |
| 589278 | 36.87 | 6.68 | 5.99 | 0.322 | 6.13 | 16.19 | 1.17 | 4.84 | 0.292 | 0.70 | 19.11 | 98.29 | 9 | 4 | 125 | 1063 | 1489 | 56 | 70 | 20 | 5 | < 20 | 20 |
| 589279 | 31.72 | 6.91 | 7.00 | 0.347 | 8.42 | 15.19 | 0.83 | 5.35 | 0.481 | 0.08 | 21.92 | 98.26 | 7 | 3 | 104 | 741 | 1709 | 14 | 36 | < 20 | 9 | < 20 | 30 |
| 589280 | 49.35 | 10.69 | 4.82 | 0.323 | 5.09 | 7.84 | 2.76 | 6.53 | 0.394 | 0.28 | 11.07 | 99.14 | 13 | 5 | 162 | 965 | 1119 | 18 | 47 | 30 | 6 | < 20 | 20 |
| 589281 | 2.16 | 0.38 | 2.80 | 0.413 | 2.34 | 49.99 | 0.05 | 0.29 | 0.092 | 2.15 | 38.95 | 99.61 | 7 | 1 | 35 | 586 | 2151 | 115 | 63 | < 20 | < 1 | < 20 | 20 |
| 589282 | 1.40 | 0.21 | 1.98 | 0.361 | 1.78 | 51.13 | 0.03 | 0.17 | 0.131 | 2.22 | 40.03 | 99.46 | 4 | < 1 | 22 | 946 | 1587 | 91 | 112 | < 20 | < 1 | < 20 | < 10 |

Results

Activation Laboratories Ltd.

Report: A18-04296

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589283 | 4.34 | 0.54 | 3.41 | 0.347 | 2.41 | 48.33 | 0.07 | 0.44 | 0.085 | 2.50 | 37.48 | 99.95 | 6 | 1 | 25 | 900 | 1876 | 107 | 114 | < 20 | < 1 | < 20 | 10 |
| 589284 | 49.20 | 10.69 | 4.45 | 0.191 | 4.59 | 9.60 | 2.10 | 6.24 | 0.237 | 0.47 | 12.37 | 100.2 | 12 | 5 | 193 | 851 | 1126 | 31 | 95 | 30 | 4 | < 20 | < 10 |
| 589285 | 30.92 | 5.77 | 4.88 | 0.340 | 5.16 | 22.23 | 0.53 | 4.45 | 0.176 | 2.44 | 22.19 | 99.10 | 11 | 3 | 109 | 1205 | 1647 | 99 | 46 | 30 | 3 | < 20 | < 10 |
| 589286 | 9.93 | 0.12 | 0.20 | 0.020 | 5.72 | 45.94 | 0.03 | 0.01 | 0.007 | 0.02 | 38.39 | 100.4 | < 1 | < 1 | 5 | 21 | 65 | 3 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589287 | 3.28 | 0.47 | 3.84 | 0.444 | 3.39 | 46.36 | 0.05 | 0.36 | 0.071 | 1.71 | 38.55 | 98.53 | 8 | 5 | 52 | 2790 | 1830 | 112 | 54 | < 20 | 1 | < 20 | 10 |
| 589288 | 60.01 | 12.99 | 2.86 | 0.128 | 2.29 | 4.84 | 4.16 | 5.04 | 0.234 | 0.28 | 6.21 | 99.04 | 8 | 6 | 106 | 641 | 623 | 24 | 68 | 30 | 2 | < 20 | < 10 |
| 589289 | 6.27 | 1.72 | 4.26 | 0.846 | 2.23 | 45.85 | 0.38 | 0.64 | 0.223 | 2.39 | 32.19 | 96.98 | 3 | 1 | 203 | 2900 | 10000 | 58 | 87 | < 20 | 1 | < 20 | 10 |
| 589290 | 60.94 | 12.78 | 3.51 | 0.124 | 2.02 | 6.43 | 4.13 | 2.84 | 0.244 | 0.14 | 6.02 | 99.18 | 6 | 5 | 82 | 646 | 869 | 14 | 93 | 50 | 4 | < 20 | < 10 |
| 589291 | 11.35 | 2.22 | 10.68 | 0.418 | 7.76 | 29.80 | 0.10 | 1.49 | 2.375 | 4.00 | 29.30 | 99.50 | 19 | 3 | 252 | 861 | 2229 | 155 | 1050 | 30 | 21 | 30 | 60 |
| 589292 | 2.46 | 0.37 | 3.41 | 0.398 | 2.30 | 49.34 | 0.04 | 0.28 | 0.228 | 1.47 | 39.58 | 99.88 | 6 | < 1 | 46 | 681 | 1560 | 89 | 204 | < 20 | 3 | < 20 | 30 |
| 589293 | 1.93 | 0.07 | 1.77 | 0.435 | 1.48 | 51.78 | 0.02 | 0.04 | 0.012 | 1.67 | 40.31 | 99.50 | 3 | < 1 | 19 | 497 | 1724 | 57 | 8 | < 20 | < 1 | < 20 | 20 |
| 589294 | 0.18 | 0.03 | 2.03 | 0.494 | 1.50 | 51.89 | 0.02 | < 0.01 | 0.017 | 0.18 | 42.47 | 98.82 | 4 | < 1 | 20 | 1347 | 1789 | 39 | 4 | < 20 | < 1 | < 20 | 10 |
| 589295 | 5.59 | 1.24 | 3.83 | 0.572 | 3.90 | 43.14 | 0.15 | 0.98 | 0.099 | 0.15 | 39.12 | 98.76 | 8 | 1 | 32 | 4425 | 1231 | 33 | 21 | < 20 | < 1 | < 20 | < 10 |
| 589296 | 9.24 | 1.58 | 4.06 | 0.382 | 3.30 | 41.68 | 0.14 | 1.15 | 0.088 | 2.40 | 34.09 | 98.10 | 5 | 2 | 30 | 1467 | 1625 | 88 | 25 | < 20 | 1 | < 20 | < 10 |
| 589297 | 17.56 | 2.87 | 4.91 | 0.340 | 4.01 | 35.79 | 0.29 | 2.31 | 0.153 | 2.58 | 29.38 | 100.2 | 6 | 3 | 58 | 1082 | 1691 | 107 | 48 | < 20 | 5 | < 20 | 20 |
| 589298 | 3.40 | 0.42 | 3.19 | 0.424 | 2.69 | 47.52 | 0.06 | 0.37 | 0.147 | 2.01 | 38.23 | 98.47 | 5 | < 1 | 36 | 809 | 2663 | 102 | 18 | < 20 | 2 | < 20 | 10 |
| 589299 | 9.68 | 1.57 | 2.20 | 0.353 | 1.75 | 45.40 | 0.53 | 0.78 | 0.036 | 4.62 | 32.34 | 99.26 | 4 | 1 | 52 | 801 | 2996 | 104 | 17 | < 20 | < 1 | < 20 | < 10 |
| 589300 | 56.90 | 11.72 | 4.79 | 0.145 | 3.25 | 6.13 | 3.69 | 3.98 | 0.360 | 0.19 | 6.82 | 97.96 | 13 | 5 | 133 | 785 | 835 | 16 | 80 | 130 | 8 | 50 | < 10 |
| 589301 | 3.83 | 0.42 | 2.10 | 0.400 | 1.85 | 48.90 | 0.06 | 0.34 | 0.059 | 1.30 | 39.26 | 98.51 | 4 | < 1 | 20 | 1001 | 1405 | 68 | 7 | < 20 | < 1 | < 20 | 30 |
| 589302 | 59.85 | 11.53 | 3.92 | 0.148 | 2.15 | 5.80 | 3.80 | 4.36 | 0.420 | 0.50 | 5.70 | 98.17 | 9 | 4 | 85 | 1207 | 977 | 27 | 72 | 30 | 6 | < 20 | < 10 |
| 589303 | 39.50 | 8.29 | 4.22 | 0.255 | 3.90 | 17.63 | 1.06 | 5.16 | 0.451 | 1.13 | 17.22 | 98.82 | 7 | 4 | 106 | 2255 | 1242 | 78 | 145 | < 20 | 6 | < 20 | 30 |
| 589304 | 4.76 | 0.78 | 4.09 | 0.372 | 2.59 | 47.65 | 0.07 | 0.62 | 0.079 | 3.93 | 34.96 | 99.89 | 4 | 2 | 43 | 1017 | 2037 | 142 | 33 | < 20 | 2 | < 20 | 10 |
| 589305 | 0.85 | 0.09 | 1.99 | 0.444 | 1.41 | 53.23 | 0.04 | 0.07 | 0.008 | 3.41 | 38.85 | 100.4 | 4 | < 1 | 14 | 767 | 1947 | 140 | 3 | < 20 | < 1 | < 20 | 20 |
| 589306 | 0.24 | 0.02 | 1.56 | 0.414 | 1.00 | 53.07 | 0.02 | 0.01 | 0.003 | 0.61 | 42.19 | 99.13 | 3 | < 1 | 9 | 717 | 1851 | 65 | 3 | < 20 | < 1 | < 20 | 20 |
| 589307 | 1.29 | 0.21 | 3.03 | 0.433 | 2.48 | 49.91 | 0.05 | 0.14 | 0.055 | 5.82 | 35.62 | 99.04 | 5 | < 1 | 35 | 1433 | 2064 | 217 | 11 | < 20 | 3 | < 20 | < 10 |
| 589308 | 7.90 | 0.12 | 0.19 | 0.016 | 2.06 | 51.29 | 0.03 | 0.02 | 0.008 | 0.02 | 38.89 | 100.6 | < 1 | < 1 | < 5 | 19 | 65 | 3 | < 2 | < 20 | < 1 | < 20 | < 10 |
| 589309 | 1.06 | 0.11 | 2.92 | 0.475 | 2.41 | 51.04 | 0.05 | 0.06 | 0.023 | 5.68 | 36.01 | 99.83 | 5 | < 1 | 25 | 1695 | 1867 | 236 | 9 | < 20 | < 1 | < 20 | 10 |
| 589310 | 2.43 | 0.18 | 3.47 | 0.488 | 2.69 | 47.28 | 0.11 | 0.07 | 0.027 | 3.33 | 38.78 | 98.85 | 7 | 1 | 28 | 1374 | 1649 | 150 | 12 | < 20 | 1 | < 20 | < 10 |
| 589311 | 55.97 | 11.91 | 3.80 | 0.153 | 3.80 | 6.53 | 1.13 | 5.48 | 0.275 | 0.05 | 9.81 | 98.91 | 16 | 8 | 270 | 1198 | 985 | 11 | 95 | 60 | 5 | 20 | 30 |
| 589312 | 4.40 | 0.85 | 1.97 | 0.503 | 1.75 | 47.68 | 0.07 | 0.51 | 0.019 | 1.58 | 38.81 | 98.14 | 5 | < 1 | 28 | 831 | 2667 | 72 | 17 | < 20 | < 1 | < 20 | 10 |
| 589313 | 46.14 | 9.17 | 4.78 | 0.324 | 5.78 | 10.90 | 0.88 | 4.09 | 0.235 | 0.45 | 15.78 | 98.52 | 10 | 3 | 134 | 1453 | 1217 | 36 | 51 | < 20 | 5 | < 20 | < 10 |
| 589314 | 1.54 | 0.14 | 2.32 | 0.505 | 2.09 | 50.24 | 0.04 | 0.04 | 0.021 | 3.42 | 38.93 | 99.28 | 6 | < 1 | 23 | 1068 | 1555 | 164 | 21 | < 20 | < 1 | 30 | < 10 |
| 589315 | 0.88 | 0.11 | 2.77 | 0.769 | 3.37 | 48.13 | 0.03 | 0.03 | 0.045 | 1.89 | 40.59 | 98.60 | 8 | < 1 | 29 | 2395 | 1186 | 142 | 9 | < 20 | < 1 | < 20 | < 10 |
| 589316 | 0.55 | 0.06 | 3.01 | 0.551 | 2.06 | 49.76 | 0.03 | 0.02 | 0.019 | 2.86 | 39.41 | 98.33 | 6 | 1 | 19 | 2134 | 1179 | 190 | 8 | < 20 | < 1 | < 20 | < 10 |
| 589317 | 0.68 | 0.10 | 2.96 | 0.564 | 2.14 | 49.30 | 0.03 | 0.03 | 0.023 | 2.87 | 39.27 | 97.94 | 7 | 1 | 18 | 1834 | 1209 | 193 | 8 | < 20 | < 1 | < 20 | < 10 |
| 589318 | 1.01 | 0.05 | 15.91 | 0.433 | 1.90 | 42.36 | 0.04 | < 0.01 | 0.031 | 5.83 | 30.61 | 98.17 | 7 | 5 | 33 | 2900 | 1448 | 307 | 74 | < 20 | < 1 | < 20 | < 10 |
| 589319 | 7.83 | 1.49 | 4.53 | 0.350 | 3.46 | 41.90 | 0.08 | 1.29 | 0.320 | 2.60 | 34.79 | 98.63 | 7 | 2 | 51 | 916 | 1997 | 102 | 282 | < 20 | 4 | < 20 | 10 |
| 589320 | 52.53 | 11.89 | 3.29 | 0.134 | 3.72 | 6.90 | 0.73 | 9.03 | 0.225 | 0.18 | 10.03 | 98.67 | 9 | 6 | 143 | 1673 | 968 | 22 | 132 | 20 | 5 | < 20 | < 10 |
| 589321 | 3.22 | 0.27 | 2.87 | 0.458 | 1.53 | 50.13 | 0.03 | 0.19 | 0.039 | 1.96 | 37.49 | 98.18 | 4 | < 1 | 28 | 1069 | 2687 | 86 | 5 | < 20 | 16 | < 20 | 30 |
| 589322 | 3.41 | 0.53 | 2.83 | 0.437 | 2.16 | 48.98 | 0.05 | 0.44 | 0.039 | 2.16 | 37.78 | 98.82 | 4 | < 1 | 37 | 1230 | 3161 | 76 | 9 | < 20 | 5 | < 20 | 10 |
| 589323 | 0.73 | 0.08 | 1.46 | 0.433 | 1.08 | 52.45 | 0.03 | 0.06 | 0.014 | 1.78 | 40.32 | 98.44 | 3 | < 1 | 13 | 1133 | 3091 | 71 | 7 | < 20 | < 1 | < 20 | < 10 |

Results

Activation Laboratories Ltd.

Report: A18-04296

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589324 | 23.34 | 4.94 | 7.38 | 0.383 | 7.05 | 23.53 | 0.44 | 4.21 | 0.147 | 3.55 | 23.08 | 98.06 | 9 | 4 | 152 | 2655 | 1808 | 115 | 84 | < 20 | 14 | < 20 | 10 |
| 589325 | 1.53 | 0.20 | 1.96 | 0.415 | 1.49 | 51.42 | 0.04 | 0.17 | 0.035 | 2.79 | 38.74 | 98.78 | 4 | < 1 | 26 | 1010 | 2710 | 74 | 25 | < 20 | 1 | < 20 | 10 |
| 589326 | 1.73 | 0.23 | 2.54 | 0.483 | 1.94 | 50.71 | 0.04 | 0.19 | 0.048 | 3.72 | 37.36 | 98.98 | 4 | < 1 | 27 | 890 | 2223 | 120 | 259 | < 20 | 3 | < 20 | 10 |
| 589327 | 2.93 | 0.30 | 2.45 | 0.427 | 2.01 | 50.02 | 0.04 | 0.25 | 0.067 | 4.38 | 36.05 | 98.92 | 4 | < 1 | 37 | 2337 | 2528 | 95 | 247 | < 20 | 3 | < 20 | 10 |
| 589328 | 5.36 | 0.42 | 3.16 | 0.420 | 2.71 | 47.22 | 0.04 | 0.34 | 0.158 | 5.17 | 34.05 | 99.05 | 4 | < 1 | 50 | 2878 | 2770 | 108 | 209 | < 20 | 4 | < 20 | 10 |
| 589329 | 10.16 | 0.14 | 0.15 | 0.016 | 3.91 | 49.01 | 0.03 | 0.01 | 0.010 | 0.02 | 36.86 | 100.3 | < 1 | < 1 | 6 | 25 | 68 | 3 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589330 | 4.72 | 0.29 | 3.32 | 0.424 | 2.22 | 46.69 | 0.05 | 0.23 | 0.574 | 4.45 | 34.74 | 97.70 | 4 | < 1 | 62 | 2859 | 3346 | 102 | 761 | < 20 | 3 | < 20 | 10 |
| 589331 | 1.29 | 0.09 | 2.20 | 0.484 | 1.47 | 52.34 | 0.04 | 0.06 | 0.020 | 3.32 | 38.06 | 99.39 | 3 | < 1 | 19 | 1296 | 2912 | 116 | 31 | < 20 | 1 | < 20 | 10 |
| 589332 | 1.52 | 0.02 | 3.06 | 0.583 | 3.83 | 47.46 | 0.07 | < 0.01 | 0.017 | 5.76 | 35.40 | 97.72 | 3 | < 1 | 23 | 2412 | 3538 | 267 | 6 | < 20 | 1 | < 20 | < 10 |
| 589333 | 2.64 | 0.09 | 5.48 | 0.932 | 9.33 | 38.79 | 0.09 | 0.06 | 0.023 | 10.63 | 29.85 | 97.93 | 4 | < 1 | 30 | 2287 | 3308 | 596 | 20 | < 20 | 4 | < 20 | < 10 |
| 589334 | 1.28 | 0.04 | 2.52 | 0.449 | 1.76 | 52.28 | 0.03 | 0.02 | 0.016 | 3.58 | 38.12 | 100.1 | 4 | < 1 | 19 | 1466 | 2820 | 206 | 13 | < 20 | < 1 | < 20 | 10 |
| 589335 | 33.24 | 7.11 | 7.09 | 0.300 | 7.09 | 16.02 | 0.88 | 5.14 | 0.238 | 1.35 | 20.06 | 98.52 | 10 | 3 | 139 | 1267 | 1306 | 83 | 79 | 30 | 6 | < 20 | < 10 |
| 589336 | 11.83 | 2.79 | 3.98 | 0.454 | 4.46 | 38.49 | 0.22 | 2.16 | 0.078 | 1.22 | 33.57 | 99.25 | 10 | 1 | 50 | 3061 | 1532 | 98 | 39 | < 20 | 6 | < 20 | < 10 |
| 589337 | 6.04 | 1.62 | 4.11 | 0.788 | 2.04 | 46.58 | 0.36 | 0.62 | 0.217 | 2.36 | 32.08 | 96.81 | 3 | 1 | 197 | 2735 | > 10000 | 50 | 84 | < 20 | 2 | < 20 | 10 |
| 589338 | 20.01 | 4.12 | 5.16 | 0.505 | 4.45 | 32.01 | 0.33 | 3.34 | 0.129 | 5.44 | 23.82 | 99.31 | 10 | 1 | 73 | 2053 | 1816 | 257 | 78 | < 20 | 7 | < 20 | 20 |
| 589339 | 39.85 | 7.17 | 5.97 | 0.386 | 4.68 | 16.29 | 1.17 | 5.39 | 0.232 | 0.43 | 17.90 | 99.48 | 14 | 3 | 148 | 1483 | 871 | 43 | 101 | 50 | 8 | 30 | 20 |
| 589340 | 33.38 | 6.88 | 6.88 | 0.655 | 5.81 | 19.29 | 1.51 | 3.98 | 0.268 | 2.03 | 19.02 | 99.71 | 11 | 2 | 115 | 2354 | 1750 | 142 | 65 | 30 | 12 | 20 | 20 |
| 589341 | 33.41 | 5.65 | 6.30 | 0.710 | 5.74 | 21.26 | 1.49 | 3.17 | 0.160 | 1.27 | 20.71 | 99.88 | 18 | 3 | 157 | 1341 | 1880 | 100 | 49 | 40 | 7 | 20 | 10 |
| 589342 | 17.19 | 2.12 | 6.24 | 0.913 | 5.23 | 34.36 | 0.29 | 1.44 | 0.219 | 4.57 | 25.23 | 97.81 | 10 | 2 | 64 | 5834 | 2657 | 323 | 9 | < 20 | 12 | 20 | 40 |
| 589343 | 6.24 | 1.84 | 4.06 | 0.814 | 2.15 | 46.22 | 0.41 | 0.69 | 0.222 | 2.39 | 32.10 | 97.14 | 3 | < 1 | 197 | 2853 | > 10000 | 57 | 91 | < 20 | 2 | < 20 | 10 |
| 589344 | 37.22 | 7.44 | 5.91 | 0.505 | 4.42 | 18.09 | 2.07 | 4.71 | 0.227 | 1.01 | 18.01 | 99.62 | 15 | 4 | 147 | 1515 | 2072 | 84 | 75 | 20 | 5 | < 20 | < 10 |
| 589345 | 43.87 | 8.46 | 5.82 | 0.602 | 4.08 | 13.81 | 2.98 | 3.91 | 0.153 | 0.77 | 14.36 | 98.80 | 14 | 4 | 129 | 3933 | 1413 | 70 | 54 | 30 | 5 | < 20 | < 10 |
| 589346 | 48.65 | 9.73 | 7.23 | 0.431 | 3.55 | 10.65 | 4.68 | 3.82 | 0.178 | 0.86 | 9.93 | 99.71 | 14 | 5 | 110 | 1514 | 1651 | 47 | 75 | 30 | 7 | 20 | 50 |
| 589347 | 37.22 | 6.90 | 4.68 | 0.438 | 3.54 | 20.94 | 2.22 | 3.45 | 0.224 | 1.68 | 18.73 | 100.0 | 9 | 3 | 102 | 1997 | 1732 | 101 | 54 | < 20 | 4 | < 20 | < 10 |
| 589348 | 2.71 | 0.39 | 3.92 | 0.644 | 3.53 | 46.78 | 0.08 | 0.25 | 0.015 | 0.48 | 40.28 | 99.09 | 10 | 1 | 42 | 1163 | 1080 | 63 | 15 | < 20 | 2 | < 20 | 20 |
| 589349 | 55.28 | 11.19 | 3.84 | 0.219 | 3.14 | 7.37 | 4.25 | 3.82 | 0.270 | 0.06 | 9.50 | 98.94 | 9 | 7 | 145 | 2977 | 1577 | 33 | 117 | < 20 | 2 | < 20 | < 10 |
| 589350 | 59.13 | 13.27 | 3.80 | 0.141 | 2.36 | 4.99 | 4.20 | 3.96 | 0.233 | 0.02 | 6.55 | 98.66 | 8 | 3 | 68 | 3890 | 1088 | 36 | 106 | 20 | 2 | < 20 | < 10 |
| 589351 | 37.03 | 9.92 | 3.64 | 0.232 | 5.92 | 14.61 | 2.03 | 5.41 | 0.204 | 0.02 | 18.58 | 97.60 | 9 | 2 | 60 | 7363 | 2528 | 73 | 87 | 20 | 3 | < 20 | < 10 |
| 589352 | 8.77 | 0.14 | 0.14 | 0.017 | 4.90 | 48.87 | 0.04 | 0.01 | 0.009 | 0.04 | 37.75 | 100.7 | < 1 | < 1 | 5 | 25 | 63 | 3 | 5 | < 20 | < 1 | < 20 | < 10 |
| 589353 | 49.93 | 9.39 | 3.59 | 0.326 | 2.92 | 12.06 | 2.53 | 3.76 | 0.244 | 2.86 | 10.15 | 97.77 | 11 | 3 | 85 | 4789 | 1611 | 479 | 154 | < 20 | 3 | < 20 | < 10 |
| 589354 | 34.90 | 6.74 | 5.41 | 0.642 | 6.21 | 18.10 | 1.48 | 3.72 | 0.206 | 0.68 | 20.62 | 98.71 | 15 | 5 | 137 | 2107 | 1308 | 65 | 52 | < 20 | 4 | < 20 | < 10 |
| 589355 | 6.82 | 1.02 | 6.61 | 1.522 | 8.05 | 36.44 | 0.20 | 0.76 | 0.076 | 1.65 | 35.25 | 98.40 | 7 | 2 | 51 | 687 | 3832 | 94 | 10 | < 20 | 8 | < 20 | 10 |
| 589356 | 63.31 | 12.32 | 2.96 | 0.147 | 1.98 | 4.23 | 3.60 | 5.17 | 0.195 | 0.17 | 4.86 | 98.96 | 6 | 4 | 87 | 1520 | 801 | 16 | 52 | < 20 | 2 | < 20 | < 10 |
| 589357 | 55.77 | 10.55 | 3.95 | 0.238 | 2.79 | 7.77 | 1.46 | 6.88 | 0.275 | 1.13 | 8.70 | 99.50 | 15 | 4 | 229 | 1134 | 945 | 85 | 71 | 50 | 5 | < 20 | < 10 |
| 589358 | 18.19 | 4.33 | 7.12 | 0.557 | 6.12 | 26.93 | 0.35 | 3.35 | 2.058 | 4.22 | 25.09 | 98.33 | 19 | 3 | 159 | 1470 | 2357 | 368 | 426 | < 20 | 13 | < 20 | 50 |
| 589359 | 53.06 | 13.22 | 3.05 | 0.113 | 3.97 | 7.18 | 3.27 | 6.66 | 0.177 | 0.10 | 7.64 | 98.42 | 6 | 18 | 55 | 3933 | 858 | 18 | 76 | 20 | 4 | < 20 | 10 |
| 589360 | 22.60 | 5.33 | 3.97 | 0.497 | 11.31 | 20.88 | 0.96 | 3.30 | 0.138 | 0.22 | 29.30 | 98.50 | 16 | 2 | 73 | 3495 | 2854 | 42 | 27 | 30 | 6 | < 20 | < 10 |
| 589361 | 32.28 | 6.68 | 4.64 | 0.389 | 8.36 | 17.35 | 1.56 | 3.75 | 0.165 | 2.46 | 20.74 | 98.39 | 18 | 5 | 116 | 793 | 2580 | 157 | 42 | 50 | 5 | 20 | < 10 |
| 589362 | 6.30 | 0.21 | 0.19 | 0.017 | 4.43 | 49.45 | 0.08 | 0.02 | 0.009 | 0.02 | 39.91 | 100.6 | < 1 | < 1 | 5 | 31 | 68 | 3 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589363 | 61.58 | 13.62 | 3.04 | 0.118 | 2.28 | 3.69 | 5.24 | 4.09 | 0.214 | 0.15 | 4.36 | 98.38 | 9 | 7 | 101 | 704 | 701 | 21 | 88 | < 20 | 3 | < 20 | < 10 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589201 | 100 | 17 | 2 | < 5 | 63 | 38 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | 0.7 | 126 | 278 | 33.2 | 133 | 22.6 | 5.31 | 9.2 | 0.8 | 3.1 | 0.5 | 1.2 |
| 589202 | 110 | 13 | 1 | 8 | 51 | > 1000 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 278 | 652 | 80.7 | 329 | 66.7 | 20.4 | 47.5 | 5.8 | 26.7 | 3.9 | 8.5 |
| 589203 | 120 | 16 | 2 | < 5 | 104 | 198 | 5 | < 0.5 | < 0.2 | 4 | < 0.5 | 0.5 | 121 | 285 | 35.3 | 147 | 30.4 | 8.73 | 20.2 | 2.3 | 10.6 | 1.6 | 3.6 |
| 589204 | 80 | 18 | 1 | < 5 | 61 | 117 | 2 | 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 94.5 | 217 | 27.1 | 106 | 17.8 | 4.99 | 10.5 | 1.2 | 5.2 | 0.7 | 1.5 |
| 589205 | 110 | 15 | 1 | < 5 | 64 | 993 | 3 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.5 | 218 | 522 | 63.9 | 258 | 49.2 | 15.1 | 36.4 | 4.9 | 24.0 | 3.6 | 8.1 |
| 589206 | 110 | 16 | 1 | < 5 | 76 | 536 | 3 | 0.7 | < 0.2 | 3 | < 0.5 | < 0.5 | 195 | 445 | 54.5 | 209 | 39.7 | 11.6 | 28.6 | 3.8 | 18.9 | 2.9 | 6.8 |
| 589207 | 100 | 21 | 1 | < 5 | 80 | > 1000 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 156 | 358 | 42.6 | 167 | 28.1 | 8.17 | 18.2 | 2.2 | 10.2 | 1.5 | 3.1 |
| 589208 | 150 | 14 | < 1 | < 5 | 89 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.7 | 216 | 502 | 59.4 | 231 | 39.4 | 11.4 | 27.1 | 3.5 | 17.3 | 2.6 | 6.0 |
| 589209 | 190 | 19 | 1 | < 5 | 127 | > 1000 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | 0.9 | 157 | 358 | 42.7 | 169 | 30.0 | 9.12 | 22.3 | 3.1 | 16.8 | 2.6 | 5.7 |
| 589210 | 120 | 14 | < 1 | < 5 | 67 | > 1000 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 228 | 503 | 59.6 | 237 | 46.9 | 15.2 | 38.3 | 5.2 | 24.8 | 3.6 | 7.8 |
| 589211 | 50 | 20 | < 1 | < 5 | 40 | 29 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 35.5 | 72.6 | 8.12 | 29.9 | 4.7 | 1.62 | 3.0 | 0.4 | 1.5 | 0.2 | 0.5 |
| 589212 | 130 | 18 | 1 | < 5 | 74 | 125 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 175 | 408 | 51.2 | 211 | 42.2 | 13.2 | 30.9 | 4.2 | 19.4 | 2.7 | 5.7 |
| 589213 | 130 | 16 | 2 | 7 | 30 | 573 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 517 | 1280 | 164 | 701 | 148 | 48.1 | 117 | 16.1 | 78.7 | 11.5 | 24.7 |
| 589214 | < 30 | 4 | < 1 | 6 | < 2 | 89 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 258 | 591 | 70.8 | 288 | 58.6 | 17.8 | 40.7 | 5.0 | 23.3 | 3.5 | 8.5 |
| 589215 | 180 | 7 | 1 | 19 | < 2 | 672 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 513 | 1310 | 179 | 770 | 181 | 58.6 | 157 | 20.5 | 93.0 | 12.9 | 27.5 |
| 589216 | 100 | 14 | 2 | 10 | 13 | 717 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 705 | 1690 | 210 | 853 | 151 | 44.6 | 99.7 | 11.8 | 51.7 | 6.9 | 14.4 |
| 589217 | 90 | 20 | < 1 | < 5 | 106 | 875 | 9 | 0.6 | < 0.2 | 4 | < 0.5 | 0.6 | 249 | 511 | 58.1 | 218 | 36.7 | 10.7 | 25.0 | 3.0 | 13.9 | 2.1 | 4.5 |
| 589218 | 220 | 15 | 2 | 11 | 41 | 741 | 7 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 466 | 1190 | 153 | 637 | 118 | 34.4 | 78.5 | 9.2 | 43.1 | 6.1 | 13.6 |
| 589219 | < 30 | 4 | < 1 | < 5 | < 2 | 53 | 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 560 | 65.3 | 255 | 47.9 | 14.8 | 34.7 | 4.6 | 21.9 | 3.5 | 9.0 |
| 589220 | < 30 | < 1 | 1 | < 5 | < 2 | 2 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.4 | 1.5 | 0.27 | 1.1 | 0.2 | 0.06 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589221 | 310 | 13 | < 1 | 8 | 47 | 529 | 3 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 290 | 654 | 78.8 | 309 | 57.0 | 17.1 | 39.0 | 4.8 | 23.8 | 3.8 | 8.7 |
| 589222 | 100 | 9 | < 1 | < 5 | 37 | 617 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 278 | 650 | 78.9 | 306 | 52.3 | 15.0 | 35.2 | 4.2 | 21.2 | 3.3 | 8.1 |
| 589223 | 140 | 16 | 1 | < 5 | 53 | 935 | 5 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 194 | 455 | 55.2 | 219 | 37.2 | 10.4 | 23.3 | 2.9 | 13.7 | 2.2 | 5.6 |
| 589224 | 90 | 11 | < 1 | < 5 | 34 | 299 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 232 | 535 | 63.9 | 252 | 45.8 | 13.5 | 31.9 | 4.1 | 21.1 | 3.3 | 8.0 |
| 589225 | 90 | 20 | < 1 | < 5 | 120 | 201 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.5 | 111 | 254 | 30.6 | 118 | 19.5 | 5.43 | 12.1 | 1.6 | 7.6 | 1.2 | 3.1 |
| 589226 | 100 | 14 | < 1 | < 5 | 78 | 932 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 214 | 488 | 59.1 | 234 | 41.8 | 12.3 | 29.7 | 3.8 | 19.3 | 3.0 | 7.0 |
| 589227 | 120 | 22 | 2 | < 5 | 128 | 169 | 11 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 372 | 855 | 100 | 364 | 48.2 | 11.8 | 23.2 | 2.5 | 11.1 | 1.6 | 3.9 |
| 589228 | 170 | 19 | 1 | < 5 | 102 | 233 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 296 | 614 | 71.2 | 269 | 40.4 | 10.5 | 23.1 | 2.6 | 11.6 | 1.6 | 3.8 |
| 589229 | 110 | 19 | < 1 | < 5 | 81 | 75 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.8 | 99.8 | 211 | 24.8 | 100 | 20.7 | 6.28 | 16.2 | 2.2 | 10.4 | 1.6 | 3.5 |
| 589230 | 90 | 9 | 1 | < 5 | 8 | 224 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 889 | 1850 | 222 | 884 | 156 | 44.0 | 94.1 | 10.0 | 41.4 | 5.9 | 12.0 |
| 589231 | 50 | 18 | 1 | < 5 | 66 | 57 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 119 | 268 | 32.0 | 124 | 20.5 | 5.99 | 12.3 | 1.2 | 5.1 | 0.7 | 1.5 |
| 589232 | 100 | 19 | 1 | < 5 | 82 | 105 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 152 | 326 | 37.8 | 146 | 23.3 | 6.89 | 14.1 | 1.6 | 7.1 | 1.0 | 2.4 |
| 589233 | 100 | 10 | < 1 | < 5 | 52 | 137 | 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 250 | 546 | 63.7 | 246 | 42.0 | 12.3 | 28.2 | 3.6 | 17.2 | 2.7 | 6.3 |
| 589234 | 100 | 17 | < 1 | < 5 | 94 | 34 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | 1.8 | 68.3 | 147 | 17.5 | 68.2 | 12.0 | 3.18 | 7.8 | 1.0 | 4.7 | 0.7 | 1.9 |
| 589235 | 130 | 22 | 1 | < 5 | 131 | 130 | < 2 | < 0.5 | < 0.2 | 6 | < 0.5 | < 0.5 | 204 | 409 | 46.0 | 173 | 26.6 | 6.95 | 13.4 | 1.2 | 4.3 | 0.6 | 1.3 |
| 589236 | 60 | 12 | 2 | 6 | 4 | 146 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 653 | 1540 | 195 | 820 | 150 | 43.8 | 98.8 | 11.8 | 55.3 | 7.6 | 16.2 |
| 589237 | 70 | 13 | 2 | 6 | 25 | 893 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 536 | 1260 | 159 | 670 | 133 | 40.6 | 101 | 13.5 | 64.4 | 9.3 | 19.8 |
| 589238 | 60 | 20 | < 1 | < 5 | 90 | 95 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 78.3 | 171 | 20.0 | 78.2 | 13.5 | 3.85 | 8.1 | 1.0 | 3.9 | 0.5 | 1.2 |
| 589239 | 50 | 16 | < 1 | < 5 | 50 | 57 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 165 | 376 | 45.0 | 176 | 29.9 | 8.68 | 19.5 | 2.2 | 9.3 | 1.3 | 2.6 |
| 589240 | 480 | 16 | 1 | 5 | 35 | > 1000 | 15 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1110 | 2010 | 168 | 497 | 53.9 | 13.9 | 24.7 | 2.8 | 13.2 | 2.2 | 5.7 |
| 589241 | 40 | 11 | < 1 | < 5 | 47 | 240 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 206 | 471 | 56.1 | 221 | 42.8 | 13.1 | 32.4 | 4.2 | 20.7 | 3.1 | 7.2 |

Results

Activation Laboratories Ltd.

Report: A18-04296

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589242 | 80 | 21 | < 1 | < 5 | 122 | 81 | < 2 | 0.6 | < 0.2 | 2 | < 0.5 | 1.1 | 117 | 246 | 28.3 | 107 | 17.1 | 4.58 | 11.0 | 1.3 | 5.9 | 0.9 | 2.1 |
| 589243 | 150 | 9 | < 1 | < 5 | 19 | 562 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 310 | 734 | 91.2 | 377 | 78.8 | 25.8 | 64.3 | 9.1 | 42.9 | 6.3 | 14.1 |
| 589244 | 120 | 19 | 1 | 5 | 107 | 634 | < 2 | < 0.5 | < 0.2 | 4 | 1.0 | < 0.5 | 154 | 366 | 46.9 | 195 | 41.6 | 13.6 | 34.1 | 4.3 | 19.5 | 2.7 | 5.7 |
| 589245 | 60 | 19 | < 1 | < 5 | 78 | 95 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 61.6 | 144 | 17.9 | 72.7 | 14.6 | 4.40 | 10.7 | 1.3 | 5.4 | 0.7 | 1.6 |
| 589246 | 40 | 8 | 1 | < 5 | 11 | 214 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 355 | 841 | 104 | 416 | 76.0 | 22.8 | 51.3 | 6.3 | 25.7 | 3.4 | 7.5 |
| 589247 | 110 | 20 | < 1 | < 5 | 98 | 195 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 191 | 353 | 37.7 | 136 | 21.8 | 6.11 | 13.8 | 1.5 | 6.9 | 1.1 | 2.5 |
| 589248 | 70 | 7 | < 1 | < 5 | 26 | 239 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 272 | 641 | 79.3 | 310 | 58.0 | 17.3 | 45.4 | 5.7 | 27.7 | 4.5 | 10.1 |
| 589249 | 80 | 17 | < 1 | < 5 | 108 | 111 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 71.9 | 162 | 19.0 | 70.5 | 12.6 | 3.85 | 9.1 | 1.1 | 4.5 | 0.6 | 1.4 |
| 589250 | 140 | 15 | < 1 | 26 | 84 | 210 | 11 | < 0.5 | < 0.2 | 3 | 1.2 | < 0.5 | 81.0 | 196 | 24.3 | 97.6 | 21.7 | 7.08 | 18.3 | 2.2 | 9.0 | 1.2 | 2.7 |
| 589251 | 150 | 11 | 1 | 6 | 60 | 329 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 225 | 549 | 67.8 | 277 | 56.5 | 16.5 | 41.3 | 5.1 | 22.0 | 3.2 | 7.5 |
| 589252 | 270 | 16 | 1 | 6 | 80 | 339 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 165 | 398 | 49.5 | 204 | 42.5 | 13.2 | 34.5 | 4.8 | 22.2 | 3.2 | 7.6 |
| 589253 | 200 | 20 | 1 | < 5 | 78 | 231 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 282 | 513 | 54.2 | 200 | 37.0 | 10.2 | 20.6 | 1.7 | 5.4 | 0.7 | 1.5 |
| 589254 | 90 | 6 | 1 | 5 | 2 | 276 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 380 | 790 | 88.3 | 336 | 64.4 | 19.3 | 46.5 | 5.5 | 22.8 | 3.1 | 7.2 |
| 589255 | 50 | 4 | < 1 | < 5 | < 2 | 27 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 510 | 59.3 | 231 | 41.0 | 11.8 | 29.2 | 3.8 | 18.0 | 2.8 | 6.9 |
| 589256 | < 30 | 3 | < 1 | < 5 | < 2 | 3 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 219 | 508 | 59.9 | 235 | 43.1 | 12.6 | 30.2 | 4.0 | 18.3 | 2.8 | 6.9 |
| 589257 | 40 | 4 | < 1 | < 5 | < 2 | 3 | 11 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 515 | 60.1 | 236 | 43.7 | 12.9 | 31.2 | 4.2 | 19.3 | 2.9 | 7.1 |
| 589258 | < 30 | 3 | < 1 | < 5 | < 2 | 4 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 222 | 512 | 60.4 | 232 | 42.0 | 12.3 | 29.5 | 3.7 | 17.7 | 2.7 | 6.6 |
| 589259 | 80 | 4 | < 1 | < 5 | < 2 | 95 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 227 | 526 | 61.8 | 248 | 48.1 | 14.1 | 33.7 | 4.2 | 20.1 | 3.0 | 7.3 |
| 589260 | < 30 | < 1 | < 1 | < 5 | < 2 | 2 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.6 | 1.9 | 0.33 | 1.3 | 0.2 | 0.08 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589261 | 150 | 18 | < 1 | 16 | 97 | > 1000 | 3 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 169 | 385 | 45.3 | 175 | 29.9 | 8.55 | 20.4 | 2.6 | 13.0 | 2.0 | 4.4 |
| 589262 | 80 | 10 | < 1 | < 5 | 54 | 256 | 19 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 236 | 537 | 65.3 | 253 | 46.2 | 14.1 | 35.3 | 4.8 | 23.0 | 3.6 | 8.1 |
| 589263 | 100 | 20 | 1 | < 5 | 116 | 160 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 | 0.6 | 96.7 | 217 | 25.3 | 98.8 | 16.5 | 4.59 | 9.9 | 0.9 | 3.3 | 0.4 | 1.0 |
| 589264 | 160 | 17 | 2 | < 5 | 68 | 419 | 3 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 374 | 731 | 79.5 | 296 | 47.8 | 13.0 | 30.5 | 3.7 | 18.3 | 2.7 | 5.9 |
| 589265 | 70 | 8 | 1 | < 5 | 13 | 112 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 289 | 650 | 77.3 | 307 | 57.9 | 17.1 | 42.3 | 5.4 | 26.1 | 3.9 | 8.9 |
| 589266 | < 30 | 9 | 2 | 6 | < 2 | 138 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 518 | 1230 | 151 | 615 | 93.1 | 22.3 | 43.0 | 3.5 | 13.9 | 1.9 | 4.5 |
| 589267 | 60 | 8 | 2 | 7 | 4 | 264 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 957 | 1900 | 217 | 818 | 142 | 40.6 | 92.6 | 10.0 | 41.1 | 5.7 | 11.1 |
| 589268 | 70 | 9 | 1 | 7 | 14 | 193 | < 2 | 1.1 | < 0.2 | 2 | < 0.5 | < 0.5 | 319 | 717 | 86.3 | 369 | 90.9 | 31.2 | 87.3 | 12.5 | 59.4 | 8.5 | 18.4 |
| 589269 | 100 | 15 | 1 | 6 | 49 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 235 | 559 | 67.2 | 270 | 51.3 | 15.6 | 40.3 | 5.3 | 26.8 | 4.0 | 9.1 |
| 589270 | 130 | 13 | < 1 | 8 | 20 | 214 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 295 | 708 | 86.9 | 344 | 60.3 | 17.2 | 42.1 | 4.9 | 22.3 | 3.4 | 7.8 |
| 589271 | 460 | 11 | < 1 | 6 | 33 | > 1000 | 18 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1120 | 2020 | 172 | 506 | 55.4 | 14.0 | 24.2 | 2.9 | 13.9 | 2.5 | 5.8 |
| 589272 | 160 | 12 | 1 | 5 | 30 | 537 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 312 | 720 | 86.3 | 350 | 67.5 | 20.8 | 54.3 | 7.9 | 43.9 | 7.2 | 17.1 |
| 589273 | 180 | 21 | 1 | < 5 | 56 | 596 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 264 | 557 | 63.9 | 247 | 43.0 | 11.9 | 29.5 | 3.9 | 20.0 | 3.4 | 7.4 |
| 589274 | 150 | 15 | 1 | < 5 | 65 | > 1000 | 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 218 | 475 | 53.3 | 206 | 37.6 | 10.7 | 26.9 | 3.6 | 17.5 | 2.5 | 5.5 |
| 589275 | 180 | 9 | 1 | < 5 | 36 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 282 | 641 | 75.1 | 298 | 59.3 | 20.4 | 59.4 | 9.9 | 54.4 | 8.5 | 18.0 |
| 589276 | < 30 | < 1 | < 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.3 | 1.2 | 0.21 | 0.9 | 0.2 | 0.06 | 0.2 | < 0.1 | 0.2 | < 0.1 | 0.1 |
| 589277 | 140 | 11 | 1 | 8 | 36 | 531 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 289 | 665 | 80.2 | 330 | 77.3 | 27.2 | 76.3 | 12.4 | 66.7 | 10.5 | 23.6 |
| 589278 | 130 | 15 | 1 | < 5 | 93 | 860 | 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 174 | 379 | 44.2 | 171 | 31.7 | 9.73 | 24.1 | 3.1 | 14.9 | 2.3 | 5.0 |
| 589279 | 140 | 17 | < 1 | 6 | 94 | 599 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 223 | 486 | 58.3 | 224 | 35.6 | 8.99 | 17.0 | 1.4 | 5.2 | 0.7 | 1.5 |
| 589280 | 110 | 16 | < 1 | < 5 | 89 | 274 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 118 | 250 | 29.5 | 115 | 23.1 | 7.36 | 16.3 | 1.5 | 5.8 | 0.8 | 1.8 |
| 589281 | 50 | 10 | 2 | 5 | 5 | 90 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 456 | 1100 | 137 | 579 | 118 | 34.0 | 78.4 | 8.8 | 37.7 | 5.3 | 11.3 |
| 589282 | 40 | 9 | 1 | < 5 | 2 | 85 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 374 | 890 | 108 | 432 | 78.8 | 23.1 | 54.6 | 6.6 | 28.1 | 3.9 | 8.5 |
| 589283 | 60 | 6 | < 1 | < 5 | 7 | 205 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 595 | 72.1 | 297 | 61.5 | 20.1 | 52.9 | 6.9 | 31.2 | 4.4 | 9.4 |

Results

Activation Laboratories Ltd.

Report: A18-04296

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589284 | 110 | 21 | 1 | < 5 | 103 | 397 | < 2 | < 0.5 | < 0.2 | 7 | < 0.5 | < 0.5 | 96.4 | 223 | 26.8 | 107 | 20.5 | 6.58 | 16.1 | 2.0 | 8.9 | 1.3 | 3.0 |
| 589285 | 130 | 15 | 1 | < 5 | 65 | 804 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 229 | 530 | 65.1 | 265 | 58.2 | 19.5 | 51.7 | 6.7 | 30.2 | 4.1 | 8.8 |
| 589286 | < 30 | < 1 | < 1 | < 5 | < 2 | 3 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.4 | 1.5 | 0.27 | 0.9 | 0.2 | 0.06 | 0.2 | < 0.1 | 0.2 | < 0.1 | 0.1 |
| 589287 | 60 | 13 | 2 | 7 | 5 | 126 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 602 | 1550 | 198 | 851 | 171 | 49.0 | 106 | 9.7 | 36.0 | 4.6 | 9.3 |
| 589288 | 70 | 20 | 1 | < 5 | 78 | 122 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 80.9 | 184 | 22.6 | 97.0 | 22.5 | 6.96 | 16.5 | 1.8 | 7.5 | 1.0 | 2.0 |
| 589289 | 470 | 16 | 1 | 6 | 36 | > 1000 | 14 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1080 | 1970 | 165 | 490 | 53.5 | 13.2 | 24.3 | 2.7 | 12.7 | 2.0 | 5.4 |
| 589290 | 60 | 20 | 1 | < 5 | 57 | 56 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.7 | 102 | 242 | 30.1 | 123 | 20.4 | 5.50 | 11.4 | 1.1 | 4.2 | 0.6 | 1.2 |
| 589291 | 120 | 14 | 1 | < 5 | 30 | 347 | < 2 | 2.8 | 0.2 | 4 | 0.5 | < 0.5 | 251 | 629 | 80.7 | 349 | 67.7 | 20.4 | 52.1 | 7.3 | 38.8 | 6.0 | 13.7 |
| 589292 | 50 | 8 | 1 | 7 | 5 | 99 | < 2 | 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 376 | 903 | 113 | 458 | 73.8 | 20.4 | 47.4 | 5.8 | 25.8 | 3.4 | 7.7 |
| 589293 | 50 | 6 | < 1 | < 5 | < 2 | 14 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 301 | 716 | 87.8 | 358 | 64.3 | 18.1 | 42.0 | 4.5 | 17.9 | 2.3 | 5.2 |
| 589294 | 30 | 7 | 1 | 6 | < 2 | 29 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 407 | 979 | 122 | 517 | 107 | 29.5 | 60.1 | 4.9 | 14.2 | 1.8 | 4.0 |
| 589295 | 70 | 16 | 2 | 7 | 15 | 225 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 668 | 1670 | 213 | 922 | 179 | 45.0 | 81.3 | 4.8 | 12.9 | 1.7 | 3.9 |
| 589296 | 80 | 9 | 1 | < 5 | 20 | 858 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 385 | 934 | 119 | 482 | 84.8 | 24.7 | 54.6 | 6.3 | 27.0 | 3.8 | 8.4 |
| 589297 | 80 | 10 | 1 | < 5 | 45 | 655 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 288 | 689 | 86.7 | 354 | 66.1 | 20.3 | 50.8 | 6.8 | 31.9 | 4.7 | 9.9 |
| 589298 | 60 | 6 | < 1 | < 5 | 6 | 102 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 313 | 721 | 87.4 | 344 | 65.3 | 20.1 | 50.6 | 6.6 | 30.2 | 4.3 | 9.3 |
| 589299 | 60 | 8 | < 1 | < 5 | 13 | 257 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 318 | 773 | 98.1 | 396 | 73.3 | 22.0 | 52.9 | 6.8 | 32.1 | 4.6 | 9.9 |
| 589300 | 90 | 18 | < 1 | < 5 | 76 | 48 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 49.4 | 110 | 13.6 | 55.6 | 12.0 | 3.79 | 9.5 | 1.1 | 4.8 | 0.7 | 1.5 |
| 589301 | 40 | 6 | < 1 | < 5 | 5 | 241 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 324 | 777 | 96.1 | 382 | 67.3 | 18.9 | 41.5 | 4.6 | 20.3 | 2.8 | 6.5 |
| 589302 | 70 | 17 | < 1 | < 5 | 84 | 281 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 46.1 | 107 | 13.3 | 53.6 | 12.9 | 4.45 | 11.7 | 1.5 | 7.3 | 1.1 | 2.5 |
| 589303 | 80 | 16 | 1 | < 5 | 99 | 280 | < 2 | 0.6 | < 0.2 | 4 | < 0.5 | < 0.5 | 228 | 545 | 68.8 | 291 | 60.4 | 18.3 | 43.5 | 5.3 | 23.8 | 3.3 | 6.7 |
| 589304 | 50 | 8 | 1 | < 5 | 10 | 325 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 323 | 768 | 95.7 | 384 | 72.3 | 22.4 | 57.3 | 8.2 | 41.1 | 6.2 | 13.1 |
| 589305 | < 30 | 7 | 1 | < 5 | < 2 | 25 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 390 | 932 | 118 | 473 | 86.7 | 25.7 | 62.1 | 8.3 | 39.9 | 6.0 | 13.3 |
| 589306 | < 30 | 5 | < 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 364 | 842 | 102 | 405 | 70.1 | 20.5 | 44.4 | 5.3 | 22.6 | 2.9 | 6.4 |
| 589307 | 50 | 10 | 2 | 6 | < 2 | 153 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 544 | 1340 | 171 | 709 | 141 | 43.0 | 108 | 14.8 | 67.3 | 9.4 | 20.3 |
| 589308 | < 30 | < 1 | < 1 | < 5 | < 2 | 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.9 | 2.0 | 0.34 | 1.4 | 0.3 | 0.08 | 0.3 | < 0.1 | 0.2 | < 0.1 | 0.2 |
| 589309 | 40 | 10 | 2 | 8 | < 2 | 101 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 585 | 1460 | 190 | 803 | 166 | 52.2 | 131 | 17.3 | 78.8 | 11.1 | 23.3 |
| 589310 | 50 | 10 | 2 | 5 | < 2 | 88 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 555 | 1340 | 170 | 691 | 126 | 36.9 | 82.2 | 9.6 | 42.7 | 6.1 | 13.6 |
| 589311 | 150 | 18 | 1 | < 5 | 118 | 116 | 3 | < 0.5 | < 0.2 | 9 | < 0.5 | < 0.5 | 63.5 | 151 | 19.0 | 77.2 | 13.3 | 3.64 | 7.4 | 0.7 | 3.3 | 0.5 | 1.2 |
| 589312 | 80 | 6 | < 1 | < 5 | 10 | 92 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 295 | 691 | 84.3 | 331 | 55.5 | 15.9 | 36.4 | 4.6 | 21.1 | 3.0 | 7.0 |
| 589313 | 140 | 18 | 1 | < 5 | 89 | 202 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 162 | 384 | 48.5 | 198 | 37.1 | 10.8 | 24.0 | 2.7 | 11.3 | 1.5 | 3.4 |
| 589314 | 40 | 8 | 1 | 5 | < 2 | 86 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 405 | 1010 | 130 | 545 | 103 | 31.4 | 76.8 | 9.8 | 46.2 | 6.9 | 15.5 |
| 589315 | 40 | 12 | 2 | 8 | < 2 | 87 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 739 | 1860 | 238 | 970 | 151 | 40.0 | 83.4 | 9.0 | 40.5 | 5.7 | 12.6 |
| 589316 | 30 | 11 | 2 | 7 | < 2 | 40 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 699 | 1760 | 224 | 897 | 151 | 42.6 | 99.9 | 12.2 | 57.3 | 8.2 | 16.6 |
| 589317 | 30 | 11 | 2 | 7 | < 2 | 40 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 692 | 1750 | 222 | 897 | 149 | 42.5 | 101 | 12.5 | 58.3 | 8.2 | 16.9 |
| 589318 | < 30 | 13 | 3 | 10 | < 2 | 37 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 836 | 2080 | 266 | 1120 | 222 | 68.1 | 169 | 21.6 | 98.1 | 13.6 | 27.2 |
| 589319 | 50 | 9 | 1 | 6 | 17 | 300 | 2 | 1.0 | < 0.2 | < 1 | < 0.5 | < 0.5 | 339 | 794 | 98.8 | 398 | 72.1 | 21.4 | 50.9 | 6.1 | 28.4 | 4.2 | 10.0 |
| 589320 | 100 | 17 | < 1 | < 5 | 134 | 194 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 128 | 298 | 37.1 | 149 | 26.4 | 7.44 | 14.9 | 1.5 | 6.2 | 0.9 | 2.2 |
| 589321 | 210 | 4 | < 1 | 16 | 3 | 147 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 261 | 613 | 73.9 | 286 | 53.3 | 16.3 | 37.5 | 4.6 | 22.7 | 3.5 | 8.5 |
| 589322 | 60 | 5 | < 1 | < 5 | 8 | 113 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 262 | 614 | 74.4 | 289 | 50.7 | 14.7 | 34.4 | 4.4 | 21.4 | 3.3 | 7.8 |
| 589323 | < 30 | 4 | < 1 | < 5 | < 2 | 58 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 239 | 560 | 67.8 | 262 | 46.8 | 13.5 | 31.5 | 4.0 | 19.8 | 3.1 | 7.5 |
| 589324 | 100 | 14 | < 1 | 5 | 88 | 361 | < 2 | < 0.5 | < 0.2 | 2 | 0.5 | < 0.5 | 279 | 660 | 81.9 | 326 | 60.4 | 18.5 | 45.7 | 6.4 | 31.9 | 4.9 | 10.7 |

Results

Activation Laboratories Ltd.

Report: A18-04296

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589325 | 60 | 5 | < 1 | < 5 | 3 | 85 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 269 | 633 | 77.2 | 299 | 51.8 | 14.5 | 34.9 | 4.4 | 21.1 | 3.2 | 7.3 |
| 589326 | 120 | 6 | < 1 | < 5 | 3 | 86 | < 2 | 0.9 | < 0.2 | < 1 | < 0.5 | < 0.5 | 305 | 720 | 88.2 | 343 | 60.3 | 17.9 | 44.3 | 6.3 | 33.6 | 5.3 | 11.9 |
| 589327 | 60 | 6 | < 1 | 6 | 4 | 119 | < 2 | 1.3 | < 0.2 | < 1 | < 0.5 | < 0.5 | 302 | 719 | 87.7 | 347 | 59.8 | 17.0 | 40.9 | 5.3 | 26.7 | 4.2 | 9.4 |
| 589328 | 90 | 7 | < 1 | 5 | 6 | 81 | < 2 | 1.1 | < 0.2 | < 1 | < 0.5 | < 0.5 | 285 | 677 | 82.7 | 328 | 57.6 | 16.5 | 40.0 | 5.4 | 29.0 | 4.8 | 11.3 |
| 589329 | < 30 | < 1 | < 1 | < 5 | < 2 | 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.4 | 1.4 | 0.27 | 1.1 | 0.2 | < 0.05 | 0.3 | < 0.1 | 0.2 | < 0.1 | 0.2 |
| 589330 | 60 | 7 | < 1 | 5 | 4 | 152 | < 2 | 2.8 | < 0.2 | < 1 | < 0.5 | < 0.5 | 261 | 628 | 77.1 | 303 | 54.0 | 15.9 | 38.4 | 5.2 | 27.2 | 4.6 | 10.7 |
| 589331 | 80 | 5 | < 1 | < 5 | < 2 | 66 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 307 | 728 | 89.4 | 351 | 63.2 | 18.7 | 45.5 | 6.3 | 32.7 | 5.2 | 11.9 |
| 589332 | 40 | 6 | < 1 | < 5 | < 2 | 279 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 348 | 842 | 106 | 443 | 103 | 36.0 | 98.5 | 14.7 | 77.0 | 11.8 | 25.6 |
| 589333 | 50 | 9 | 2 | 7 | < 2 | 579 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 471 | 1200 | 162 | 706 | 177 | 63.9 | 177 | 29.1 | 163 | 27.8 | 61.8 |
| 589334 | 40 | 4 | < 1 | < 5 | < 2 | 114 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 266 | 624 | 77.6 | 316 | 69.1 | 23.2 | 59.9 | 9.5 | 53.5 | 9.2 | 21.4 |
| 589335 | 130 | 17 | 1 | < 5 | 106 | 502 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 284 | 638 | 76.4 | 292 | 47.8 | 14.1 | 34.2 | 4.9 | 24.9 | 3.9 | 8.5 |
| 589336 | 90 | 11 | 2 | 9 | 35 | 125 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 468 | 1160 | 151 | 621 | 114 | 32.6 | 74.4 | 8.3 | 34.6 | 4.5 | 9.3 |
| 589337 | 440 | 14 | 1 | 6 | 35 | > 1000 | 15 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1100 | 1990 | 169 | 495 | 53.2 | 13.4 | 24.2 | 2.7 | 13.0 | 2.2 | 5.7 |
| 589338 | 110 | 14 | 2 | 12 | 51 | 343 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 549 | 1330 | 170 | 690 | 140 | 46.4 | 124 | 17.6 | 86.1 | 12.4 | 25.3 |
| 589339 | 210 | 18 | 1 | 7 | 88 | 173 | 3 | < 0.5 | < 0.2 | 6 | < 0.5 | < 0.5 | 352 | 810 | 102 | 426 | 79.8 | 21.4 | 41.8 | 4.0 | 15.4 | 2.0 | 4.4 |
| 589340 | 280 | 15 | 1 | < 5 | 74 | 217 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 436 | 884 | 99.5 | 365 | 70.7 | 22.6 | 57.5 | 8.0 | 40.7 | 6.3 | 13.4 |
| 589341 | 260 | 13 | 2 | 6 | 60 | 222 | 3 | < 0.5 | 0.2 | 4 | 0.5 | < 0.5 | 370 | 862 | 104 | 404 | 74.3 | 22.2 | 52.9 | 6.5 | 30.5 | 4.5 | 9.7 |
| 589342 | 240 | 11 | 1 | 13 | 28 | 154 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 580 | 1290 | 152 | 574 | 116 | 38.4 | 107 | 16.4 | 87.2 | 13.8 | 30.3 |
| 589343 | 450 | 11 | < 1 | 6 | 33 | > 1000 | 15 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1120 | 2030 | 172 | 506 | 54.9 | 13.9 | 24.6 | 2.8 | 13.6 | 2.3 | 5.8 |
| 589344 | 170 | 14 | 1 | < 5 | 82 | 96 | 4 | < 0.5 | 0.2 | 4 | 0.5 | < 0.5 | 636 | 1240 | 135 | 486 | 79.4 | 22.6 | 49.4 | 6.1 | 26.4 | 3.6 | 7.6 |
| 589345 | 270 | 17 | 2 | 8 | 64 | 235 | 8 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 1050 | 1880 | 189 | 609 | 72.6 | 18.9 | 38.8 | 4.6 | 22.0 | 3.0 | 6.3 |
| 589346 | 300 | 17 | 1 | < 5 | 69 | 68 | 14 | < 0.5 | 0.3 | 5 | < 0.5 | < 0.5 | 764 | 1400 | 144 | 469 | 55.1 | 14.0 | 28.2 | 3.3 | 15.9 | 2.1 | 4.7 |
| 589347 | 180 | 13 | 1 | < 5 | 55 | 505 | 4 | < 0.5 | < 0.2 | 2 | 0.6 | < 0.5 | 528 | 1100 | 125 | 464 | 82.2 | 23.8 | 53.4 | 6.8 | 29.5 | 4.0 | 9.0 |
| 589348 | 110 | 5 | 1 | 9 | 4 | 162 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 682 | 1670 | 211 | 852 | 128 | 30.5 | 55.7 | 5.4 | 22.7 | 3.2 | 6.3 |
| 589349 | 80 | 18 | 1 | 12 | 63 | 41 | < 2 | < 0.5 | < 0.2 | 3 | 0.5 | < 0.5 | 538 | 998 | 106 | 372 | 60.5 | 16.9 | 32.6 | 3.1 | 11.1 | 1.4 | 3.3 |
| 589350 | 40 | 17 | < 1 | 15 | 67 | 50 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 167 | 346 | 38.7 | 141 | 24.6 | 7.30 | 17.5 | 2.5 | 11.7 | 1.5 | 2.9 |
| 589351 | 260 | 13 | < 1 | 16 | 84 | 102 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 334 | 686 | 79.0 | 296 | 52.5 | 15.6 | 40.2 | 5.7 | 24.9 | 3.4 | 6.5 |
| 589352 | < 30 | < 1 | < 1 | < 5 | < 2 | 3 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.5 | 1.5 | 0.25 | 1.1 | 0.1 | 0.05 | 0.3 | < 0.1 | 0.2 | < 0.1 | 0.2 |
| 589353 | 230 | 15 | < 1 | 40 | 66 | 136 | < 2 | 0.7 | < 0.2 | 2 | 1.2 | < 0.5 | 234 | 499 | 60.8 | 253 | 74.8 | 30.2 | 95.8 | 19.5 | 118 | 19.5 | 43.0 |
| 589354 | 190 | 13 | 1 | < 5 | 77 | 134 | 4 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 653 | 1260 | 139 | 502 | 90.8 | 26.5 | 55.2 | 5.5 | 22.0 | 2.8 | 6.4 |
| 589355 | 210 | 5 | < 1 | 9 | 25 | 158 | 3 | < 0.5 | 0.2 | 1 | < 0.5 | < 0.5 | 375 | 772 | 86.3 | 312 | 57.3 | 18.2 | 45.5 | 6.2 | 29.8 | 4.3 | 9.3 |
| 589356 | 70 | 17 | 1 | < 5 | 96 | 40 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.9 | 161 | 312 | 34.6 | 126 | 23.3 | 6.78 | 14.1 | 1.5 | 5.6 | 0.7 | 1.5 |
| 589357 | 160 | 15 | < 1 | < 5 | 107 | 63 | 4 | < 0.5 | < 0.2 | 6 | 0.5 | < 0.5 | 169 | 366 | 43.7 | 174 | 39.6 | 13.0 | 33.1 | 4.8 | 23.7 | 3.7 | 8.1 |
| 589358 | 160 | 12 | < 1 | 10 | 53 | 234 | < 2 | 1.6 | < 0.2 | 2 | 1.0 | < 0.5 | 481 | 1030 | 124 | 495 | 112 | 38.2 | 102 | 16.0 | 85.8 | 14.3 | 34.3 |
| 589359 | 110 | 18 | < 1 | < 5 | 165 | 58 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.6 | 165 | 340 | 40.2 | 156 | 28.6 | 8.22 | 16.7 | 1.6 | 6.0 | 0.8 | 1.9 |
| 589360 | 210 | 9 | < 1 | 7 | 52 | 83 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 377 | 843 | 100 | 405 | 70.7 | 19.0 | 37.9 | 3.3 | 13.0 | 1.8 | 4.1 |
| 589361 | 210 | 12 | 1 | < 5 | 68 | 110 | < 2 | < 0.5 | < 0.2 | 3 | 0.6 | < 0.5 | 715 | 1360 | 156 | 607 | 125 | 39.1 | 94.9 | 11.6 | 51.5 | 6.9 | 14.1 |
| 589362 | < 30 | < 1 | < 1 | < 5 | < 2 | 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.7 | 2.0 | 0.31 | 1.2 | 0.3 | 0.08 | 0.3 | < 0.1 | 0.2 | < 0.1 | 0.2 |
| 589363 | 80 | 19 | 1 | < 5 | 68 | 34 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 120 | 242 | 27.4 | 103 | 21.7 | 6.82 | 14.9 | 1.6 | 6.4 | 0.8 | 1.8 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589201 | 0.17 | 1.1 | 0.17 | 3.1 | 0.7 | 5 | 0.2 | 12 | < 0.4 | 21.5 | 1.5 | 0.011 |
| 589202 | 0.97 | 5.1 | 0.68 | 1.7 | 2.6 | 4 | 0.2 | 35 | < 0.4 | 74.1 | 14.2 | 0.534 |
| 589203 | 0.45 | 2.7 | 0.37 | 3.0 | 0.6 | 2 | 0.3 | 15 | < 0.4 | 28.4 | 3.6 | 0.044 |
| 589204 | 0.18 | 0.9 | 0.11 | 5.0 | 0.4 | 9 | 0.2 | 10 | < 0.4 | 13.4 | 2.4 | 0.024 |
| 589205 | 0.95 | 4.9 | 0.63 | 1.8 | 5.8 | 5 | < 0.1 | 27 | < 0.4 | 25.4 | 18.1 | 0.342 |
| 589206 | 0.82 | 4.0 | 0.49 | 3.6 | 2.9 | 40 | 0.2 | 17 | < 0.4 | 17.6 | 18.0 | 0.231 |
| 589207 | 0.35 | 1.8 | 0.24 | 2.6 | 9.9 | 4 | 0.2 | 18 | < 0.4 | 23.1 | 19.3 | 0.335 |
| 589208 | 0.70 | 3.6 | 0.45 | 1.4 | 6.2 | 3 | 0.1 | 37 | < 0.4 | 23.3 | 20.9 | 0.572 |
| 589209 | 0.64 | 3.4 | 0.43 | 2.4 | 3.6 | 2 | 0.2 | 18 | < 0.4 | 22.0 | 11.5 | 0.265 |
| 589210 | 0.81 | 4.2 | 0.54 | 1.8 | 2.0 | 4 | 0.1 | 16 | < 0.4 | 38.7 | 10.6 | 0.214 |
| 589211 | 0.06 | 0.4 | 0.05 | 2.4 | 0.1 | 2 | < 0.1 | 10 | < 0.4 | 3.3 | 0.8 | 0.005 |
| 589212 | 0.61 | 2.8 | 0.32 | 2.5 | 0.7 | 2 | < 0.1 | 8 | < 0.4 | 21.7 | 4.8 | 0.027 |
| 589213 | 2.61 | 11.8 | 1.37 | 1.5 | 3.0 | 1 | < 0.1 | 19 | < 0.4 | 66.3 | 38.9 | 0.211 |
| 589214 | 1.06 | 6.2 | 0.78 | < 0.2 | 0.3 | < 1 | < 0.1 | 12 | < 0.4 | 25.9 | 1.8 | 0.006 |
| 589215 | 2.90 | 13.5 | 1.55 | 0.8 | 2.7 | 4 | < 0.1 | 126 | < 0.4 | 83.2 | 22.2 | 0.384 |
| 589216 | 1.55 | 7.5 | 0.92 | 0.5 | 1.6 | < 1 | < 0.1 | 31 | < 0.4 | 78.5 | 7.8 | 0.278 |
| 589217 | 0.51 | 2.5 | 0.30 | 4.5 | 3.8 | < 1 | 0.3 | 17 | < 0.4 | 33.8 | 3.9 | 0.159 |
| 589218 | 1.45 | 7.2 | 0.86 | 1.3 | 3.6 | 3 | < 0.1 | 24 | < 0.4 | 86.5 | 10.6 | 0.236 |
| 589219 | 1.21 | 7.3 | 0.98 | < 0.2 | 0.2 | < 1 | < 0.1 | 16 | < 0.4 | 18.8 | 1.0 | < 0.003 |
| 589220 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | 0.1 | < 0.1 | < 0.003 |
| 589221 | 1.07 | 5.8 | 0.76 | 1.3 | 2.1 | 3 | < 0.1 | 34 | < 0.4 | 42.5 | 5.5 | 0.128 |
| 589222 | 0.97 | 5.9 | 0.79 | 1.1 | 0.8 | < 1 | < 0.1 | 29 | < 0.4 | 37.6 | 5.8 | 0.210 |
| 589223 | 0.70 | 4.0 | 0.49 | 2.6 | 0.7 | < 1 | < 0.1 | 14 | < 0.4 | 25.3 | 5.2 | 0.171 |
| 589224 | 0.99 | 5.5 | 0.69 | 0.7 | 0.4 | < 1 | < 0.1 | 23 | < 0.4 | 19.5 | 7.5 | 0.127 |
| 589225 | 0.38 | 2.1 | 0.29 | 3.7 | 2.2 | 9 | 0.3 | 29 | < 0.4 | 16.6 | 6.5 | 0.039 |
| 589226 | 0.86 | 4.5 | 0.59 | 1.7 | 1.2 | 3 | < 0.1 | 16 | < 0.4 | 31.5 | 15.2 | 0.198 |
| 589227 | 0.47 | 2.3 | 0.27 | 2.6 | 2.8 | 4 | 0.5 | 9 | < 0.4 | 47.4 | 7.9 | 0.032 |
| 589228 | 0.45 | 2.2 | 0.28 | 2.3 | 3.6 | 17 | 0.2 | 7 | < 0.4 | 32.5 | 6.0 | 0.050 |
| 589229 | 0.42 | 2.2 | 0.29 | 2.8 | 0.6 | 4 | 0.2 | 11 | < 0.4 | 11.9 | 4.6 | 0.015 |
| 589230 | 1.16 | 5.6 | 0.68 | 0.4 | 0.9 | 8 | < 0.1 | 14 | < 0.4 | 84.3 | 19.8 | 0.033 |
| 589231 | 0.18 | 0.9 | 0.12 | 1.8 | 0.4 | 3 | < 0.1 | 9 | < 0.4 | 13.0 | 2.4 | 0.016 |
| 589232 | 0.26 | 1.4 | 0.19 | 2.4 | 0.2 | 3 | < 0.1 | 11 | < 0.4 | 14.2 | 3.0 | 0.024 |
| 589233 | 0.82 | 4.9 | 0.68 | 1.0 | 0.4 | 5 | < 0.1 | 18 | < 0.4 | 19.2 | 4.4 | 0.024 |
| 589234 | 0.25 | 1.6 | 0.24 | 2.7 | 0.5 | 4 | 0.3 | 10 | < 0.4 | 9.4 | 2.3 | 0.008 |
| 589235 | 0.15 | 0.8 | 0.12 | 3.9 | 0.5 | < 1 | 0.2 | 9 | < 0.4 | 14.9 | 3.3 | 0.023 |
| 589236 | 1.71 | 8.1 | 0.91 | 0.5 | 0.2 | < 1 | < 0.1 | 22 | < 0.4 | 74.1 | 26.3 | 0.082 |
| 589237 | 2.20 | 10.3 | 1.13 | 0.9 | 1.9 | < 1 | < 0.1 | 44 | < 0.4 | 68.4 | 39.4 | 0.351 |
| 589238 | 0.14 | 0.8 | 0.11 | 3.2 | 0.8 | < 1 | 0.2 | 10 | < 0.4 | 10.5 | 3.1 | 0.018 |
| 589239 | 0.29 | 1.5 | 0.20 | 1.8 | 0.5 | < 1 | < 0.1 | 8 | < 0.4 | 30.1 | 3.9 | 0.013 |
| 589240 | 0.71 | 4.2 | 0.59 | 0.4 | 19.3 | < 1 | < 0.1 | 44 | < 0.4 | 48.8 | 26.1 | 0.553 |
| 589241 | 0.78 | 4.7 | 0.59 | 1.5 | 1.4 | < 1 | < 0.1 | 14 | < 0.4 | 30.6 | 7.4 | 0.046 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589242 | 0.27 | 1.5 | 0.21 | 5.2 | 1.9 | 4 | 0.5 | 17 | < 0.4 | 16.9 | 2.2 | 0.015 |
| 589243 | 1.66 | 8.4 | 1.01 | 0.3 | 1.1 | 3 | < 0.1 | 100 | < 0.4 | 57.6 | 19.8 | 0.241 |
| 589244 | 0.61 | 3.1 | 0.37 | 2.4 | 2.6 | 7 | 0.1 | 19 | < 0.4 | 31.8 | 7.8 | 0.105 |
| 589245 | 0.19 | 1.0 | 0.14 | 2.3 | 1.6 | 6 | 0.1 | 12 | < 0.4 | 10.5 | 5.0 | 0.020 |
| 589246 | 0.88 | 4.7 | 0.63 | 0.4 | 0.3 | 1 | < 0.1 | 18 | < 0.4 | 61.5 | 16.9 | 0.086 |
| 589247 | 0.30 | 1.6 | 0.20 | 2.5 | 2.9 | 8 | 0.1 | 19 | < 0.4 | 16.9 | 4.9 | 0.031 |
| 589248 | 1.19 | 6.2 | 0.81 | 0.6 | < 0.1 | 7 | < 0.1 | 63 | < 0.4 | 36.3 | 14.8 | 0.103 |
| 589249 | 0.16 | 0.9 | 0.13 | 2.8 | 1.6 | 9 | 0.2 | 16 | < 0.4 | 8.7 | 3.4 | 0.028 |
| 589250 | 0.30 | 1.7 | 0.22 | 1.9 | 1.8 | 4 | 0.2 | 20 | < 0.4 | 9.6 | 9.1 | 0.036 |
| 589251 | 0.87 | 4.7 | 0.63 | 0.6 | 1.9 | 4 | < 0.1 | 23 | < 0.4 | 14.4 | 17.2 | 0.137 |
| 589252 | 0.89 | 4.5 | 0.58 | 3.1 | 2.0 | 3 | < 0.1 | 109 | < 0.4 | 29.1 | 49.8 | 0.067 |
| 589253 | 0.16 | 0.9 | 0.13 | 2.7 | 1.3 | 7 | < 0.1 | 37 | < 0.4 | 34.8 | 4.4 | 0.057 |
| 589254 | 0.84 | 4.7 | 0.61 | 0.2 | 0.4 | 4 | < 0.1 | 18 | < 0.4 | 51.7 | 16.6 | 0.141 |
| 589255 | 0.87 | 5.0 | 0.65 | < 0.2 | < 0.1 | 5 | < 0.1 | 38 | < 0.4 | 5.1 | 3.0 | < 0.003 |
| 589256 | 0.85 | 5.0 | 0.66 | < 0.2 | < 0.1 | 2 | < 0.1 | 22 | < 0.4 | 9.2 | 4.6 | < 0.003 |
| 589257 | 0.88 | 4.9 | 0.70 | < 0.2 | < 0.1 | 3 | < 0.1 | 22 | < 0.4 | 8.8 | 4.7 | < 0.003 |
| 589258 | 0.79 | 4.9 | 0.66 | < 0.2 | < 0.1 | < 1 | < 0.1 | 16 | < 0.4 | 5.2 | 2.1 | < 0.003 |
| 589259 | 0.84 | 4.9 | 0.70 | 0.2 | 0.1 | 4 | < 0.1 | 46 | < 0.4 | 13.5 | 2.3 | 0.007 |
| 589260 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 8 | < 0.1 | < 5 | < 0.4 | < 0.1 | 0.1 | < 0.003 |
| 589261 | 0.48 | 2.6 | 0.33 | 1.9 | 4.5 | 5 | < 0.1 | 38 | < 0.4 | 26.0 | 17.5 | 0.185 |
| 589262 | 0.90 | 4.9 | 0.64 | 0.8 | 0.2 | 6 | < 0.1 | 15 | < 0.4 | 31.3 | 9.1 | 0.127 |
| 589263 | 0.11 | 0.7 | 0.10 | 4.3 | 1.2 | 4 | < 0.1 | 10 | < 0.4 | 12.4 | 2.1 | 0.030 |
| 589264 | 0.66 | 3.5 | 0.45 | 2.6 | 4.7 | 7 | < 0.1 | 21 | < 0.4 | 57.9 | 20.5 | 0.081 |
| 589265 | 1.04 | 5.4 | 0.69 | 0.8 | 2.3 | 3 | < 0.1 | 34 | < 0.4 | 37.6 | 35.0 | 0.061 |
| 589266 | 0.54 | 2.9 | 0.39 | < 0.2 | 0.4 | 4 | < 0.1 | 13 | < 0.4 | 53.3 | 13.1 | 0.090 |
| 589267 | 1.13 | 5.3 | 0.65 | 1.0 | 1.3 | 19 | < 0.1 | 36 | < 0.4 | 79.2 | 43.2 | 0.160 |
| 589268 | 1.85 | 9.7 | 1.16 | 3.9 | 3.5 | 13 | < 0.1 | 42 | 0.4 | 51.5 | 29.2 | 0.069 |
| 589269 | 0.98 | 5.1 | 0.65 | 1.8 | 11.0 | 4 | < 0.1 | 67 | < 0.4 | 39.9 | 79.0 | 0.391 |
| 589270 | 0.97 | 5.0 | 0.62 | 1.4 | 0.7 | 8 | < 0.1 | 85 | < 0.4 | 21.3 | 15.4 | 0.112 |
| 589271 | 0.76 | 4.2 | 0.60 | 0.5 | 10.4 | 86 | < 0.1 | 45 | < 0.4 | 48.3 | 24.0 | 0.548 |
| 589272 | 1.92 | 9.9 | 1.27 | 1.1 | 4.2 | 6 | < 0.1 | 62 | < 0.4 | 44.3 | 52.6 | 0.227 |
| 589273 | 0.81 | 4.1 | 0.50 | 1.9 | 7.4 | 6 | < 0.1 | 54 | < 0.4 | 29.7 | 27.7 | 0.125 |
| 589274 | 0.59 | 2.8 | 0.35 | 2.4 | 5.9 | 15 | < 0.1 | 33 | < 0.4 | 59.8 | 26.5 | 0.261 |
| 589275 | 1.82 | 8.7 | 1.03 | 0.9 | 4.4 | 9 | < 0.1 | 45 | < 0.4 | 87.7 | 49.7 | 0.512 |
| 589276 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 3 | < 0.1 | < 5 | < 0.4 | 0.1 | < 0.1 | < 0.003 |
| 589277 | 2.44 | 11.8 | 1.38 | 0.9 | 0.8 | 5 | < 0.1 | 129 | 0.5 | 84.3 | 25.7 | 0.202 |
| 589278 | 0.54 | 2.5 | 0.32 | 2.3 | 2.7 | 7 | < 0.1 | 27 | < 0.4 | 42.9 | 12.0 | 0.164 |
| 589279 | 0.18 | 1.0 | 0.15 | 1.9 | 0.6 | 15 | < 0.1 | 23 | < 0.4 | 24.5 | 3.6 | 0.120 |
| 589280 | 0.21 | 1.0 | 0.12 | 2.6 | 2.8 | 9 | 0.1 | 30 | < 0.4 | 20.9 | 4.8 | 0.042 |
| 589281 | 1.19 | 6.1 | 0.80 | 0.8 | 0.3 | 5 | < 0.1 | 15 | < 0.4 | 70.0 | 12.8 | 0.054 |
| 589282 | 0.96 | 4.8 | 0.63 | 1.1 | 0.1 | 5 | < 0.1 | 13 | < 0.4 | 50.9 | 12.1 | 0.055 |
| 589283 | 0.99 | 5.3 | 0.68 | 0.9 | 1.9 | 5 | < 0.1 | 20 | < 0.4 | 47.2 | 27.4 | 0.133 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589284 | 0.32 | 1.6 | 0.23 | 3.2 | 1.4 | 3 | < 0.1 | 10 | < 0.4 | 20.8 | 6.0 | 0.070 |
| 589285 | 0.92 | 4.5 | 0.56 | 1.5 | 4.2 | 7 | < 0.1 | 19 | < 0.4 | 49.2 | 18.2 | 0.203 |
| 589286 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 10 | < 0.1 | < 5 | < 0.4 | 0.1 | 0.1 | < 0.003 |
| 589287 | 1.02 | 4.9 | 0.58 | 1.5 | 0.1 | 7 | < 0.1 | 22 | < 0.4 | 106 | 11.8 | 0.097 |
| 589288 | 0.17 | 1.0 | 0.13 | 1.6 | 0.6 | 4 | < 0.1 | 9 | < 0.4 | 15.3 | 2.4 | 0.023 |
| 589289 | 0.72 | 3.9 | 0.55 | 0.5 | 15.4 | 2 | < 0.1 | 57 | < 0.4 | 45.6 | 24.9 | 0.542 |
| 589290 | 0.13 | 0.7 | 0.11 | 2.4 | 0.3 | < 1 | < 0.1 | 12 | < 0.4 | 13.7 | 1.4 | 0.008 |
| 589291 | 1.61 | 8.4 | 1.04 | 11.7 | 9.2 | 22 | < 0.1 | 19 | < 0.4 | 50.4 | 16.2 | 0.113 |
| 589292 | 0.86 | 4.4 | 0.56 | 2.4 | 0.1 | 4 | < 0.1 | 27 | < 0.4 | 49.2 | 6.5 | 0.036 |
| 589293 | 0.63 | 3.5 | 0.46 | < 0.2 | < 0.1 | 2 | < 0.1 | 31 | < 0.4 | 32.6 | 1.7 | < 0.003 |
| 589294 | 0.51 | 3.0 | 0.45 | < 0.2 | 0.2 | 5 | < 0.1 | 17 | < 0.4 | 63.8 | 2.1 | < 0.003 |
| 589295 | 0.46 | 2.8 | 0.45 | 0.4 | 0.6 | 5 | < 0.1 | 21 | < 0.4 | 99.6 | 10.8 | 0.102 |
| 589296 | 0.90 | 4.3 | 0.53 | 0.6 | 1.6 | 2 | < 0.1 | 24 | < 0.4 | 83.6 | 27.6 | 0.362 |
| 589297 | 1.04 | 5.1 | 0.63 | 0.9 | 0.8 | 3 | < 0.1 | 19 | < 0.4 | 55.0 | 20.2 | 0.272 |
| 589298 | 1.00 | 5.4 | 0.64 | 0.3 | < 0.1 | 4 | < 0.1 | 32 | < 0.4 | 39.3 | 9.8 | 0.072 |
| 589299 | 1.10 | 5.5 | 0.67 | 0.4 | 0.4 | 2 | < 0.1 | 22 | < 0.4 | 38.9 | 17.6 | 0.135 |
| 589300 | 0.18 | 1.1 | 0.15 | 2.2 | 0.5 | 5 | < 0.1 | 20 | < 0.4 | 9.0 | 1.3 | 0.013 |
| 589301 | 0.80 | 4.0 | 0.53 | 0.2 | < 0.1 | 3 | < 0.1 | 55 | < 0.4 | 50.1 | 12.3 | 0.143 |
| 589302 | 0.29 | 1.7 | 0.23 | 1.8 | 0.7 | 5 | < 0.1 | 13 | < 0.4 | 9.2 | 5.3 | 0.062 |
| 589303 | 0.70 | 3.4 | 0.43 | 2.9 | 1.0 | 6 | < 0.1 | 14 | < 0.4 | 50.0 | 8.1 | 0.053 |
| 589304 | 1.41 | 6.8 | 0.77 | 0.5 | 0.2 | 4 | < 0.1 | 16 | < 0.4 | 51.3 | 23.1 | 0.190 |
| 589305 | 1.50 | 7.4 | 0.89 | 0.2 | < 0.1 | < 1 | < 0.1 | 11 | < 0.4 | 48.6 | 6.8 | < 0.003 |
| 589306 | 0.73 | 4.0 | 0.52 | < 0.2 | < 0.1 | < 1 | < 0.1 | 15 | < 0.4 | 71.8 | 3.6 | < 0.003 |
| 589307 | 2.14 | 11.2 | 1.42 | 0.4 | 0.5 | 3 | < 0.1 | 39 | < 0.4 | 92.8 | 38.7 | 0.119 |
| 589308 | < 0.05 | 0.2 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | 0.2 | 0.1 | < 0.003 |
| 589309 | 2.51 | 12.0 | 1.39 | 0.6 | < 0.1 | 2 | < 0.1 | 21 | < 0.4 | 120 | 25.6 | 0.030 |
| 589310 | 1.45 | 7.4 | 0.87 | 0.3 | < 0.1 | < 1 | < 0.1 | 17 | < 0.4 | 98.8 | 11.7 | 0.071 |
| 589311 | 0.16 | 0.9 | 0.12 | 3.1 | 0.4 | 2 | < 0.1 | 51 | < 0.4 | 8.6 | 3.4 | 0.028 |
| 589312 | 0.88 | 4.8 | 0.65 | 0.4 | < 0.1 | 2 | < 0.1 | 38 | < 0.4 | 41.5 | 6.4 | 0.036 |
| 589313 | 0.39 | 2.1 | 0.26 | 1.4 | 1.4 | 6 | < 0.1 | 15 | < 0.4 | 49.3 | 10.1 | 0.047 |
| 589314 | 1.71 | 8.5 | 0.96 | 0.5 | < 0.1 | 2 | < 0.1 | 16 | < 0.4 | 62.0 | 15.1 | 0.068 |
| 589315 | 1.29 | 5.3 | 0.62 | 0.3 | 0.9 | 1 | < 0.1 | 8 | < 0.4 | 104 | 7.0 | 0.010 |
| 589316 | 1.59 | 6.9 | 0.81 | 0.4 | 0.2 | < 1 | < 0.1 | 8 | < 0.4 | 135 | 7.5 | 0.005 |
| 589317 | 1.66 | 7.0 | 0.77 | 0.5 | 0.3 | < 1 | < 0.1 | 7 | < 0.4 | 137 | 7.3 | 0.009 |
| 589318 | 2.58 | 11.7 | 1.33 | 1.5 | < 0.1 | 3 | < 0.1 | 13 | < 0.4 | 171 | 14.6 | 0.003 |
| 589319 | 1.24 | 6.7 | 0.88 | 2.4 | 1.3 | 49 | < 0.1 | 16 | < 0.4 | 54.7 | 30.7 | 0.167 |
| 589320 | 0.27 | 1.6 | 0.26 | 2.7 | 1.6 | 1 | < 0.1 | 17 | < 0.4 | 23.7 | 9.0 | 0.040 |
| 589321 | 1.02 | 5.6 | 0.74 | 0.3 | 0.6 | 1 | < 0.1 | 160 | 1.1 | 50.8 | 24.0 | 0.109 |
| 589322 | 0.94 | 4.8 | 0.62 | 0.3 | 0.7 | < 1 | < 0.1 | 43 | < 0.4 | 35.8 | 22.2 | 0.090 |
| 589323 | 0.90 | 5.0 | 0.68 | < 0.2 | 2.5 | < 1 | < 0.1 | 39 | < 0.4 | 40.9 | 12.8 | 0.010 |
| 589324 | 1.17 | 5.5 | 0.63 | 2.0 | 8.3 | 8 | < 0.1 | 33 | < 0.4 | 45.0 | 109 | 0.187 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589325 | 0.88 | 4.8 | 0.64 | 0.4 | 0.7 | < 1 | < 0.1 | 53 | < 0.4 | 44.5 | 28.9 | 0.031 |
| 589326 | 1.22 | 6.8 | 0.83 | 1.3 | 1.7 | < 1 | < 0.1 | 78 | < 0.4 | 59.1 | 34.0 | 0.023 |
| 589327 | 1.15 | 5.8 | 0.69 | 1.0 | 4.7 | 1 | < 0.1 | 70 | < 0.4 | 51.2 | 101 | 0.073 |
| 589328 | 1.27 | 6.8 | 0.87 | 1.1 | 1.7 | < 1 | < 0.1 | 62 | < 0.4 | 41.8 | 64.0 | 0.044 |
| 589329 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | 0.1 | 0.2 | < 0.003 |
| 589330 | 1.31 | 6.7 | 0.85 | 3.0 | 4.0 | 9 | < 0.1 | 41 | < 0.4 | 35.5 | 60.2 | 0.060 |
| 589331 | 1.40 | 7.1 | 0.93 | 0.4 | 1.4 | 2 | < 0.1 | 29 | < 0.4 | 52.6 | 12.0 | 0.008 |
| 589332 | 2.70 | 12.1 | 1.34 | 0.4 | 0.6 | < 1 | < 0.1 | 41 | < 0.4 | 74.8 | 33.7 | 0.199 |
| 589333 | 6.10 | 25.5 | 2.55 | 1.1 | 1.2 | < 1 | < 0.1 | 54 | < 0.4 | 136 | 46.7 | 0.273 |
| 589334 | 2.38 | 11.1 | 1.27 | 0.4 | 0.2 | 1 | < 0.1 | 26 | < 0.4 | 123 | 19.5 | 0.021 |
| 589335 | 0.83 | 3.8 | 0.43 | 1.6 | 4.6 | 7 | < 0.1 | 14 | < 0.4 | 45.6 | 14.9 | 0.093 |
| 589336 | 1.04 | 5.0 | 0.65 | 0.9 | < 0.1 | 5 | < 0.1 | 19 | < 0.4 | 106 | 13.5 | 0.044 |
| 589337 | 0.72 | 4.1 | 0.55 | 0.4 | 13.4 | 2 | < 0.1 | 56 | < 0.4 | 48.0 | 25.0 | 0.513 |
| 589338 | 2.55 | 11.2 | 1.33 | 1.5 | 1.6 | 3 | < 0.1 | 30 | < 0.4 | 121 | 36.5 | 0.151 |
| 589339 | 0.48 | 2.3 | 0.27 | 2.2 | 1.0 | 8 | < 0.1 | 21 | < 0.4 | 65.3 | 5.5 | 0.029 |
| 589340 | 1.46 | 6.6 | 0.77 | 1.5 | 3.4 | 11 | < 0.1 | 52 | < 0.4 | 92.1 | 14.1 | 0.037 |
| 589341 | 1.06 | 5.1 | 0.59 | 2.4 | 1.3 | 2 | < 0.1 | 28 | < 0.4 | 67.2 | 9.4 | 0.035 |
| 589342 | 3.31 | 15.9 | 1.85 | 0.7 | 0.1 | 7 | < 0.1 | 138 | < 0.4 | 349 | 62.1 | 0.086 |
| 589343 | 0.69 | 4.0 | 0.53 | 0.6 | 9.4 | < 1 | < 0.1 | 39 | < 0.4 | 48.5 | 24.9 | 0.541 |
| 589344 | 0.86 | 4.4 | 0.55 | 2.3 | 1.6 | 8 | 0.3 | 40 | < 0.4 | 71.1 | 6.6 | 0.019 |
| 589345 | 0.68 | 3.1 | 0.40 | 1.6 | 1.2 | 3 | 0.2 | 30 | < 0.4 | 54.9 | 9.0 | 0.042 |
| 589346 | 0.47 | 2.1 | 0.24 | 1.8 | 0.3 | 1 | 0.2 | 21 | < 0.4 | 29.7 | 3.8 | 0.013 |
| 589347 | 1.00 | 4.8 | 0.56 | 1.2 | 2.5 | 5 | 0.2 | 34 | < 0.4 | 68.8 | 10.9 | 0.086 |
| 589348 | 0.74 | 4.0 | 0.55 | 0.3 | 1.0 | 3 | < 0.1 | 35 | < 0.4 | 106 | 18.8 | 0.052 |
| 589349 | 0.38 | 1.9 | 0.25 | 2.6 | 0.4 | 20 | 0.2 | 65 | < 0.4 | 58.1 | 14.2 | 0.007 |
| 589350 | 0.33 | 1.7 | 0.22 | 2.0 | 0.7 | 7 | 0.3 | 24 | < 0.4 | 294 | 25.5 | 0.013 |
| 589351 | 0.65 | 3.4 | 0.42 | 1.9 | 0.8 | 13 | 0.3 | 159 | < 0.4 | 806 | 32.5 | 0.013 |
| 589352 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 5 | < 0.1 | < 5 | < 0.4 | 0.6 | 0.1 | < 0.003 |
| 589353 | 4.77 | 23.0 | 2.58 | 2.9 | 1.8 | 6 | 0.2 | 81 | < 0.4 | 494 | 83.2 | 0.031 |
| 589354 | 0.72 | 3.5 | 0.40 | 1.9 | 1.1 | 4 | 0.2 | 32 | < 0.4 | 104 | 9.4 | 0.024 |
| 589355 | 1.05 | 5.3 | 0.67 | 0.4 | 0.4 | 3 | < 0.1 | 60 | < 0.4 | 73.4 | 5.4 | 0.023 |
| 589356 | 0.16 | 0.8 | 0.11 | 1.4 | 0.8 | 7 | 0.3 | 18 | < 0.4 | 22.8 | 1.3 | 0.009 |
| 589357 | 0.87 | 4.5 | 0.54 | 2.1 | 1.0 | 5 | 0.3 | 24 | < 0.4 | 49.9 | 26.6 | 0.013 |
| 589358 | 4.32 | 22.1 | 2.47 | 5.3 | 4.3 | 17 | 0.1 | 69 | < 0.4 | 172 | 72.3 | 0.070 |
| 589359 | 0.26 | 1.3 | 0.16 | 1.6 | 0.7 | 6 | 0.5 | 12 | < 0.4 | 32.0 | 4.4 | 0.009 |
| 589360 | 0.52 | 3.1 | 0.38 | 0.6 | 0.9 | 6 | 0.2 | 22 | < 0.4 | 75.7 | 6.6 | 0.011 |
| 589361 | 1.51 | 7.2 | 0.81 | 1.5 | 1.0 | 7 | 0.2 | 27 | < 0.4 | 155 | 9.7 | 0.017 |
| 589362 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 3 | < 0.1 | < 5 | < 0.4 | 0.2 | < 0.1 | < 0.003 |
| 589363 | 0.20 | 1.1 | 0.14 | 2.4 | 0.5 | 6 | 0.2 | 14 | < 0.4 | 23.3 | 1.7 | 0.010 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu | |
|-----------------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|-----|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 | |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS | |
| NIST 694 Meas | 11.39 | 1.84 | 0.76 | 0.013 | 0.34 | 43.35 | 0.89 | 0.54 | 0.114 | 30.20 | | | | | 1598 | | | | | | | | | |
| NIST 694 Cert | 11.2 | 1.80 | 0.790 | 0.0116 | 0.330 | 43.6 | 0.860 | 0.510 | 0.110 | 30.2 | | | | | 1740 | | | | | | | | | |
| DNC-1 Meas | 47.88 | 18.92 | 10.06 | 0.149 | 10.16 | 11.40 | 1.95 | 0.24 | 0.487 | 0.07 | | | 31 | | 152 | 109 | 154 | 14 | 38 | | 59 | 270 | 100 | |
| DNC-1 Cert | 47.15 | 18.34 | 9.97 | 0.150 | 10.13 | 11.49 | 1.890 | 0.234 | 0.480 | 0.070 | | | 31 | | 148 | 118 | 144.0 | 18.0 | 38 | | 57 | 247 | 100 | |
| LKSD-3 Meas | | | | | | | | | | | | | | | | | | | | 80 | 31 | | 40 | |
| LKSD-3 Cert | | | | | | | | | | | | | | | | | | | | 87.0 | 30.0 | | 35.0 | |
| TDB-1 Meas | | | | | | | | | | | | | | | | | | | | 250 | | 90 | 330 | |
| TDB-1 Cert | | | | | | | | | | | | | | | | | | | | 251 | | 92 | 323 | |
| AC-E Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| AC-E Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| OKA-1 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| OKA-1 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 51.49 | 15.18 | 10.74 | 0.163 | 6.36 | 10.80 | 2.16 | 0.62 | 1.036 | 0.14 | | | 35 | < 1 | 265 | 175 | 203 | 19 | 90 | 90 | 44 | 70 | 110 | |
| W-2a Cert | 52.4 | 15.4 | 10.7 | 0.163 | 6.37 | 10.9 | 2.14 | 0.626 | 1.06 | 0.140 | | | 36.0 | 1.30 | 262 | 182 | 190 | 24.0 | 94.0 | 92.0 | 43.0 | 70.0 | 110 | |
| SY-4 Meas | 49.34 | 19.77 | 5.82 | 0.107 | 0.49 | 7.92 | 6.96 | 1.63 | 0.276 | 0.13 | | | 1 | 3 | 8 | 348 | 1159 | 106 | 533 | | | | | |
| SY-4 Cert | 49.9 | 20.69 | 6.21 | 0.108 | 0.54 | 8.05 | 7.10 | 1.66 | 0.287 | 0.131 | | | 1.1 | 2.6 | 8.0 | 340 | 1191 | 119 | 517 | | | | | |
| CTA-AC-1 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| BIR-1a Meas | 49.65 | 14.69 | 11.76 | 0.173 | 9.27 | 13.55 | 1.85 | 0.02 | 0.936 | 0.02 | | | 44 | < 1 | 325 | 8 | 109 | 14 | 17 | 380 | 54 | 180 | 130 | |
| BIR-1a Cert | 47.96 | 15.50 | 11.30 | 0.175 | 9.700 | 13.30 | 1.82 | 0.030 | 0.96 | 0.021 | | | 44 | 0.58 | 310 | 6 | 110 | 16 | 18 | 370 | 52 | 170 | 125 | |
| NCS DC86312 Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC86312 Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | | | | | | | | | | | | | | | | | | | | | | | 1010 | |
| NCS DC70009 (GBW07241) Cert | | | | | | | | | | | | | | | | | | | | | | | 960 | |
| OREAS 100a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 17 | 180 | |
| OREAS 100a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 18.1 | 169 | |
| OREAS 101a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 47 | 440 | |
| OREAS 101a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 48.8 | 430 | |
| OREAS 101b (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | | 46 | < 20 | 420 |
| OREAS 101b (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | | 47 | 9 | 420 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|-----------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Meas | | | | | | | | | | | | | | | | | | | | | | < 20 | |
| JR-1 Cert | | | | | | | | | | | | | | | | | | | | | | | 1.67 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589215 Orig | 2.71 | 0.25 | 5.55 | 0.495 | 2.09 | 47.27 | 0.20 | 0.13 | 0.070 | 5.81 | 34.92 | 99.48 | 5 | < 1 | 28 | 2475 | 6567 | 303 | 21 | < 20 | 20 | < 20 | 20 |
| 589215 Dup | 2.67 | 0.24 | 5.49 | 0.496 | 2.09 | 47.45 | 0.20 | 0.14 | 0.062 | 5.76 | 34.85 | 99.45 | 4 | < 1 | 27 | 2461 | 6480 | 302 | 21 | < 20 | 18 | < 20 | 20 |
| 589232 Orig | 55.47 | 11.57 | 3.99 | 0.126 | 3.14 | 8.48 | 3.97 | 4.40 | 0.182 | 0.31 | 8.83 | 100.5 | 3 | 6 | 129 | 962 | 1475 | 23 | 97 | < 20 | 2 | < 20 | < 10 |
| 589232 Dup | 54.49 | 10.69 | 3.89 | 0.125 | 3.26 | 8.53 | 3.99 | 4.34 | 0.178 | 0.32 | 8.84 | 98.65 | 4 | 6 | 129 | 950 | 1398 | 24 | 97 | < 20 | 2 | < 20 | < 10 |
| 589250 Orig | 43.51 | 8.79 | 9.71 | 0.282 | 4.76 | 11.44 | 3.49 | 4.15 | 0.376 | 1.02 | 11.03 | 98.56 | 11 | 4 | 112 | 530 | 1568 | 29 | 65 | 50 | 25 | 30 | 30 |
| 589250 Split PREP DUP | 43.91 | 9.69 | 9.33 | 0.271 | 4.82 | 10.40 | 3.97 | 4.40 | 0.395 | 0.87 | 10.66 | 98.71 | 10 | 4 | 115 | 544 | 1647 | 27 | 73 | 60 | 23 | 30 | 30 |
| 589262 Orig | 12.01 | 2.28 | 3.80 | 0.394 | 4.18 | 38.98 | 0.17 | 1.99 | 0.228 | 2.74 | 31.55 | 98.32 | 4 | 2 | 52 | 1234 | 3267 | 80 | 28 | < 20 | 5 | < 20 | 10 |
| 589262 Dup | 11.85 | 2.20 | 3.77 | 0.394 | 4.15 | 39.36 | 0.16 | 1.98 | 0.227 | 2.72 | 31.51 | 98.32 | 4 | 2 | 52 | 1189 | 3144 | 78 | 32 | < 20 | 5 | < 20 | 10 |
| 589279 Orig | 31.72 | 6.90 | 7.00 | 0.349 | 8.47 | 15.23 | 0.84 | 5.34 | 0.481 | 0.08 | 21.92 | 98.33 | 7 | 3 | 103 | 738 | 1714 | 13 | 35 | < 20 | 9 | < 20 | 30 |
| 589279 Dup | 31.72 | 6.92 | 7.00 | 0.345 | 8.37 | 15.16 | 0.83 | 5.35 | 0.481 | 0.07 | 21.93 | 98.18 | 7 | 3 | 104 | 745 | 1704 | 14 | 36 | < 20 | 9 | < 20 | 30 |
| 589300 Orig | 56.90 | 11.72 | 4.79 | 0.145 | 3.25 | 6.13 | 3.69 | 3.98 | 0.360 | 0.19 | 6.82 | 97.96 | 13 | 5 | 133 | 785 | 835 | 16 | 80 | 130 | 8 | 50 | < 10 |
| 589300 Split PREP DUP | 57.38 | 11.42 | 4.90 | 0.136 | 3.20 | 6.00 | 3.56 | 4.18 | 0.341 | 0.18 | 6.97 | 98.26 | 12 | 4 | 128 | 828 | 859 | 15 | 80 | 170 | 8 | 60 | < 10 |
| 589309 Orig | 1.07 | 0.10 | 2.96 | 0.476 | 2.39 | 51.02 | 0.05 | 0.05 | 0.023 | 5.69 | 36.02 | 99.87 | 6 | < 1 | 27 | 1692 | 1824 | 246 | 10 | < 20 | < 1 | < 20 | 10 |
| 589309 Dup | 1.06 | 0.11 | 2.88 | 0.474 | 2.42 | 51.06 | 0.05 | 0.06 | 0.024 | 5.66 | 36.00 | 99.79 | 5 | < 1 | 23 | 1699 | 1909 | 226 | 8 | < 20 | 1 | < 20 | 10 |
| 589326 Orig | 1.73 | 0.23 | 2.55 | 0.484 | 1.94 | 50.85 | 0.04 | 0.19 | 0.048 | 3.71 | 37.37 | 99.14 | 4 | < 1 | 26 | 906 | 2246 | 121 | 262 | < 20 | 3 | < 20 | 10 |
| 589326 Dup | 1.73 | 0.23 | 2.54 | 0.481 | 1.93 | 50.57 | 0.04 | 0.19 | 0.048 | 3.72 | 37.35 | 98.82 | 4 | < 1 | 27 | 875 | 2200 | 120 | 255 | < 20 | 3 | < 20 | 10 |
| 589350 Orig | 59.13 | 13.27 | 3.80 | 0.141 | 2.36 | 4.99 | 4.20 | 3.96 | 0.233 | 0.02 | 6.55 | 98.66 | 8 | 3 | 68 | 3890 | 1088 | 36 | 106 | 20 | 2 | < 20 | < 10 |
| 589350 Split PREP DUP | 59.85 | 13.46 | 3.62 | 0.120 | 2.04 | 4.99 | 4.41 | 3.80 | 0.210 | < 0.01 | 5.95 | 98.46 | 7 | 3 | 63 | 4150 | 939 | 32 | 112 | < 20 | 2 | < 20 | < 10 |
| 589356 Orig | 62.86 | 12.60 | 3.04 | 0.151 | 1.97 | 4.21 | 3.57 | 5.10 | 0.199 | 0.17 | 4.82 | 98.69 | 7 | 4 | 87 | 1504 | 816 | 16 | 51 | < 20 | 2 | < 20 | < 10 |
| 589356 Dup | 63.77 | 12.04 | 2.89 | 0.144 | 2.00 | 4.25 | 3.64 | 5.24 | 0.191 | 0.17 | 4.89 | 99.22 | 6 | 4 | 88 | 1536 | 787 | 15 | 54 | < 20 | 2 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | 0.01 | 0.002 | < 0.01 | 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | 1 | 2 | < 20 | < 1 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | < 0.01 | 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | < 0.01 | 0.01 | 0.02 | 0.003 | 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | < 0.01 | < 0.01 | < 0.01 | 0.003 | 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.002 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | 1 | < 2 | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| NIST 694 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| DNC-1 Meas | 70 | 14 | | | | 3 | | | | | 0.9 | | 3.8 | | | 5.1 | | 0.61 | | | | | |
| DNC-1 Cert | 70 | 15 | | | | 3 | | | | | 0.96 | | 3.6 | | | 5.20 | | 0.59 | | | | | |
| LKSD-3 Meas | 150 | | | 29 | 77 | | < 2 | 2.5 | | | | 2.2 | 49.1 | 91.5 | | 45.6 | 8.0 | 1.40 | | | | 5.3 | |
| LKSD-3 Cert | 152 | | | 27.0 | 78.0 | | 2.00 | 2.70 | | | | 2.30 | 52.0 | 90.0 | | 44.0 | 8.00 | 1.50 | | | | 4.90 | |
| TDB-1 Meas | 150 | | | | | | | | | | | | 17.6 | 41.2 | | 24.5 | | 2.10 | | | | | |
| TDB-1 Cert | 155 | | | | | | | | | | | | 17 | 41 | | 23 | | 2.1 | | | | | |
| AC-E Meas | | | | | | | | | | | | | | | | | | | | | | | |
| AC-E Cert | | | | | | | | | | | | | | | | | | | | | | | |
| OKA-1 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| OKA-1 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 70 | 18 | 1 | | 19 | | < 2 | | | | | | 10.8 | 24.2 | | 12.9 | 3.4 | | | 0.6 | 3.9 | 0.8 | |
| W-2a Cert | 80.0 | 17.0 | 1.00 | | 21.0 | | 0.600 | | | | | | 10.0 | 23.0 | | 13.0 | 3.30 | | | 0.630 | 3.60 | 0.760 | |
| SY-4 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Meas | 40 | | | | | | | | | | | | > 2000 | > 3000 | | 1190 | 169 | 47.3 | 132 | 14.6 | | | |
| CTA-AC-1 Cert | 38.0 | | | | | | | | | | | | 2176 | 3326 | | 1087 | 162 | 46.7 | 124 | 13.9 | | | |
| BIR-1a Meas | 70 | 16 | | | | | | | | | | | 0.7 | 2.0 | | 2.5 | 1.1 | 0.53 | 2.0 | | | | |
| BIR-1a Cert | 70 | 16 | | | | | | | | | | | 0.63 | 1.9 | | 2.5 | 1.1 | 0.55 | 2.0 | | | | |
| NCS DC86312 Meas | | | | | | | | | | | | | > 2000 | 178 | | 1620 | | | 228 | 32.6 | 201 | 36.2 | 103 |
| NCS DC86312 Cert | | | | | | | | | | | | | 2360 | 190 | | 1600 | | | 225.0 | 34.6 | 183 | 36 | 96.2 |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | 100 | 17 | 10 | 65 | 481 | | | 1.9 | 1.0 | > 1000 | 2.8 | 40.7 | 24.6 | 60.3 | 8.10 | 32.9 | 12.8 | | 16.1 | 3.2 | 20.9 | 4.5 | 14.0 |
| NCS DC70009 (GBW07241) Cert | 100 | 16.5 | 11.2 | 69.9 | 500 | | | 1.8 | 1.3 | 1700 | 3.1 | 41 | 23.7 | 60.3 | 7.9 | 32.9 | 12.5 | | 14.8 | 3.3 | 20.7 | 4.5 | 13.4 |
| OREAS 100a (Fusion) Meas | | | | | | | 22 | | | | | | 273 | 471 | 47.2 | 157 | 24.4 | 3.72 | 21.8 | 3.5 | 25.0 | 5.1 | 15.4 |
| OREAS 100a (Fusion) Cert | | | | | | | 24.1 | | | | | | 260 | 463 | 47.1 | 152 | 23.6 | 3.71 | 23.6 | 3.80 | 23.2 | 4.81 | 14.9 |
| OREAS 101a (Fusion) Meas | | | | | | | | 21 | | | | | 822 | 1410 | 131 | 403 | 49.8 | 8.09 | 46.6 | 5.8 | 33.8 | 6.7 | 19.7 |
| OREAS 101a (Fusion) Cert | | | | | | | | 21.9 | | | | | 816 | 1396 | 134 | 403 | 48.8 | 8.06 | 43.4 | 5.92 | 33.3 | 6.46 | 19.5 |
| OREAS 101b (Fusion) Meas | | | | | | | | 20 | | | | | 811 | 1400 | 128 | 384 | 50.0 | 8.11 | | 5.2 | 31.9 | 6.3 | 18.8 |
| OREAS 101b (Fusion) Cert | | | | | | | | 21 | | | | | 789 | 1331 | 127 | 378 | 48 | 7.77 | | 5.37 | 32.1 | 6.34 | 18.7 |
| JR-1 Meas | < 30 | 17 | | 16 | 235 | 14 | 3 | | < 0.2 | 3 | | 19.6 | 21.0 | 48.2 | 6.00 | 24.8 | 6.0 | 0.29 | 5.1 | 1.0 | 5.8 | 1.2 | 3.3 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Cert | 30.6 | 16.1 | | 16.3 | 257 | 15.2 | 3.25 | | 0.028 | 2.86 | | 20.8 | 19.7 | 47.2 | 5.58 | 23.3 | 6.03 | 0.30 | 5.06 | 1.01 | 5.69 | 1.11 | 3.61 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SARM 3 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589215 Orig | 190 | 6 | 1 | 19 | < 2 | 770 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 506 | 1310 | 178 | 771 | 180 | 57.9 | 155 | 20.3 | 92.8 | 12.9 | 27.5 |
| 589215 Dup | 170 | 7 | 1 | 18 | < 2 | 573 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 519 | 1320 | 180 | 769 | 182 | 59.3 | 159 | 20.7 | 93.2 | 12.9 | 27.6 |
| 589232 Orig | 110 | 20 | 1 | < 5 | 82 | 107 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 156 | 332 | 38.5 | 149 | 23.8 | 7.02 | 14.4 | 1.6 | 7.2 | 1.1 | 2.5 |
| 589232 Dup | 100 | 18 | 1 | < 5 | 81 | 102 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 149 | 319 | 37.0 | 142 | 22.9 | 6.77 | 13.8 | 1.6 | 7.1 | 1.0 | 2.3 |
| 589250 Orig | 140 | 15 | < 1 | 26 | 84 | 210 | 11 | < 0.5 | < 0.2 | 3 | 1.2 | < 0.5 | 81.0 | 196 | 24.3 | 97.6 | 21.7 | 7.08 | 18.3 | 2.2 | 9.0 | 1.2 | 2.7 |
| 589250 Split PREP DUP | 140 | 16 | < 1 | 20 | 85 | 176 | 10 | < 0.5 | < 0.2 | 3 | 0.8 | < 0.5 | 78.1 | 186 | 22.7 | 92.4 | 20.1 | 6.44 | 16.7 | 2.0 | 8.1 | 1.1 | 2.4 |
| 589262 Orig | 80 | 10 | < 1 | < 5 | 54 | 256 | 18 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 236 | 537 | 65.4 | 253 | 46.2 | 14.2 | 35.6 | 4.8 | 23.1 | 3.6 | 8.2 |
| 589262 Dup | 80 | 10 | < 1 | 5 | 53 | 256 | 20 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 235 | 537 | 65.1 | 253 | 46.2 | 13.9 | 35.1 | 4.8 | 22.8 | 3.6 | 7.9 |
| 589279 Orig | 140 | 17 | < 1 | 5 | 94 | 576 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 224 | 483 | 58.0 | 223 | 35.7 | 8.89 | 17.5 | 1.4 | 5.0 | 0.7 | 1.5 |
| 589279 Dup | 140 | 17 | < 1 | 7 | 94 | 622 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 222 | 490 | 58.6 | 225 | 35.4 | 9.09 | 16.4 | 1.4 | 5.3 | 0.7 | 1.5 |
| 589300 Orig | 90 | 18 | < 1 | < 5 | 76 | 48 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 49.4 | 110 | 13.6 | 55.6 | 12.0 | 3.79 | 9.5 | 1.1 | 4.8 | 0.7 | 1.5 |
| 589300 Split PREP DUP | 100 | 19 | 1 | < 5 | 75 | 48 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | 0.5 | 46.6 | 104 | 13.0 | 52.3 | 11.7 | 3.74 | 8.9 | 1.0 | 4.6 | 0.6 | 1.5 |
| 589309 Orig | 50 | 10 | 2 | 7 | < 2 | 99 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 568 | 1430 | 185 | 787 | 165 | 51.7 | 130 | 17.3 | 78.2 | 11.0 | 23.1 |
| 589309 Dup | 40 | 10 | 2 | 9 | < 2 | 103 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 603 | 1490 | 194 | 820 | 167 | 52.7 | 131 | 17.4 | 79.3 | 11.3 | 23.5 |
| 589326 Orig | 120 | 6 | < 1 | < 5 | 3 | 89 | < 2 | 1.0 | < 0.2 | < 1 | < 0.5 | < 0.5 | 310 | 733 | 89.8 | 349 | 61.4 | 18.2 | 45.1 | 6.4 | 34.1 | 5.5 | 12.2 |
| 589326 Dup | 120 | 6 | < 1 | < 5 | 3 | 83 | < 2 | 0.9 | < 0.2 | < 1 | < 0.5 | < 0.5 | 300 | 707 | 86.6 | 337 | 59.1 | 17.6 | 43.4 | 6.2 | 33.1 | 5.2 | 11.7 |
| 589350 Orig | 40 | 17 | < 1 | 15 | 67 | 50 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 167 | 346 | 38.7 | 141 | 24.6 | 7.30 | 17.5 | 2.5 | 11.7 | 1.5 | 2.9 |
| 589350 Split PREP DUP | 30 | 17 | < 1 | 12 | 66 | 50 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 154 | 321 | 37.6 | 139 | 24.2 | 6.83 | 16.6 | 2.4 | 10.7 | 1.5 | 2.9 |
| 589356 Orig | 70 | 17 | 1 | < 5 | 97 | 41 | 4 | < 0.5 | < 0.2 | 3 | < 0.5 | 1.0 | 161 | 311 | 34.5 | 125 | 23.3 | 6.81 | 14.1 | 1.5 | 5.6 | 0.7 | 1.5 |
| 589356 Dup | 80 | 17 | 1 | < 5 | 95 | 38 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.9 | 162 | 313 | 34.6 | 127 | 23.3 | 6.76 | 14.2 | 1.4 | 5.7 | 0.7 | 1.5 |
| Method Blank | < 30 | < 1 | < 1 | < 5 | < 2 | < 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| NIST 694 Meas | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | |
| DNC-1 Meas | | 2.1 | | | | | | | | | | |
| DNC-1 Cert | | 2.0 | | | | | | | | | | |
| LKSD-3 Meas | | 2.8 | 0.41 | 4.5 | 0.7 | | | | | 11.1 | 4.6 | |
| LKSD-3 Cert | | 2.70 | 0.400 | 4.80 | 0.700 | | | | | 11.4 | 4.60 | |
| TDB-1 Meas | | 3.2 | | | | | | | | 2.7 | | |
| TDB-1 Cert | | 3.4 | | | | | | | | 2.7 | | |
| AC-E Meas | | | | | | | | | | | | 0.014 |
| AC-E Cert | | | | | | | | | | | | 0.016 |
| OKA-1 Meas | | | | | | | | | | | | 0.548 |
| OKA-1 Cert | | | | | | | | | | | | 0.529 |
| W-2a Meas | | 2.1 | 0.31 | 2.5 | | < 1 | < 0.1 | | < 0.4 | 2.2 | 0.5 | |
| W-2a Cert | | 2.10 | 0.330 | 2.60 | | 0.300 | 0.200 | | 0.0300 | 2.40 | 0.530 | |
| SY-4 Meas | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | |
| CTA-AC-1 Meas | | 11.5 | 1.15 | 1.2 | 2.5 | | | | | 23.9 | 4.3 | |
| CTA-AC-1 Cert | | 11.4 | 1.08 | 1.13 | 2.65 | | | | | 21.8 | 4.4 | |
| BIR-1a Meas | | 1.7 | | 0.6 | | | | | | | | |
| BIR-1a Cert | | 1.7 | | 0.60 | | | | | | | | |
| NCS DC86312 Meas | 14.2 | 90.3 | 12.6 | | | | | | | 23.3 | | |
| NCS DC86312 Cert | 15.1 | 87.79 | 11.96 | | | | | | | 23.6 | | |
| VS-N Meas | | | | | | | | | | | | 0.102 |
| VS-N Cert | | | | | | | | | | | | 0.10 |
| NCS DC70009 (GBW07241) Meas | 2.30 | 14.7 | 2.36 | | | 2330 | 1.9 | | | 30.3 | | |
| NCS DC70009 (GBW07241) Cert | 2.2 | 14.9 | 2.4 | | | 2200 | 1.8 | | | 28.3 | | |
| OREAS 100a (Fusion) Meas | 2.34 | 15.5 | 2.24 | | | | | | | 53.4 | 145 | |
| OREAS 100a (Fusion) Cert | 2.31 | 14.9 | 2.26 | | | | | | | 51.6 | 135 | |
| OREAS 101a (Fusion) Meas | 2.90 | 18.7 | 2.60 | | | | | | | 36.2 | 432 | |
| OREAS 101a (Fusion) Cert | 2.90 | 17.5 | 2.66 | | | | | | | 36.6 | 422 | |
| OREAS 101b (Fusion) Meas | 2.69 | 17.8 | 2.56 | | | | | | | 36.1 | 397 | |
| OREAS 101b (Fusion) Cert | 2.66 | 17.6 | 2.58 | | | | | | | 37.1 | 396 | |
| JR-1 Meas | 0.66 | 4.5 | 0.75 | 4.3 | 1.9 | | | 18 | 0.6 | 28.1 | 9.5 | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| JR-1 Cert | 0.67 | 4.55 | 0.71 | 4.51 | 1.86 | | | 19.3 | 0.56 | 26.7 | 8.88 | |
| SX18-01 Meas | | | | | | | | | | | | 0.693 |
| SX18-01 Cert | | | | | | | | | | | | 0.695 |
| SARM 3 Meas | | | | | | | | | | | | 0.139 |
| SARM 3 Cert | | | | | | | | | | | | 0.14 |
| 589215 Orig | 2.86 | 13.5 | 1.55 | 0.7 | 3.0 | 6 | < 0.1 | 140 | < 0.4 | 82.4 | 21.4 | 0.381 |
| 589215 Dup | 2.95 | 13.5 | 1.56 | 0.8 | 2.4 | 2 | < 0.1 | 112 | < 0.4 | 83.9 | 23.0 | 0.387 |
| 589232 Orig | 0.27 | 1.4 | 0.18 | 2.4 | 0.2 | 2 | < 0.1 | 10 | < 0.4 | 14.6 | 3.0 | 0.025 |
| 589232 Dup | 0.26 | 1.4 | 0.19 | 2.4 | 0.2 | 3 | < 0.1 | 11 | < 0.4 | 13.8 | 3.0 | 0.023 |
| 589250 Orig | 0.30 | 1.7 | 0.22 | 1.9 | 1.8 | 4 | 0.2 | 20 | < 0.4 | 9.6 | 9.1 | 0.036 |
| 589250 Split PREP DUP | 0.26 | 1.6 | 0.22 | 2.0 | 1.7 | 4 | 0.1 | 15 | < 0.4 | 9.2 | 8.4 | 0.034 |
| 589262 Orig | 0.88 | 4.8 | 0.65 | 0.6 | 0.2 | 7 | < 0.1 | 14 | < 0.4 | 31.3 | 9.1 | 0.125 |
| 589262 Dup | 0.92 | 5.1 | 0.64 | 1.0 | 0.2 | 4 | < 0.1 | 15 | < 0.4 | 31.2 | 9.2 | 0.129 |
| 589279 Orig | 0.18 | 1.1 | 0.15 | 2.0 | 0.6 | 17 | < 0.1 | 23 | < 0.4 | 24.5 | 3.7 | 0.119 |
| 589279 Dup | 0.18 | 1.0 | 0.14 | 1.8 | 0.6 | 13 | 0.1 | 23 | < 0.4 | 24.5 | 3.5 | 0.121 |
| 589300 Orig | 0.18 | 1.1 | 0.15 | 2.2 | 0.5 | 5 | < 0.1 | 20 | < 0.4 | 9.0 | 1.3 | 0.013 |
| 589300 Split PREP DUP | 0.19 | 1.1 | 0.15 | 2.3 | 0.5 | 3 | < 0.1 | 18 | < 0.4 | 9.3 | 1.5 | 0.014 |
| 589309 Orig | 2.44 | 11.9 | 1.39 | 0.5 | < 0.1 | 2 | < 0.1 | 20 | < 0.4 | 117 | 25.4 | 0.030 |
| 589309 Dup | 2.57 | 12.2 | 1.39 | 0.6 | < 0.1 | 2 | < 0.1 | 21 | < 0.4 | 124 | 25.9 | 0.031 |
| 589326 Orig | 1.20 | 7.2 | 0.84 | 1.4 | 1.6 | 2 | < 0.1 | 70 | < 0.4 | 60.4 | 34.0 | 0.023 |
| 589326 Dup | 1.23 | 6.5 | 0.82 | 1.3 | 1.7 | < 1 | < 0.1 | 85 | < 0.4 | 57.7 | 33.9 | 0.023 |
| 589350 Orig | 0.33 | 1.7 | 0.22 | 2.0 | 0.7 | 7 | 0.3 | 24 | < 0.4 | 294 | 25.5 | 0.013 |
| 589350 Split PREP DUP | 0.32 | 1.7 | 0.22 | 2.0 | 0.6 | 11 | 0.3 | 20 | < 0.4 | 286 | 23.4 | 0.012 |
| 589356 Orig | 0.16 | 0.8 | 0.10 | 1.4 | 0.8 | 6 | 0.3 | 18 | < 0.4 | 22.6 | 1.4 | 0.009 |
| 589356 Dup | 0.17 | 0.8 | 0.11 | 1.4 | 0.7 | 8 | 0.3 | 17 | < 0.4 | 22.9 | 1.3 | 0.009 |
| Method Blank | < 0.05 | < 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | < 0.1 | < 0.1 | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | < 0.003 |



Date Submitted: 09-Apr-18
Invoice No.: A18-04469
Invoice Date: 01-Jun-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

145 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 4C1*+ 4C1** XRF Pressed Pellet

Code 4LITHO (11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code Nb Assay - XRF XRF

REPORT **A18-04469**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed.

We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

Footnote: Litho Nb/Ta may be inconsistent due to high P2O5

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589364 | 68.81 | 15.81 | 1.35 | 0.022 | 0.62 | 3.18 | 5.80 | 1.72 | 0.151 | 0.07 | 1.98 | 99.51 | < 1 | 3 | 21 | 623 | 951 | 3 | 92 | < 20 | 2 | < 20 | < 10 |
| 589365 | 15.25 | 3.34 | 2.59 | 0.515 | 2.00 | 39.76 | 1.17 | 0.94 | 0.064 | 1.45 | 31.89 | 98.96 | 5 | 3 | 41 | 2586 | 2099 | 59 | 13 | < 20 | 2 | < 20 | < 10 |
| 589366 | 8.65 | 1.42 | 2.18 | 0.428 | 1.47 | 45.56 | 0.50 | 0.44 | 0.049 | 3.40 | 34.01 | 98.11 | 4 | < 1 | 32 | 3583 | 2699 | 73 | 19 | < 20 | 2 | < 20 | < 10 |
| 589367 | 66.04 | 15.44 | 2.12 | 0.054 | 1.01 | 3.89 | 5.81 | 2.72 | 0.195 | 0.10 | 3.29 | 100.7 | 3 | 4 | 55 | 708 | 1024 | 6 | 82 | < 20 | 3 | < 20 | < 10 |
| 589368 | 27.21 | 6.10 | 2.61 | 0.369 | 1.86 | 30.60 | 1.88 | 2.23 | 0.076 | 1.94 | 24.64 | 99.53 | 5 | 2 | 55 | 945 | 3291 | 88 | 23 | < 20 | 2 | < 20 | 10 |
| 589369 | 6.55 | 1.90 | 4.15 | 0.820 | 2.20 | 44.77 | 0.45 | 0.73 | 0.232 | 2.49 | 32.05 | 96.34 | 3 | < 1 | 202 | 2955 | > 10000 | 59 | 68 | < 20 | 1 | < 20 | 10 |
| 589370 | 1.27 | 0.03 | 2.12 | 0.492 | 1.09 | 51.49 | 0.08 | < 0.01 | 0.012 | 2.05 | 38.67 | 97.30 | 3 | < 1 | 26 | 1231 | 6813 | 72 | 8 | < 20 | 4 | < 20 | < 10 |
| 589371 | 0.43 | 0.02 | 1.84 | 0.505 | 0.85 | 52.43 | 0.06 | < 0.01 | 0.008 | 0.78 | 40.59 | 97.53 | 3 | < 1 | 17 | 996 | 7001 | 66 | 6 | < 20 | 4 | < 20 | < 10 |
| 589372 | 1.18 | 0.12 | 1.46 | 0.491 | 0.82 | 52.28 | 0.08 | 0.03 | 0.011 | 0.63 | 41.36 | 98.46 | 3 | < 1 | 13 | 978 | 3510 | 57 | 12 | < 20 | < 1 | < 20 | < 10 |
| 589373 | 64.25 | 15.09 | 2.01 | 0.049 | 1.15 | 5.05 | 5.74 | 2.19 | 0.173 | 0.20 | 3.59 | 99.49 | 3 | 3 | 46 | 670 | 1008 | 10 | 72 | < 20 | 3 | < 20 | 30 |
| 589374 | 27.88 | 5.95 | 3.99 | 0.277 | 2.70 | 27.65 | 1.00 | 3.83 | 0.128 | 1.42 | 24.16 | 98.98 | 7 | 2 | 108 | 2361 | 1970 | 54 | 70 | < 20 | 4 | < 20 | < 10 |
| 589375 | 40.62 | 8.78 | 4.11 | 0.312 | 5.93 | 14.65 | 2.59 | 3.44 | 0.186 | 0.91 | 17.29 | 98.82 | 7 | 4 | 112 | 1143 | 1556 | 41 | 57 | 40 | 5 | 20 | < 10 |
| 589376 | 14.42 | 3.40 | 4.03 | 0.609 | 6.70 | 32.43 | 0.72 | 1.70 | 0.079 | 0.31 | 33.59 | 98.00 | 6 | 2 | 63 | 1988 | 1863 | 28 | 23 | 50 | 4 | 30 | < 10 |
| 589377 | 13.32 | 3.02 | 3.54 | 0.545 | 5.70 | 34.84 | 0.48 | 1.66 | 0.073 | 1.07 | 34.00 | 98.25 | 4 | 2 | 72 | 1124 | 1935 | 44 | 29 | < 20 | 2 | < 20 | < 10 |
| 589378 | 4.57 | 0.07 | 4.88 | 0.441 | 5.60 | 42.15 | 0.04 | 0.03 | 0.218 | 3.88 | 36.59 | 98.47 | 5 | < 1 | 65 | 1145 | 2352 | 72 | 131 | < 20 | 3 | < 20 | < 10 |
| 589379 | 1.35 | 0.06 | 3.49 | 0.522 | 4.26 | 46.54 | 0.05 | 0.02 | 0.096 | 3.38 | 38.62 | 98.40 | 3 | < 1 | 30 | 2161 | 1943 | 89 | 107 | < 20 | 3 | < 20 | < 10 |
| 589380 | 2.93 | 0.07 | 3.52 | 0.361 | 4.30 | 45.94 | 0.03 | 0.04 | 0.114 | 2.53 | 38.95 | 98.78 | 4 | < 1 | 97 | 2520 | 2341 | 43 | 210 | < 20 | 3 | < 20 | < 10 |
| 589381 | 10.62 | 2.12 | 4.53 | 0.357 | 4.66 | 39.17 | 0.34 | 1.32 | 0.320 | 3.25 | 31.91 | 98.60 | 6 | 2 | 226 | 1594 | 3938 | 68 | 273 | < 20 | 8 | < 20 | 20 |
| 589382 | 9.17 | 1.75 | 5.04 | 0.429 | 4.72 | 37.65 | 0.09 | 1.53 | 1.059 | 2.03 | 34.50 | 97.97 | 8 | < 1 | 138 | 1898 | 2694 | 87 | 234 | < 20 | 12 | 30 | 60 |
| 589383 | 3.84 | 0.40 | 4.34 | 0.565 | 4.51 | 43.51 | 0.08 | 0.24 | 0.025 | 1.83 | 38.55 | 97.88 | 5 | < 1 | 37 | 10140 | 1323 | 87 | 7 | < 20 | 4 | < 20 | 10 |
| 589384 | 6.30 | 1.36 | 4.64 | 0.684 | 4.61 | 40.93 | 0.25 | 0.87 | 0.099 | 4.53 | 33.79 | 98.08 | 7 | < 1 | 62 | 4385 | 2520 | 156 | 23 | < 20 | 4 | < 20 | < 10 |
| 589385 | 43.35 | 10.54 | 4.85 | 0.293 | 5.52 | 10.82 | 1.63 | 6.97 | 0.384 | 0.60 | 13.60 | 98.56 | 9 | 5 | 157 | 1599 | 1157 | 22 | 165 | 50 | 7 | 50 | < 10 |
| 589386 | 3.48 | 0.45 | 4.68 | 0.554 | 4.09 | 44.06 | 0.05 | 0.36 | 0.138 | 3.02 | 37.62 | 98.52 | 5 | < 1 | 110 | 2300 | 2311 | 66 | 52 | < 20 | 3 | < 20 | < 10 |
| 589387 | 3.12 | 0.09 | 4.19 | 0.423 | 4.11 | 44.83 | 0.08 | 0.05 | 0.272 | 3.46 | 37.55 | 98.17 | 5 | < 1 | 164 | 2780 | 3286 | 62 | 605 | < 20 | 3 | < 20 | < 10 |
| 589388 | 2.34 | 0.08 | 4.24 | 0.398 | 3.66 | 46.43 | 0.12 | 0.05 | 0.169 | 3.28 | 37.53 | 98.29 | 5 | < 1 | 116 | 1380 | 3743 | 81 | 104 | < 20 | 3 | < 20 | < 10 |
| 589389 | 57.11 | 12.31 | 3.77 | 0.127 | 2.89 | 6.82 | 3.63 | 5.70 | 0.200 | 0.63 | 7.16 | 100.3 | 6 | 6 | 167 | 1219 | 1071 | 28 | 86 | < 20 | 2 | < 20 | < 10 |
| 589390 | 22.07 | 4.32 | 4.52 | 0.424 | 5.59 | 29.01 | 0.83 | 2.20 | 0.439 | 3.43 | 26.13 | 98.96 | 8 | 2 | 85 | 2166 | 1771 | 112 | 36 | < 20 | 7 | 20 | < 10 |
| 589391 | 26.18 | 5.41 | 4.67 | 0.485 | 4.55 | 27.22 | 1.26 | 2.86 | 0.074 | 1.61 | 24.32 | 98.64 | 8 | 2 | 81 | 1856 | 2149 | 77 | 25 | < 20 | 11 | < 20 | 20 |
| 589392 | 24.18 | 5.29 | 3.25 | 0.187 | 3.23 | 30.83 | 1.81 | 1.50 | 0.461 | 3.27 | 24.81 | 98.82 | 5 | 2 | 70 | 676 | 2237 | 60 | 222 | < 20 | 6 | < 20 | 20 |
| 589393 | 30.03 | 6.24 | 3.19 | 0.261 | 4.72 | 24.91 | 1.40 | 3.82 | 0.163 | 1.17 | 23.24 | 99.16 | 8 | 5 | 98 | 1749 | 1995 | 39 | 89 | < 20 | 3 | < 20 | < 10 |
| 589394 | 31.45 | 8.08 | 3.40 | 0.371 | 7.33 | 20.21 | 2.92 | 2.09 | 0.254 | 0.96 | 22.04 | 99.10 | 7 | 4 | 57 | 1900 | 1817 | 42 | 110 | 30 | 6 | < 20 | < 10 |
| 589395 | 3.74 | 0.66 | 2.98 | 0.558 | 9.39 | 39.10 | 0.12 | 0.44 | 0.054 | 4.04 | 37.48 | 98.57 | 6 | < 1 | 31 | 2301 | 2577 | 125 | 57 | < 20 | 2 | < 20 | < 10 |
| 589396 | 40.79 | 8.99 | 6.03 | 0.260 | 5.78 | 12.78 | 1.45 | 5.83 | 0.319 | 1.23 | 15.15 | 98.60 | 8 | 4 | 162 | 1848 | 1309 | 49 | 154 | 30 | 5 | < 20 | < 10 |
| 589397 | 0.60 | 0.04 | 6.82 | 0.919 | 12.86 | 33.15 | 0.04 | < 0.01 | 0.003 | 2.79 | 40.17 | 97.40 | 4 | < 1 | 56 | 4941 | 2884 | 124 | 10 | < 20 | 2 | < 20 | < 10 |
| 589398 | 1.05 | 0.06 | 5.83 | 0.861 | 12.87 | 33.74 | 0.04 | < 0.01 | 0.003 | 4.15 | 38.73 | 97.33 | 5 | < 1 | 59 | 7785 | 2961 | 190 | 11 | < 20 | < 1 | < 20 | < 10 |
| 589399 | 48.98 | 12.27 | 4.92 | 0.189 | 4.52 | 8.94 | 1.19 | 7.78 | 0.601 | 1.18 | 9.11 | 99.69 | 9 | 3 | 110 | 2109 | 1043 | 49 | 141 | < 20 | 9 | < 20 | 30 |
| 589400 | 9.84 | 0.15 | 0.13 | 0.015 | 3.30 | 48.95 | 0.05 | 0.01 | 0.010 | 0.02 | 38.13 | 100.6 | < 1 | < 1 | < 5 | 18 | 71 | 3 | 5 | < 20 | < 1 | < 20 | < 10 |
| 589401 | 33.42 | 6.56 | 6.22 | 0.285 | 7.21 | 18.54 | 2.22 | 5.06 | 0.376 | 2.53 | 17.62 | 100.0 | 5 | 6 | 130 | 984 | 2283 | 61 | 91 | 20 | 5 | < 20 | < 10 |
| 589402 | 19.76 | 3.85 | 6.49 | 0.342 | 5.17 | 30.43 | 1.41 | 2.84 | 0.669 | 3.26 | 24.02 | 98.25 | 5 | 6 | 137 | 807 | 5082 | 74 | 410 | 30 | 10 | < 20 | 10 |
| 589403 | 11.34 | 1.95 | 3.98 | 0.354 | 2.64 | 40.68 | 1.10 | 1.14 | 0.591 | 4.09 | 30.14 | 98.00 | 2 | 3 | 81 | 720 | 6177 | 90 | 404 | < 20 | 5 | < 20 | 10 |
| 589404 | 24.51 | 5.21 | 4.44 | 0.326 | 4.74 | 27.73 | 1.00 | 3.57 | 0.209 | 2.16 | 24.10 | 97.99 | 5 | 3 | 76 | 3174 | 2959 | 68 | 49 | < 20 | 7 | < 20 | 20 |

Results

Activation Laboratories Ltd.

Report: A18-04469

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589405 | 31.73 | 6.36 | 5.82 | 0.310 | 4.32 | 23.21 | 2.08 | 2.98 | 0.208 | 1.47 | 19.95 | 98.44 | 6 | 4 | 97 | 1306 | 2752 | 59 | 81 | < 20 | 15 | < 20 | 20 |
| 589406 | 59.93 | 12.04 | 3.84 | 0.099 | 2.99 | 5.25 | 3.33 | 6.22 | 0.392 | 0.55 | 6.18 | 100.8 | 4 | 5 | 102 | 1467 | 903 | 17 | 178 | 30 | 4 | < 20 | < 10 |
| 589407 | 5.35 | 0.97 | 2.20 | 0.356 | 1.51 | 48.58 | 0.41 | 0.60 | 0.045 | 1.62 | 36.65 | 98.30 | 2 | < 1 | 27 | 510 | 9538 | 74 | 27 | < 20 | 3 | < 20 | 10 |
| 589408 | 2.71 | 0.06 | 2.01 | 0.436 | 1.38 | 50.01 | 0.32 | 0.08 | 0.036 | 2.63 | 37.52 | 97.18 | 2 | < 1 | 43 | 1579 | 8463 | 72 | 42 | < 20 | 2 | < 20 | 10 |
| 589409 | 0.86 | 0.04 | 2.01 | 0.501 | 0.96 | 51.57 | 0.22 | 0.04 | 0.023 | 1.78 | 39.03 | 97.03 | 2 | < 1 | 22 | 800 | 9790 | 79 | 25 | < 20 | 4 | < 20 | < 10 |
| 589410 | 0.73 | 0.04 | 1.59 | 0.507 | 0.83 | 51.33 | 0.16 | 0.02 | 0.021 | 1.50 | 40.03 | 96.76 | 1 | < 1 | 19 | 733 | > 10000 | 73 | 19 | < 20 | < 1 | < 20 | < 10 |
| 589411 | 0.86 | 0.08 | 2.36 | 0.413 | 0.84 | 52.75 | 0.10 | < 0.01 | 0.011 | 0.93 | 39.71 | 98.07 | 1 | < 1 | 23 | 592 | 8671 | 75 | 14 | < 20 | 5 | < 20 | < 10 |
| 589412 | 11.30 | 2.23 | 7.75 | 0.409 | 4.58 | 36.15 | 0.10 | 0.21 | 2.365 | 3.13 | 29.47 | 97.69 | 10 | 2 | 202 | 1746 | 4234 | 65 | 236 | < 20 | 21 | 40 | 50 |
| 589413 | 62.85 | 12.27 | 3.95 | 0.095 | 2.68 | 3.27 | 4.21 | 6.66 | 0.217 | 0.15 | 3.18 | 99.52 | 4 | 7 | 106 | 1465 | 1057 | 13 | 121 | < 20 | 3 | < 20 | 10 |
| 589414 | 6.05 | 0.87 | 2.38 | 0.355 | 2.08 | 46.15 | 0.47 | 0.78 | 0.084 | 3.17 | 34.85 | 97.23 | 2 | 1 | 59 | 394 | 8318 | 75 | 29 | < 20 | 2 | < 20 | < 10 |
| 589415 | 1.39 | 0.08 | 2.00 | 0.417 | 1.13 | 50.87 | 0.11 | 0.02 | 0.024 | 1.46 | 39.78 | 97.27 | 2 | < 1 | 22 | 876 | 6949 | 69 | 11 | < 20 | 4 | < 20 | < 10 |
| 589416 | 3.36 | 0.10 | 2.05 | 0.358 | 1.51 | 49.55 | 0.33 | 0.09 | 0.062 | 5.28 | 34.54 | 97.22 | 2 | < 1 | 60 | 544 | 8269 | 79 | 30 | < 20 | 1 | < 20 | < 10 |
| 589417 | 6.29 | 0.14 | 0.17 | 0.020 | 6.71 | 45.91 | 0.05 | 0.01 | 0.008 | 0.01 | 40.26 | 99.59 | < 1 | < 1 | 5 | 17 | 67 | 3 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589418 | 0.90 | 0.05 | 2.70 | 0.482 | 1.16 | 51.12 | 0.08 | 0.03 | 0.030 | 0.62 | 40.15 | 97.32 | 2 | < 1 | 17 | 725 | 6804 | 61 | 4 | < 20 | 7 | < 20 | 10 |
| 589419 | 30.33 | 5.55 | 6.65 | 0.345 | 7.48 | 19.81 | 1.97 | 4.21 | 0.255 | 2.26 | 19.42 | 98.27 | 6 | 5 | 186 | 1387 | 2149 | 44 | 61 | < 20 | 7 | < 20 | 10 |
| 589420 | 65.33 | 14.32 | 2.44 | 0.065 | 1.84 | 4.20 | 5.67 | 2.25 | 0.158 | 0.11 | 3.45 | 99.84 | 3 | 4 | 55 | 573 | 964 | 6 | 121 | < 20 | 3 | < 20 | < 10 |
| 589421 | 49.51 | 10.53 | 3.98 | 0.172 | 2.81 | 12.94 | 3.46 | 3.53 | 0.321 | 0.88 | 11.56 | 99.69 | 6 | 4 | 84 | 1311 | 1208 | 34 | 141 | < 20 | 5 | < 20 | < 10 |
| 589422 | 3.42 | 0.31 | 1.51 | 0.374 | 1.24 | 49.46 | 0.31 | 0.27 | 0.019 | 2.03 | 38.31 | 97.24 | 2 | < 1 | 26 | 482 | 9427 | 80 | 32 | < 20 | < 1 | < 20 | < 10 |
| 589423 | 3.64 | 0.50 | 2.17 | 0.384 | 1.92 | 47.78 | 0.26 | 0.39 | 0.065 | 3.72 | 36.56 | 97.39 | 3 | < 1 | 43 | 1914 | 8686 | 85 | 39 | < 20 | < 1 | < 20 | < 10 |
| 589424 | 8.84 | 0.16 | 0.16 | 0.017 | 5.46 | 46.40 | 0.06 | < 0.01 | 0.012 | 0.03 | 38.55 | 99.70 | < 1 | < 1 | < 5 | 20 | 80 | 4 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589425 | 3.06 | 0.54 | 2.88 | 0.327 | 2.17 | 47.41 | 0.37 | 0.32 | 0.310 | 1.64 | 38.53 | 97.57 | 6 | 2 | 55 | 651 | 8311 | 94 | 354 | < 20 | 2 | < 20 | 10 |
| 589426 | 7.45 | 0.66 | 5.49 | 0.416 | 4.17 | 41.16 | 0.27 | 0.49 | 0.525 | 3.24 | 33.59 | 97.46 | 9 | 2 | 93 | 5587 | 3849 | 119 | 371 | < 20 | 9 | < 20 | 20 |
| 589427 | 3.61 | 0.52 | 2.40 | 0.397 | 2.21 | 47.39 | 0.23 | 0.34 | 0.076 | 0.89 | 39.11 | 97.18 | 2 | < 1 | 24 | 1250 | 6447 | 84 | 11 | < 20 | 4 | < 20 | < 10 |
| 589428 | 53.17 | 12.40 | 5.74 | 0.153 | 4.05 | 7.68 | 5.00 | 3.96 | 0.486 | 0.88 | 6.33 | 99.83 | 10 | 6 | 123 | 1788 | 1227 | 30 | 247 | 90 | 13 | 50 | < 10 |
| 589429 | 1.85 | 0.31 | 1.19 | 0.350 | 1.08 | 51.00 | 0.24 | 0.26 | 0.026 | 1.59 | 39.92 | 97.80 | 1 | < 1 | 18 | 634 | 9017 | 79 | 24 | < 20 | < 1 | < 20 | < 10 |
| 589430 | 8.34 | 1.74 | 1.88 | 0.326 | 1.16 | 45.65 | 0.74 | 0.65 | 0.077 | 1.16 | 36.03 | 97.75 | 3 | < 1 | 30 | 863 | 6464 | 75 | 22 | < 20 | 4 | < 20 | < 10 |
| 589431 | 48.92 | 11.14 | 5.01 | 0.153 | 3.67 | 11.90 | 4.90 | 3.68 | 0.458 | 0.98 | 10.03 | 100.8 | 9 | 6 | 122 | 853 | 1970 | 35 | 229 | 80 | 11 | 50 | < 10 |
| 589432 | 42.07 | 9.24 | 5.47 | 0.186 | 4.77 | 14.71 | 3.43 | 5.04 | 0.395 | 1.48 | 13.43 | 100.2 | 8 | 7 | 146 | 958 | 2054 | 37 | 210 | 70 | 8 | 40 | 20 |
| 589433 | 32.78 | 7.28 | 4.61 | 0.213 | 4.19 | 23.25 | 2.65 | 3.95 | 0.333 | 1.26 | 19.83 | 100.3 | 6 | 5 | 123 | 880 | 4011 | 46 | 197 | 50 | 8 | 20 | 90 |
| 589434 | 6.75 | 1.26 | 2.25 | 0.292 | 1.96 | 45.69 | 0.48 | 0.90 | 0.089 | 2.40 | 35.11 | 97.18 | 2 | 2 | 41 | 458 | 8082 | 70 | 74 | < 20 | 3 | < 20 | 10 |
| 589435 | 39.06 | 8.64 | 5.58 | 0.208 | 5.77 | 15.51 | 3.01 | 4.60 | 0.443 | 1.80 | 14.67 | 99.29 | 8 | 6 | 136 | 913 | 2137 | 49 | 238 | 50 | 10 | 30 | 30 |
| 589436 | 32.77 | 7.31 | 4.73 | 0.220 | 4.24 | 21.96 | 2.92 | 3.98 | 0.380 | 1.72 | 18.19 | 98.43 | 6 | 6 | 108 | 938 | 3634 | 48 | 200 | 50 | 9 | 20 | 20 |
| 589437 | 29.58 | 6.53 | 4.30 | 0.226 | 4.88 | 23.97 | 2.23 | 4.11 | 0.319 | 1.78 | 21.00 | 98.92 | 4 | 6 | 89 | 742 | 3900 | 46 | 166 | 30 | 8 | < 20 | 20 |
| 589438 | 19.31 | 3.62 | 3.31 | 0.247 | 3.34 | 34.91 | 1.72 | 1.76 | 0.218 | 6.85 | 22.62 | 97.92 | 4 | 4 | 82 | 837 | 6176 | 99 | 156 | 20 | 5 | < 20 | 20 |
| 589439 | 6.40 | 1.83 | 4.14 | 0.825 | 2.16 | 45.08 | 0.44 | 0.70 | 0.232 | 2.47 | 32.27 | 96.56 | 3 | < 1 | 202 | 2938 | > 10000 | 53 | 94 | < 20 | 2 | < 20 | 10 |
| 589440 | 22.90 | 4.35 | 4.94 | 0.271 | 4.12 | 30.82 | 1.55 | 2.88 | 0.220 | 1.75 | 24.75 | 98.56 | 5 | 4 | 107 | 785 | 4388 | 63 | 101 | 20 | 10 | < 20 | 30 |
| 589441 | 46.67 | 10.50 | 4.20 | 0.187 | 2.75 | 15.68 | 4.10 | 2.84 | 0.454 | 0.45 | 12.33 | 100.2 | 7 | 4 | 81 | 2061 | 2657 | 46 | 268 | 60 | 11 | 30 | 40 |
| 589442 | 2.86 | 0.60 | 1.43 | 0.313 | 0.95 | 49.64 | 0.27 | 0.21 | 0.034 | 0.94 | 40.13 | 97.35 | 3 | < 1 | 19 | 485 | 6294 | 92 | 29 | < 20 | < 1 | < 20 | < 10 |
| 589443 | 0.03 | 0.04 | 1.26 | 0.330 | 0.79 | 52.87 | 0.10 | 0.02 | 0.043 | 0.47 | 42.04 | 97.98 | 2 | < 1 | 12 | 447 | 8979 | 94 | 6 | < 20 | < 1 | < 20 | < 10 |
| 589444 | 2.83 | 0.28 | 3.48 | 0.423 | 2.89 | 46.23 | 0.18 | 0.21 | 0.388 | 3.01 | 37.31 | 97.23 | 6 | < 1 | 57 | 2587 | 5243 | 120 | 49 | 20 | 10 | 20 | 20 |
| 589445 | 5.92 | 1.38 | 2.12 | 0.354 | 1.54 | 46.57 | 0.58 | 0.54 | 0.072 | 1.15 | 37.16 | 97.37 | 4 | < 1 | 29 | 2388 | 5337 | 87 | 60 | < 20 | 4 | < 20 | 20 |

Results

Activation Laboratories Ltd.

Report: A18-04469

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589446 | 53.40 | 12.37 | 5.80 | 0.164 | 4.72 | 6.15 | 4.94 | 4.82 | 0.520 | 0.41 | 7.18 | 100.5 | 9 | 7 | 122 | 1740 | 840 | 22 | 210 | 80 | 12 | 40 | < 10 |
| 589447 | 17.75 | 3.53 | 4.83 | 0.275 | 4.45 | 33.34 | 1.42 | 2.00 | 0.534 | 3.50 | 27.37 | 99.02 | 5 | 3 | 209 | 1026 | 3374 | 66 | 309 | 30 | 9 | < 20 | 20 |
| 589448 | 8.26 | 1.45 | 4.68 | 0.379 | 4.87 | 39.55 | 0.28 | 1.25 | 0.322 | 3.51 | 33.89 | 98.45 | 5 | 1 | 136 | 1957 | 4141 | 93 | 200 | < 20 | 6 | < 20 | 20 |
| 589449 | 1.01 | 0.04 | 2.38 | 0.412 | 2.05 | 49.16 | 0.09 | 0.02 | 0.062 | 1.01 | 41.15 | 97.40 | 3 | < 1 | 38 | 2069 | 7235 | 89 | 33 | < 20 | 3 | < 20 | < 10 |
| 589450 | < 0.01 | 0.01 | 3.08 | 0.656 | 7.22 | 43.10 | 0.05 | 0.01 | 0.009 | 0.06 | 43.42 | 97.58 | 3 | < 1 | 32 | 1728 | 4441 | 54 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589451 | 0.49 | 0.06 | 2.03 | 0.310 | 1.21 | 51.15 | 0.22 | 0.05 | 0.032 | 0.81 | 41.28 | 97.65 | 1 | < 1 | 55 | 531 | 9661 | 90 | 7 | < 20 | 1 | 30 | < 10 |
| 589452 | 18.53 | 3.54 | 10.49 | 0.356 | 7.77 | 25.79 | 1.21 | 3.15 | 3.014 | 2.95 | 21.90 | 98.72 | 6 | 4 | 235 | 997 | 4191 | 55 | 1109 | < 20 | 15 | < 20 | 20 |
| 589453 | 10.07 | 0.14 | 0.15 | 0.015 | 4.55 | 46.74 | 0.05 | 0.01 | 0.012 | 0.04 | 37.26 | 99.02 | < 1 | < 1 | 6 | 19 | 71 | 3 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589454 | 7.09 | 0.88 | 18.71 | 0.392 | 3.53 | 34.22 | 0.84 | 0.89 | 2.951 | 3.60 | 25.02 | 98.12 | 2 | 2 | 632 | 327 | 5413 | 69 | 1341 | < 20 | 16 | < 20 | 10 |
| 589455 | 17.80 | 3.46 | 4.87 | 0.390 | 3.41 | 33.35 | 0.48 | 2.53 | 0.747 | 1.42 | 29.76 | 98.21 | 6 | 1 | 109 | 2939 | 2708 | 56 | 189 | < 20 | 8 | < 20 | 20 |
| 589456 | 5.46 | 0.46 | 6.80 | 0.731 | 4.42 | 39.82 | 0.08 | 0.29 | 0.200 | 0.52 | 37.51 | 96.29 | 8 | < 1 | 71 | 16440 | 1232 | 41 | 32 | < 20 | 5 | < 20 | < 10 |
| 589457 | 62.71 | 12.60 | 3.36 | 0.086 | 1.87 | 4.72 | 5.28 | 2.48 | 0.242 | 0.14 | 5.20 | 98.67 | 4 | 5 | 65 | 1979 | 774 | 14 | 143 | < 20 | 4 | < 20 | < 10 |
| 589458 | 16.12 | 2.94 | 3.68 | 0.430 | 2.70 | 37.95 | 1.45 | 1.33 | 0.121 | 1.32 | 29.88 | 97.94 | 5 | 3 | 63 | 3356 | 4967 | 81 | 45 | 20 | 8 | < 20 | 20 |
| 589459 | 13.97 | 2.45 | 3.70 | 0.393 | 2.62 | 39.28 | 0.81 | 1.57 | 0.134 | 1.47 | 30.88 | 97.28 | 3 | 2 | 57 | 1726 | 4227 | 67 | 28 | < 20 | 6 | < 20 | < 10 |
| 589460 | 23.67 | 4.49 | 2.61 | 0.268 | 1.90 | 34.09 | 2.20 | 1.05 | 0.171 | 2.35 | 25.74 | 98.53 | 2 | 3 | 50 | 1335 | 4140 | 62 | 237 | < 20 | 2 | < 20 | < 10 |
| 589461 | 22.11 | 4.51 | 2.94 | 0.278 | 2.17 | 34.83 | 2.22 | 1.28 | 0.119 | 1.78 | 26.48 | 98.72 | 2 | 3 | 54 | 809 | 5183 | 59 | 112 | < 20 | 5 | < 20 | < 10 |
| 589462 | 6.79 | 1.18 | 3.02 | 0.415 | 2.97 | 44.49 | 0.21 | 0.65 | 0.071 | 3.30 | 35.00 | 98.09 | 4 | 1 | 38 | 3179 | 2481 | 115 | 49 | < 20 | 2 | < 20 | < 10 |
| 589463 | 0.70 | 0.05 | 1.62 | 0.507 | 2.18 | 51.43 | 0.12 | 0.05 | 0.013 | 2.10 | 40.28 | 99.06 | 3 | < 1 | 18 | 782 | 5714 | 103 | 43 | < 20 | < 1 | < 20 | < 10 |
| 589464 | 13.04 | 2.19 | 19.39 | 0.308 | 5.04 | 29.65 | 0.94 | 1.92 | 1.896 | 3.46 | 19.81 | 97.65 | 4 | 5 | 781 | 419 | 4495 | 55 | 1055 | < 20 | 23 | 20 | 30 |
| 589465 | 31.44 | 6.83 | 4.48 | 0.218 | 3.54 | 24.61 | 2.22 | 2.30 | 0.271 | 1.24 | 21.32 | 98.47 | 5 | 3 | 76 | 624 | 3321 | 60 | 86 | < 20 | 5 | < 20 | 30 |
| 589466 | 2.05 | 0.18 | 2.02 | 0.278 | 1.34 | 51.49 | 0.30 | 0.19 | 0.050 | 2.30 | 37.89 | 98.10 | 2 | 1 | 22 | 427 | 8603 | 83 | 218 | < 20 | 3 | < 20 | < 10 |
| 589467 | 6.36 | 1.81 | 4.01 | 0.808 | 2.13 | 45.26 | 0.42 | 0.68 | 0.218 | 2.42 | 32.07 | 96.18 | 4 | < 1 | 195 | 2846 | > 10000 | 57 | 69 | < 20 | 2 | < 20 | 10 |
| 589468 | 9.75 | 2.13 | 12.09 | 0.745 | 5.74 | 31.12 | 0.30 | 1.41 | 0.768 | 2.99 | 29.63 | 96.68 | 13 | 2 | 192 | 10130 | 1859 | 124 | 443 | < 20 | 8 | < 20 | 10 |
| 589469 | 9.19 | 0.11 | 0.15 | 0.018 | 3.50 | 49.34 | 0.03 | < 0.01 | 0.009 | 0.01 | 37.99 | 100.4 | < 1 | < 1 | < 5 | 21 | 68 | 2 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589470 | 14.42 | 2.83 | 3.63 | 0.232 | 1.81 | 40.86 | 0.79 | 0.98 | 0.265 | 2.03 | 30.54 | 98.37 | 4 | 5 | 69 | 878 | 3369 | 114 | 76 | < 20 | 8 | < 20 | 10 |
| 589471 | 25.66 | 5.32 | 5.33 | 0.235 | 3.92 | 28.30 | 2.10 | 2.93 | 0.181 | 1.52 | 22.78 | 98.28 | 4 | 4 | 96 | 690 | 5904 | 57 | 82 | < 20 | 9 | < 20 | 10 |
| 589472 | 48.98 | 10.28 | 4.92 | 0.158 | 3.87 | 11.16 | 4.59 | 3.78 | 0.241 | 0.78 | 10.34 | 99.08 | 3 | 6 | 118 | 738 | 2315 | 30 | 126 | < 20 | 4 | < 20 | 30 |
| 589473 | 33.10 | 6.65 | 5.55 | 0.244 | 5.71 | 19.60 | 2.31 | 3.64 | 0.279 | 2.62 | 18.54 | 98.26 | 5 | 5 | 134 | 989 | 4393 | 75 | 74 | < 20 | 4 | < 20 | < 10 |
| 589474 | 49.44 | 10.55 | 5.53 | 0.183 | 5.15 | 8.54 | 4.14 | 4.80 | 0.255 | 0.65 | 10.19 | 99.43 | 5 | 7 | 151 | 1469 | 2719 | 26 | 103 | < 20 | 4 | < 20 | 20 |
| 589475 | 48.14 | 10.13 | 5.61 | 0.171 | 5.69 | 9.16 | 3.67 | 5.34 | 0.304 | 0.69 | 10.96 | 99.87 | 4 | 7 | 152 | 1288 | 3428 | 26 | 112 | 60 | 5 | 120 | 10 |
| 589476 | 46.26 | 9.93 | 5.15 | 0.164 | 4.80 | 11.60 | 3.23 | 4.65 | 0.282 | 1.19 | 11.79 | 99.05 | 4 | 6 | 144 | 853 | 3572 | 35 | 131 | < 20 | 4 | < 20 | 10 |
| 589477 | 47.48 | 9.92 | 4.61 | 0.235 | 3.93 | 12.20 | 3.85 | 3.42 | 0.221 | 0.87 | 12.11 | 98.84 | 6 | 6 | 112 | 4309 | 3287 | 39 | 111 | < 20 | 4 | < 20 | 20 |
| 589478 | 6.66 | 1.33 | 3.93 | 0.386 | 2.66 | 44.34 | 0.18 | 0.87 | 0.139 | 1.55 | 36.13 | 98.18 | 7 | < 1 | 49 | 8464 | 1624 | 96 | 27 | < 20 | 4 | < 20 | < 10 |
| 589479 | 28.92 | 6.59 | 6.60 | 0.430 | 5.61 | 20.88 | 1.92 | 3.14 | 0.190 | 0.46 | 22.93 | 97.66 | 11 | 3 | 139 | 5907 | 1663 | 44 | 66 | < 20 | 9 | < 20 | < 10 |
| 589480 | 4.28 | 0.38 | 4.68 | 0.385 | 1.70 | 47.49 | 0.20 | 0.05 | 0.323 | 3.46 | 34.87 | 97.82 | 3 | 1 | 216 | 1463 | 4828 | 86 | 173 | < 20 | 9 | < 20 | < 10 |
| 589481 | 8.45 | 1.36 | 5.12 | 0.373 | 1.91 | 44.78 | 0.56 | 0.23 | 0.376 | 3.60 | 32.24 | 98.99 | 5 | 2 | 255 | 885 | 4914 | 107 | 142 | < 20 | 6 | < 20 | < 10 |
| 589482 | 27.06 | 4.56 | 4.73 | 0.314 | 3.42 | 28.30 | 1.16 | 2.53 | 0.167 | 2.66 | 23.68 | 98.59 | 6 | 2 | 105 | 1157 | 2044 | 90 | 42 | < 20 | 5 | < 20 | 10 |
| 589483 | 15.58 | 2.50 | 2.86 | 0.350 | 1.87 | 39.94 | 0.88 | 0.73 | 0.398 | 3.30 | 29.87 | 98.26 | 3 | < 1 | 58 | 1104 | 3584 | 77 | 36 | < 20 | 3 | < 20 | < 10 |
| 589484 | 11.22 | 2.36 | 2.32 | 0.343 | 1.91 | 42.47 | 0.63 | 1.19 | 0.088 | 1.12 | 34.82 | 98.47 | 4 | 1 | 49 | 620 | 5660 | 78 | 26 | < 20 | < 1 | < 20 | < 10 |
| 589485 | 48.90 | 10.33 | 3.75 | 0.181 | 2.45 | 14.25 | 3.13 | 3.64 | 0.164 | 0.95 | 12.50 | 100.2 | 2 | 3 | 61 | 822 | 1828 | 38 | 78 | < 20 | 4 | < 20 | 20 |
| 589486 | 14.62 | 3.49 | 4.88 | 0.359 | 3.63 | 35.85 | 0.53 | 2.10 | 0.290 | 2.62 | 29.71 | 98.07 | 4 | 1 | 92 | 831 | 3605 | 77 | 170 | < 20 | 7 | < 20 | < 10 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|----------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589487 | 8.66 | 0.17 | 0.17 | 0.020 | 6.93 | 45.20 | 0.06 | 0.02 | 0.011 | 0.03 | 38.70 | 99.98 | < 1 | < 1 | < 5 | 21 | 63 | 3 | 4 | < 20 | < 1 | < 20 | < 10 |
| 589488 | 25.04 | 5.76 | 3.89 | 0.324 | 2.99 | 29.07 | 1.18 | 3.42 | 0.162 | 3.60 | 23.99 | 99.43 | 5 | < 1 | 63 | 1368 | 1906 | 114 | 67 | < 20 | 4 | < 20 | < 10 |
| 589489 | 7.05 | 1.10 | 2.90 | 0.333 | 2.45 | 45.47 | 0.35 | 0.76 | 0.064 | 2.55 | 35.35 | 98.37 | 3 | 2 | 54 | 746 | 5969 | 77 | 97 | < 20 | 4 | < 20 | < 10 |
| 589490 | 2.86 | 0.05 | 4.02 | 0.350 | 1.90 | 48.47 | 0.41 | 0.16 | 0.142 | 3.13 | 35.76 | 97.25 | 2 | 1 | 104 | 501 | 9121 | 80 | 56 | < 20 | 6 | < 20 | < 10 |
| 589491 | 2.78 | 0.09 | 6.70 | 0.349 | 1.69 | 46.09 | 0.64 | 0.05 | 0.338 | 2.83 | 36.02 | 97.57 | 2 | 3 | 273 | 346 | 7891 | 77 | 108 | < 20 | 5 | < 20 | < 10 |
| 589492 | 3.00 | 0.18 | 5.49 | 0.379 | 2.03 | 47.34 | 0.34 | 0.20 | 0.401 | 1.87 | 37.09 | 98.31 | 3 | 2 | 184 | 438 | 7031 | 75 | 70 | < 20 | 7 | < 20 | < 10 |
| 589493 | 8.42 | 1.20 | 7.58 | 0.381 | 3.95 | 38.59 | 0.70 | 1.00 | 1.728 | 3.36 | 31.17 | 98.06 | 11 | 3 | 219 | 662 | 5288 | 117 | 189 | 70 | 18 | 40 | 40 |
| 589494 | 47.22 | 9.43 | 6.27 | 0.224 | 4.71 | 10.55 | 3.04 | 4.26 | 1.814 | 0.64 | 11.60 | 99.75 | 13 | 6 | 175 | 960 | 1296 | 29 | 163 | 100 | 15 | 70 | 40 |
| 589495 | 37.98 | 6.67 | 4.73 | 0.216 | 2.58 | 22.33 | 2.18 | 2.02 | 0.190 | 5.61 | 14.99 | 99.49 | 6 | 2 | 79 | 3580 | 1556 | 364 | 57 | < 20 | 6 | < 20 | < 10 |
| 589496 | 8.77 | 1.29 | 2.86 | 0.437 | 2.23 | 44.99 | 0.32 | 0.62 | 0.035 | 3.20 | 34.14 | 98.89 | 7 | < 1 | 34 | 1557 | 2407 | 178 | 29 | < 20 | 4 | < 20 | < 10 |
| 589497 | 8.93 | 1.89 | 4.19 | 0.507 | 2.92 | 42.45 | 0.27 | 1.28 | 0.071 | 3.23 | 31.97 | 97.71 | 7 | 2 | 67 | 1418 | 3168 | 113 | 47 | < 20 | 10 | < 20 | < 10 |
| 589498 | 1.27 | 0.13 | 3.31 | 0.607 | 3.24 | 47.20 | 0.10 | 0.10 | 0.080 | 4.41 | 36.83 | 97.29 | 5 | < 1 | 31 | 1027 | 5052 | 135 | 94 | < 20 | 4 | < 20 | < 10 |
| 589499 | 0.80 | 0.06 | 2.61 | 0.633 | 1.72 | 50.88 | 0.09 | 0.04 | 0.023 | 3.58 | 37.75 | 98.18 | 5 | < 1 | 22 | 713 | 6106 | 113 | 16 | < 20 | 5 | < 20 | < 10 |
| 589500 | 67.49 | 13.14 | 2.05 | 0.072 | 1.39 | 2.66 | 3.64 | 4.92 | 0.172 | 0.08 | 3.56 | 99.17 | 5 | 2 | 62 | 966 | 670 | 7 | 122 | < 20 | 2 | < 20 | < 10 |
| 589501 | 6.35 | 1.81 | 4.08 | 0.813 | 2.14 | 45.20 | 0.43 | 0.70 | 0.220 | 2.42 | 32.01 | 96.17 | 3 | < 1 | 195 | 2849 | > 10000 | 59 | 65 | < 20 | 2 | < 20 | 10 |
| 589502 | 7.37 | 1.59 | 3.67 | 0.405 | 3.38 | 43.02 | 0.14 | 0.93 | 0.036 | 1.30 | 35.89 | 97.72 | 7 | < 1 | 34 | 6170 | 968 | 154 | 27 | < 20 | 4 | < 20 | < 10 |
| 589503 | 0.71 | 0.24 | 3.22 | 0.422 | 2.94 | 48.57 | 0.04 | 0.12 | 0.033 | 0.58 | 41.15 | 98.03 | 5 | < 1 | 16 | 4462 | 846 | 116 | 34 | < 20 | 2 | < 20 | < 10 |
| 589504 | 3.24 | 0.43 | 3.03 | 0.388 | 2.69 | 47.81 | 0.05 | 0.16 | 0.030 | 0.15 | 39.95 | 97.92 | 6 | < 1 | 15 | 4312 | 791 | 76 | 12 | < 20 | 2 | < 20 | < 10 |
| 589505 | 4.56 | 0.29 | 2.45 | 0.324 | 2.14 | 48.86 | 0.06 | 0.07 | 0.023 | 0.73 | 38.96 | 98.46 | 5 | < 1 | 9 | 3079 | 912 | 92 | 11 | < 20 | 2 | < 20 | 10 |
| 589506 | 1.64 | 0.20 | 2.22 | 0.299 | 1.60 | 51.55 | 0.03 | 0.10 | 0.004 | 0.33 | 41.55 | 99.52 | 5 | < 1 | 11 | 3225 | 773 | 75 | 3 | < 20 | < 1 | < 20 | < 10 |
| 589507 | 1.46 | 0.64 | 3.24 | 0.306 | 2.54 | 48.88 | 0.04 | 0.05 | 0.011 | < 0.01 | 40.85 | 98.01 | 5 | < 1 | 17 | 4176 | 778 | 74 | 4 | < 20 | 1 | < 20 | 10 |
| 589508 | 63.50 | 14.78 | 3.49 | 0.079 | 1.92 | 3.66 | 4.97 | 3.27 | 0.371 | 0.10 | 4.46 | 100.6 | 6 | 3 | 98 | 713 | 566 | 12 | 167 | < 20 | 8 | < 20 | 70 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589364 | < 30 | 18 | < 1 | < 5 | 42 | 9 | < 2 | 0.5 | < 0.2 | < 1 | < 0.5 | 1.4 | 38.5 | 78.4 | 8.68 | 30.9 | 4.3 | 1.33 | 2.0 | 0.2 | 0.8 | 0.1 | 0.3 |
| 589365 | 100 | 8 | < 1 | < 5 | 23 | 409 | 5 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 730 | 1360 | 151 | 536 | 82.2 | 21.6 | 46.3 | 4.9 | 21.0 | 2.8 | 6.1 |
| 589366 | 80 | 6 | < 1 | < 5 | 7 | > 1000 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 461 | 1100 | 137 | 545 | 91.7 | 24.7 | 54.5 | 5.6 | 23.5 | 3.3 | 7.3 |
| 589367 | 40 | 18 | < 1 | < 5 | 48 | 25 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | 0.7 | 38.1 | 80.7 | 9.48 | 36.2 | 6.4 | 2.33 | 4.4 | 0.5 | 1.9 | 0.3 | 0.6 |
| 589368 | 90 | 10 | < 1 | < 5 | 36 | 592 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 330 | 795 | 97.9 | 397 | 72.3 | 22.8 | 56.0 | 7.0 | 30.3 | 3.9 | 7.8 |
| 589369 | 490 | 13 | < 1 | 6 | 36 | > 1000 | 14 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.9 | 1090 | 2000 | 177 | 506 | 54.2 | 14.5 | 28.8 | 3.2 | 13.9 | 2.1 | 6.0 |
| 589370 | 150 | 3 | < 1 | 7 | < 2 | 222 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 302 | 709 | 86.0 | 339 | 60.8 | 17.5 | 42.3 | 4.9 | 21.7 | 3.2 | 7.2 |
| 589371 | 140 | 2 | < 1 | 6 | < 2 | 131 | 7 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 276 | 640 | 76.3 | 299 | 52.8 | 15.4 | 36.4 | 4.3 | 19.6 | 3.0 | 6.6 |
| 589372 | < 30 | 3 | < 1 | < 5 | < 2 | 146 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 339 | 805 | 98.7 | 397 | 74.4 | 21.5 | 49.1 | 5.2 | 20.1 | 2.6 | 5.5 |
| 589373 | 40 | 18 | < 1 | < 5 | 46 | 48 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | 1.1 | 48.0 | 109 | 13.8 | 57.9 | 12.6 | 4.14 | 8.4 | 0.9 | 3.5 | 0.4 | 0.9 |
| 589374 | 100 | 12 | < 1 | 6 | 56 | 154 | 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 346 | 864 | 119 | 525 | 112 | 30.4 | 64.6 | 5.8 | 21.5 | 2.6 | 5.4 |
| 589375 | 80 | 13 | < 1 | < 5 | 59 | 291 | 25 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 238 | 524 | 62.5 | 249 | 44.9 | 13.5 | 30.5 | 3.4 | 13.9 | 1.9 | 3.8 |
| 589376 | 70 | 8 | < 1 | < 5 | 30 | 280 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 529 | 1210 | 144 | 552 | 85.0 | 21.7 | 40.3 | 3.3 | 11.2 | 1.5 | 3.0 |
| 589377 | 80 | 8 | < 1 | < 5 | 20 | 252 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 551 | 1300 | 156 | 596 | 86.9 | 22.3 | 44.1 | 3.9 | 15.5 | 2.2 | 4.7 |
| 589378 | 120 | 3 | < 1 | 8 | < 2 | 721 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 279 | 597 | 68.6 | 253 | 44.1 | 13.2 | 31.4 | 4.2 | 21.0 | 3.3 | 7.7 |
| 589379 | 140 | 4 | < 1 | 13 | < 2 | 530 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 565 | 1290 | 148 | 564 | 93.8 | 26.5 | 56.8 | 6.5 | 28.1 | 4.0 | 8.3 |
| 589380 | 70 | 3 | < 1 | 7 | < 2 | 537 | < 2 | 0.8 | < 0.2 | 2 | < 0.5 | < 0.5 | 310 | 628 | 71.3 | 264 | 43.4 | 12.5 | 26.7 | 3.2 | 14.6 | 2.2 | 4.8 |
| 589381 | 150 | 7 | < 1 | 9 | 31 | 248 | 4 | 1.4 | < 0.2 | < 1 | < 0.5 | < 0.5 | 438 | 854 | 90.7 | 317 | 49.6 | 14.6 | 32.0 | 3.9 | 18.7 | 2.7 | 6.4 |
| 589382 | 80 | 6 | < 1 | 6 | 24 | 176 | 4 | 1.1 | < 0.2 | 2 | < 0.5 | < 0.5 | 309 | 639 | 73.1 | 285 | 50.7 | 15.5 | 36.8 | 4.8 | 23.5 | 3.5 | 8.1 |
| 589383 | 70 | 7 | 1 | 5 | 2 | 223 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 849 | 1850 | 226 | 883 | 142 | 39.7 | 84.9 | 8.7 | 33.7 | 4.3 | 8.8 |
| 589384 | 60 | 8 | < 1 | 13 | 13 | 289 | 13 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1120 | 2030 | 213 | 723 | 99.5 | 28.2 | 62.8 | 8.9 | 45.9 | 7.1 | 15.8 |
| 589385 | 80 | 18 | < 1 | < 5 | 127 | 116 | 7 | 0.8 | < 0.2 | 3 | < 0.5 | 1.0 | 603 | 965 | 91.1 | 289 | 31.1 | 7.46 | 14.7 | 1.5 | 6.4 | 1.0 | 2.3 |
| 589386 | 170 | 5 | < 1 | 7 | 5 | 198 | 10 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 631 | 1280 | 141 | 508 | 67.4 | 18.3 | 38.2 | 4.3 | 20.4 | 2.8 | 6.6 |
| 589387 | 60 | 3 | < 1 | < 5 | < 2 | 452 | < 2 | 1.9 | < 0.2 | 2 | < 0.5 | < 0.5 | 325 | 717 | 86.7 | 338 | 59.6 | 16.4 | 36.7 | 4.5 | 20.8 | 3.0 | 6.6 |
| 589388 | 70 | 3 | < 1 | 6 | < 2 | 350 | < 2 | 0.6 | < 0.2 | < 1 | < 0.5 | < 0.5 | 279 | 625 | 73.8 | 292 | 53.9 | 16.6 | 39.8 | 5.0 | 22.6 | 3.2 | 7.2 |
| 589389 | 120 | 18 | < 1 | < 5 | 94 | 101 | 5 | < 0.5 | < 0.2 | 3 | < 0.5 | 0.7 | 208 | 422 | 47.5 | 181 | 30.8 | 8.92 | 20.2 | 2.2 | 9.0 | 1.2 | 2.6 |
| 589390 | 90 | 10 | < 1 | 5 | 34 | 266 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 488 | 1050 | 129 | 526 | 98.6 | 29.2 | 68.0 | 7.7 | 33.0 | 4.7 | 10.0 |
| 589391 | 150 | 9 | < 1 | 7 | 43 | 263 | 7 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 359 | 729 | 83.9 | 319 | 58.7 | 17.5 | 42.1 | 5.0 | 21.6 | 3.0 | 6.6 |
| 589392 | 60 | 9 | < 1 | < 5 | 29 | 172 | < 2 | 1.0 | < 0.2 | 1 | < 0.5 | < 0.5 | 226 | 493 | 59.2 | 236 | 42.7 | 13.0 | 31.1 | 3.7 | 17.3 | 2.5 | 5.7 |
| 589393 | 80 | 10 | < 1 | < 5 | 60 | 289 | 3 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 331 | 701 | 81.9 | 313 | 48.9 | 13.4 | 28.0 | 2.9 | 11.9 | 1.6 | 3.6 |
| 589394 | 50 | 13 | < 1 | < 5 | 45 | 153 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 | 1.3 | 243 | 572 | 72.5 | 295 | 53.5 | 14.6 | 32.9 | 3.5 | 15.2 | 2.0 | 4.2 |
| 589395 | 40 | 5 | < 1 | < 5 | 7 | 613 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 378 | 888 | 111 | 436 | 75.4 | 22.3 | 53.8 | 8.0 | 39.7 | 5.9 | 12.3 |
| 589396 | 100 | 15 | < 1 | < 5 | 95 | 243 | 3 | 0.7 | < 0.2 | 5 | < 0.5 | < 0.5 | 245 | 479 | 51.7 | 183 | 28.2 | 7.65 | 18.7 | 2.4 | 12.6 | 1.9 | 4.6 |
| 589397 | 1090 | 7 | 1 | 7 | < 2 | 239 | 10 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 842 | 1950 | 247 | 966 | 156 | 40.7 | 83.6 | 9.3 | 41.6 | 5.7 | 12.5 |
| 589398 | 350 | 9 | 1 | 7 | < 2 | 202 | 8 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1120 | 2540 | 313 | 1230 | 197 | 51.7 | 111 | 13.6 | 63.0 | 8.7 | 18.4 |
| 589399 | 140 | 18 | < 1 | < 5 | 143 | 112 | 3 | 0.6 | < 0.2 | 3 | < 0.5 | 1.5 | 135 | 306 | 37.5 | 146 | 26.7 | 7.39 | 19.6 | 2.7 | 13.6 | 2.0 | 4.3 |
| 589400 | < 30 | < 1 | < 1 | < 5 | < 2 | 2 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.7 | 1.7 | 0.28 | 1.2 | 0.2 | < 0.05 | 0.3 | < 0.1 | 0.2 | < 0.1 | 0.2 |
| 589401 | 90 | 14 | < 1 | < 5 | 101 | 547 | 2 | < 0.5 | < 0.2 | 4 | < 0.5 | 0.8 | 168 | 383 | 45.5 | 175 | 31.1 | 9.32 | 23.0 | 3.1 | 15.5 | 2.4 | 5.8 |
| 589402 | 150 | 11 | < 1 | < 5 | 76 | 221 | 4 | 2.0 | < 0.2 | 3 | < 0.5 | 1.5 | 289 | 656 | 79.0 | 311 | 54.3 | 15.6 | 37.3 | 4.4 | 20.4 | 3.0 | 6.8 |
| 589403 | 80 | 8 | < 1 | < 5 | 30 | 157 | < 2 | 2.0 | < 0.2 | 1 | < 0.5 | < 0.5 | 315 | 731 | 88.0 | 344 | 62.1 | 18.1 | 45.3 | 5.5 | 25.1 | 3.8 | 8.7 |
| 589404 | 100 | 12 | < 1 | < 5 | 70 | 379 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 218 | 499 | 60.7 | 236 | 42.6 | 11.8 | 29.1 | 4.1 | 20.3 | 3.1 | 7.1 |

Results

Activation Laboratories Ltd.

Report: A18-04469

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589405 | 140 | 12 | < 1 | 12 | 56 | 293 | 9 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 194 | 439 | 52.4 | 205 | 36.8 | 10.8 | 26.4 | 3.4 | 16.4 | 2.4 | 5.6 |
| 589406 | 50 | 18 | < 1 | < 5 | 110 | 216 | 3 | 0.8 | < 0.2 | 4 | < 0.5 | 0.6 | 110 | 242 | 28.1 | 106 | 17.7 | 4.77 | 11.1 | 1.1 | 4.8 | 0.7 | 1.6 |
| 589407 | < 30 | 5 | < 1 | 11 | 11 | 142 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 231 | 551 | 69.2 | 258 | 44.7 | 13.3 | 33.3 | 4.3 | 19.8 | 3.0 | 7.4 |
| 589408 | 40 | 3 | < 1 | < 5 | < 2 | 831 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 239 | 575 | 71.0 | 278 | 50.6 | 14.4 | 34.3 | 4.2 | 19.4 | 2.9 | 7.1 |
| 589409 | < 30 | 2 | < 1 | < 5 | < 2 | 464 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 246 | 584 | 69.9 | 273 | 49.8 | 15.2 | 37.7 | 4.7 | 21.8 | 3.2 | 7.6 |
| 589410 | < 30 | 2 | < 1 | < 5 | < 2 | 481 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 233 | 549 | 65.9 | 253 | 45.5 | 13.1 | 31.9 | 4.0 | 19.4 | 2.9 | 7.4 |
| 589411 | 60 | 4 | < 1 | 11 | < 2 | 154 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 223 | 527 | 66.3 | 248 | 46.4 | 13.0 | 32.0 | 4.2 | 19.4 | 3.0 | 7.6 |
| 589412 | 80 | 12 | < 1 | 9 | 3 | > 1000 | 3 | 1.0 | < 0.2 | 3 | < 0.5 | < 0.5 | 302 | 689 | 84.1 | 323 | 57.2 | 15.7 | 37.5 | 4.8 | 21.3 | 3.1 | 7.1 |
| 589413 | 80 | 17 | < 1 | < 5 | 116 | 41 | 4 | 0.6 | < 0.2 | 4 | < 0.5 | < 0.5 | 136 | 293 | 33.4 | 120 | 17.6 | 5.07 | 9.7 | 1.1 | 4.5 | 0.6 | 1.2 |
| 589414 | 30 | 5 | < 1 | 6 | 17 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 261 | 618 | 74.7 | 290 | 49.3 | 14.3 | 33.1 | 4.1 | 20.8 | 3.3 | 7.8 |
| 589415 | 90 | 2 | < 1 | 10 | < 2 | 517 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 264 | 615 | 73.4 | 279 | 48.2 | 14.2 | 32.2 | 4.0 | 19.0 | 3.1 | 7.2 |
| 589416 | < 30 | 3 | < 1 | < 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 310 | 745 | 91.3 | 354 | 60.2 | 17.6 | 40.7 | 5.0 | 22.5 | 3.4 | 8.0 |
| 589417 | < 30 | < 1 | < 1 | < 5 | < 2 | 7 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.3 | 1.3 | 0.23 | 0.9 | 0.2 | < 0.05 | 0.2 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589418 | 120 | 2 | < 1 | 9 | < 2 | 211 | 22 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 298 | 623 | 70.1 | 252 | 40.4 | 11.7 | 25.8 | 3.3 | 16.3 | 2.6 | 6.6 |
| 589419 | 90 | 13 | < 1 | 6 | 81 | > 1000 | 4 | < 0.5 | < 0.2 | 6 | < 0.5 | < 0.5 | 225 | 491 | 56.0 | 204 | 30.1 | 8.45 | 18.3 | 2.4 | 11.6 | 1.8 | 4.4 |
| 589420 | 30 | 18 | < 1 | < 5 | 45 | 52 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.9 | 58.8 | 122 | 13.1 | 43.1 | 5.5 | 1.62 | 2.8 | 0.3 | 1.6 | 0.3 | 0.6 |
| 589421 | 70 | 15 | < 1 | < 5 | 69 | 321 | < 2 | 0.6 | < 0.2 | 3 | < 0.5 | 1.7 | 171 | 389 | 46.5 | 179 | 32.7 | 9.20 | 20.7 | 2.4 | 10.0 | 1.5 | 3.2 |
| 589422 | < 30 | 2 | < 1 | < 5 | 3 | 329 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 254 | 590 | 70.2 | 270 | 47.6 | 14.1 | 33.4 | 4.3 | 21.4 | 3.4 | 8.1 |
| 589423 | 30 | 3 | < 1 | < 5 | 9 | 722 | 3 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 334 | 790 | 96.0 | 365 | 60.5 | 17.2 | 38.1 | 4.6 | 23.0 | 3.5 | 8.5 |
| 589424 | < 30 | < 1 | < 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.4 | 1.4 | 0.25 | 1.0 | 0.2 | 0.06 | 0.2 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589425 | < 30 | 5 | < 1 | < 5 | 7 | 72 | < 2 | 1.9 | < 0.2 | 2 | < 0.5 | < 0.5 | 321 | 741 | 90.2 | 353 | 64.1 | 18.7 | 44.0 | 5.4 | 25.8 | 3.8 | 9.2 |
| 589426 | 60 | 6 | < 1 | 7 | 7 | 238 | < 2 | 1.4 | < 0.2 | 2 | < 0.5 | < 0.5 | 334 | 795 | 102 | 413 | 81.6 | 24.0 | 59.7 | 7.9 | 37.3 | 5.6 | 11.9 |
| 589427 | 50 | 3 | < 1 | < 5 | 6 | 142 | 3 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 362 | 768 | 87.9 | 329 | 54.3 | 16.0 | 36.6 | 4.6 | 22.3 | 3.4 | 8.4 |
| 589428 | 130 | 19 | < 1 | < 5 | 79 | 390 | 4 | 1.2 | < 0.2 | 4 | < 0.5 | 0.9 | 115 | 261 | 31.2 | 118 | 19.9 | 5.10 | 12.1 | 1.5 | 7.3 | 1.2 | 3.0 |
| 589429 | < 30 | 2 | < 1 | < 5 | 6 | 220 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 251 | 578 | 69.4 | 266 | 46.6 | 13.9 | 31.9 | 4.0 | 20.0 | 3.1 | 7.8 |
| 589430 | 110 | 5 | < 1 | 7 | 12 | 231 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 216 | 497 | 59.6 | 230 | 42.1 | 12.4 | 30.0 | 3.8 | 19.0 | 3.0 | 7.5 |
| 589431 | 80 | 17 | < 1 | 9 | 69 | 247 | 3 | 1.1 | < 0.2 | 3 | < 0.5 | < 0.5 | 119 | 260 | 31.4 | 117 | 20.4 | 5.70 | 14.6 | 1.8 | 9.0 | 1.4 | 3.5 |
| 589432 | 90 | 16 | < 1 | 7 | 100 | 526 | < 2 | 0.9 | < 0.2 | 5 | < 0.5 | 0.5 | 138 | 311 | 37.9 | 145 | 25.5 | 7.25 | 17.0 | 2.0 | 9.8 | 1.6 | 3.9 |
| 589433 | 90 | 14 | < 1 | 7 | 77 | 334 | < 2 | 0.8 | < 0.2 | 4 | < 0.5 | < 0.5 | 157 | 355 | 42.6 | 163 | 28.3 | 7.98 | 18.3 | 2.3 | 11.4 | 1.8 | 4.5 |
| 589434 | 60 | 5 | < 1 | < 5 | 19 | 376 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 240 | 560 | 68.4 | 269 | 46.4 | 13.5 | 32.2 | 4.1 | 19.7 | 3.1 | 7.7 |
| 589435 | 120 | 17 | < 1 | < 5 | 94 | 405 | 2 | 0.8 | < 0.2 | 3 | < 0.5 | 0.6 | 165 | 371 | 45.2 | 174 | 31.6 | 8.05 | 20.5 | 2.9 | 14.0 | 2.1 | 5.2 |
| 589436 | 90 | 14 | < 1 | < 5 | 78 | 306 | 5 | 0.7 | < 0.2 | 3 | < 0.5 | < 0.5 | 154 | 349 | 43.5 | 170 | 32.2 | 8.82 | 22.8 | 3.2 | 14.1 | 2.1 | 5.1 |
| 589437 | 80 | 14 | < 1 | < 5 | 84 | 667 | 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 153 | 351 | 43.1 | 165 | 29.0 | 8.13 | 20.2 | 2.7 | 12.4 | 2.0 | 4.7 |
| 589438 | 60 | 10 | < 1 | < 5 | 36 | > 1000 | 2 | 0.6 | < 0.2 | 3 | < 0.5 | < 0.5 | 293 | 696 | 87.7 | 349 | 63.7 | 17.6 | 43.8 | 5.7 | 27.7 | 4.4 | 10.1 |
| 589439 | 460 | 11 | < 1 | < 5 | 34 | > 1000 | 18 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.9 | 1120 | 2020 | 174 | 504 | 56.3 | 13.8 | 25.2 | 2.9 | 14.1 | 2.3 | 5.9 |
| 589440 | 80 | 9 | < 1 | 5 | 65 | 526 | < 2 | 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 186 | 423 | 50.9 | 197 | 34.6 | 10.4 | 25.3 | 3.4 | 16.5 | 2.7 | 6.8 |
| 589441 | 100 | 16 | < 1 | < 5 | 62 | 65 | 8 | 1.3 | < 0.2 | 2 | < 0.5 | 1.0 | 165 | 376 | 45.5 | 174 | 28.8 | 7.08 | 18.1 | 2.3 | 11.7 | 1.9 | 4.5 |
| 589442 | < 30 | 3 | < 1 | < 5 | 4 | 237 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 273 | 625 | 74.6 | 287 | 51.5 | 15.4 | 36.5 | 4.9 | 24.0 | 3.7 | 9.0 |
| 589443 | < 30 | 2 | < 1 | < 5 | < 2 | 183 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 290 | 646 | 76.1 | 291 | 51.2 | 15.1 | 36.2 | 4.7 | 23.6 | 4.0 | 9.2 |
| 589444 | 110 | 4 | < 1 | 8 | 3 | 552 | 11 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 494 | 1010 | 115 | 434 | 71.0 | 20.5 | 47.0 | 6.1 | 30.9 | 4.9 | 11.3 |
| 589445 | 60 | 4 | < 1 | 5 | 10 | 172 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 429 | 871 | 98.3 | 366 | 58.9 | 16.4 | 36.7 | 4.5 | 21.4 | 3.3 | 8.1 |
| 589446 | 90 | 21 | < 1 | < 5 | 97 | 107 | 2 | 1.1 | < 0.2 | 4 | < 0.5 | 0.6 | 164 | 325 | 36.3 | 132 | 20.5 | 5.10 | 10.5 | 1.1 | 5.2 | 0.8 | 2.0 |

Results

Activation Laboratories Ltd.

Report: A18-04469

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589447 | 80 | 9 | < 1 | 6 | 34 | 367 | 4 | 1.0 | < 0.2 | 2 | < 0.5 | < 0.5 | 261 | 487 | 55.3 | 203 | 35.1 | 10.1 | 24.1 | 3.4 | 17.0 | 2.8 | 7.1 |
| 589448 | 180 | 4 | < 1 | 6 | 23 | 298 | 4 | 0.9 | < 0.2 | 2 | < 0.5 | < 0.5 | 276 | 539 | 60.5 | 226 | 41.0 | 13.1 | 29.8 | 4.1 | 21.7 | 3.4 | 7.8 |
| 589449 | 100 | 2 | < 1 | 9 | < 2 | 245 | 9 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 375 | 774 | 87.6 | 315 | 49.0 | 14.2 | 31.3 | 4.0 | 20.6 | 3.2 | 8.1 |
| 589450 | 50 | 3 | < 1 | < 5 | < 2 | 12 | 22 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 905 | 1620 | 166 | 564 | 66.7 | 16.5 | 28.2 | 3.1 | 14.3 | 2.2 | 5.5 |
| 589451 | < 30 | 4 | < 1 | < 5 | < 2 | 90 | 4 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 319 | 711 | 84.0 | 323 | 55.9 | 16.6 | 38.0 | 4.8 | 23.5 | 3.7 | 9.3 |
| 589452 | 150 | 28 | < 1 | < 5 | 66 | 956 | < 2 | 6.0 | < 0.2 | 4 | < 0.5 | 0.9 | 171 | 411 | 50.5 | 203 | 35.9 | 10.4 | 23.9 | 3.0 | 14.4 | 2.4 | 5.3 |
| 589453 | < 30 | < 1 | < 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.5 | 1.4 | 0.24 | 1.1 | 0.2 | 0.06 | 0.2 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589454 | 160 | 20 | < 1 | < 5 | 22 | 531 | < 2 | 5.2 | < 0.2 | 5 | < 0.5 | < 0.5 | 226 | 520 | 65.1 | 260 | 44.9 | 12.3 | 30.6 | 3.9 | 19.2 | 3.1 | 7.4 |
| 589455 | 100 | 10 | < 1 | < 5 | 39 | 397 | 5 | 1.0 | < 0.2 | 4 | < 0.5 | < 0.5 | 325 | 762 | 96.8 | 402 | 76.4 | 21.0 | 39.4 | 3.6 | 16.3 | 2.5 | 5.6 |
| 589456 | 340 | 7 | 1 | 8 | 4 | 301 | 27 | < 0.5 | 0.3 | 1 | < 0.5 | < 0.5 | 642 | 1490 | 195 | 833 | 171 | 40.6 | 72.3 | 6.2 | 17.4 | 2.5 | 4.9 |
| 589457 | 70 | 19 | < 1 | < 5 | 52 | 42 | 3 | 0.6 | < 0.2 | 2 | < 0.5 | 0.6 | 220 | 451 | 46.9 | 154 | 20.8 | 5.46 | 10.4 | 1.0 | 4.2 | 0.6 | 1.4 |
| 589458 | 300 | 7 | < 1 | 9 | 27 | 324 | 36 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 429 | 918 | 103 | 369 | 54.9 | 15.7 | 34.7 | 4.3 | 21.4 | 3.2 | 7.6 |
| 589459 | 110 | 8 | < 1 | 6 | 32 | 347 | 18 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 249 | 594 | 72.0 | 269 | 44.7 | 12.6 | 29.8 | 3.8 | 18.2 | 2.8 | 6.8 |
| 589460 | 70 | 10 | < 1 | < 5 | 22 | 318 | 9 | 1.4 | < 0.2 | 1 | < 0.5 | < 0.5 | 221 | 525 | 64.6 | 248 | 43.1 | 11.9 | 28.2 | 3.4 | 16.7 | 2.6 | 6.4 |
| 589461 | 100 | 12 | < 1 | 7 | 24 | 641 | 4 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 214 | 499 | 60.8 | 231 | 40.6 | 11.1 | 26.8 | 3.6 | 17.2 | 2.7 | 6.4 |
| 589462 | 110 | 6 | < 1 | < 5 | 13 | 630 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 503 | 1180 | 150 | 618 | 131 | 38.8 | 90.1 | 9.7 | 39.0 | 4.9 | 10.4 |
| 589463 | 40 | 2 | < 1 | < 5 | < 2 | 265 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 285 | 684 | 85.8 | 340 | 65.5 | 20.6 | 51.9 | 6.7 | 31.5 | 4.5 | 9.9 |
| 589464 | 120 | 20 | < 1 | < 5 | 46 | 700 | < 2 | 4.2 | < 0.2 | 5 | < 0.5 | 0.7 | 210 | 500 | 62.8 | 252 | 43.5 | 12.4 | 29.3 | 3.8 | 17.3 | 2.7 | 6.2 |
| 589465 | 70 | 14 | < 1 | < 5 | 54 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 149 | 346 | 42.5 | 168 | 34.8 | 10.9 | 29.1 | 4.0 | 17.6 | 2.5 | 5.4 |
| 589466 | 30 | 4 | < 1 | < 5 | 4 | 507 | < 2 | 1.2 | < 0.2 | < 1 | < 0.5 | < 0.5 | 249 | 588 | 73.2 | 286 | 52.0 | 14.9 | 36.4 | 4.6 | 22.6 | 3.6 | 8.7 |
| 589467 | 470 | 13 | < 1 | 5 | 36 | > 1000 | 15 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1120 | 2050 | 181 | 523 | 56.0 | 14.6 | 28.7 | 3.2 | 13.9 | 2.2 | 5.9 |
| 589468 | 810 | 13 | 1 | 10 | 28 | 327 | 4 | 1.7 | 0.4 | 5 | < 0.5 | < 0.5 | 330 | 1010 | 184 | 944 | 229 | 60.9 | 128 | 12.1 | 45.7 | 5.7 | 12.1 |
| 589469 | < 30 | < 1 | 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.6 | 1.6 | 0.30 | 1.3 | 0.4 | 0.07 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |
| 589470 | 60 | 7 | < 1 | 8 | 18 | 354 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 223 | 510 | 63.0 | 253 | 53.3 | 18.4 | 52.9 | 7.9 | 37.0 | 5.2 | 10.2 |
| 589471 | 100 | 12 | < 1 | < 5 | 66 | 801 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 179 | 417 | 50.7 | 200 | 34.0 | 9.95 | 23.2 | 2.9 | 15.3 | 2.4 | 5.8 |
| 589472 | 100 | 18 | 1 | < 5 | 72 | 328 | < 2 | 0.7 | < 0.2 | 5 | < 0.5 | < 0.5 | 87.3 | 197 | 24.1 | 95.6 | 17.0 | 5.22 | 12.1 | 1.7 | 8.3 | 1.3 | 3.0 |
| 589473 | 150 | 15 | < 1 | < 5 | 75 | 791 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 182 | 419 | 53.0 | 205 | 38.6 | 11.4 | 28.7 | 4.1 | 21.2 | 3.4 | 7.8 |
| 589474 | 130 | 17 | 1 | < 5 | 96 | 377 | 2 | 0.5 | < 0.2 | 6 | < 0.5 | < 0.5 | 114 | 247 | 29.5 | 115 | 19.2 | 5.40 | 12.4 | 1.5 | 7.3 | 1.1 | 2.5 |
| 589475 | 110 | 17 | 1 | < 5 | 106 | 224 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 99.7 | 220 | 26.8 | 102 | 18.0 | 5.62 | 12.9 | 1.6 | 7.4 | 1.1 | 2.5 |
| 589476 | 100 | 16 | 1 | < 5 | 96 | 513 | < 2 | 0.7 | < 0.2 | 5 | < 0.5 | < 0.5 | 106 | 239 | 29.1 | 116 | 20.8 | 6.53 | 16.1 | 2.1 | 9.9 | 1.5 | 3.3 |
| 589477 | 120 | 14 | 1 | < 5 | 62 | 122 | 8 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 212 | 479 | 60.9 | 237 | 35.7 | 9.17 | 19.1 | 2.3 | 11.0 | 1.7 | 3.7 |
| 589478 | 60 | 5 | < 1 | < 5 | 13 | 279 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 421 | 1050 | 147 | 674 | 152 | 44.1 | 94.8 | 8.4 | 31.8 | 3.9 | 8.6 |
| 589479 | 100 | 15 | < 1 | < 5 | 45 | 212 | < 2 | < 0.5 | 0.3 | 4 | < 0.5 | < 0.5 | 307 | 749 | 103 | 450 | 95.0 | 24.8 | 50.0 | 5.1 | 19.3 | 2.4 | 4.4 |
| 589480 | 90 | 4 | < 1 | 8 | < 2 | 471 | 4 | 0.6 | < 0.2 | 2 | < 0.5 | < 0.5 | 264 | 625 | 77.3 | 301 | 59.5 | 17.9 | 44.3 | 5.6 | 26.6 | 4.0 | 8.7 |
| 589481 | 70 | 7 | < 1 | < 5 | 5 | 248 | < 2 | 0.6 | < 0.2 | < 1 | < 0.5 | < 0.5 | 243 | 577 | 74.2 | 287 | 55.8 | 17.9 | 46.9 | 6.3 | 29.4 | 4.3 | 9.8 |
| 589482 | 110 | 11 | < 1 | < 5 | 40 | > 1000 | < 2 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 275 | 654 | 83.1 | 331 | 66.7 | 21.3 | 51.2 | 6.2 | 29.2 | 4.0 | 8.9 |
| 589483 | 50 | 6 | < 1 | < 5 | 14 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 275 | 655 | 82.4 | 323 | 58.1 | 17.0 | 40.1 | 4.9 | 22.6 | 3.2 | 7.2 |
| 589484 | 80 | 4 | < 1 | < 5 | 22 | 255 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 228 | 520 | 63.0 | 245 | 45.2 | 13.6 | 33.0 | 4.3 | 21.1 | 3.2 | 7.5 |
| 589485 | 60 | 16 | < 1 | < 5 | 67 | 520 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 108 | 241 | 28.9 | 111 | 20.7 | 6.58 | 15.8 | 2.1 | 10.0 | 1.6 | 3.6 |
| 589486 | 70 | 10 | < 1 | < 5 | 36 | 355 | < 2 | 0.7 | < 0.2 | 1 | < 0.5 | < 0.5 | 242 | 590 | 74.5 | 299 | 52.0 | 14.8 | 34.3 | 4.4 | 21.0 | 3.2 | 7.3 |
| 589487 | < 30 | < 1 | 1 | < 5 | < 2 | 5 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 1.6 | 2.1 | 0.34 | 1.5 | 0.2 | 0.08 | 0.3 | < 0.1 | 0.3 | < 0.1 | 0.2 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| 589488 | 100 | 12 | < 1 | < 5 | 55 | 975 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 231 | 549 | 69.1 | 277 | 56.1 | 18.7 | 50.5 | 7.0 | 33.6 | 4.9 | 10.5 |
| 589489 | 60 | 5 | < 1 | < 5 | 16 | 788 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 296 | 678 | 82.3 | 315 | 55.0 | 15.9 | 37.6 | 4.9 | 23.7 | 3.6 | 8.2 |
| 589490 | < 30 | 3 | < 1 | 5 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 288 | 671 | 80.8 | 310 | 55.9 | 16.1 | 39.0 | 4.7 | 22.2 | 3.4 | 8.1 |
| 589491 | 60 | 4 | 1 | 8 | < 2 | 562 | < 2 | 0.6 | < 0.2 | 2 | < 0.5 | < 0.5 | 283 | 678 | 84.0 | 332 | 56.9 | 15.7 | 36.3 | 4.4 | 21.1 | 3.2 | 7.6 |
| 589492 | 70 | 4 | 1 | 9 | 3 | 342 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 247 | 576 | 70.0 | 270 | 48.0 | 13.9 | 32.4 | 4.0 | 19.8 | 3.1 | 7.6 |
| 589493 | 120 | 7 | 1 | 9 | 21 | > 1000 | < 2 | 1.1 | < 0.2 | 3 | < 0.5 | < 0.5 | 322 | 740 | 90.0 | 348 | 61.6 | 18.5 | 45.7 | 6.0 | 30.1 | 4.6 | 10.8 |
| 589494 | 130 | 16 | 1 | < 5 | 78 | 174 | < 2 | 0.8 | < 0.2 | 4 | < 0.5 | 0.7 | 99.4 | 212 | 25.0 | 97.4 | 21.9 | 6.83 | 16.4 | 1.9 | 8.2 | 1.2 | 2.7 |
| 589495 | 90 | 9 | < 1 | < 5 | 33 | 305 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 143 | 337 | 44.1 | 195 | 75.9 | 33.9 | 112 | 18.4 | 94.1 | 15.0 | 31.3 |
| 589496 | 140 | 4 | < 1 | < 5 | 8 | 261 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 289 | 651 | 80.5 | 322 | 78.6 | 26.9 | 70.1 | 10.1 | 50.3 | 7.9 | 18.7 |
| 589497 | 110 | 7 | < 1 | 11 | 17 | 372 | 14 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 523 | 1220 | 158 | 639 | 121 | 34.7 | 81.2 | 9.3 | 40.1 | 5.3 | 11.6 |
| 589498 | 70 | 2 | < 1 | 6 | < 2 | 236 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 358 | 814 | 98.8 | 380 | 67.8 | 20.0 | 48.7 | 6.6 | 34.2 | 5.7 | 11.8 |
| 589499 | 100 | 2 | < 1 | 5 | < 2 | 220 | 5 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 338 | 789 | 95.9 | 373 | 65.9 | 19.9 | 48.3 | 6.3 | 31.1 | 4.6 | 9.7 |
| 589500 | 60 | 17 | < 1 | < 5 | 92 | 48 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | 0.8 | 40.8 | 88.2 | 10.5 | 40.3 | 8.8 | 2.68 | 5.9 | 0.8 | 3.5 | 0.5 | 1.2 |
| 589501 | 460 | 13 | < 1 | 5 | 37 | > 1000 | 15 | < 0.5 | < 0.2 | < 1 | < 0.5 | 0.8 | 1100 | 2020 | 179 | 520 | 56.2 | 13.9 | 27.1 | 3.1 | 13.3 | 2.0 | 5.7 |
| 589502 | 50 | 11 | 2 | 15 | 14 | 394 | < 2 | < 0.5 | < 0.2 | 3 | < 0.5 | < 0.5 | 922 | 2290 | 306 | 1300 | 280 | 81.3 | 174 | 17.6 | 62.9 | 7.3 | 14.4 |
| 589503 | < 30 | 5 | 1 | 7 | < 2 | 227 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 923 | 2350 | 314 | 1360 | 273 | 74.8 | 149 | 12.8 | 44.3 | 5.0 | 9.1 |
| 589504 | < 30 | 6 | 2 | 10 | 2 | 409 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 968 | 2350 | 303 | 1280 | 251 | 66.0 | 120 | 9.2 | 31.1 | 3.5 | 6.4 |
| 589505 | < 30 | 8 | 2 | 12 | < 2 | > 1000 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 926 | 2250 | 297 | 1260 | 255 | 65.5 | 125 | 11.2 | 38.1 | 4.6 | 9.3 |
| 589506 | < 30 | 8 | 2 | 8 | < 2 | 347 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 875 | 2090 | 271 | 1130 | 225 | 58.1 | 113 | 9.9 | 33.3 | 4.1 | 7.7 |
| 589507 | 40 | 9 | 2 | 10 | < 2 | 232 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 941 | 2290 | 285 | 1180 | 241 | 66.9 | 130 | 10.7 | 32.0 | 3.7 | 7.2 |
| 589508 | 190 | 20 | < 1 | < 5 | 61 | 75 | 5 | 0.8 | < 0.2 | 3 | < 0.5 | < 0.5 | 53.8 | 116 | 13.9 | 51.9 | 9.7 | 2.88 | 7.0 | 0.8 | 3.6 | 0.6 | 1.5 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589364 | < 0.05 | 0.3 | 0.05 | 2.2 | 0.2 | 4 | 0.7 | 12 | < 0.4 | 8.4 | 1.4 | < 0.003 |
| 589365 | 0.73 | 3.8 | 0.46 | 0.5 | 1.4 | < 1 | < 0.1 | 56 | < 0.4 | 60.8 | 15.4 | 0.136 |
| 589366 | 0.81 | 4.7 | 0.62 | 0.4 | 4.0 | 2 | 0.1 | 41 | < 0.4 | 48.1 | 24.7 | 0.384 |
| 589367 | 0.07 | 0.4 | 0.05 | 2.3 | 0.2 | 3 | 0.3 | 10 | < 0.4 | 4.8 | 1.1 | 0.005 |
| 589368 | 0.82 | 4.1 | 0.49 | 0.8 | 5.6 | 3 | 0.1 | 39 | < 0.4 | 37.6 | 13.3 | 0.143 |
| 589369 | 0.68 | 4.0 | 0.60 | 0.3 | 8.7 | < 1 | < 0.1 | 64 | < 0.4 | 44.1 | 24.7 | 0.533 |
| 589370 | 0.91 | 4.8 | 0.63 | 0.3 | 1.5 | 4 | < 0.1 | 57 | < 0.4 | 20.4 | 9.7 | 0.093 |
| 589371 | 0.85 | 4.8 | 0.59 | < 0.2 | 0.4 | 1 | < 0.1 | 39 | < 0.4 | 18.8 | 5.3 | 0.030 |
| 589372 | 0.67 | 3.7 | 0.53 | 0.3 | < 0.1 | 1 | < 0.1 | 12 | < 0.4 | 39.0 | 4.6 | 0.047 |
| 589373 | 0.10 | 0.5 | 0.07 | 1.7 | 0.4 | 4 | 0.3 | 9 | < 0.4 | 7.5 | 1.4 | 0.011 |
| 589374 | 0.60 | 3.0 | 0.41 | 1.2 | 2.1 | 5 | < 0.1 | 28 | < 0.4 | 56.0 | 17.3 | 0.032 |
| 589375 | 0.42 | 2.2 | 0.27 | 1.9 | 1.1 | 5 | 0.2 | 39 | < 0.4 | 19.0 | 8.9 | 0.054 |
| 589376 | 0.32 | 1.6 | 0.23 | 0.8 | 0.2 | 3 | < 0.1 | 31 | < 0.4 | 33.5 | 7.9 | 0.058 |
| 589377 | 0.51 | 2.7 | 0.34 | 0.6 | 0.5 | 2 | < 0.1 | 35 | < 0.4 | 36.0 | 17.8 | 0.070 |
| 589378 | 0.90 | 4.7 | 0.58 | 0.9 | 2.6 | < 1 | < 0.1 | 56 | < 0.4 | 43.8 | 70.6 | 0.185 |
| 589379 | 0.90 | 4.6 | 0.55 | 1.1 | 0.8 | 5 | < 0.1 | 103 | < 0.4 | 49.1 | 27.2 | 0.229 |
| 589380 | 0.55 | 3.0 | 0.42 | 1.5 | 3.2 | < 1 | < 0.1 | 53 | < 0.4 | 40.9 | 68.5 | 0.117 |
| 589381 | 0.74 | 3.9 | 0.50 | 1.6 | 0.8 | 4 | < 0.1 | 42 | < 0.4 | 23.8 | 34.4 | 0.091 |
| 589382 | 0.95 | 4.9 | 0.63 | 3.4 | 0.7 | 8 | < 0.1 | 20 | < 0.4 | 26.5 | 10.7 | 0.043 |
| 589383 | 0.96 | 4.4 | 0.56 | 0.4 | < 0.1 | 3 | < 0.1 | 40 | < 0.4 | 81.9 | 15.6 | 0.046 |
| 589384 | 1.73 | 8.5 | 0.99 | 0.5 | 0.4 | 4 | < 0.1 | 36 | < 0.4 | 44.3 | 27.4 | 0.108 |
| 589385 | 0.25 | 1.4 | 0.18 | 4.0 | 0.6 | 3 | 0.3 | 44 | < 0.4 | 12.9 | 6.9 | 0.021 |
| 589386 | 0.80 | 4.2 | 0.53 | 0.6 | 1.6 | 5 | < 0.1 | 57 | < 0.4 | 20.1 | 65.0 | 0.069 |
| 589387 | 0.77 | 4.2 | 0.55 | 2.7 | 3.7 | 24 | < 0.1 | 33 | < 0.4 | 21.1 | 83.7 | 0.093 |
| 589388 | 0.85 | 4.6 | 0.60 | 0.8 | 1.2 | 2 | < 0.1 | 38 | < 0.4 | 22.1 | 49.3 | 0.144 |
| 589389 | 0.29 | 1.4 | 0.19 | 2.2 | 0.8 | 4 | 0.2 | 16 | < 0.4 | 19.6 | 4.8 | 0.020 |
| 589390 | 1.15 | 5.6 | 0.63 | 1.1 | 7.1 | 9 | < 0.1 | 23 | < 0.4 | 41.4 | 18.4 | 0.056 |
| 589391 | 0.76 | 4.0 | 0.49 | 0.9 | 0.6 | 3 | < 0.1 | 57 | < 0.4 | 27.8 | 10.1 | 0.044 |
| 589392 | 0.65 | 3.4 | 0.45 | 2.5 | 3.2 | 7 | < 0.1 | 19 | < 0.4 | 13.6 | 13.2 | 0.030 |
| 589393 | 0.40 | 2.4 | 0.29 | 1.8 | 2.0 | 7 | < 0.1 | 24 | < 0.4 | 18.3 | 9.6 | 0.048 |
| 589394 | 0.45 | 2.5 | 0.33 | 2.4 | 0.7 | < 1 | < 0.1 | 13 | < 0.4 | 19.9 | 5.1 | 0.036 |
| 589395 | 1.37 | 7.1 | 0.86 | 1.0 | 0.9 | 6 | < 0.1 | 18 | < 0.4 | 52.0 | 22.2 | 0.162 |
| 589396 | 0.53 | 2.7 | 0.35 | 3.5 | 2.2 | 7 | 0.2 | 13 | < 0.4 | 18.3 | 10.0 | 0.042 |
| 589397 | 1.33 | 5.8 | 0.63 | 0.3 | 0.2 | 8 | < 0.1 | 39 | 0.6 | 75.8 | 19.1 | 0.039 |
| 589398 | 1.85 | 7.6 | 0.91 | 0.4 | < 0.1 | < 1 | < 0.1 | 33 | 0.5 | 108 | 18.9 | 0.035 |
| 589399 | 0.47 | 2.4 | 0.29 | 3.6 | 1.1 | 3 | 0.4 | 15 | < 0.4 | 16.5 | 4.8 | 0.019 |
| 589400 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 2 | < 0.1 | < 5 | < 0.4 | < 0.1 | 0.2 | < 0.003 |
| 589401 | 0.63 | 3.3 | 0.41 | 2.2 | 3.2 | 6 | 0.2 | 12 | < 0.4 | 15.4 | 13.3 | 0.123 |
| 589402 | 0.79 | 4.3 | 0.54 | 3.3 | 5.7 | 3 | 0.1 | 19 | < 0.4 | 9.2 | 12.8 | 0.046 |
| 589403 | 1.01 | 5.3 | 0.65 | 3.1 | 3.2 | 2 | < 0.1 | 31 | < 0.4 | 7.3 | 18.0 | 0.043 |
| 589404 | 0.89 | 4.7 | 0.58 | 1.4 | 1.3 | 5 | < 0.1 | 13 | < 0.4 | 31.6 | 13.2 | 0.080 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589405 | 0.66 | 3.7 | 0.49 | 2.0 | 0.9 | 6 | 0.2 | 23 | < 0.4 | 20.2 | 10.8 | 0.046 |
| 589406 | 0.18 | 0.9 | 0.13 | 3.8 | 0.8 | 2 | 0.4 | 12 | < 0.4 | 11.6 | 4.1 | 0.037 |
| 589407 | 0.80 | 5.0 | 0.72 | 0.6 | 0.5 | 3 | < 0.1 | 8 | < 0.4 | 3.3 | 5.4 | 0.086 |
| 589408 | 0.85 | 4.8 | 0.62 | 0.7 | 5.7 | 1 | < 0.1 | 21 | < 0.4 | 7.5 | 21.8 | 0.337 |
| 589409 | 0.93 | 5.4 | 0.68 | 0.5 | 2.5 | 4 | < 0.1 | 15 | < 0.4 | 6.9 | 16.7 | 0.220 |
| 589410 | 0.87 | 5.1 | 0.66 | 0.4 | 2.5 | 4 | < 0.1 | 16 | < 0.4 | 4.1 | 14.0 | 0.228 |
| 589411 | 0.86 | 5.4 | 0.69 | 0.3 | 0.5 | < 1 | < 0.1 | 24 | < 0.4 | 3.2 | 9.6 | 0.105 |
| 589412 | 0.84 | 4.4 | 0.54 | 5.1 | 11.4 | 7 | < 0.1 | 17 | < 0.4 | 19.3 | 20.8 | 0.357 |
| 589413 | 0.12 | 0.7 | 0.10 | 2.6 | 0.2 | 2 | 0.7 | 14 | < 0.4 | 20.3 | 0.9 | 0.008 |
| 589414 | 0.85 | 5.0 | 0.63 | 0.6 | 4.8 | 3 | 0.3 | 18 | < 0.4 | 6.1 | 19.2 | 0.355 |
| 589415 | 0.90 | 5.0 | 0.66 | 0.2 | 2.4 | 3 | 0.2 | 30 | < 0.4 | 8.6 | 12.6 | 0.172 |
| 589416 | 0.95 | 5.0 | 0.67 | 0.6 | 9.8 | 1 | 0.2 | 23 | < 0.4 | 10.4 | 28.4 | 0.807 |
| 589417 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 4 | 0.1 | < 5 | < 0.4 | < 0.1 | 0.3 | < 0.003 |
| 589418 | 0.81 | 4.9 | 0.62 | < 0.2 | 0.3 | 4 | 0.3 | 27 | < 0.4 | 15.6 | 7.5 | 0.049 |
| 589419 | 0.49 | 2.7 | 0.37 | 2.0 | 7.9 | 6 | 0.4 | 23 | < 0.4 | 25.2 | 27.9 | 0.454 |
| 589420 | 0.08 | 0.6 | 0.08 | 3.0 | 0.2 | 4 | 0.3 | 8 | < 0.4 | 9.9 | 2.2 | 0.008 |
| 589421 | 0.38 | 2.0 | 0.25 | 3.1 | 2.1 | 9 | 0.3 | 13 | < 0.4 | 36.3 | 9.2 | 0.056 |
| 589422 | 0.94 | 5.5 | 0.70 | 0.5 | 5.6 | 3 | < 0.1 | 22 | < 0.4 | 6.7 | 23.6 | 0.098 |
| 589423 | 0.95 | 5.4 | 0.70 | 0.6 | 10.7 | 4 | < 0.1 | 29 | < 0.4 | 14.3 | 37.6 | 0.224 |
| 589424 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 2 | < 0.1 | < 5 | < 0.4 | < 0.1 | 0.1 | < 0.003 |
| 589425 | 1.02 | 5.5 | 0.70 | 7.2 | 3.1 | 3 | < 0.1 | 7 | < 0.4 | 8.0 | 3.8 | 0.006 |
| 589426 | 1.35 | 6.5 | 0.82 | 7.5 | 2.9 | 2 | < 0.1 | 25 | < 0.4 | 53.8 | 20.7 | 0.048 |
| 589427 | 1.04 | 5.7 | 0.69 | 0.3 | 1.2 | 4 | < 0.1 | 14 | < 0.4 | 19.7 | 5.1 | 0.019 |
| 589428 | 0.36 | 2.1 | 0.30 | 5.5 | 9.4 | 2 | 0.3 | 21 | < 0.4 | 17.3 | 20.8 | 0.066 |
| 589429 | 0.89 | 5.3 | 0.70 | 0.5 | 4.6 | 2 | < 0.1 | 14 | < 0.4 | 4.9 | 14.7 | 0.055 |
| 589430 | 0.91 | 5.1 | 0.69 | 0.6 | 2.7 | 5 | < 0.1 | 53 | < 0.4 | 12.4 | 8.7 | 0.038 |
| 589431 | 0.44 | 2.5 | 0.35 | 5.0 | 3.3 | 7 | 0.2 | 16 | < 0.4 | 15.1 | 8.2 | 0.038 |
| 589432 | 0.49 | 2.5 | 0.38 | 4.2 | 7.4 | 4 | 0.3 | 20 | < 0.4 | 15.0 | 18.5 | 0.081 |
| 589433 | 0.54 | 3.1 | 0.43 | 4.1 | 4.3 | 6 | 0.2 | 16 | < 0.4 | 11.8 | 11.5 | 0.056 |
| 589434 | 0.94 | 5.1 | 0.66 | 1.2 | 5.0 | 1 | < 0.1 | 41 | < 0.4 | 5.1 | 24.6 | 0.106 |
| 589435 | 0.66 | 3.8 | 0.51 | 4.8 | 3.3 | 4 | < 0.1 | 18 | < 0.4 | 18.5 | 17.2 | 0.098 |
| 589436 | 0.63 | 3.7 | 0.49 | 4.2 | 3.5 | < 1 | < 0.1 | 24 | < 0.4 | 15.9 | 19.1 | 0.084 |
| 589437 | 0.60 | 3.5 | 0.47 | 3.5 | 7.9 | 4 | < 0.1 | 25 | < 0.4 | 12.6 | 34.6 | 0.135 |
| 589438 | 1.21 | 6.3 | 0.77 | 2.4 | 19.7 | 5 | < 0.1 | 66 | < 0.4 | 25.6 | 110 | 0.547 |
| 589439 | 0.77 | 4.4 | 0.60 | 0.6 | 20.6 | < 1 | < 0.1 | 71 | < 0.4 | 53.1 | 30.5 | 0.536 |
| 589440 | 0.85 | 4.5 | 0.57 | 2.3 | 2.8 | 4 | 0.2 | 28 | < 0.4 | 13.8 | 9.5 | 0.102 |
| 589441 | 0.55 | 3.0 | 0.41 | 6.1 | 0.8 | 9 | 0.3 | 15 | < 0.4 | 21.3 | 2.3 | 0.009 |
| 589442 | 1.04 | 5.8 | 0.78 | 0.6 | 1.3 | 3 | < 0.1 | 27 | < 0.4 | 19.0 | 5.9 | 0.053 |
| 589443 | 1.12 | 6.0 | 0.80 | < 0.2 | 1.1 | 4 | < 0.1 | 11 | < 0.4 | 5.6 | 2.2 | 0.027 |
| 589444 | 1.26 | 6.6 | 0.82 | 1.0 | 5.2 | 4 | < 0.1 | 20 | < 0.4 | 40.8 | 12.7 | 0.137 |
| 589445 | 0.97 | 5.4 | 0.71 | 0.9 | 2.2 | 3 | < 0.1 | 11 | < 0.4 | 17.0 | 8.5 | 0.024 |
| 589446 | 0.25 | 1.6 | 0.21 | 5.2 | 1.1 | 7 | 0.2 | 8 | < 0.4 | 13.0 | 3.1 | 0.016 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589447 | 0.82 | 4.5 | 0.55 | 3.8 | 2.6 | 3 | < 0.1 | 19 | < 0.4 | 14.8 | 29.8 | 0.059 |
| 589448 | 0.90 | 4.4 | 0.56 | 1.4 | 1.4 | 3 | < 0.1 | 34 | < 0.4 | 19.5 | 29.6 | 0.065 |
| 589449 | 0.99 | 5.3 | 0.69 | 0.3 | 0.7 | 3 | < 0.1 | 16 | < 0.4 | 10.9 | 11.4 | 0.050 |
| 589450 | 0.68 | 3.6 | 0.48 | < 0.2 | < 0.1 | 4 | < 0.1 | 8 | < 0.4 | 13.3 | 3.4 | < 0.003 |
| 589451 | 1.09 | 6.0 | 0.77 | 0.2 | 0.9 | 1 | < 0.1 | 5 | < 0.4 | 2.6 | 1.0 | 0.008 |
| 589452 | 0.64 | 3.4 | 0.45 | 11.0 | 14.5 | 6 | < 0.1 | 26 | < 0.4 | 18.9 | 23.8 | 0.222 |
| 589453 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 8 | < 0.1 | < 5 | < 0.4 | < 0.1 | 0.1 | < 0.003 |
| 589454 | 0.86 | 4.9 | 0.57 | 9.8 | 9.9 | 6 | < 0.1 | 19 | < 0.4 | 11.7 | 36.5 | 0.100 |
| 589455 | 0.60 | 3.3 | 0.43 | 2.7 | 4.9 | 12 | < 0.1 | 32 | < 0.4 | 39.3 | 24.8 | 0.072 |
| 589456 | 0.52 | 2.7 | 0.32 | 0.5 | 3.1 | 5 | < 0.1 | 26 | < 0.4 | 98.5 | 84.4 | 0.044 |
| 589457 | 0.16 | 0.8 | 0.12 | 3.6 | 0.5 | 5 | 0.2 | 12 | < 0.4 | 14.3 | 3.8 | 0.006 |
| 589458 | 0.91 | 4.5 | 0.61 | 1.7 | 1.0 | 2 | 0.2 | 61 | < 0.4 | 19.7 | 7.4 | 0.043 |
| 589459 | 0.82 | 4.4 | 0.60 | 0.9 | 3.1 | 5 | 0.3 | 17 | < 0.4 | 12.6 | 7.6 | 0.070 |
| 589460 | 0.75 | 4.2 | 0.52 | 2.4 | 6.6 | 7 | 0.2 | 16 | < 0.4 | 10.8 | 15.9 | 0.068 |
| 589461 | 0.74 | 4.4 | 0.60 | 1.8 | 7.3 | 4 | < 0.1 | 42 | < 0.4 | 14.6 | 22.0 | 0.124 |
| 589462 | 1.10 | 5.1 | 0.65 | 0.9 | 5.5 | 3 | < 0.1 | 47 | < 0.4 | 45.9 | 46.7 | 0.209 |
| 589463 | 1.16 | 6.0 | 0.79 | 0.6 | 1.3 | 2 | < 0.1 | 21 | < 0.4 | 15.9 | 13.6 | 0.075 |
| 589464 | 0.70 | 3.8 | 0.49 | 9.4 | 9.4 | < 1 | < 0.1 | 15 | < 0.4 | 12.1 | 15.1 | 0.132 |
| 589465 | 0.60 | 3.2 | 0.43 | 1.6 | 22.1 | 5 | 0.1 | 42 | < 0.4 | 43.3 | 65.8 | 0.256 |
| 589466 | 1.04 | 5.9 | 0.76 | 1.3 | 5.7 | 3 | < 0.1 | 24 | < 0.4 | 15.6 | 41.1 | 0.148 |
| 589467 | 0.68 | 4.2 | 0.59 | 0.3 | 10.9 | 3 | < 0.1 | 70 | < 0.4 | 42.4 | 25.2 | 0.540 |
| 589468 | 1.29 | 6.1 | 0.70 | 4.8 | 5.2 | 5 | < 0.1 | 31 | < 0.4 | 154 | 26.1 | 0.063 |
| 589469 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 2 | < 0.1 | < 5 | < 0.4 | 0.2 | 0.2 | < 0.003 |
| 589470 | 1.07 | 5.2 | 0.60 | 1.7 | 3.5 | 5 | < 0.1 | 20 | < 0.4 | 38.9 | 10.4 | 0.078 |
| 589471 | 0.66 | 3.6 | 0.48 | 1.7 | 4.5 | 6 | < 0.1 | 20 | < 0.4 | 10.4 | 7.2 | 0.161 |
| 589472 | 0.34 | 2.0 | 0.27 | 2.8 | 2.7 | 5 | < 0.1 | 11 | < 0.4 | 12.0 | 4.2 | 0.053 |
| 589473 | 0.86 | 4.3 | 0.53 | 1.8 | 12.2 | 5 | < 0.1 | 61 | < 0.4 | 29.9 | 46.6 | 0.194 |
| 589474 | 0.25 | 1.4 | 0.19 | 3.1 | 5.4 | 4 | 0.1 | 21 | < 0.4 | 16.5 | 11.9 | 0.061 |
| 589475 | 0.27 | 1.4 | 0.18 | 3.4 | 3.9 | 5 | 0.2 | 11 | < 0.4 | 12.5 | 9.2 | 0.039 |
| 589476 | 0.35 | 1.9 | 0.30 | 3.4 | 9.1 | 5 | 0.2 | 22 | < 0.4 | 13.4 | 18.8 | 0.093 |
| 589477 | 0.40 | 1.9 | 0.25 | 2.9 | 1.8 | 5 | 0.1 | 17 | < 0.4 | 23.4 | 5.5 | 0.020 |
| 589478 | 0.90 | 4.3 | 0.53 | 0.6 | 2.5 | 10 | < 0.1 | 12 | < 0.4 | 91.8 | 13.5 | 0.060 |
| 589479 | 0.44 | 2.1 | 0.25 | 2.1 | 2.2 | 2 | < 0.1 | 23 | < 0.4 | 53.5 | 4.4 | 0.029 |
| 589480 | 1.00 | 5.6 | 0.75 | 1.4 | 23.6 | 3 | < 0.1 | 67 | < 0.4 | 38.7 | 75.7 | 0.102 |
| 589481 | 1.03 | 5.7 | 0.72 | 1.1 | 7.4 | 4 | < 0.1 | 51 | < 0.4 | 32.1 | 59.2 | 0.125 |
| 589482 | 0.92 | 5.5 | 0.65 | 1.1 | 21.5 | 4 | < 0.1 | 39 | < 0.4 | 68.2 | 33.3 | 0.597 |
| 589483 | 0.80 | 4.5 | 0.60 | 0.7 | 18.1 | 5 | < 0.1 | 21 | < 0.4 | 26.9 | 19.5 | 0.325 |
| 589484 | 0.87 | 4.9 | 0.68 | 0.9 | 2.9 | 3 | < 0.1 | 39 | < 0.4 | 20.4 | 4.3 | 0.042 |
| 589485 | 0.41 | 2.1 | 0.26 | 1.8 | 12.1 | 4 | 0.1 | 15 | < 0.4 | 8.5 | 9.1 | 0.089 |
| 589486 | 0.83 | 4.2 | 0.56 | 1.9 | 10.5 | 4 | < 0.1 | 34 | < 0.4 | 13.0 | 24.1 | 0.098 |
| 589487 | < 0.05 | 0.1 | < 0.01 | < 0.2 | < 0.1 | 4 | < 0.1 | < 5 | < 0.4 | 0.1 | 0.1 | < 0.003 |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| 589488 | 1.19 | 6.1 | 0.78 | 1.2 | 32.2 | 9 | < 0.1 | 30 | < 0.4 | 46.2 | 44.2 | 0.253 |
| 589489 | 0.93 | 5.3 | 0.69 | 1.1 | 10.9 | < 1 | < 0.1 | 55 | < 0.4 | 28.0 | 34.7 | 0.226 |
| 589490 | 0.99 | 5.3 | 0.70 | 0.9 | 20.0 | 2 | < 0.1 | 39 | < 0.4 | 14.4 | 61.2 | 0.329 |
| 589491 | 0.85 | 4.6 | 0.64 | 1.3 | 8.3 | 4 | < 0.1 | 24 | < 0.4 | 10.3 | 30.0 | 0.151 |
| 589492 | 0.92 | 5.2 | 0.67 | 1.3 | 5.5 | 5 | < 0.1 | 36 | < 0.4 | 10.9 | 24.1 | 0.099 |
| 589493 | 1.23 | 6.3 | 0.79 | 3.3 | 11.4 | 8 | < 0.1 | 55 | < 0.4 | 32.7 | 25.1 | 0.340 |
| 589494 | 0.31 | 1.7 | 0.24 | 3.6 | 3.3 | 6 | 0.1 | 19 | < 0.4 | 16.7 | 3.2 | 0.029 |
| 589495 | 3.09 | 14.4 | 1.52 | 1.8 | 6.3 | 6 | < 0.1 | 22 | < 0.4 | 112 | 22.0 | 0.051 |
| 589496 | 2.11 | 11.0 | 1.37 | 0.7 | 7.5 | < 1 | < 0.1 | 29 | < 0.4 | 78.2 | 33.9 | 0.037 |
| 589497 | 1.24 | 6.1 | 0.73 | 1.0 | 0.7 | < 1 | < 0.1 | 55 | < 0.4 | 61.6 | 8.5 | 0.092 |
| 589498 | 1.34 | 7.1 | 0.89 | 1.3 | 1.4 | 3 | < 0.1 | 23 | < 0.4 | 34.1 | 12.0 | 0.054 |
| 589499 | 1.19 | 6.8 | 0.89 | 0.3 | 0.3 | 2 | < 0.1 | 32 | < 0.4 | 29.8 | 6.4 | 0.045 |
| 589500 | 0.15 | 0.9 | 0.14 | 2.9 | 0.2 | 5 | < 0.1 | 27 | < 0.4 | 10.1 | 2.6 | 0.010 |
| 589501 | 0.67 | 4.2 | 0.57 | 0.5 | 12.1 | < 1 | < 0.1 | 49 | < 0.4 | 47.3 | 28.0 | 0.543 |
| 589502 | 1.41 | 6.8 | 0.86 | 0.8 | 0.1 | 4 | < 0.1 | 22 | < 0.4 | 280 | 20.8 | 0.090 |
| 589503 | 0.94 | 4.9 | 0.61 | 0.7 | 0.6 | 8 | < 0.1 | 9 | < 0.4 | 232 | 11.3 | 0.032 |
| 589504 | 0.63 | 3.2 | 0.47 | 0.4 | < 0.1 | 3 | < 0.1 | 14 | < 0.4 | 180 | 9.3 | 0.100 |
| 589505 | 0.87 | 4.5 | 0.56 | 0.3 | 0.4 | < 1 | < 0.1 | 31 | < 0.4 | 176 | 21.7 | 0.253 |
| 589506 | 0.77 | 3.9 | 0.54 | < 0.2 | 1.1 | 2 | < 0.1 | 24 | < 0.4 | 169 | 12.5 | 0.053 |
| 589507 | 0.72 | 3.5 | 0.43 | 0.2 | 0.9 | 4 | < 0.1 | 13 | < 0.4 | 197 | 14.7 | 0.045 |
| 589508 | 0.19 | 1.1 | 0.15 | 4.2 | 0.6 | 3 | 0.2 | 14 | < 0.4 | 10.9 | 2.5 | 0.012 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|-----------------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| NIST 694 Meas | 11.37 | 1.87 | 0.74 | 0.013 | 0.34 | 42.79 | 0.87 | 0.53 | 0.117 | 30.20 | | | | | 1578 | | | | | | | | |
| NIST 694 Cert | 11.2 | 1.80 | 0.790 | 0.0116 | 0.330 | 43.6 | 0.860 | 0.510 | 0.110 | 30.2 | | | | | 1740 | | | | | | | | |
| DNC-1 Meas | 47.28 | 18.31 | 9.98 | 0.147 | 10.04 | 11.47 | 1.91 | 0.22 | 0.476 | 0.07 | | | 31 | 150 | 105 | 144 | 16 | 35 | 270 | 59 | 270 | 110 | |
| DNC-1 Cert | 47.15 | 18.34 | 9.97 | 0.150 | 10.13 | 11.49 | 1.890 | 0.234 | 0.480 | 0.070 | | | 31 | 148 | 118 | 144.0 | 18.0 | 38 | 270 | 57 | 247 | 100 | |
| LKSD-3 Meas | | | | | | | | | | | | | | | | | | | | 90 | 32 | 50 | 40 |
| LKSD-3 Cert | | | | | | | | | | | | | | | | | | | | 87.0 | 30.0 | 47.0 | 35.0 |
| TDB-1 Meas | | | | | | | | | | | | | | | | | | | | 240 | | 90 | 330 |
| TDB-1 Cert | | | | | | | | | | | | | | | | | | | | 251 | | 92 | 323 |
| BE-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| BE-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 52.61 | 15.03 | 10.93 | 0.167 | 6.38 | 11.07 | 2.21 | 0.60 | 1.068 | 0.12 | | | 35 | < 1 | 276 | 171 | 194 | 18 | 88 | 90 | 44 | 70 | 110 |
| W-2a Cert | 52.4 | 15.4 | 10.7 | 0.163 | 6.37 | 10.9 | 2.14 | 0.626 | 1.06 | 0.140 | | | 36.0 | 1.30 | 262 | 182 | 190 | 24.0 | 94.0 | 92.0 | 43.0 | 70.0 | 110 |
| W-2a Meas | 52.64 | 15.50 | 10.96 | 0.166 | 6.35 | 11.08 | 2.23 | 0.62 | 1.086 | 0.14 | | | 35 | < 1 | 267 | 175 | 197 | 19 | 90 | | | | |
| W-2a Cert | 52.4 | 15.4 | 10.7 | 0.163 | 6.37 | 10.9 | 2.14 | 0.626 | 1.06 | 0.140 | | | 36.0 | 1.30 | 262 | 182 | 190 | 24.0 | 94.0 | | | | |
| SY-4 Meas | 49.87 | 20.54 | 6.16 | 0.107 | 0.50 | 8.08 | 6.90 | 1.62 | 0.289 | 0.12 | | | 1 | 3 | 9 | 342 | 1199 | 115 | 529 | | | | |
| SY-4 Cert | 49.9 | 20.69 | 6.21 | 0.108 | 0.54 | 8.05 | 7.10 | 1.66 | 0.287 | 0.131 | | | 1.1 | 2.6 | 8.0 | 340 | 1191 | 119 | 517 | | | | |
| CTA-AC-1 Meas | | | | | | | | | | | | | | | | | | | | | | | 50 |
| CTA-AC-1 Cert | | | | | | | | | | | | | | | | | | | | | | | 54.0 |
| BIR-1a Meas | 48.24 | 16.08 | 11.56 | 0.173 | 9.60 | 13.59 | 1.84 | 0.02 | 0.978 | 0.03 | | | 44 | < 1 | 328 | 7 | 112 | 15 | 15 | 390 | 54 | 180 | 130 |
| BIR-1a Cert | 47.96 | 15.50 | 11.30 | 0.175 | 9.700 | 13.30 | 1.82 | 0.030 | 0.96 | 0.021 | | | 44 | 0.58 | 310 | 6 | 110 | 16 | 18 | 370 | 52 | 170 | 125 |
| NCS DC86312 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC86312 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | | | | | | | | | | | | | | | | | | | | | 4 | | 1050 |
| NCS DC70009 (GBW07241) Cert | | | | | | | | | | | | | | | | | | | | | 3.7 | | 960 |
| OREAS 100a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 18 | | 180 |
| OREAS 100a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 18.1 | | 169 |
| OREAS 101a (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 50 | | 450 |
| OREAS 101a (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 48.8 | | 430 |
| OREAS 101b (Fusion) Meas | | | | | | | | | | | | | | | | | | | | | 44 | < 20 | 410 |
| OREAS 101b (Fusion) Cert | | | | | | | | | | | | | | | | | | | | | 47 | 9 | 420 |

| Analyte Symbol | SiO2 | Al2O3 | Fe2O3(T) | MnO | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | LOI | Total | Sc | Be | V | Ba | Sr | Y | Zr | Cr | Co | Ni | Cu |
|-----------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % | % | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | | 0.01 | 1 | 1 | 5 | 2 | 2 | 1 | 2 | 20 | 1 | 20 | 10 |
| Method Code | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-ICP | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Meas | | | | | | | | | | | | | | | | | | | | | | < 20 | |
| JR-1 Cert | | | | | | | | | | | | | | | | | | | | | | | 1.67 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589378 Orig | 4.59 | 0.07 | 4.86 | 0.440 | 5.70 | 41.78 | 0.04 | 0.03 | 0.220 | 3.87 | 36.58 | 98.17 | 5 | < 1 | 65 | 1158 | 2366 | 73 | 125 | < 20 | 3 | < 20 | < 10 |
| 589378 Dup | 4.55 | 0.07 | 4.90 | 0.442 | 5.51 | 42.52 | 0.04 | 0.03 | 0.217 | 3.88 | 36.60 | 98.77 | 5 | < 1 | 65 | 1132 | 2337 | 70 | 137 | < 20 | 3 | < 20 | < 10 |
| 589395 Orig | 3.77 | 0.67 | 2.97 | 0.557 | 9.40 | 39.07 | 0.13 | 0.44 | 0.054 | 4.04 | 37.50 | 98.61 | 6 | < 1 | 30 | 2320 | 2584 | 125 | 55 | < 20 | 2 | < 20 | < 10 |
| 589395 Dup | 3.71 | 0.65 | 2.98 | 0.558 | 9.38 | 39.13 | 0.12 | 0.44 | 0.054 | 4.03 | 37.46 | 98.53 | 6 | < 1 | 32 | 2281 | 2570 | 125 | 58 | < 20 | 2 | < 20 | < 10 |
| 589413 Orig | 62.85 | 12.27 | 3.95 | 0.095 | 2.68 | 3.27 | 4.21 | 6.66 | 0.217 | 0.15 | 3.18 | 99.52 | 4 | 7 | 106 | 1465 | 1057 | 13 | 121 | < 20 | 3 | < 20 | 10 |
| 589413 Split PREP DUP | 62.28 | 12.16 | 3.94 | 0.095 | 2.67 | 3.30 | 4.26 | 6.56 | 0.218 | 0.16 | 3.19 | 98.84 | 4 | 7 | 102 | 1457 | 1026 | 13 | 125 | < 20 | 3 | < 20 | 10 |
| 589425 Orig | 3.06 | 0.54 | 2.88 | 0.327 | 2.17 | 47.43 | 0.37 | 0.32 | 0.309 | 1.65 | 38.52 | 97.57 | 6 | 2 | 55 | 649 | 8291 | 94 | 354 | < 20 | 2 | < 20 | 10 |
| 589425 Dup | 3.06 | 0.54 | 2.88 | 0.327 | 2.17 | 47.40 | 0.37 | 0.33 | 0.312 | 1.63 | 38.54 | 97.56 | 6 | 2 | 55 | 653 | 8330 | 94 | 353 | < 20 | 2 | < 20 | 10 |
| 589442 Orig | 2.86 | 0.60 | 1.42 | 0.313 | 0.95 | 49.63 | 0.27 | 0.21 | 0.036 | 0.94 | 40.14 | 97.36 | 3 | < 1 | 19 | 488 | 6285 | 92 | 29 | < 20 | < 1 | < 20 | 700 |
| 589442 Dup | 2.86 | 0.60 | 1.43 | 0.314 | 0.94 | 49.65 | 0.28 | 0.21 | 0.033 | 0.94 | 40.11 | 97.35 | 3 | < 1 | 19 | 482 | 6304 | 91 | 30 | < 20 | < 1 | < 20 | < 10 |
| 589443 Orig | | | | | | | | | | | | | | | | | | | | | | | |
| 589443 Dup | | | | | | | | | | | | | | | | | | | | | | | |
| 589463 Orig | 0.70 | 0.05 | 1.62 | 0.507 | 2.18 | 51.43 | 0.12 | 0.05 | 0.013 | 2.10 | 40.28 | 99.06 | 3 | < 1 | 18 | 782 | 5714 | 103 | 43 | < 20 | < 1 | < 20 | < 10 |
| 589463 Split PREP DUP | 0.75 | 0.05 | 1.63 | 0.504 | 2.17 | 51.00 | 0.12 | 0.05 | 0.014 | 2.18 | 40.04 | 98.52 | 3 | < 1 | 19 | 827 | 5965 | 107 | 25 | < 20 | < 1 | < 20 | < 10 |
| 589472 Orig | 49.24 | 10.39 | 4.93 | 0.158 | 3.89 | 11.20 | 4.61 | 3.79 | 0.242 | 0.78 | 10.31 | 99.53 | 3 | 6 | 119 | 744 | 2265 | 30 | 126 | < 20 | 4 | < 20 | 30 |
| 589472 Dup | 48.71 | 10.18 | 4.91 | 0.158 | 3.84 | 11.12 | 4.57 | 3.77 | 0.239 | 0.79 | 10.36 | 98.64 | 3 | 6 | 117 | 733 | 2365 | 30 | 126 | < 20 | 4 | < 20 | 30 |
| 589486 Orig | | | | | | | | | | | | | | | | | | | | | | | |
| 589486 Dup | | | | | | | | | | | | | | | | | | | | | | | |
| 589489 Orig | 7.06 | 1.10 | 2.90 | 0.334 | 2.46 | 45.64 | 0.35 | 0.77 | 0.069 | 2.55 | 35.34 | 98.56 | 3 | 2 | 56 | 743 | 5932 | 77 | 125 | < 20 | 4 | < 20 | < 10 |
| 589489 Dup | 7.05 | 1.10 | 2.89 | 0.332 | 2.45 | 45.29 | 0.35 | 0.76 | 0.059 | 2.56 | 35.35 | 98.18 | 3 | 2 | 53 | 748 | 6007 | 78 | 68 | < 20 | 4 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | 0.02 | 0.002 | < 0.01 | 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | < 20 | < 1 | < 20 | < 10 |
| Method Blank | < 0.01 | < 0.01 | < 0.01 | 0.002 | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | 2 | | | | |
| Method Blank | < 0.01 | < 0.01 | 0.01 | 0.002 | 0.02 | 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | 2 | | | | |
| Method Blank | 0.01 | < 0.01 | < 0.01 | 0.001 | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | 0.00 | 0.03 | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | < 20 | < 1 | < 20 | < 10 |
| Method Blank | 0.01 | < 0.01 | < 0.01 | 0.001 | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | 0.01 | < 0.01 | < 0.01 | 0.001 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | 0.01 | < 0.01 | < 0.01 | 0.001 | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.001 | < 0.01 | | | < 1 | < 1 | < 5 | < 2 | < 2 | < 1 | < 2 | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| NIST 694 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| DNC-1 Meas | 70 | | | | 4 | 3 | | | | | 1.0 | | 3.7 | | | 4.7 | | 0.62 | | | | | |
| DNC-1 Cert | 70 | | | | 5 | 3 | | | | | 0.96 | | 3.6 | | | 5.20 | | 0.59 | | | | | |
| LKSD-3 Meas | 150 | | | 26 | 75 | | < 2 | 2.7 | | 2 | | 2.2 | 49.8 | 93.3 | | 45.3 | 7.9 | 1.40 | | | | 5.2 | |
| LKSD-3 Cert | 152 | | | 27.0 | 78.0 | | 2.00 | 2.70 | | 3.00 | | 2.30 | 52.0 | 90.0 | | 44.0 | 8.00 | 1.50 | | | | 4.90 | |
| TDB-1 Meas | 150 | | | | | | | | | | | | 17.7 | 41.4 | | 24.4 | | 2.00 | | | | | |
| TDB-1 Cert | 155 | | | | | | | | | | | | 17 | 41 | | 23 | | 2.1 | | | | | |
| BE-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| BE-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Meas | 80 | 18 | 2 | < 5 | 20 | 7 | < 2 | | | | | | 10.4 | 24.7 | | 13.3 | 3.4 | | | 0.6 | 3.9 | 0.8 | |
| W-2a Cert | 80.0 | 17.0 | 1.00 | 1.20 | 21.0 | 7.90 | 0.600 | | | | | | 10.0 | 23.0 | | 13.0 | 3.30 | | | 0.630 | 3.60 | 0.760 | |
| W-2a Meas | | | | | | | | | | | | | | | | | | | | | | | |
| W-2a Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SY-4 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| CTA-AC-1 Meas | 40 | | | | | | | | | | | | > 2000 | > 3000 | | 1190 | 172 | 48.0 | 128 | 14.0 | | | |
| CTA-AC-1 Cert | 38.0 | | | | | | | | | | | | 2176 | 3326 | | 1087 | 162 | 46.7 | 124 | 13.9 | | | |
| BIR-1a Meas | 70 | 15 | | | | | | | | | | 0.6 | 0.6 | 1.9 | | 2.5 | 1.1 | 0.50 | 1.9 | | | 3.7 | |
| BIR-1a Cert | 70 | 16 | | | | | | | | | | 0.58 | 0.63 | 1.9 | | 2.5 | 1.1 | 0.55 | 2.0 | | | 4 | |
| NCS DC86312 Meas | | | | | | | | | | | | | > 2000 | 184 | | 1620 | | | 238 | 31.3 | 193 | 35.7 | 102 |
| NCS DC86312 Cert | | | | | | | | | | | | | 2360 | 190 | | 1600 | | | 225.0 | 34.6 | 183 | 36 | 96.2 |
| VS-N Meas | | | | | | | | | | | | | | | | | | | | | | | |
| VS-N Cert | | | | | | | | | | | | | | | | | | | | | | | |
| NCS DC70009 (GBW07241) Meas | 100 | 17 | 10 | 66 | 501 | | | 2.0 | 1.0 | > 1000 | 3.0 | 41.7 | 25.1 | 62.1 | 8.50 | 34.4 | 13.0 | | 16.0 | 3.1 | 22.3 | 4.4 | 13.8 |
| NCS DC70009 (GBW07241) Cert | 100 | 16.5 | 11.2 | 69.9 | 500 | | | 1.8 | 1.3 | 1700 | 3.1 | 41 | 23.7 | 60.3 | 7.9 | 32.9 | 12.5 | | 14.8 | 3.3 | 20.7 | 4.5 | 13.4 |
| OREAS 100a (Fusion) Meas | | | | | | | 23 | | | | | | 277 | 492 | 48.7 | 156 | 24.2 | 3.79 | 21.3 | 3.5 | 24.6 | 4.9 | 15.5 |
| OREAS 100a (Fusion) Cert | | | | | | | 24.1 | | | | | | 260 | 463 | 47.1 | 152 | 23.6 | 3.71 | 23.6 | 3.80 | 23.2 | 4.81 | 14.9 |
| OREAS 101a (Fusion) Meas | | | | | | | 20 | | | | | | 842 | 1470 | 135 | 407 | 51.2 | 8.26 | 46.0 | 6.1 | 33.7 | 6.6 | 20.2 |
| OREAS 101a (Fusion) Cert | | | | | | | 21.9 | | | | | | 816 | 1396 | 134 | 403 | 48.8 | 8.06 | 43.4 | 5.92 | 33.3 | 6.46 | 19.5 |
| OREAS 101b (Fusion) Meas | | | | | | | 20 | | | | | | 813 | 1400 | 128 | 381 | 49.0 | 8.03 | | 5.1 | 31.6 | 6.2 | 18.7 |
| OREAS 101b (Fusion) Cert | | | | | | | 21 | | | | | | 789 | 1331 | 127 | 378 | 48 | 7.77 | | 5.37 | 32.1 | 6.34 | 18.7 |
| JR-1 Meas | 30 | 17 | 2 | 15 | 243 | 15 | 4 | | < 0.2 | 3 | 1.2 | 20.0 | 21.1 | 49.4 | | 24.3 | 5.8 | 0.29 | 5.1 | 0.9 | 5.7 | 1.2 | 3.3 |

| Analyte Symbol | Zn | Ga | Ge | As | Rb | Nb | Mo | Ag | In | Sn | Sb | Cs | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Lower Limit | 30 | 1 | 1 | 5 | 2 | 1 | 2 | 0.5 | 0.2 | 1 | 0.5 | 0.5 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS |
| JR-1 Cert | 30.6 | 16.1 | 1.88 | 16.3 | 257 | 15.2 | 3.25 | | 0.028 | 2.86 | 1.19 | 20.8 | 19.7 | 47.2 | | 23.3 | 6.03 | 0.30 | 5.06 | 1.01 | 5.69 | 1.11 | 3.61 |
| SX18-01 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-01 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-04 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Meas | | | | | | | | | | | | | | | | | | | | | | | |
| SX18-05 Cert | | | | | | | | | | | | | | | | | | | | | | | |
| 589378 Orig | 120 | 2 | < 1 | 9 | < 2 | 707 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 275 | 592 | 68.2 | 251 | 42.7 | 13.1 | 31.5 | 4.2 | 20.6 | 3.2 | 7.7 |
| 589378 Dup | 120 | 3 | < 1 | 7 | < 2 | 734 | 5 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 282 | 603 | 68.9 | 255 | 45.4 | 13.3 | 31.2 | 4.2 | 21.4 | 3.3 | 7.7 |
| 589395 Orig | 40 | 4 | < 1 | < 5 | 7 | 613 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 370 | 875 | 109 | 429 | 74.7 | 22.3 | 53.7 | 8.2 | 39.6 | 5.9 | 12.0 |
| 589395 Dup | 40 | 5 | < 1 | < 5 | 7 | 612 | < 2 | < 0.5 | < 0.2 | 1 | < 0.5 | < 0.5 | 386 | 902 | 113 | 442 | 76.1 | 22.2 | 54.0 | 7.8 | 39.7 | 5.8 | 12.5 |
| 589413 Orig | 80 | 17 | < 1 | < 5 | 116 | 41 | 4 | 0.6 | < 0.2 | 4 | < 0.5 | < 0.5 | 136 | 293 | 33.4 | 120 | 17.6 | 5.07 | 9.7 | 1.1 | 4.5 | 0.6 | 1.2 |
| 589413 Split PREP DUP | 70 | 16 | < 1 | < 5 | 114 | 36 | 5 | < 0.5 | < 0.2 | 4 | < 0.5 | < 0.5 | 134 | 292 | 33.1 | 120 | 17.1 | 4.85 | 9.9 | 1.0 | 4.4 | 0.6 | 1.3 |
| 589425 Orig | < 30 | 5 | < 1 | < 5 | 6 | 72 | < 2 | 1.8 | < 0.2 | 2 | < 0.5 | < 0.5 | 321 | 738 | 90.0 | 350 | 63.1 | 18.5 | 44.2 | 5.3 | 25.6 | 3.8 | 9.1 |
| 589425 Dup | < 30 | 5 | < 1 | < 5 | 7 | 71 | < 2 | 2.0 | < 0.2 | 2 | < 0.5 | < 0.5 | 322 | 743 | 90.5 | 356 | 65.0 | 18.9 | 43.7 | 5.5 | 26.0 | 3.9 | 9.3 |
| 589442 Orig | 410 | 3 | < 1 | < 5 | 4 | 226 | < 2 | < 0.5 | < 0.2 | 5 | < 0.5 | < 0.5 | 278 | 639 | 76.3 | 293 | 52.2 | 15.6 | 37.2 | 4.9 | 24.4 | 3.7 | 9.2 |
| 589442 Dup | < 30 | 3 | < 1 | < 5 | 4 | 247 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 268 | 611 | 73.0 | 282 | 50.7 | 15.3 | 35.7 | 4.8 | 23.5 | 3.7 | 8.9 |
| 589443 Orig | | | | | | | | | | | | | | | | | | | | | | | |
| 589443 Dup | | | | | | | | | | | | | | | | | | | | | | | |
| 589463 Orig | 40 | 2 | < 1 | < 5 | < 2 | 265 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 285 | 684 | 85.8 | 340 | 65.5 | 20.6 | 51.9 | 6.7 | 31.5 | 4.5 | 9.9 |
| 589463 Split PREP DUP | 30 | 2 | < 1 | < 5 | < 2 | 301 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | 286 | 685 | 84.7 | 335 | 66.5 | 20.7 | 53.0 | 7.2 | 33.7 | 4.8 | 10.6 |
| 589472 Orig | 100 | 18 | 1 | < 5 | 71 | 337 | < 2 | 0.8 | < 0.2 | 5 | < 0.5 | < 0.5 | 86.2 | 195 | 24.0 | 93.5 | 17.1 | 5.27 | 12.0 | 1.6 | 8.3 | 1.3 | 3.1 |
| 589472 Dup | 100 | 17 | 1 | < 5 | 72 | 319 | 2 | 0.6 | < 0.2 | 5 | < 0.5 | < 0.5 | 88.4 | 198 | 24.3 | 97.7 | 16.8 | 5.17 | 12.3 | 1.7 | 8.2 | 1.3 | 3.0 |
| 589486 Orig | | | | | | | | | | | | | | | | | | | | | | | |
| 589486 Dup | | | | | | | | | | | | | | | | | | | | | | | |
| 589489 Orig | 60 | 5 | < 1 | < 5 | 16 | 765 | 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 289 | 663 | 80.8 | 306 | 54.0 | 15.7 | 37.4 | 4.8 | 23.3 | 3.6 | 8.3 |
| 589489 Dup | 60 | 5 | < 1 | 6 | 15 | 811 | < 2 | < 0.5 | < 0.2 | 2 | < 0.5 | < 0.5 | 303 | 693 | 83.8 | 324 | 56.1 | 16.2 | 37.8 | 4.9 | 24.1 | 3.6 | 8.1 |
| Method Blank | < 30 | < 1 | < 1 | < 5 | < 2 | < 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | < 30 | < 1 | < 1 | < 5 | < 2 | < 1 | < 2 | < 0.5 | < 0.2 | < 1 | < 0.5 | < 0.5 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.05 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | | | | | | | | | | | | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| NIST 694 Meas | | | | | | | | | | | | |
| NIST 694 Cert | | | | | | | | | | | | |
| DNC-1 Meas | | 2.0 | | | | | | | | | | |
| DNC-1 Cert | | 2.0 | | | | | | | | | | |
| LKSD-3 Meas | | 2.8 | 0.42 | 4.5 | | | | | | 11.6 | 4.9 | |
| LKSD-3 Cert | | 2.70 | 0.400 | 4.80 | | | | | | 11.4 | 4.60 | |
| TDB-1 Meas | | 3.2 | | | | | | | | 2.7 | | |
| TDB-1 Cert | | 3.4 | | | | | | | | 2.7 | | |
| BE-N Meas | | | | | | | | | | | | 0.017 |
| BE-N Cert | | | | | | | | | | | | 0.015 |
| W-2a Meas | | 2.0 | | | 0.4 | < 1 | < 0.1 | | < 0.4 | 2.2 | 0.5 | |
| W-2a Cert | | 2.10 | | | 0.500 | 0.300 | 0.200 | | 0.0300 | 2.40 | 0.530 | |
| W-2a Meas | | | | | | | | | | | | |
| W-2a Cert | | | | | | | | | | | | |
| SY-4 Meas | | | | | | | | | | | | |
| SY-4 Cert | | | | | | | | | | | | |
| CTA-AC-1 Meas | | 11.4 | 1.19 | | 2.6 | | | | | 20.8 | 4.5 | |
| CTA-AC-1 Cert | | 11.4 | 1.08 | | 2.65 | | | | | 21.8 | 4.4 | |
| BIR-1a Meas | | 1.6 | | 0.6 | | | | | | | | |
| BIR-1a Cert | | 1.7 | | 0.60 | | | | | | | | |
| NCS DC86312 Meas | 13.9 | 88.0 | 12.6 | | | | | | | 23.6 | | |
| NCS DC86312 Cert | 15.1 | 87.79 | 11.96 | | | | | | | 23.6 | | |
| VS-N Meas | | | | | | | | | | | | 0.103 |
| VS-N Cert | | | | | | | | | | | | 0.10 |
| NCS DC70009 (GBW07241) Meas | 2.30 | 16.0 | 2.31 | | | 2220 | 1.9 | | | 31.0 | | |
| NCS DC70009 (GBW07241) Cert | 2.2 | 14.9 | 2.4 | | | 2200 | 1.8 | | | 28.3 | | |
| OREAS 100a (Fusion) Meas | 2.41 | 15.8 | 2.22 | | | | | | | 52.0 | 133 | |
| OREAS 100a (Fusion) Cert | 2.31 | 14.9 | 2.26 | | | | | | | 51.6 | 135 | |
| OREAS 101a (Fusion) Meas | 2.90 | 18.5 | 2.61 | | | | | | | 39.0 | 462 | |
| OREAS 101a (Fusion) Cert | 2.90 | 17.5 | 2.66 | | | | | | | 36.6 | 422 | |
| OREAS 101b (Fusion) Meas | 2.62 | 17.8 | 2.48 | | | | | | | 36.1 | 398 | |
| OREAS 101b (Fusion) Cert | 2.66 | 17.6 | 2.58 | | | | | | | 37.1 | 396 | |
| JR-1 Meas | 0.69 | 4.9 | 0.75 | 4.3 | | 2 | | 19 | 0.5 | 27.0 | 8.9 | |

| Analyte Symbol | Tm | Yb | Lu | Hf | Ta | W | Tl | Pb | Bi | Th | U | Nb2O5 |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Unit Symbol | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % |
| Lower Limit | 0.05 | 0.1 | 0.01 | 0.2 | 0.1 | 1 | 0.1 | 5 | 0.4 | 0.1 | 0.1 | 0.003 |
| Method Code | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-MS | FUS-XRF |
| JR-1 Cert | 0.67 | 4.55 | 0.71 | 4.51 | | 1.59 | | 19.3 | 0.56 | 26.7 | 8.88 | |
| SX18-01 Meas | | | | | | | | | | | | 0.688 |
| SX18-01 Cert | | | | | | | | | | | | 0.695 |
| SX18-04 Meas | | | | | | | | | | | | 1.315 |
| SX18-04 Cert | | | | | | | | | | | | 1.32 |
| SX18-05 Meas | | | | | | | | | | | | 0.957 |
| SX18-05 Cert | | | | | | | | | | | | 0.973 |
| 589378 Orig | 0.92 | 4.5 | 0.57 | 0.9 | 2.7 | 1 | < 0.1 | 65 | < 0.4 | 42.8 | 70.0 | 0.189 |
| 589378 Dup | 0.88 | 4.8 | 0.59 | 1.0 | 2.5 | < 1 | < 0.1 | 47 | < 0.4 | 44.7 | 71.2 | 0.181 |
| 589395 Orig | 1.31 | 7.0 | 0.87 | 1.2 | 0.9 | 4 | < 0.1 | 17 | < 0.4 | 51.5 | 22.7 | 0.162 |
| 589395 Dup | 1.43 | 7.2 | 0.85 | 0.9 | 0.9 | 8 | < 0.1 | 19 | < 0.4 | 52.5 | 21.6 | 0.162 |
| 589413 Orig | 0.12 | 0.7 | 0.10 | 2.6 | 0.2 | 2 | 0.7 | 14 | < 0.4 | 20.3 | 0.9 | 0.008 |
| 589413 Split PREP DUP | 0.13 | 0.7 | 0.10 | 2.7 | 0.1 | 4 | 0.6 | 13 | < 0.4 | 20.3 | 0.8 | 0.009 |
| 589425 Orig | 0.99 | 5.3 | 0.70 | 7.2 | 3.0 | 3 | < 0.1 | 7 | < 0.4 | 8.0 | 3.9 | 0.005 |
| 589425 Dup | 1.05 | 5.7 | 0.71 | 7.2 | 3.2 | 2 | < 0.1 | 6 | < 0.4 | 8.0 | 3.8 | 0.007 |
| 589442 Orig | 1.00 | 6.0 | 0.79 | 0.5 | 1.1 | 4 | < 0.1 | 45 | < 0.4 | 19.3 | 5.8 | 0.053 |
| 589442 Dup | 1.07 | 5.7 | 0.78 | 0.6 | 1.4 | 2 | < 0.1 | 9 | < 0.4 | 18.8 | 5.9 | |
| 589443 Orig | | | | | | | | | | | | 0.026 |
| 589443 Dup | | | | | | | | | | | | 0.029 |
| 589463 Orig | 1.16 | 6.0 | 0.79 | 0.6 | 1.3 | 2 | < 0.1 | 21 | < 0.4 | 15.9 | 13.6 | 0.075 |
| 589463 Split PREP DUP | 1.23 | 6.5 | 0.83 | 0.4 | 1.1 | 3 | < 0.1 | 19 | < 0.4 | 16.1 | 12.5 | 0.084 |
| 589472 Orig | 0.34 | 2.1 | 0.27 | 2.8 | 2.7 | 6 | 0.1 | 11 | < 0.4 | 11.9 | 4.2 | 0.052 |
| 589472 Dup | 0.35 | 1.9 | 0.27 | 2.8 | 2.7 | 3 | < 0.1 | 10 | < 0.4 | 12.1 | 4.2 | 0.053 |
| 589486 Orig | | | | | | | | | | | | 0.097 |
| 589486 Dup | | | | | | | | | | | | 0.099 |
| 589489 Orig | 0.94 | 5.2 | 0.68 | 1.3 | 10.2 | < 1 | < 0.1 | 45 | < 0.4 | 27.1 | 33.4 | 0.226 |
| 589489 Dup | 0.92 | 5.5 | 0.69 | 0.9 | 11.7 | 4 | < 0.1 | 65 | < 0.4 | 28.8 | 35.9 | |
| Method Blank | < 0.05 | < 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | < 0.1 | < 0.1 | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | < 0.05 | < 0.1 | < 0.01 | < 0.2 | < 0.1 | < 1 | < 0.1 | < 5 | < 0.4 | < 0.1 | < 0.1 | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | |
| Method Blank | | | | | | | | | | | | < 0.003 |



Date Submitted: 24-Apr-18
Invoice No.: A18-05281Final2
Invoice Date: 12-Jul-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

234 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-05281Final2**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized with loops and a horizontal line at the end.

Emmanuel Esemé , Ph.D.
Quality Control

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589509 | 0.014 | < 0.003 | < 0.005 | 0.005 | 0.033 | 7.54 | 0.32 | < 0.003 | 0.005 | < 0.003 |
| 589510 | 0.029 | < 0.003 | 0.007 | 0.008 | 0.004 | 7.96 | 2.92 | < 0.003 | 0.016 | < 0.003 |
| 589511 | 0.109 | 0.003 | < 0.005 | 0.008 | 0.101 | 10.65 | 3.86 | < 0.003 | 0.020 | 0.004 |
| 589512 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.007 | 0.10 | 0.02 | < 0.003 | 0.005 | < 0.003 |
| 589513 | 0.091 | 0.004 | < 0.005 | 0.007 | 0.126 | 11.52 | 2.22 | < 0.003 | 0.016 | < 0.003 |
| 589514 | 0.058 | 0.003 | < 0.005 | 0.007 | 0.071 | 9.40 | 4.05 | < 0.003 | 0.022 | < 0.003 |
| 589515 | 0.087 | 0.003 | < 0.005 | 0.005 | 0.137 | 11.05 | 3.21 | < 0.003 | 0.018 | 0.003 |
| 589516 | 0.112 | < 0.003 | < 0.005 | 0.007 | 0.110 | 11.66 | 2.20 | < 0.003 | 0.020 | < 0.003 |
| 589517 | 0.088 | 0.003 | 0.005 | 0.007 | 0.083 | 11.91 | 3.80 | < 0.003 | 0.019 | < 0.003 |
| 589518 | 0.097 | < 0.003 | < 0.005 | 0.007 | 0.114 | 11.41 | 4.23 | < 0.003 | 0.029 | 0.003 |
| 589519 | 0.085 | < 0.003 | 0.012 | 0.008 | 0.413 | 11.31 | 4.79 | < 0.003 | 0.026 | 0.005 |
| 589520 | 0.029 | < 0.003 | < 0.005 | 0.005 | 0.041 | 10.37 | 1.65 | < 0.003 | 0.010 | < 0.003 |
| 589521 | 0.012 | 0.003 | < 0.005 | 0.005 | 0.060 | 8.42 | 0.59 | < 0.003 | 0.005 | < 0.003 |
| 589522 | 0.135 | < 0.003 | 0.009 | 0.007 | < 0.003 | 3.43 | 2.72 | < 0.003 | 0.012 | < 0.003 |
| 589523 | 0.023 | < 0.003 | < 0.005 | < 0.005 | 0.032 | 8.19 | 0.62 | < 0.003 | 0.006 | < 0.003 |
| 589524 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 7.70 | 0.59 | < 0.003 | 0.006 | < 0.003 |
| 589525 | 0.078 | 0.004 | 0.007 | 0.006 | 0.022 | 5.67 | 3.38 | < 0.003 | 0.017 | 0.004 |
| 589526 | 0.043 | 0.003 | 0.007 | 0.007 | 0.007 | 3.64 | 3.71 | < 0.003 | 0.015 | < 0.003 |
| 589527 | 0.074 | 0.006 | 0.009 | 0.007 | < 0.003 | 2.50 | 3.85 | < 0.003 | 0.015 | < 0.003 |
| 589528 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.032 | 7.13 | 0.49 | 0.003 | 0.006 | < 0.003 |
| 589529 | 0.016 | < 0.003 | < 0.005 | 0.005 | 0.007 | 10.34 | 0.76 | < 0.003 | 0.006 | < 0.003 |
| 589530 | 0.054 | 0.005 | 0.007 | 0.007 | < 0.003 | 5.93 | 6.26 | < 0.003 | 0.012 | 0.008 |
| 589531 | 0.011 | < 0.003 | < 0.005 | 0.005 | 0.013 | 5.31 | 0.59 | < 0.003 | 0.006 | < 0.003 |
| 589532 | 0.013 | < 0.003 | < 0.005 | 0.005 | 0.028 | 6.20 | 0.49 | < 0.003 | 0.006 | < 0.003 |
| 589533 | 0.008 | < 0.003 | < 0.005 | 0.007 | 0.009 | 6.31 | 1.12 | < 0.003 | 0.007 | < 0.003 |
| 589534 | 0.006 | 0.003 | < 0.005 | 0.005 | 0.024 | 5.83 | 1.04 | < 0.003 | 0.008 | < 0.003 |
| 589535 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.007 | 0.11 | 0.01 | < 0.003 | 0.004 | < 0.003 |
| 589536 | 0.006 | < 0.003 | < 0.005 | 0.005 | 0.026 | 5.98 | 0.45 | < 0.003 | 0.009 | 0.003 |
| 589537 | 0.019 | 0.006 | < 0.005 | < 0.005 | 0.047 | 6.46 | 1.56 | < 0.003 | 0.007 | 0.009 |
| 589538 | 0.025 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.64 | 2.61 | < 0.003 | 0.011 | < 0.003 |
| 589539 | 0.019 | 0.003 | < 0.005 | 0.005 | 0.016 | 6.24 | 1.17 | < 0.003 | 0.007 | 0.006 |
| 589540 | 0.524 | 0.004 | 0.009 | 0.011 | < 0.003 | 4.16 | 2.48 | < 0.003 | 0.009 | 0.003 |
| 589541 | 0.048 | < 0.003 | 0.005 | 0.007 | 0.003 | 6.84 | 2.41 | < 0.003 | 0.012 | < 0.003 |
| 589542 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.28 | 0.16 | < 0.003 | 0.005 | < 0.003 |
| 589543 | 0.264 | 0.005 | < 0.005 | 0.007 | 0.007 | 6.81 | 1.04 | < 0.003 | 0.006 | 0.003 |
| 589544 | 0.053 | < 0.003 | 0.006 | 0.009 | < 0.003 | 5.49 | 2.99 | < 0.003 | 0.010 | 0.004 |
| 589545 | 0.060 | < 0.003 | < 0.005 | 0.006 | 0.013 | 6.42 | 0.72 | < 0.003 | 0.006 | 0.005 |
| 589546 | 0.013 | 0.003 | < 0.005 | 0.005 | 0.024 | 6.10 | 0.56 | 0.003 | 0.005 | 0.004 |
| 589547 | 0.027 | < 0.003 | < 0.005 | 0.005 | 0.004 | 8.33 | 0.83 | < 0.003 | 0.008 | 0.004 |
| 589548 | 0.073 | 0.010 | 0.006 | 0.013 | < 0.003 | 6.43 | 3.06 | < 0.003 | 0.018 | 0.005 |
| 589549 | 0.009 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.62 | 0.27 | < 0.003 | 0.004 | 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589550 | 0.053 | < 0.003 | < 0.005 | 0.005 | 0.011 | 6.79 | 1.75 | 0.003 | 0.010 | < 0.003 |
| 589551 | 0.041 | 0.003 | < 0.005 | < 0.005 | 0.012 | 6.07 | 0.71 | < 0.003 | 0.006 | < 0.003 |
| 589552 | 0.044 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 6.43 | 0.92 | 0.003 | 0.012 | 0.004 |
| 589553 | 0.123 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.08 | 2.24 | < 0.003 | 0.018 | 0.003 |
| 589554 | 0.094 | < 0.003 | < 0.005 | < 0.005 | 0.037 | 7.54 | 0.82 | < 0.003 | 0.008 | 0.006 |
| 589555 | 0.055 | 0.004 | 0.005 | < 0.005 | < 0.003 | 2.26 | 1.03 | < 0.003 | 0.019 | 0.006 |
| 589556 | 0.134 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 6.81 | 1.25 | 0.004 | 0.013 | < 0.003 |
| 589557 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.10 | 0.01 | < 0.003 | < 0.003 | < 0.003 |
| 589558 | 0.062 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 3.73 | 2.34 | < 0.003 | 0.020 | 0.003 |
| 589559 | 0.416 | < 0.003 | < 0.005 | < 0.005 | 0.030 | 3.69 | 3.88 | < 0.003 | 0.024 | < 0.003 |
| 589560 | 0.040 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 4.95 | 3.79 | < 0.003 | 0.025 | 0.006 |
| 589561 | 0.043 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.19 | 1.51 | < 0.003 | 0.012 | 0.003 |
| 589562 | 0.068 | < 0.003 | < 0.005 | < 0.005 | 0.059 | 8.90 | 2.33 | < 0.003 | 0.014 | < 0.003 |
| 589563 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.103 | 4.63 | 0.45 | < 0.003 | 0.006 | < 0.003 |
| 589564 | 0.130 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 4.26 | 4.56 | < 0.003 | 0.026 | < 0.003 |
| 589565 | 0.190 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.73 | 3.97 | < 0.003 | 0.017 | < 0.003 |
| 589566 | 0.135 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 5.40 | 1.85 | < 0.003 | 0.010 | 0.004 |
| 589567 | 0.532 | 0.006 | 0.011 | 0.008 | < 0.003 | 3.90 | 2.49 | < 0.003 | 0.015 | < 0.003 |
| 589568 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.10 | 0.01 | < 0.003 | < 0.003 | < 0.003 |
| 589569 | 0.079 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.83 | 1.26 | < 0.003 | 0.015 | < 0.003 |
| 589570 | 0.046 | < 0.003 | < 0.005 | < 0.005 | 0.026 | 7.44 | 1.12 | < 0.003 | 0.011 | < 0.003 |
| 589571 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.65 | 0.35 | < 0.003 | 0.014 | 0.003 |
| 589572 | 0.106 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 7.25 | 1.15 | < 0.003 | 0.015 | < 0.003 |
| 589573 | 0.035 | < 0.003 | < 0.005 | < 0.005 | 0.063 | 6.83 | 2.71 | < 0.003 | 0.015 | 0.003 |
| 589574 | 0.082 | < 0.003 | 0.007 | < 0.005 | 0.005 | 5.57 | 4.03 | < 0.003 | 0.017 | < 0.003 |
| 589575 | 0.070 | < 0.003 | < 0.005 | < 0.005 | 0.048 | 9.25 | 3.49 | < 0.003 | 0.017 | 0.003 |
| 589576 | 0.059 | < 0.003 | < 0.005 | < 0.005 | 0.064 | 8.81 | 5.39 | < 0.003 | 0.025 | < 0.003 |
| 589577 | 0.086 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 6.64 | 0.88 | < 0.003 | 0.004 | < 0.003 |
| 589578 | 0.063 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 6.65 | 1.01 | < 0.003 | 0.006 | 0.009 |
| 589579 | 0.076 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.60 | 1.20 | < 0.003 | 0.010 | < 0.003 |
| 589580 | 0.157 | 0.003 | 0.007 | < 0.005 | < 0.003 | 4.01 | 3.03 | < 0.003 | 0.011 | < 0.003 |
| 589581 | 0.030 | < 0.003 | < 0.005 | < 0.005 | 0.055 | 13.47 | 0.64 | < 0.003 | 0.008 | 0.003 |
| 589582 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 6.15 | 1.00 | < 0.003 | 0.010 | < 0.003 |
| 589583 | 0.147 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 3.41 | 2.41 | < 0.003 | 0.010 | < 0.003 |
| 589584 | 0.089 | < 0.003 | 0.005 | < 0.005 | 0.049 | 5.60 | 7.67 | < 0.003 | 0.014 | 0.003 |
| 589585 | 0.070 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 3.73 | 2.25 | < 0.003 | 0.022 | < 0.003 |
| 589586 | 0.038 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 4.86 | 0.33 | < 0.003 | 0.024 | < 0.003 |
| 589587 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.16 | 0.01 | < 0.003 | < 0.003 | 0.005 |
| 589588 | 0.071 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 4.68 | 2.69 | < 0.003 | 0.025 | < 0.003 |
| 589589 | 0.051 | < 0.003 | < 0.005 | < 0.005 | 0.049 | 10.13 | 1.95 | < 0.003 | 0.013 | 0.004 |
| 589590 | 0.022 | < 0.003 | 0.012 | 0.012 | 0.017 | 4.29 | 3.90 | < 0.003 | 0.023 | 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589591 | 0.027 | < 0.003 | 0.008 | 0.012 | 0.040 | 5.16 | 3.47 | < 0.003 | 0.021 | < 0.003 |
| 589592 | 0.102 | 0.003 | 0.013 | < 0.005 | < 0.003 | 3.21 | 2.70 | < 0.003 | 0.025 | < 0.003 |
| 589593 | 0.049 | < 0.003 | < 0.005 | 0.007 | 0.014 | 7.57 | 2.56 | < 0.003 | 0.012 | < 0.003 |
| 589594 | 0.019 | < 0.003 | < 0.005 | 0.012 | 0.009 | 6.82 | 3.42 | < 0.003 | 0.021 | < 0.003 |
| 589595 | 0.063 | < 0.003 | < 0.005 | 0.006 | 0.013 | 8.73 | 1.27 | < 0.003 | 0.018 | < 0.003 |
| 589596 | 0.062 | < 0.003 | < 0.005 | < 0.005 | 0.022 | 8.56 | 1.58 | < 0.003 | 0.016 | 0.003 |
| 589597 | 0.161 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 5.11 | 2.42 | < 0.003 | 0.023 | < 0.003 |
| 589598 | 0.253 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.35 | 2.05 | < 0.003 | 0.016 | < 0.003 |
| 589599 | 0.125 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 8.11 | 1.66 | 0.007 | 0.012 | < 0.003 |
| 589600 | 0.040 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 6.72 | 1.22 | < 0.003 | 0.009 | < 0.003 |
| 589601 | 0.057 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 5.03 | 2.88 | < 0.003 | 0.024 | 0.003 |
| 589602 | 0.094 | 0.003 | 0.009 | < 0.005 | < 0.003 | 2.23 | 2.46 | < 0.003 | 0.021 | < 0.003 |
| 589603 | 0.174 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 5.16 | 3.86 | < 0.003 | 0.021 | < 0.003 |
| 589604 | 0.138 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.54 | 2.45 | < 0.003 | 0.014 | < 0.003 |
| 589605 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 6.48 | 0.93 | < 0.003 | 0.007 | < 0.003 |
| 589606 | 0.066 | < 0.003 | 0.007 | 0.007 | 0.044 | 6.56 | 6.28 | < 0.003 | 0.033 | 0.003 |
| 589607 | 0.007 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.12 | 0.02 | 0.003 | < 0.003 | < 0.003 |
| 589608 | 0.250 | < 0.003 | < 0.005 | < 0.005 | 0.007 | 3.00 | 1.21 | < 0.003 | 0.020 | 0.004 |
| 589609 | 0.020 | < 0.003 | < 0.005 | 0.010 | 0.026 | 7.18 | 1.34 | < 0.003 | 0.012 | < 0.003 |
| 589610 | 0.064 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 6.99 | 0.71 | < 0.003 | 0.011 | < 0.003 |
| 589611 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 5.36 | 0.56 | < 0.003 | 0.019 | < 0.003 |
| 589612 | 0.175 | < 0.003 | < 0.005 | 0.006 | 0.018 | 6.81 | 2.24 | < 0.003 | 0.026 | < 0.003 |
| 589613 | 0.539 | 0.006 | 0.013 | 0.007 | < 0.003 | 4.22 | 2.51 | < 0.003 | 0.015 | < 0.003 |
| 589614 | 0.071 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 7.01 | 1.24 | < 0.003 | 0.013 | < 0.003 |
| 589615 | 0.062 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 7.61 | 1.30 | < 0.003 | 0.013 | < 0.003 |
| 589616 | 0.010 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 7.12 | 0.03 | < 0.003 | 0.015 | < 0.003 |
| 589617 | 0.023 | < 0.003 | 0.011 | 0.007 | < 0.003 | 4.37 | 0.84 | < 0.003 | 0.024 | < 0.003 |
| 589618 | 0.086 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 3.04 | 1.58 | 0.003 | 0.023 | 0.011 |
| 589619 | 0.032 | < 0.003 | < 0.005 | < 0.005 | 0.054 | 5.95 | 4.41 | < 0.003 | 0.022 | 0.003 |
| 589620 | 0.039 | < 0.003 | < 0.005 | < 0.005 | 0.041 | 7.08 | 2.54 | < 0.003 | 0.015 | < 0.003 |
| 589621 | 0.006 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.10 | 0.02 | < 0.003 | < 0.003 | < 0.003 |
| 589622 | 0.100 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 5.58 | 0.62 | < 0.003 | 0.015 | 0.003 |
| 589623 | 0.005 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 1.63 | 0.48 | < 0.003 | 0.020 | < 0.003 |
| 589624 | 0.131 | 0.003 | 0.007 | 0.005 | < 0.003 | 3.79 | 1.82 | < 0.003 | 0.024 | < 0.003 |
| 589625 | 0.095 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 5.45 | 4.51 | < 0.003 | 0.024 | 0.003 |
| 589626 | 0.174 | 0.003 | 0.009 | 0.007 | < 0.003 | 6.91 | 2.58 | < 0.003 | 0.028 | 0.005 |
| 589627 | 0.084 | < 0.003 | 0.005 | 0.005 | < 0.003 | 5.95 | 1.77 | 0.005 | 0.008 | 0.003 |
| 589628 | 0.029 | 0.004 | < 0.005 | 0.008 | 0.010 | 6.01 | 2.29 | < 0.003 | 0.009 | < 0.003 |
| 589629 | 0.040 | < 0.003 | < 0.005 | 0.005 | 0.110 | 9.94 | 1.90 | < 0.003 | 0.008 | < 0.003 |
| 589630 | 0.083 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.00 | 0.92 | < 0.003 | 0.005 | 0.003 |
| 589631 | 0.057 | < 0.003 | 0.009 | 0.009 | < 0.003 | 1.69 | 1.50 | < 0.003 | 0.015 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589632 | 0.146 | 0.003 | 0.005 | 0.008 | 0.021 | 5.38 | 2.76 | 0.005 | 0.012 | < 0.003 |
| 589633 | 0.117 | 0.003 | < 0.005 | 0.006 | < 0.003 | 4.23 | 1.70 | < 0.003 | 0.011 | 0.004 |
| 589634 | 0.682 | 0.003 | 0.006 | 0.008 | < 0.003 | 4.74 | 3.86 | < 0.003 | 0.010 | 0.003 |
| 589635 | 0.143 | < 0.003 | 0.010 | 0.008 | < 0.003 | 4.20 | 2.00 | < 0.003 | 0.012 | 0.004 |
| 589636 | 0.004 | 0.004 | < 0.005 | 0.008 | < 0.003 | 1.95 | 0.65 | < 0.003 | 0.010 | < 0.003 |
| 589637 | 0.044 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 6.19 | 3.04 | < 0.003 | 0.012 | 0.003 |
| 589638 | 0.199 | < 0.003 | < 0.005 | 0.007 | 0.026 | 5.70 | 3.40 | < 0.003 | 0.017 | 0.003 |
| 589639 | 0.231 | 0.003 | 0.008 | 0.008 | < 0.003 | 4.26 | 3.21 | < 0.003 | 0.016 | 0.004 |
| 589640 | 0.027 | 0.003 | < 0.005 | 0.005 | 0.008 | 6.58 | 0.28 | < 0.003 | 0.003 | 0.010 |
| 589641 | 0.022 | < 0.003 | 0.007 | 0.010 | < 0.003 | 6.91 | 0.72 | < 0.003 | 0.005 | 0.005 |
| 589642 | 0.068 | < 0.003 | 0.007 | 0.008 | < 0.003 | 7.01 | 0.30 | < 0.003 | 0.003 | < 0.003 |
| 589643 | 0.027 | < 0.003 | 0.006 | 0.011 | < 0.003 | 6.77 | 2.53 | < 0.003 | 0.013 | < 0.003 |
| 589644 | 0.200 | < 0.003 | < 0.005 | 0.005 | 0.026 | 7.63 | 1.37 | < 0.003 | 0.008 | < 0.003 |
| 589645 | 0.081 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 6.50 | 1.67 | < 0.003 | 0.005 | < 0.003 |
| 589646 | 0.218 | < 0.003 | 0.013 | 0.013 | < 0.003 | 7.29 | 2.11 | < 0.003 | 0.013 | 0.003 |
| 589647 | 0.473 | 0.003 | 0.006 | 0.008 | < 0.003 | 5.86 | 5.59 | < 0.003 | 0.010 | < 0.003 |
| 589648 | 0.042 | < 0.003 | < 0.005 | 0.005 | 0.041 | 7.71 | 0.88 | < 0.003 | 0.007 | 0.003 |
| 589649 | 0.229 | < 0.003 | 0.009 | 0.009 | < 0.003 | 3.23 | 4.24 | < 0.003 | 0.015 | < 0.003 |
| 589650 | 0.076 | 0.003 | 0.009 | 0.008 | < 0.003 | 4.91 | 1.83 | < 0.003 | 0.013 | < 0.003 |
| 589651 | 0.148 | 0.003 | 0.008 | 0.009 | < 0.003 | 2.93 | 3.03 | < 0.003 | 0.014 | 0.003 |
| 589652 | 0.023 | 0.003 | 0.007 | 0.007 | < 0.003 | 1.91 | 1.20 | < 0.003 | 0.011 | < 0.003 |
| 589653 | 0.027 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 4.94 | 0.74 | < 0.003 | 0.005 | < 0.003 |
| 589654 | 0.313 | 0.006 | 0.018 | 0.010 | 0.003 | 3.17 | 4.27 | < 0.003 | 0.014 | < 0.003 |
| 589655 | 0.119 | 0.005 | 0.013 | 0.010 | < 0.003 | 2.47 | 2.91 | < 0.003 | 0.014 | < 0.003 |
| 589656 | 0.122 | 0.003 | 0.007 | 0.011 | 0.038 | 9.03 | 4.67 | < 0.003 | 0.023 | < 0.003 |
| 589657 | 0.178 | 0.004 | 0.006 | 0.008 | 0.103 | 10.89 | 5.57 | < 0.003 | 0.010 | 0.003 |
| 589658 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.15 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 589659 | 0.177 | < 0.003 | < 0.005 | 0.007 | 0.084 | 5.86 | 2.24 | < 0.003 | 0.009 | < 0.003 |
| 589660 | 0.454 | 0.008 | 0.011 | 0.006 | 0.020 | 5.68 | 4.17 | < 0.003 | 0.010 | 0.008 |
| 589661 | 0.260 | 0.004 | 0.006 | 0.011 | < 0.003 | 4.24 | 2.38 | < 0.003 | 0.017 | 0.003 |
| 589662 | 0.134 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.66 | 2.90 | < 0.003 | 0.015 | < 0.003 |
| 589663 | 0.284 | 0.004 | < 0.005 | 0.009 | 0.035 | 4.55 | 3.18 | < 0.003 | 0.014 | < 0.003 |
| 589664 | 0.198 | 0.004 | < 0.005 | 0.008 | 0.015 | 8.26 | 1.96 | < 0.003 | 0.012 | < 0.003 |
| 589665 | 0.436 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 2.89 | 3.11 | < 0.003 | 0.012 | < 0.003 |
| 589666 | 0.075 | 0.004 | 0.006 | 0.005 | 0.012 | 2.95 | 2.31 | < 0.003 | 0.011 | < 0.003 |
| 589667 | 0.148 | 0.003 | < 0.005 | 0.006 | 0.008 | 8.23 | 1.67 | < 0.003 | 0.009 | 0.003 |
| 589668 | 0.126 | < 0.003 | < 0.005 | 0.005 | 0.017 | 6.49 | 1.63 | < 0.003 | 0.008 | < 0.003 |
| 589669 | 0.177 | 0.003 | < 0.005 | 0.005 | 0.015 | 8.81 | 1.06 | < 0.003 | 0.005 | < 0.003 |
| 589670 | 0.400 | 0.004 | 0.007 | 0.007 | < 0.003 | 3.45 | 3.13 | < 0.003 | 0.012 | < 0.003 |
| 589671 | 0.054 | 0.003 | < 0.005 | < 0.005 | 0.010 | 6.12 | 0.62 | < 0.003 | 0.004 | < 0.003 |
| 589672 | 0.536 | 0.005 | 0.012 | 0.012 | < 0.003 | 4.19 | 2.51 | < 0.003 | 0.009 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589673 | 0.341 | 0.003 | 0.007 | 0.006 | 0.068 | 5.53 | 4.22 | < 0.003 | 0.009 | < 0.003 |
| 589674 | 0.022 | 0.004 | < 0.005 | < 0.005 | 0.017 | 6.71 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| 589675 | 0.326 | 0.003 | < 0.005 | 0.005 | 0.020 | 5.51 | 0.72 | < 0.003 | 0.006 | < 0.003 |
| 589676 | 0.276 | < 0.003 | 0.005 | 0.006 | 0.017 | 6.39 | 3.23 | < 0.003 | 0.012 | < 0.003 |
| 589677 | 0.018 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 6.07 | 0.79 | < 0.003 | 0.007 | < 0.003 |
| 589678 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.14 | 0.03 | 0.004 | 0.004 | < 0.003 |
| 589679 | 0.024 | 0.004 | < 0.005 | < 0.005 | 0.012 | 6.57 | 0.41 | < 0.003 | 0.006 | < 0.003 |
| 589680 | 0.472 | 0.004 | 0.005 | 0.009 | < 0.003 | 4.36 | 2.25 | < 0.003 | 0.009 | < 0.003 |
| 589681 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.15 | 0.47 | < 0.003 | 0.005 | < 0.003 |
| 589682 | 0.007 | 0.004 | < 0.005 | < 0.005 | 0.013 | 5.61 | 0.32 | < 0.003 | 0.005 | < 0.003 |
| 589683 | 0.691 | 0.003 | 0.006 | 0.008 | < 0.003 | 3.11 | 6.51 | < 0.003 | 0.011 | < 0.003 |
| 589684 | 0.847 | 0.004 | 0.008 | 0.010 | < 0.003 | 2.83 | 5.23 | < 0.003 | 0.011 | < 0.003 |
| 589685 | 0.405 | 0.003 | 0.010 | 0.008 | < 0.003 | 2.06 | 3.31 | < 0.003 | 0.011 | 0.003 |
| 589686 | 0.134 | < 0.003 | 0.008 | 0.007 | < 0.003 | 1.51 | 2.11 | < 0.003 | 0.012 | < 0.003 |
| 589687 | 0.125 | < 0.003 | 0.008 | 0.007 | < 0.003 | 1.97 | 1.59 | < 0.003 | 0.013 | < 0.003 |
| 589688 | 0.052 | < 0.003 | 0.007 | 0.007 | < 0.003 | 4.07 | 0.50 | < 0.003 | 0.010 | < 0.003 |
| 589689 | 0.219 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.92 | 4.09 | < 0.003 | 0.012 | 0.003 |
| 589690 | 0.678 | 0.009 | 0.013 | 0.008 | < 0.003 | 5.32 | 7.27 | < 0.003 | 0.012 | 0.011 |
| 589691 | 0.516 | 0.004 | 0.009 | 0.009 | < 0.003 | 6.09 | 6.34 | < 0.003 | 0.014 | 0.003 |
| 589692 | 0.196 | < 0.003 | 0.007 | 0.008 | < 0.003 | 3.28 | 2.39 | < 0.003 | 0.011 | < 0.003 |
| 589693 | 0.064 | 0.003 | 0.007 | 0.007 | < 0.003 | 1.41 | 0.93 | < 0.003 | 0.011 | < 0.003 |
| 589694 | 0.084 | < 0.003 | 0.009 | 0.007 | < 0.003 | 1.99 | 1.37 | < 0.003 | 0.012 | < 0.003 |
| 589695 | 0.139 | < 0.003 | 0.005 | 0.007 | < 0.003 | 3.49 | 2.98 | < 0.003 | 0.011 | < 0.003 |
| 589696 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.01 | 0.42 | < 0.003 | 0.003 | < 0.003 |
| 589697 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.16 | 0.03 | < 0.003 | 0.004 | < 0.003 |
| 589698 | 0.538 | 0.003 | 0.015 | 0.007 | < 0.003 | 4.94 | 5.92 | < 0.003 | 0.011 | < 0.003 |
| 589699 | 0.151 | < 0.003 | 0.007 | 0.007 | < 0.003 | 3.46 | 2.21 | < 0.003 | 0.010 | < 0.003 |
| 589700 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.51 | 0.25 | 0.003 | 0.004 | < 0.003 |
| 589701 | 0.236 | < 0.003 | 0.009 | 0.010 | < 0.003 | 5.32 | 2.80 | < 0.003 | 0.013 | 0.003 |
| 589702 | 0.020 | 0.003 | < 0.005 | < 0.005 | 0.013 | 5.40 | 0.68 | < 0.003 | 0.005 | < 0.003 |
| 589703 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 0.10 | 0.01 | < 0.003 | 0.005 | < 0.003 |
| 589704 | 0.072 | 0.004 | 0.009 | 0.008 | 0.019 | 4.88 | 3.49 | < 0.003 | 0.015 | 0.004 |
| 589705 | 0.009 | 0.003 | < 0.005 | < 0.005 | 0.011 | 6.59 | 0.28 | < 0.003 | < 0.003 | 0.003 |
| 589706 | 0.097 | < 0.003 | 0.005 | 0.007 | < 0.003 | 6.10 | 3.02 | < 0.003 | 0.013 | 0.005 |
| 589707 | 0.066 | < 0.003 | 0.008 | 0.022 | 0.021 | 4.50 | 7.14 | < 0.003 | 0.050 | 0.006 |
| 589708 | 0.544 | 0.005 | 0.014 | 0.011 | < 0.003 | 4.22 | 2.51 | < 0.003 | 0.008 | < 0.003 |
| 589709 | 0.085 | < 0.003 | 0.007 | 0.022 | 0.042 | 5.37 | 8.40 | < 0.003 | 0.046 | < 0.003 |
| 589710 | 0.102 | < 0.003 | < 0.005 | 0.006 | 0.005 | 10.70 | 0.14 | < 0.003 | 0.003 | < 0.003 |
| 589711 | 0.014 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.32 | 0.20 | < 0.003 | 0.003 | < 0.003 |
| 589712 | 0.052 | 0.003 | < 0.005 | 0.007 | 0.007 | 7.44 | 0.81 | < 0.003 | 0.008 | < 0.003 |
| 589713 | 0.207 | 0.003 | < 0.005 | 0.010 | 0.009 | 6.23 | 2.72 | < 0.003 | 0.013 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589714 | 0.139 | < 0.003 | < 0.005 | 0.015 | < 0.003 | 8.13 | 5.23 | < 0.003 | 0.025 | 0.003 |
| 589715 | 0.056 | < 0.003 | 0.006 | 0.008 | < 0.003 | 6.29 | 1.32 | < 0.003 | 0.011 | < 0.003 |
| 589716 | 0.029 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.36 | 0.43 | 0.009 | 0.004 | 0.003 |
| 589717 | 0.094 | < 0.003 | < 0.005 | 0.013 | 0.003 | 5.95 | 1.39 | < 0.003 | 0.010 | 0.005 |
| 589718 | 0.053 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 5.43 | 0.50 | < 0.003 | 0.007 | < 0.003 |
| 589719 | 0.018 | 0.003 | < 0.005 | < 0.005 | 0.014 | 6.36 | 0.10 | < 0.003 | 0.004 | < 0.003 |
| 589720 | 0.023 | 0.005 | < 0.005 | 0.005 | 0.014 | 7.11 | 0.15 | < 0.003 | 0.004 | < 0.003 |
| 589721 | 0.181 | 0.006 | 0.010 | 0.011 | < 0.003 | 3.07 | 3.31 | < 0.003 | 0.015 | < 0.003 |
| 589722 | 0.048 | 0.005 | < 0.005 | 0.006 | 0.008 | 5.82 | 0.23 | < 0.003 | 0.004 | 0.003 |
| 589723 | 0.056 | 0.004 | 0.005 | 0.009 | < 0.003 | 6.70 | 0.42 | < 0.003 | 0.006 | < 0.003 |
| 589724 | 0.032 | 0.004 | < 0.005 | 0.005 | 0.007 | 6.22 | 0.41 | < 0.003 | 0.005 | < 0.003 |
| 589725 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 6.39 | 0.22 | < 0.003 | 0.004 | < 0.003 |
| 589726 | 0.037 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 7.38 | 0.19 | < 0.003 | 0.004 | < 0.003 |
| 589727 | 0.191 | 0.005 | < 0.005 | 0.007 | 0.016 | 6.15 | 2.30 | 0.004 | 0.013 | < 0.003 |
| 589728 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.14 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 589729 | 0.125 | 0.004 | < 0.005 | 0.008 | 0.013 | 2.48 | 2.17 | < 0.003 | 0.015 | 0.011 |
| 589730 | 0.097 | < 0.003 | 0.008 | 0.008 | < 0.003 | 1.88 | 1.77 | < 0.003 | 0.013 | < 0.003 |
| 589731 | 0.034 | < 0.003 | 0.006 | 0.008 | < 0.003 | 2.06 | 0.70 | < 0.003 | 0.011 | < 0.003 |
| 589732 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.040 | 5.83 | 0.56 | 0.011 | 0.005 | < 0.003 |
| 589733 | 0.034 | < 0.003 | < 0.005 | 0.005 | 0.018 | 5.23 | 1.07 | < 0.003 | 0.007 | < 0.003 |
| 589734 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.016 | 6.30 | 0.85 | < 0.003 | 0.007 | < 0.003 |
| 589735 | 0.538 | 0.005 | 0.011 | 0.010 | < 0.003 | 4.15 | 2.50 | < 0.003 | 0.006 | 0.003 |
| 589736 | 0.020 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 6.10 | 0.39 | < 0.003 | 0.004 | < 0.003 |
| 589737 | 0.025 | < 0.003 | 0.006 | 0.005 | < 0.003 | 2.40 | 1.16 | < 0.003 | 0.013 | < 0.003 |
| 589738 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 9.23 | 0.82 | < 0.003 | 0.005 | < 0.003 |
| 589739 | 0.022 | < 0.003 | < 0.005 | 0.005 | 0.011 | 6.66 | 0.90 | < 0.003 | 0.006 | 0.003 |
| 589740 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 7.69 | 0.81 | 0.003 | 0.005 | < 0.003 |
| 589741 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.14 | 0.02 | < 0.003 | 0.004 | 0.003 |
| 589742 | 0.022 | < 0.003 | < 0.005 | 0.006 | 0.008 | 6.65 | 0.74 | < 0.003 | 0.007 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | 0.017 | | | | 0.033 | 13.09 | 1.08 | | | |
| BE-N Cert | 0.015 | | | | 0.035 | 12.8 | 1.05 | | | |
| BE-N Meas | | | | | 0.032 | 12.90 | 1.10 | | | |
| BE-N Cert | | | | | 0.035 | 12.8 | 1.05 | | | |
| ZW-C Meas | | 0.010 | < 0.005 | 0.006 | 0.011 | 9.55 | 0.02 | 0.161 | | 0.040 |
| ZW-C Cert | | 0.010 | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| ZW-C Meas | | 0.010 | < 0.005 | 0.009 | 0.011 | 9.40 | 0.03 | 0.168 | | 0.039 |
| ZW-C Cert | | 0.010 | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.102 | 0.100 | | | 0.100 | 4.01 | | 0.101 | 0.105 | |
| VS-N Cert | 0.10 | 0.098 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | | 0.099 | | | 0.101 | 3.98 | | 0.106 | 0.103 | |
| VS-N Cert | | 0.098 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.687 | 0.007 | | 0.018 | 0.089 | 8.25 | 3.84 | | 0.018 | |
| SX18-01 Cert | 0.695 | 0.005 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | | 0.006 | | 0.021 | 0.089 | 8.12 | 3.87 | | 0.015 | |
| SX18-01 Cert | | 0.005 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | 1.314 | 0.007 | < 0.005 | 0.028 | 0.160 | 11.21 | 5.22 | | 0.024 | |
| SX18-04 Cert | 1.32 | 0.005 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-04 Meas | | 0.006 | < 0.005 | 0.024 | 0.161 | 11.10 | 5.23 | | 0.020 | |
| SX18-04 Cert | | 0.005 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.955 | 0.005 | < 0.005 | 0.028 | 0.210 | 10.68 | 5.71 | | 0.030 | |
| SX18-05 Cert | 0.973 | 0.004 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| SX18-05 Meas | | 0.004 | 0.005 | 0.026 | 0.211 | 10.55 | 5.76 | | 0.026 | |
| SX18-05 Cert | | 0.004 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| 589538 Orig | 0.026 | < 0.003 | 0.005 | 0.007 | < 0.003 | 5.63 | 2.59 | < 0.003 | 0.011 | < 0.003 |
| 589538 Dup | 0.025 | 0.003 | < 0.005 | 0.007 | < 0.003 | 5.64 | 2.62 | < 0.003 | 0.011 | 0.006 |
| 589558 Orig | 0.062 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 3.73 | 2.34 | < 0.003 | 0.020 | 0.003 |
| 589558 Split PREP DUP | 0.064 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 3.83 | 2.33 | < 0.003 | 0.021 | < 0.003 |
| 589568 Orig | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.10 | 0.01 | < 0.003 | < 0.003 | < 0.003 |
| 589568 Dup | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.10 | 0.01 | < 0.003 | < 0.003 | < 0.003 |
| 589598 Orig | 0.248 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.38 | 2.07 | < 0.003 | 0.016 | < 0.003 |
| 589598 Dup | 0.259 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.31 | 2.03 | < 0.003 | 0.016 | < 0.003 |
| 589608 Orig | 0.250 | < 0.003 | < 0.005 | < 0.005 | 0.007 | 3.00 | 1.21 | < 0.003 | 0.020 | 0.004 |
| 589608 Split PREP DUP | 0.249 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 2.90 | 1.24 | < 0.003 | 0.019 | 0.008 |
| 589628 Orig | 0.029 | 0.004 | 0.005 | 0.008 | 0.011 | 6.00 | 2.28 | < 0.003 | 0.009 | 0.003 |
| 589628 Dup | 0.029 | 0.004 | < 0.005 | 0.008 | 0.010 | 6.01 | 2.30 | < 0.003 | 0.010 | < 0.003 |
| 589658 Orig | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 0.16 | 0.02 | < 0.003 | 0.004 | 0.004 |
| 589658 Dup | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.14 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 589659 Orig | 0.177 | < 0.003 | < 0.005 | 0.007 | 0.084 | 5.86 | 2.24 | < 0.003 | 0.009 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589659 Split PREP DUP | 0.171 | 0.003 | < 0.005 | 0.007 | 0.071 | 5.66 | 2.33 | < 0.003 | 0.009 | 0.003 |
| 589688 Orig | 0.049 | < 0.003 | 0.006 | 0.006 | < 0.003 | 4.06 | 0.47 | < 0.003 | 0.010 | < 0.003 |
| 589688 Dup | 0.055 | < 0.003 | 0.007 | 0.007 | < 0.003 | 4.09 | 0.52 | < 0.003 | 0.010 | < 0.003 |
| 589709 Orig | 0.085 | < 0.003 | 0.007 | 0.022 | 0.042 | 5.37 | 8.40 | < 0.003 | 0.046 | < 0.003 |
| 589709 Split PREP DUP | 0.088 | 0.003 | 0.008 | 0.021 | 0.041 | 5.24 | 8.22 | < 0.003 | 0.045 | 0.003 |
| 589718 Orig | 0.052 | 0.003 | < 0.005 | 0.005 | 0.013 | 5.43 | 0.49 | < 0.003 | 0.007 | 0.003 |
| 589718 Dup | 0.053 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.43 | 0.51 | < 0.003 | 0.007 | < 0.003 |
| 589742 Orig | 0.022 | < 0.003 | < 0.005 | 0.006 | 0.008 | 6.64 | 0.75 | < 0.003 | 0.007 | < 0.003 |
| 589742 Dup | 0.022 | 0.003 | < 0.005 | 0.006 | 0.008 | 6.67 | 0.73 | < 0.003 | 0.006 | < 0.003 |
| Method Blank | < 0.003 | | | | | | | | | |
| Method Blank | | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 08-May-18
Invoice No.: A18-06091Final2
Invoice Date: 12-Jul-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

348 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-06091Final2**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized and somewhat cursive, with a horizontal line underneath it.

Emmanuel Esemé , Ph.D.
Quality Control

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| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589785 | 0.309 | 0.005 | < 0.005 | 0.008 | < 0.003 | 7.31 | 4.20 | < 0.003 | 0.014 | < 0.003 |
| 589786 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.045 | 6.12 | 0.39 | < 0.003 | 0.005 | < 0.003 |
| 589787 | 0.137 | < 0.003 | < 0.005 | 0.005 | 0.018 | 6.20 | 1.44 | 0.004 | 0.008 | 0.003 |
| 589788 | 0.159 | 0.004 | < 0.005 | 0.007 | < 0.003 | 4.82 | 3.53 | < 0.003 | 0.013 | 0.003 |
| 589789 | 0.177 | < 0.003 | 0.006 | 0.008 | < 0.003 | 2.03 | 2.37 | < 0.003 | 0.013 | < 0.003 |
| 589790 | 0.088 | 0.004 | 0.005 | 0.007 | < 0.003 | 3.44 | 1.75 | < 0.003 | 0.012 | 0.004 |
| 589791 | 0.039 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 6.76 | 0.50 | < 0.003 | 0.005 | 0.003 |
| 589792 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.006 | 0.20 | 0.02 | < 0.003 | 0.006 | 0.004 |
| 589793 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.008 | 6.19 | 1.61 | < 0.003 | 0.007 | 0.003 |
| 589794 | 0.014 | < 0.003 | < 0.005 | 0.006 | 0.003 | 5.48 | 2.80 | < 0.003 | 0.010 | < 0.003 |
| 589795 | 0.060 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.89 | 2.28 | < 0.003 | 0.008 | 0.003 |
| 589796 | 0.045 | 0.003 | 0.005 | 0.009 | < 0.003 | 5.18 | 3.89 | < 0.003 | 0.013 | < 0.003 |
| 589797 | 0.024 | 0.003 | < 0.005 | < 0.005 | 0.018 | 6.07 | 1.07 | < 0.003 | 0.005 | < 0.003 |
| 589798 | 0.013 | < 0.003 | < 0.005 | 0.005 | 0.012 | 5.54 | 1.83 | < 0.003 | 0.009 | 0.003 |
| 589799 | 0.021 | < 0.003 | < 0.005 | 0.005 | 0.019 | 6.36 | 1.52 | < 0.003 | 0.009 | < 0.003 |
| 589800 | 0.104 | 0.004 | 0.005 | 0.007 | < 0.003 | 3.06 | 1.04 | < 0.003 | 0.011 | < 0.003 |
| 589801 | 0.079 | 0.003 | < 0.005 | < 0.005 | 0.013 | 5.60 | 0.79 | 0.004 | 0.005 | < 0.003 |
| 589802 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 4.89 | 0.48 | < 0.003 | 0.005 | 0.004 |
| 589803 | 0.052 | < 0.003 | < 0.005 | 0.006 | 0.052 | 7.31 | 4.31 | < 0.003 | 0.012 | < 0.003 |
| 589804 | 0.017 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.01 | 0.64 | < 0.003 | 0.005 | 0.003 |
| 589805 | 0.019 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 5.96 | 0.54 | 0.007 | 0.005 | 0.003 |
| 589806 | 0.027 | < 0.003 | < 0.005 | 0.010 | < 0.003 | 4.07 | 4.14 | < 0.003 | 0.017 | < 0.003 |
| 589807 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 5.32 | 0.26 | < 0.003 | 0.003 | < 0.003 |
| 589808 | 0.038 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 6.67 | 0.58 | < 0.003 | 0.006 | 0.003 |
| 589809 | 0.019 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.86 | 2.38 | < 0.003 | 0.011 | < 0.003 |
| 589810 | 0.531 | 0.006 | 0.012 | 0.012 | < 0.003 | 4.23 | 2.46 | < 0.003 | 0.008 | 0.003 |
| 589811 | 0.092 | < 0.003 | 0.005 | 0.007 | < 0.003 | 3.78 | 2.45 | < 0.003 | 0.014 | 0.003 |
| 589812 | 0.035 | < 0.003 | < 0.005 | 0.007 | 0.022 | 5.89 | 3.18 | < 0.003 | 0.013 | 0.003 |
| 589813 | 0.052 | < 0.003 | 0.005 | 0.007 | 0.051 | 10.64 | 5.37 | < 0.003 | 0.013 | < 0.003 |
| 589814 | 0.237 | < 0.003 | 0.008 | 0.009 | < 0.003 | 5.10 | 3.25 | < 0.003 | 0.013 | < 0.003 |
| 589815 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.49 | 0.33 | < 0.003 | 0.005 | < 0.003 |
| 589816 | 0.022 | 0.003 | < 0.005 | 0.005 | < 0.003 | 7.31 | 0.98 | < 0.003 | 0.006 | 0.010 |
| 589817 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 5.84 | 1.20 | < 0.003 | 0.007 | < 0.003 |
| 589818 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.18 | 0.02 | < 0.003 | 0.004 | 0.003 |
| 589819 | 0.052 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 7.05 | 2.05 | < 0.003 | 0.005 | < 0.003 |
| 589820 | 0.037 | < 0.003 | 0.009 | 0.007 | < 0.003 | 7.09 | 3.37 | 0.004 | 0.008 | 0.003 |
| 589821 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 6.71 | 0.47 | < 0.003 | 0.003 | < 0.003 |
| 589822 | 0.109 | 0.004 | 0.013 | 0.008 | < 0.003 | 7.43 | 3.86 | < 0.003 | 0.015 | 0.003 |
| 589823 | 0.036 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 7.85 | 0.80 | < 0.003 | 0.006 | 0.004 |
| 589824 | 0.034 | 0.004 | < 0.005 | < 0.005 | 0.004 | 7.93 | 0.25 | < 0.003 | < 0.003 | 0.005 |
| 589825 | 0.047 | < 0.003 | 0.008 | 0.007 | < 0.003 | 7.47 | 2.88 | 0.003 | 0.009 | 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589826 | 0.034 | < 0.003 | < 0.005 | 0.005 | 0.003 | 8.94 | 0.91 | < 0.003 | 0.006 | < 0.003 |
| 589827 | 0.046 | < 0.003 | 0.006 | 0.007 | < 0.003 | 5.61 | 0.74 | < 0.003 | 0.010 | < 0.003 |
| 589828 | 0.032 | < 0.003 | < 0.005 | 0.005 | 0.006 | 7.35 | 0.38 | < 0.003 | 0.004 | < 0.003 |
| 589829 | 0.062 | < 0.003 | 0.008 | 0.007 | 0.011 | 6.69 | 3.27 | < 0.003 | 0.013 | 0.003 |
| 589830 | 0.535 | 0.005 | 0.013 | 0.012 | < 0.003 | 4.43 | 2.58 | < 0.003 | 0.009 | < 0.003 |
| 589831 | 0.046 | 0.003 | < 0.005 | < 0.005 | 0.019 | 6.95 | 0.38 | < 0.003 | 0.003 | < 0.003 |
| 589832 | 0.046 | < 0.003 | 0.009 | 0.010 | < 0.003 | 7.27 | 1.58 | < 0.003 | 0.010 | < 0.003 |
| 589833 | 0.066 | 0.003 | 0.007 | 0.010 | < 0.003 | 8.27 | 1.24 | 0.004 | 0.008 | < 0.003 |
| 589834 | 0.133 | 0.003 | 0.008 | 0.007 | 0.005 | 8.40 | 1.72 | < 0.003 | 0.010 | < 0.003 |
| 589835 | 0.035 | < 0.003 | 0.006 | 0.006 | 0.006 | 6.69 | 0.08 | < 0.003 | 0.004 | 0.003 |
| 589836 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.19 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 589837 | 0.129 | < 0.003 | 0.010 | 0.011 | < 0.003 | 7.91 | 0.86 | < 0.003 | 0.008 | < 0.003 |
| 589838 | 0.085 | < 0.003 | < 0.005 | 0.008 | 0.003 | 8.03 | 1.05 | < 0.003 | 0.008 | 0.005 |
| 589839 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 7.09 | 0.75 | < 0.003 | 0.004 | < 0.003 |
| 589840 | 0.255 | 0.004 | 0.005 | 0.007 | < 0.003 | 9.36 | 1.95 | 0.005 | 0.008 | 0.003 |
| 589841 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.54 | 0.49 | < 0.003 | 0.004 | 0.003 |
| 589842 | 0.041 | < 0.003 | < 0.005 | 0.005 | 0.018 | 8.82 | 1.24 | < 0.003 | 0.007 | 0.003 |
| 589843 | 0.276 | < 0.003 | 0.008 | 0.005 | 0.007 | 6.65 | 4.02 | < 0.003 | 0.013 | 0.006 |
| 589844 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 5.31 | 0.52 | < 0.003 | 0.004 | 0.005 |
| 589845 | 0.038 | < 0.003 | < 0.005 | 0.005 | 0.008 | 9.00 | 1.95 | < 0.003 | 0.006 | 0.003 |
| 589846 | 0.062 | < 0.003 | 0.005 | 0.005 | 0.004 | 8.32 | 1.19 | < 0.003 | 0.006 | 0.006 |
| 589847 | 0.036 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.50 | 0.79 | < 0.003 | 0.005 | 0.003 |
| 589848 | 0.033 | < 0.003 | < 0.005 | < 0.005 | 0.012 | 6.79 | 0.51 | < 0.003 | 0.004 | 0.003 |
| 589849 | 0.063 | < 0.003 | < 0.005 | 0.005 | 0.014 | 7.21 | 1.56 | < 0.003 | 0.006 | 0.005 |
| 589850 | 0.035 | < 0.003 | < 0.005 | 0.005 | 0.010 | 6.28 | 0.73 | 0.008 | 0.005 | 0.004 |
| 589851 | 0.038 | 0.003 | < 0.005 | 0.005 | 0.014 | 12.77 | 1.48 | < 0.003 | 0.007 | 0.004 |
| 589852 | 0.063 | < 0.003 | 0.010 | 0.007 | 0.006 | 4.84 | 2.74 | < 0.003 | 0.011 | 0.004 |
| 589853 | 0.148 | < 0.003 | 0.009 | 0.008 | < 0.003 | 5.56 | 1.78 | < 0.003 | 0.010 | < 0.003 |
| 589854 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.19 | 0.02 | < 0.003 | 0.005 | 0.003 |
| 589855 | 0.080 | < 0.003 | 0.009 | 0.009 | 0.013 | 6.80 | 5.47 | < 0.003 | 0.018 | 0.004 |
| 589856 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 6.12 | 0.85 | < 0.003 | 0.004 | 0.003 |
| 589857 | 0.041 | < 0.003 | 0.009 | 0.007 | < 0.003 | 4.32 | 2.87 | < 0.003 | 0.012 | 0.004 |
| 589858 | 0.007 | < 0.003 | 0.005 | 0.007 | < 0.003 | 2.29 | 0.32 | < 0.003 | 0.011 | 0.003 |
| 589859 | 0.092 | 0.003 | < 0.005 | 0.005 | 0.006 | 9.75 | 1.08 | < 0.003 | 0.006 | 0.004 |
| 589860 | 0.026 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 7.11 | 0.54 | < 0.003 | 0.003 | 0.004 |
| 589861 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 7.90 | 0.29 | 0.005 | 0.004 | 0.005 |
| 589862 | 0.027 | < 0.003 | < 0.005 | 0.005 | 0.006 | 6.71 | 0.04 | < 0.003 | 0.003 | < 0.003 |
| 589863 | 0.110 | < 0.003 | 0.008 | 0.007 | < 0.003 | 8.38 | 1.63 | < 0.003 | 0.011 | < 0.003 |
| 589864 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 7.35 | 1.67 | < 0.003 | 0.007 | 0.003 |
| 589865 | < 0.003 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 7.58 | 1.18 | < 0.003 | 0.011 | < 0.003 |
| 589866 | 0.035 | < 0.003 | < 0.005 | < 0.005 | 0.028 | 7.10 | 0.73 | 0.006 | 0.006 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589867 | 0.013 | 0.003 | < 0.005 | < 0.005 | 0.027 | 5.98 | 0.36 | < 0.003 | 0.004 | < 0.003 |
| 589868 | 0.069 | 0.003 | 0.005 | 0.009 | 0.011 | 5.72 | 4.88 | < 0.003 | 0.018 | 0.004 |
| 589869 | 0.045 | < 0.003 | 0.005 | 0.009 | < 0.003 | 5.17 | 3.06 | < 0.003 | 0.019 | 0.003 |
| 589870 | 0.031 | < 0.003 | 0.006 | 0.005 | 0.009 | 7.88 | 0.99 | < 0.003 | 0.005 | 0.003 |
| 589871 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.77 | 0.50 | < 0.003 | 0.005 | < 0.003 |
| 589872 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.82 | 1.07 | < 0.003 | 0.006 | 0.003 |
| 589873 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.024 | 8.81 | 0.90 | < 0.003 | 0.004 | 0.003 |
| 589874 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.24 | 0.44 | < 0.003 | 0.004 | < 0.003 |
| 589875 | 0.041 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 6.69 | 0.76 | < 0.003 | 0.005 | < 0.003 |
| 589876 | 0.021 | 0.003 | < 0.005 | < 0.005 | 0.011 | 7.13 | 0.37 | < 0.003 | < 0.003 | 0.003 |
| 589877 | 0.140 | 0.003 | < 0.005 | 0.005 | < 0.003 | 22.15 | 3.02 | < 0.003 | 0.008 | < 0.003 |
| 589878 | 0.033 | 0.004 | < 0.005 | < 0.005 | 0.028 | 12.83 | 0.97 | < 0.003 | 0.006 | < 0.003 |
| 589879 | 0.048 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 8.25 | 1.43 | < 0.003 | 0.005 | 0.003 |
| 589880 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.19 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 589881 | 0.057 | 0.003 | 0.012 | 0.009 | < 0.003 | 3.20 | 1.65 | < 0.003 | 0.012 | 0.003 |
| 589882 | 0.176 | 0.005 | 0.012 | 0.007 | < 0.003 | 3.16 | 3.54 | < 0.003 | 0.014 | 0.004 |
| 589883 | 0.122 | 0.004 | 0.012 | 0.007 | < 0.003 | 2.54 | 2.17 | < 0.003 | 0.012 | 0.004 |
| 589884 | 0.053 | < 0.003 | 0.011 | 0.008 | < 0.003 | 2.25 | 1.67 | < 0.003 | 0.012 | < 0.003 |
| 589885 | 0.043 | < 0.003 | 0.009 | 0.008 | < 0.003 | 3.74 | 2.06 | < 0.003 | 0.012 | 0.003 |
| 589886 | 0.024 | 0.004 | 0.006 | 0.009 | < 0.003 | 3.34 | 1.83 | < 0.003 | 0.014 | < 0.003 |
| 589887 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.18 | 0.01 | < 0.003 | 0.005 | < 0.003 |
| 589888 | 0.103 | 0.003 | < 0.005 | 0.005 | 0.008 | 6.72 | 1.77 | < 0.003 | 0.009 | 0.003 |
| 589889 | 0.039 | < 0.003 | 0.006 | 0.009 | < 0.003 | 5.19 | 1.84 | < 0.003 | 0.013 | 0.004 |
| 589890 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 8.17 | 0.43 | < 0.003 | 0.005 | 0.004 |
| 589891 | 0.036 | < 0.003 | 0.005 | 0.005 | 0.017 | 6.35 | 2.19 | < 0.003 | 0.008 | 0.003 |
| 589892 | 0.070 | < 0.003 | 0.013 | 0.007 | < 0.003 | 3.01 | 2.45 | < 0.003 | 0.009 | 0.003 |
| 589893 | 0.041 | 0.004 | 0.011 | 0.007 | < 0.003 | 4.04 | 3.23 | < 0.003 | 0.009 | < 0.003 |
| 589894 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 5.26 | 0.68 | < 0.003 | 0.006 | 0.003 |
| 589895 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 8.75 | 0.41 | < 0.003 | 0.005 | 0.004 |
| 589896 | 0.074 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 7.24 | 0.70 | < 0.003 | 0.006 | 0.004 |
| 589897 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 8.18 | 0.37 | < 0.003 | 0.005 | < 0.003 |
| 589898 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 8.29 | 0.66 | < 0.003 | 0.006 | < 0.003 |
| 589899 | 0.049 | 0.004 | 0.005 | < 0.005 | < 0.003 | 9.61 | 0.64 | < 0.003 | 0.005 | 0.003 |
| 589900 | 0.029 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.98 | 1.57 | < 0.003 | 0.008 | < 0.003 |
| 589901 | 0.036 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 9.80 | 0.51 | < 0.003 | 0.004 | 0.003 |
| 589902 | 0.078 | 0.003 | < 0.005 | 0.005 | 0.007 | 8.33 | 1.50 | < 0.003 | 0.010 | < 0.003 |
| 589903 | 0.112 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 8.56 | 0.74 | 0.005 | 0.007 | 0.004 |
| 589904 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 9.66 | 0.19 | < 0.003 | 0.004 | 0.003 |
| 589905 | 0.044 | 0.004 | 0.005 | 0.005 | < 0.003 | 10.09 | 0.66 | 0.003 | 0.006 | < 0.003 |
| 589906 | 0.011 | < 0.003 | < 0.005 | 0.005 | 0.003 | 8.34 | 0.62 | < 0.003 | 0.005 | 0.003 |
| 589907 | 0.016 | < 0.003 | 0.005 | < 0.005 | 0.016 | 5.96 | 2.12 | < 0.003 | 0.008 | 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589908 | 0.003 | < 0.003 | 0.005 | 0.008 | < 0.003 | 6.56 | 0.05 | < 0.003 | 0.004 | 0.003 |
| 589909 | 0.012 | 0.003 | < 0.005 | < 0.005 | 0.007 | 5.63 | 0.19 | < 0.003 | 0.003 | 0.003 |
| 589910 | 0.034 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 7.00 | 0.24 | < 0.003 | 0.004 | 0.005 |
| 589911 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.77 | 0.23 | 0.005 | 0.004 | 0.005 |
| 589912 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.15 | 0.01 | < 0.003 | 0.004 | 0.003 |
| 589913 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.019 | 7.28 | 0.23 | < 0.003 | 0.004 | 0.003 |
| 589914 | 0.050 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.42 | 0.73 | < 0.003 | 0.010 | 0.004 |
| 589915 | 0.056 | < 0.003 | < 0.005 | 0.006 | 0.038 | 10.04 | 1.71 | < 0.003 | 0.008 | 0.004 |
| 589916 | 0.105 | < 0.003 | < 0.005 | 0.006 | 0.009 | 9.16 | 0.88 | < 0.003 | 0.006 | 0.004 |
| 589917 | 0.047 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 3.51 | 0.29 | < 0.003 | 0.004 | 0.004 |
| 589918 | 0.015 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 4.03 | 0.89 | < 0.003 | 0.006 | < 0.003 |
| 589919 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.32 | 0.10 | < 0.003 | < 0.003 | 0.003 |
| 589920 | 0.531 | 0.006 | 0.011 | 0.013 | < 0.003 | 4.25 | 2.47 | < 0.003 | 0.009 | 0.004 |
| 589921 | 0.072 | < 0.003 | < 0.005 | 0.006 | 0.011 | 5.57 | 1.31 | < 0.003 | 0.009 | 0.003 |
| 589922 | 0.079 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 6.16 | 0.58 | < 0.003 | 0.005 | < 0.003 |
| 589923 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.22 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 589924 | 0.045 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.34 | 0.14 | < 0.003 | 0.003 | 0.003 |
| 589925 | 0.032 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.43 | 0.99 | < 0.003 | 0.005 | 0.003 |
| 589926 | 0.022 | < 0.003 | < 0.005 | 0.005 | 0.004 | 7.93 | 0.11 | < 0.003 | 0.003 | < 0.003 |
| 589927 | 0.064 | 0.005 | < 0.005 | 0.007 | < 0.003 | 7.30 | 0.69 | < 0.003 | 0.007 | 0.013 |
| 589928 | 0.049 | < 0.003 | < 0.005 | 0.006 | 0.004 | 7.17 | 0.49 | < 0.003 | 0.004 | 0.003 |
| 589929 | 0.043 | < 0.003 | < 0.005 | 0.005 | 0.004 | 6.89 | 0.89 | < 0.003 | 0.007 | 0.003 |
| 589930 | 0.157 | < 0.003 | < 0.005 | 0.005 | 0.012 | 8.03 | 1.72 | < 0.003 | 0.006 | 0.003 |
| 589931 | 0.048 | < 0.003 | 0.006 | 0.005 | < 0.003 | 5.85 | 1.29 | < 0.003 | 0.007 | < 0.003 |
| 589932 | 0.037 | < 0.003 | < 0.005 | 0.006 | < 0.003 | 7.68 | 1.57 | < 0.003 | 0.008 | 0.003 |
| 589933 | 0.089 | 0.004 | 0.008 | 0.007 | 0.004 | 4.88 | 3.81 | < 0.003 | 0.010 | 0.003 |
| 589934 | 0.125 | 0.003 | 0.008 | 0.009 | < 0.003 | 3.67 | 4.51 | < 0.003 | 0.014 | 0.003 |
| 589935 | 0.034 | < 0.003 | 0.006 | 0.005 | < 0.003 | 9.32 | 3.27 | < 0.003 | 0.008 | 0.005 |
| 589936 | 0.030 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 11.66 | 1.66 | < 0.003 | 0.005 | 0.004 |
| 589937 | 0.026 | 0.003 | 0.005 | 0.005 | 0.008 | 8.56 | 0.90 | < 0.003 | 0.004 | 0.003 |
| 589938 | 0.042 | 0.003 | 0.005 | 0.005 | 0.008 | 7.34 | 1.76 | < 0.003 | 0.008 | 0.004 |
| 589939 | 0.044 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 7.67 | 2.68 | < 0.003 | 0.005 | 0.003 |
| 589940 | 0.066 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 8.06 | 0.69 | < 0.003 | 0.003 | 0.004 |
| 589941 | 0.039 | < 0.003 | 0.006 | 0.005 | 0.087 | 8.98 | 2.19 | < 0.003 | 0.008 | < 0.003 |
| 589942 | 0.084 | 0.003 | < 0.005 | 0.005 | 0.181 | 12.81 | 2.01 | < 0.003 | 0.005 | 0.004 |
| 589943 | 0.061 | < 0.003 | 0.006 | 0.007 | 0.035 | 5.71 | 3.24 | < 0.003 | 0.013 | < 0.003 |
| 589944 | 0.046 | 0.003 | < 0.005 | 0.008 | 0.016 | 5.94 | 1.95 | < 0.003 | 0.014 | < 0.003 |
| 589945 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.19 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 589946 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 6.36 | 0.76 | < 0.003 | 0.006 | 0.003 |
| 589947 | 0.139 | 0.003 | < 0.005 | 0.005 | 0.009 | 7.31 | 1.02 | 0.010 | 0.006 | < 0.003 |
| 589948 | 0.064 | < 0.003 | < 0.005 | 0.005 | 0.004 | 6.90 | 1.50 | < 0.003 | 0.008 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589949 | 0.057 | < 0.003 | < 0.005 | 0.006 | 0.007 | 6.93 | 1.17 | < 0.003 | 0.006 | < 0.003 |
| 589950 | 0.165 | < 0.003 | < 0.005 | 0.005 | 0.013 | 7.78 | 0.79 | 0.004 | 0.006 | 0.006 |
| 589951 | 0.021 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 6.90 | 0.44 | 0.007 | 0.005 | < 0.003 |
| 589952 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.006 | 6.07 | 0.34 | < 0.003 | 0.003 | < 0.003 |
| 589953 | 0.434 | 0.003 | 0.007 | 0.007 | 0.007 | 7.28 | 3.04 | 0.005 | 0.011 | 0.004 |
| 589954 | 0.017 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 6.70 | 1.01 | < 0.003 | 0.006 | < 0.003 |
| 589955 | 0.076 | < 0.003 | < 0.005 | < 0.005 | 0.009 | 7.09 | 1.20 | 0.004 | 0.005 | < 0.003 |
| 589956 | 0.046 | 0.003 | < 0.005 | 0.005 | 0.004 | 7.35 | 0.93 | < 0.003 | 0.004 | 0.004 |
| 589957 | 0.065 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 7.42 | 0.30 | < 0.003 | 0.003 | 0.003 |
| 589958 | 0.601 | 0.004 | 0.007 | 0.009 | < 0.003 | 5.54 | 4.80 | < 0.003 | 0.015 | 0.003 |
| 589959 | 0.462 | < 0.003 | 0.008 | 0.009 | < 0.003 | 2.51 | 2.78 | < 0.003 | 0.014 | 0.003 |
| 589960 | 0.061 | 0.003 | < 0.005 | < 0.005 | 0.007 | 5.68 | 1.14 | < 0.003 | 0.008 | 0.005 |
| 589961 | 0.060 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.87 | 1.24 | < 0.003 | 0.009 | < 0.003 |
| 589962 | 0.096 | < 0.003 | < 0.005 | 0.006 | 0.016 | 7.59 | 1.38 | < 0.003 | 0.010 | 0.010 |
| 589963 | 0.097 | 0.004 | 0.006 | 0.008 | < 0.003 | 3.09 | 2.63 | < 0.003 | 0.018 | 0.004 |
| 589964 | 0.150 | < 0.003 | < 0.005 | 0.005 | 0.008 | 7.82 | 1.12 | < 0.003 | 0.008 | 0.004 |
| 589965 | 0.329 | < 0.003 | 0.008 | 0.010 | < 0.003 | 3.09 | 6.81 | < 0.003 | 0.020 | 0.004 |
| 589966 | 0.028 | < 0.003 | < 0.005 | < 0.005 | 0.021 | 5.85 | 0.52 | < 0.003 | 0.005 | 0.004 |
| 589967 | < 0.003 | 0.003 | < 0.005 | 0.005 | < 0.003 | 0.17 | 0.02 | < 0.003 | < 0.003 | < 0.003 |
| 589968 | 0.139 | 0.003 | < 0.005 | 0.005 | 0.012 | 5.49 | 1.27 | < 0.003 | 0.008 | < 0.003 |
| 589969 | 0.113 | < 0.003 | 0.007 | 0.007 | < 0.003 | 1.31 | 0.66 | < 0.003 | 0.012 | < 0.003 |
| 589970 | 0.139 | 0.003 | 0.007 | 0.008 | < 0.003 | 2.13 | 2.31 | < 0.003 | 0.011 | 0.003 |
| 589971 | 0.255 | 0.005 | < 0.005 | 0.010 | < 0.003 | 4.01 | 3.99 | < 0.003 | 0.014 | 0.003 |
| 589972 | 0.264 | 0.003 | < 0.005 | 0.010 | 0.006 | 3.61 | 3.34 | < 0.003 | 0.015 | < 0.003 |
| 589973 | 0.045 | < 0.003 | < 0.005 | 0.005 | 0.009 | 5.56 | 0.58 | < 0.003 | 0.007 | 0.005 |
| 589974 | 0.136 | 0.003 | 0.005 | 0.007 | < 0.003 | 2.72 | 2.63 | < 0.003 | 0.013 | < 0.003 |
| 589975 | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 6.16 | 0.37 | < 0.003 | 0.006 | 0.003 |
| 589976 | 0.007 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 5.92 | 0.53 | 0.007 | 0.006 | < 0.003 |
| 589977 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 5.07 | 0.63 | < 0.003 | 0.006 | 0.003 |
| 589978 | 0.067 | < 0.003 | 0.007 | 0.007 | < 0.003 | 1.16 | 1.14 | < 0.003 | 0.015 | < 0.003 |
| 589979 | 0.529 | 0.007 | 0.010 | 0.013 | < 0.003 | 4.25 | 2.47 | < 0.003 | 0.010 | < 0.003 |
| 589980 | 0.950 | 0.006 | 0.010 | 0.011 | 0.003 | 2.25 | 6.20 | < 0.003 | 0.016 | < 0.003 |
| 589981 | 0.289 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 2.62 | 2.87 | < 0.003 | 0.014 | < 0.003 |
| 589982 | 0.169 | 0.003 | < 0.005 | 0.008 | < 0.003 | 2.85 | 2.46 | < 0.003 | 0.013 | < 0.003 |
| 589983 | 0.050 | < 0.003 | 0.005 | 0.007 | < 0.003 | 1.93 | 1.58 | 0.007 | 0.013 | < 0.003 |
| 589984 | 0.654 | 0.003 | 0.007 | 0.011 | < 0.003 | 2.55 | 3.03 | < 0.003 | 0.014 | < 0.003 |
| 589985 | 0.577 | 0.005 | 0.007 | 0.011 | 0.015 | 3.45 | 4.82 | < 0.003 | 0.014 | < 0.003 |
| 589986 | 0.527 | 0.003 | 0.011 | 0.013 | < 0.003 | 4.26 | 2.48 | < 0.003 | 0.010 | < 0.003 |
| 589987 | 0.253 | < 0.003 | 0.007 | 0.009 | < 0.003 | 1.51 | 2.17 | < 0.003 | 0.014 | < 0.003 |
| 589988 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.18 | 0.02 | < 0.003 | 0.004 | 0.004 |
| 589989 | 0.102 | < 0.003 | 0.006 | 0.010 | < 0.003 | 1.63 | 1.57 | < 0.003 | 0.013 | < 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589990 | 0.380 | 0.003 | 0.008 | 0.010 | < 0.003 | 2.09 | 3.21 | < 0.003 | 0.016 | < 0.003 |
| 589991 | 0.302 | < 0.003 | 0.007 | 0.010 | < 0.003 | 2.13 | 2.50 | < 0.003 | 0.015 | < 0.003 |
| 589992 | 0.009 | 0.003 | 0.006 | 0.008 | < 0.003 | 2.37 | 0.57 | < 0.003 | 0.013 | < 0.003 |
| 589993 | 0.699 | 0.004 | 0.009 | 0.012 | 0.009 | 3.20 | 5.56 | < 0.003 | 0.019 | < 0.003 |
| 589994 | 0.615 | 0.005 | 0.008 | 0.011 | 0.005 | 3.53 | 5.36 | < 0.003 | 0.017 | < 0.003 |
| 589995 | 0.023 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 2.14 | 0.89 | < 0.003 | 0.015 | 0.003 |
| 589996 | 0.712 | 0.005 | 0.007 | 0.011 | 0.024 | 2.26 | 3.93 | < 0.003 | 0.017 | < 0.003 |
| 589997 | 0.430 | 0.012 | 0.011 | 0.008 | 0.030 | 4.15 | 3.10 | < 0.003 | 0.014 | 0.003 |
| 589998 | 0.639 | 0.009 | 0.005 | 0.009 | 0.066 | 9.19 | 4.67 | < 0.003 | 0.013 | 0.117 |
| 589999 | 0.298 | 0.005 | 0.007 | 0.009 | 0.006 | 2.93 | 1.97 | < 0.003 | 0.014 | 0.005 |
| 590000 | 0.126 | 0.004 | 0.005 | 0.006 | < 0.003 | 14.68 | 0.94 | < 0.003 | 0.012 | 0.005 |
| 590001 | 0.316 | 0.004 | 0.009 | 0.008 | 0.010 | 2.30 | 2.36 | < 0.003 | 0.013 | 0.004 |
| 590002 | 0.084 | 0.003 | 0.005 | 0.006 | 0.047 | 8.72 | 2.88 | 0.004 | 0.012 | 0.004 |
| 590003 | 0.036 | 0.004 | < 0.005 | 0.005 | 0.023 | 8.71 | 1.38 | < 0.003 | 0.013 | 0.003 |
| 590004 | 0.036 | 0.003 | 0.005 | 0.007 | 0.014 | 6.10 | 2.08 | < 0.003 | 0.013 | 0.006 |
| 590005 | 0.025 | 0.004 | 0.007 | 0.011 | < 0.003 | 3.11 | 0.66 | < 0.003 | 0.013 | 0.005 |
| 590006 | 0.049 | < 0.003 | < 0.005 | 0.007 | 0.045 | 14.56 | 1.83 | < 0.003 | 0.010 | 0.003 |
| 590007 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.14 | 0.02 | < 0.003 | 0.005 | 0.003 |
| 590008 | 0.008 | < 0.003 | < 0.005 | < 0.005 | 0.013 | 14.90 | 1.69 | < 0.003 | 0.008 | 0.004 |
| 590009 | 0.703 | 0.007 | 0.008 | 0.009 | 0.056 | 2.88 | 4.99 | < 0.003 | 0.015 | 0.003 |
| 590010 | 0.306 | 0.004 | 0.008 | 0.009 | 0.018 | 3.14 | 4.78 | < 0.003 | 0.015 | < 0.003 |
| 590011 | 0.186 | < 0.003 | < 0.005 | 0.007 | 0.080 | 18.45 | 3.61 | < 0.003 | 0.011 | < 0.003 |
| 590012 | 0.038 | < 0.003 | 0.005 | 0.009 | 0.050 | 6.52 | 3.75 | < 0.003 | 0.016 | 0.005 |
| 590013 | 0.046 | < 0.003 | 0.007 | 0.009 | 0.046 | 6.54 | 4.10 | < 0.003 | 0.015 | 0.004 |
| 590014 | 0.109 | < 0.003 | 0.010 | 0.008 | 0.019 | 3.25 | 3.04 | < 0.003 | 0.015 | 0.003 |
| 590015 | 0.065 | 0.003 | 0.007 | 0.009 | < 0.003 | 2.15 | 1.95 | < 0.003 | 0.014 | < 0.003 |
| 590016 | 0.208 | 0.003 | 0.009 | 0.008 | < 0.003 | 2.29 | 3.21 | < 0.003 | 0.016 | 0.003 |
| 590017 | 0.093 | 0.003 | 0.010 | 0.007 | 0.016 | 2.26 | 2.71 | < 0.003 | 0.014 | < 0.003 |
| 590018 | 0.139 | 0.005 | 0.014 | 0.008 | 0.013 | 2.26 | 2.63 | < 0.003 | 0.014 | < 0.003 |
| 590019 | 0.313 | 0.003 | 0.009 | 0.010 | 0.076 | 5.28 | 5.20 | < 0.003 | 0.017 | < 0.003 |
| 590020 | 0.086 | 0.003 | 0.006 | 0.007 | < 0.003 | 2.37 | 1.67 | < 0.003 | 0.013 | 0.005 |
| 590021 | 0.006 | < 0.003 | 0.010 | 0.008 | < 0.003 | 1.24 | 0.18 | < 0.003 | 0.014 | 0.004 |
| 590022 | 0.015 | 0.003 | 0.006 | 0.006 | < 0.003 | 1.44 | 0.43 | < 0.003 | 0.011 | 0.005 |
| 590023 | 0.422 | 0.007 | 0.012 | 0.008 | 0.100 | 8.99 | 6.24 | < 0.003 | 0.012 | 0.004 |
| 590024 | 0.394 | 0.009 | 0.014 | 0.009 | 0.080 | 9.60 | 6.53 | < 0.003 | 0.015 | < 0.003 |
| 590025 | 0.297 | 0.004 | 0.007 | 0.016 | 0.005 | 6.14 | 3.76 | < 0.003 | 0.037 | 0.005 |
| 590026 | 0.292 | 0.004 | 0.010 | 0.022 | < 0.003 | 6.09 | 3.79 | < 0.003 | 0.047 | 0.003 |
| 590027 | 0.422 | 0.003 | 0.010 | 0.011 | 0.017 | 2.40 | 2.61 | < 0.003 | 0.015 | 0.003 |
| 590028 | 0.145 | < 0.003 | 0.007 | 0.007 | < 0.003 | 2.19 | 1.45 | < 0.003 | 0.013 | < 0.003 |
| 590029 | 0.194 | 0.003 | 0.009 | 0.007 | < 0.003 | 1.56 | 1.87 | < 0.003 | 0.013 | 0.003 |
| 590030 | 0.793 | 0.004 | 0.009 | 0.011 | 0.011 | 2.30 | 4.73 | < 0.003 | 0.014 | 0.005 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590031 | 0.900 | < 0.003 | 0.008 | 0.012 | < 0.003 | 2.27 | 4.68 | < 0.003 | 0.013 | < 0.003 |
| 590032 | < 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 0.18 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590033 | 0.146 | 0.004 | < 0.005 | < 0.005 | 0.014 | 5.96 | 0.52 | < 0.003 | 0.005 | 0.003 |
| 590034 | 0.206 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 2.46 | 1.40 | < 0.003 | 0.013 | 0.004 |
| 590035 | 0.279 | < 0.003 | < 0.005 | 0.006 | 0.018 | 7.55 | 1.25 | < 0.003 | 0.006 | 0.003 |
| 590036 | 0.239 | < 0.003 | 0.008 | 0.008 | < 0.003 | 2.15 | 2.58 | < 0.003 | 0.014 | 0.003 |
| 590037 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.70 | 0.69 | < 0.003 | 0.005 | < 0.003 |
| 590038 | 0.077 | < 0.003 | 0.006 | 0.006 | < 0.003 | 3.27 | 2.78 | < 0.003 | 0.014 | < 0.003 |
| 590039 | 0.037 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 4.98 | 0.76 | < 0.003 | 0.005 | < 0.003 |
| 590040 | 0.005 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 4.30 | 0.12 | < 0.003 | 0.003 | < 0.003 |
| 590041 | 0.109 | 0.004 | 0.005 | 0.008 | 0.011 | 5.12 | 1.80 | < 0.003 | 0.015 | 0.003 |
| 590042 | 0.016 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 4.91 | 0.19 | < 0.003 | 0.005 | < 0.003 |
| 590043 | 0.076 | < 0.003 | < 0.005 | 0.007 | 0.131 | 10.69 | 2.27 | < 0.003 | 0.011 | 0.003 |
| 590044 | 0.534 | 0.008 | 0.010 | 0.012 | < 0.003 | 4.32 | 2.44 | < 0.003 | 0.009 | 0.006 |
| 590045 | 0.108 | < 0.003 | < 0.005 | 0.007 | 0.007 | 8.73 | 2.20 | < 0.003 | 0.012 | 0.008 |
| 590046 | 0.045 | 0.003 | < 0.005 | 0.007 | 0.003 | 5.72 | 1.88 | < 0.003 | 0.014 | 0.004 |
| 590047 | 0.293 | 0.009 | < 0.005 | 0.007 | 0.011 | 4.60 | 2.72 | 0.003 | 0.011 | 0.003 |
| 590048 | 0.136 | 0.003 | < 0.005 | 0.007 | 0.005 | 5.96 | 1.34 | 0.003 | 0.009 | 0.003 |
| 590049 | 0.030 | < 0.003 | < 0.005 | < 0.005 | 0.011 | 5.82 | 0.31 | < 0.003 | 0.004 | < 0.003 |
| 590050 | 0.055 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 5.32 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| 590051 | 0.035 | < 0.003 | < 0.005 | 0.007 | < 0.003 | 5.34 | 0.81 | < 0.003 | 0.009 | 0.004 |
| 590052 | 0.264 | < 0.003 | < 0.005 | 0.009 | 0.004 | 5.67 | 2.19 | < 0.003 | 0.015 | < 0.003 |
| 590053 | 0.320 | 0.003 | < 0.005 | 0.008 | 0.008 | 6.26 | 3.22 | < 0.003 | 0.018 | < 0.003 |
| 590054 | 0.117 | 0.004 | < 0.005 | 0.008 | 0.041 | 8.62 | 0.79 | < 0.003 | 0.007 | 0.004 |
| 590055 | 0.114 | 0.003 | < 0.005 | 0.006 | 0.009 | 6.86 | 0.61 | 0.008 | 0.008 | < 0.003 |
| 590056 | 0.095 | 0.004 | < 0.005 | 0.005 | 0.016 | 6.70 | 0.98 | < 0.003 | 0.006 | 0.005 |
| 590057 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.22 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590058 | 0.066 | < 0.003 | 0.007 | 0.009 | < 0.003 | 1.71 | 1.90 | < 0.003 | 0.013 | < 0.003 |
| 590059 | 0.024 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.15 | 0.31 | < 0.003 | 0.004 | < 0.003 |
| 590060 | 0.126 | < 0.003 | 0.008 | 0.010 | < 0.003 | 2.49 | 2.36 | < 0.003 | 0.018 | < 0.003 |
| 590061 | 0.036 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 5.33 | 0.63 | < 0.003 | 0.007 | < 0.003 |
| 590062 | 0.058 | 0.005 | < 0.005 | 0.005 | 0.024 | 7.23 | 0.94 | < 0.003 | 0.006 | 0.005 |
| 590063 | 0.056 | < 0.003 | < 0.005 | 0.007 | 0.016 | 6.35 | 2.60 | < 0.003 | 0.016 | 0.003 |
| 590064 | 0.538 | 0.005 | 0.010 | 0.012 | < 0.003 | 4.23 | 2.47 | < 0.003 | 0.008 | 0.005 |
| 590065 | 0.079 | 0.005 | < 0.005 | 0.006 | 0.009 | 7.86 | 0.69 | < 0.003 | 0.005 | 0.003 |
| 590066 | 0.069 | < 0.003 | < 0.005 | 0.006 | 0.007 | 8.08 | 1.02 | < 0.003 | 0.006 | 0.004 |
| 590067 | 0.067 | < 0.003 | < 0.005 | 0.005 | 0.042 | 9.78 | 1.04 | < 0.003 | 0.006 | < 0.003 |
| 590068 | 0.010 | < 0.003 | 0.005 | 0.007 | < 0.003 | 2.46 | 1.27 | 0.003 | 0.013 | 0.004 |
| 590069 | 0.232 | 0.004 | 0.005 | 0.008 | < 0.003 | 2.03 | 2.73 | 0.004 | 0.014 | < 0.003 |
| 590070 | 0.226 | 0.004 | 0.009 | 0.009 | < 0.003 | 1.41 | 2.48 | < 0.003 | 0.014 | 0.003 |
| 590071 | 0.066 | < 0.003 | 0.009 | 0.006 | < 0.003 | 1.96 | 1.41 | < 0.003 | 0.012 | 0.005 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590072 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.005 | 0.21 | 0.02 | < 0.003 | 0.005 | < 0.003 |
| 590073 | 0.193 | < 0.003 | 0.005 | 0.008 | < 0.003 | 4.30 | 3.20 | < 0.003 | 0.015 | 0.003 |
| 590074 | 0.099 | < 0.003 | 0.005 | 0.011 | 0.028 | 5.46 | 3.55 | < 0.003 | 0.019 | 0.005 |
| 590075 | 0.038 | < 0.003 | < 0.005 | < 0.005 | 0.010 | 6.12 | 1.16 | 0.004 | 0.008 | < 0.003 |
| 590076 | 0.066 | 0.003 | 0.005 | 0.014 | 0.024 | 6.35 | 4.30 | < 0.003 | 0.034 | 0.004 |
| 590077 | 0.100 | 0.004 | < 0.005 | 0.014 | < 0.003 | 3.59 | 2.38 | < 0.003 | 0.018 | 0.003 |
| 590078 | 0.033 | 0.003 | < 0.005 | 0.009 | 0.004 | 9.37 | 0.27 | < 0.003 | 0.004 | 0.003 |
| 590079 | 0.040 | < 0.003 | < 0.005 | 0.014 | < 0.003 | 5.94 | 2.68 | < 0.003 | 0.014 | < 0.003 |
| 590080 | 0.040 | 0.004 | < 0.005 | 0.012 | < 0.003 | 6.23 | 2.75 | < 0.003 | 0.016 | 0.003 |
| 590081 | 0.017 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 6.44 | 1.51 | < 0.003 | 0.011 | 0.003 |
| 590082 | 0.279 | < 0.003 | 0.006 | 0.007 | < 0.003 | 5.52 | 2.54 | < 0.003 | 0.012 | 0.010 |
| 590083 | 0.067 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 7.07 | 1.18 | < 0.003 | 0.009 | 0.003 |
| 590084 | 0.202 | 0.004 | 0.007 | 0.017 | 0.036 | 5.24 | 1.13 | < 0.003 | 0.015 | 0.004 |
| 590085 | 0.070 | < 0.003 | < 0.005 | 0.013 | < 0.003 | 5.55 | 1.61 | < 0.003 | 0.017 | < 0.003 |
| 590086 | 0.118 | < 0.003 | 0.009 | 0.008 | < 0.003 | 2.43 | 1.37 | < 0.003 | 0.012 | 0.004 |
| 590087 | 0.041 | < 0.003 | < 0.005 | 0.005 | 0.027 | 5.93 | 2.07 | < 0.003 | 0.010 | 0.004 |
| 590088 | 0.272 | 0.003 | < 0.005 | 0.012 | 0.018 | 5.35 | 2.66 | < 0.003 | 0.018 | 0.004 |
| 590089 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.17 | 0.03 | < 0.003 | 0.004 | < 0.003 |
| 590090 | 0.272 | 0.003 | < 0.005 | 0.011 | < 0.003 | 2.42 | 2.85 | < 0.003 | 0.015 | 0.003 |
| 589743 | < 0.003 | < 0.003 | 0.007 | 0.007 | < 0.003 | 5.33 | 0.25 | 0.003 | 0.012 | 0.003 |
| 589744 | 0.080 | < 0.003 | < 0.005 | 0.007 | 0.007 | 9.81 | 0.78 | < 0.003 | 0.005 | 0.004 |
| 589745 | 0.047 | < 0.003 | < 0.005 | 0.006 | 0.010 | 7.05 | 1.82 | 0.003 | 0.008 | < 0.003 |
| 589746 | 0.027 | 0.003 | < 0.005 | < 0.005 | 0.021 | 5.55 | 0.49 | < 0.003 | 0.005 | 0.003 |
| 589747 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.014 | 5.21 | 2.03 | < 0.003 | 0.007 | 0.004 |
| 589748 | 0.018 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 6.15 | 0.79 | < 0.003 | 0.004 | 0.005 |
| 589749 | 0.062 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 5.03 | 2.61 | < 0.003 | 0.004 | 0.004 |
| 589750 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 5.11 | 0.26 | < 0.003 | 0.003 | 0.003 |
| 589751 | 0.063 | 0.004 | < 0.005 | 0.005 | < 0.003 | 4.41 | 2.38 | < 0.003 | 0.008 | 0.004 |
| 589752 | 0.042 | < 0.003 | < 0.005 | < 0.005 | 0.020 | 5.27 | 1.14 | < 0.003 | 0.005 | 0.003 |
| 589753 | 0.025 | < 0.003 | < 0.005 | < 0.005 | 0.022 | 5.53 | 2.24 | < 0.003 | 0.007 | 0.003 |
| 589754 | 0.031 | 0.004 | < 0.005 | < 0.005 | 0.017 | 5.62 | 0.86 | < 0.003 | < 0.003 | 0.003 |
| 589755 | 0.030 | < 0.003 | < 0.005 | 0.006 | < 0.003 | 4.48 | 3.55 | < 0.003 | 0.009 | 0.005 |
| 589756 | 0.045 | < 0.003 | < 0.005 | 0.006 | 0.005 | 3.89 | 3.55 | < 0.003 | 0.011 | 0.004 |
| 589757 | 0.013 | 0.003 | < 0.005 | < 0.005 | 0.021 | 5.57 | 1.56 | < 0.003 | 0.005 | 0.004 |
| 589758 | 0.014 | < 0.003 | < 0.005 | < 0.005 | 0.027 | 6.32 | 1.00 | 0.004 | 0.006 | < 0.003 |
| 589759 | 0.029 | < 0.003 | < 0.005 | < 0.005 | 0.023 | 6.46 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| 589760 | 0.209 | 0.003 | < 0.005 | < 0.005 | 0.013 | 7.40 | 1.85 | < 0.003 | 0.007 | 0.004 |
| 589761 | 0.075 | < 0.003 | < 0.005 | 0.005 | 0.009 | 6.85 | 0.96 | < 0.003 | 0.007 | < 0.003 |
| 589762 | 0.040 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 6.75 | 0.54 | < 0.003 | 0.005 | 0.005 |
| 589763 | 0.064 | < 0.003 | < 0.005 | < 0.005 | 0.015 | 7.11 | 1.86 | < 0.003 | 0.007 | 0.004 |
| 589764 | 0.051 | 0.004 | < 0.005 | < 0.005 | 0.026 | 8.47 | 0.51 | < 0.003 | 0.004 | 0.004 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589765 | 0.010 | < 0.003 | < 0.005 | < 0.005 | 0.031 | 6.16 | 0.37 | < 0.003 | 0.003 | 0.004 |
| 589766 | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.025 | 5.07 | 0.28 | < 0.003 | 0.004 | 0.003 |
| 589767 | 0.482 | 0.003 | 0.007 | 0.007 | < 0.003 | 4.38 | 4.28 | < 0.003 | 0.012 | 0.004 |
| 589768 | < 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 0.19 | 0.03 | < 0.003 | 0.003 | 0.003 |
| 589769 | 0.102 | 0.003 | < 0.005 | 0.005 | 0.007 | 7.12 | 0.77 | < 0.003 | 0.006 | 0.003 |
| 589770 | 0.038 | 0.003 | < 0.005 | 0.006 | < 0.003 | 7.50 | 1.18 | < 0.003 | 0.006 | < 0.003 |
| 589771 | 0.052 | < 0.003 | < 0.005 | 0.005 | 0.004 | 7.93 | 1.32 | < 0.003 | 0.008 | 0.003 |
| 589772 | 0.039 | 0.003 | < 0.005 | < 0.005 | 0.003 | 7.90 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 589773 | 0.031 | < 0.003 | < 0.005 | < 0.005 | 0.018 | 5.97 | 0.21 | < 0.003 | 0.004 | < 0.003 |
| 589774 | 0.025 | < 0.003 | < 0.005 | 0.005 | 0.017 | 5.86 | 0.68 | < 0.003 | 0.005 | < 0.003 |
| 589775 | 0.530 | 0.005 | 0.011 | 0.013 | < 0.003 | 4.29 | 2.44 | < 0.003 | 0.009 | 0.003 |
| 589776 | 0.015 | < 0.003 | < 0.005 | 0.005 | 0.025 | 6.01 | 0.20 | < 0.003 | 0.003 | 0.003 |
| 589777 | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.039 | 5.77 | 0.33 | < 0.003 | 0.004 | < 0.003 |
| 589778 | 0.226 | < 0.003 | < 0.005 | 0.005 | 0.015 | 5.13 | 1.72 | < 0.003 | 0.009 | < 0.003 |
| 589779 | 0.011 | < 0.003 | < 0.005 | < 0.005 | 0.045 | 5.91 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| 589780 | 0.038 | 0.004 | < 0.005 | 0.005 | 0.026 | 6.61 | 1.73 | < 0.003 | 0.008 | 0.003 |
| 589781 | 0.010 | 0.005 | < 0.005 | < 0.005 | 0.026 | 11.72 | 0.58 | < 0.003 | 0.004 | 0.009 |
| 589782 | 0.022 | < 0.003 | < 0.005 | < 0.005 | 0.030 | 6.80 | 0.38 | < 0.003 | 0.004 | < 0.003 |
| 589783 | 0.014 | 0.003 | < 0.005 | < 0.005 | 0.038 | 5.94 | 0.47 | < 0.003 | 0.005 | 0.004 |
| 589784 | 0.091 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 5.21 | 1.68 | < 0.003 | 0.009 | 0.004 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|--------------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | 0.015 | | | | 0.033 | 13.09 | 1.08 | | | |
| BE-N Cert | 0.015 | | | | 0.035 | 12.8 | 1.05 | | | |
| BE-N Meas | | | | | 0.032 | 13.06 | 1.09 | | | |
| BE-N Cert | | | | | 0.035 | 12.8 | 1.05 | | | |
| OKA-1 Meas | 0.540 | | | | | | | | | |
| OKA-1 Cert | 0.529 | | | | | | | | | |
| ZW-C Meas | | 0.010 | < 0.005 | 0.006 | 0.011 | 9.55 | 0.02 | 0.161 | | 0.040 |
| ZW-C Cert | | 0.010 | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| ZW-C Meas | | 0.011 | < 0.005 | 0.007 | 0.011 | 9.55 | 0.02 | 0.167 | | 0.043 |
| ZW-C Cert | | 0.010 | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.105 | 0.100 | | | 0.100 | 4.01 | | 0.101 | 0.105 | |
| VS-N Cert | 0.10 | 0.098 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | | 0.097 | | | 0.101 | 3.99 | | 0.107 | 0.100 | |
| VS-N Cert | | 0.098 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.678 | 0.007 | | 0.018 | 0.089 | 8.25 | 3.84 | | 0.018 | |
| SX18-01 Cert | 0.695 | 0.005 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | | 0.003 | | 0.018 | 0.089 | 8.28 | 3.87 | | 0.020 | |
| SX18-01 Cert | | 0.005 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | | 0.007 | < 0.005 | 0.028 | 0.160 | 11.21 | 5.22 | | 0.024 | |
| SX18-04 Cert | | 0.005 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-04 Meas | | 0.007 | < 0.005 | 0.027 | 0.162 | 11.24 | 5.19 | | 0.024 | |
| SX18-04 Cert | | 0.005 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.940 | 0.005 | < 0.005 | 0.028 | 0.210 | 10.68 | 5.71 | | 0.030 | |
| SX18-05 Cert | 0.973 | 0.004 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| SX18-05 Meas | | 0.004 | 0.005 | 0.028 | 0.211 | 10.69 | 5.73 | | 0.033 | |
| SX18-05 Cert | | 0.004 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| 589814 Orig | 0.235 | < 0.003 | 0.008 | 0.009 | < 0.003 | 5.08 | 3.23 | < 0.003 | 0.012 | < 0.003 |
| 589814 Dup | 0.239 | < 0.003 | 0.007 | 0.009 | < 0.003 | 5.12 | 3.27 | < 0.003 | 0.013 | < 0.003 |
| 589834 Orig | 0.133 | 0.003 | 0.008 | 0.007 | 0.005 | 8.40 | 1.72 | < 0.003 | 0.010 | < 0.003 |
| 589834 Split PREP DUP | 0.131 | 0.003 | 0.006 | 0.008 | 0.004 | 8.53 | 1.82 | < 0.003 | 0.010 | < 0.003 |
| 589844 Orig | 0.015 | 0.004 | < 0.005 | < 0.005 | 0.007 | 5.32 | 0.53 | < 0.003 | 0.004 | 0.004 |
| 589844 Dup | 0.015 | < 0.003 | < 0.005 | < 0.005 | 0.008 | 5.29 | 0.52 | 0.005 | 0.005 | 0.006 |
| 589874 Orig | 0.013 | 0.003 | < 0.005 | < 0.005 | 0.019 | 6.25 | 0.45 | < 0.003 | 0.004 | < 0.003 |
| 589874 Dup | 0.013 | < 0.003 | < 0.005 | < 0.005 | 0.017 | 6.23 | 0.44 | < 0.003 | 0.005 | < 0.003 |
| 589884 Orig | 0.053 | < 0.003 | 0.011 | 0.008 | < 0.003 | 2.25 | 1.67 | < 0.003 | 0.012 | < 0.003 |
| 589884 Split PREP DUP | 0.049 | < 0.003 | 0.013 | 0.009 | < 0.003 | 2.27 | 1.59 | < 0.003 | 0.011 | 0.003 |
| 589904 Orig | 0.015 | < 0.003 | < 0.005 | 0.005 | 0.003 | 9.72 | 0.17 | < 0.003 | 0.004 | 0.003 |
| 589904 Dup | 0.016 | < 0.003 | 0.005 | < 0.005 | 0.004 | 9.60 | 0.20 | < 0.003 | 0.004 | 0.003 |
| 589934 Orig | 0.125 | 0.003 | 0.008 | 0.009 | < 0.003 | 3.67 | 4.51 | < 0.003 | 0.014 | 0.003 |

| Analyte Symbol | Nb2O5 | Ta2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 589934 Split PREP DUP | 0.128 | < 0.003 | 0.011 | 0.008 | < 0.003 | 3.67 | 4.45 | < 0.003 | 0.012 | 0.004 |
| 589936 Orig | 0.029 | 0.004 | < 0.005 | < 0.005 | 0.003 | 11.60 | 1.64 | < 0.003 | 0.005 | 0.004 |
| 589936 Dup | 0.030 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 11.72 | 1.68 | < 0.003 | 0.005 | 0.005 |
| 589964 Orig | 0.150 | < 0.003 | < 0.005 | 0.005 | 0.008 | 7.86 | 1.13 | < 0.003 | 0.008 | 0.003 |
| 589964 Dup | 0.149 | 0.005 | < 0.005 | 0.005 | 0.007 | 7.79 | 1.10 | < 0.003 | 0.007 | 0.004 |
| 589984 Orig | 0.654 | 0.003 | 0.007 | 0.011 | < 0.003 | 2.55 | 3.03 | < 0.003 | 0.014 | < 0.003 |
| 589984 Split PREP DUP | 0.648 | 0.003 | 0.006 | 0.011 | < 0.003 | 2.51 | 3.10 | < 0.003 | 0.014 | 0.003 |
| 589993 Orig | 0.692 | 0.004 | 0.009 | 0.011 | 0.009 | 3.20 | 5.54 | < 0.003 | 0.019 | 0.003 |
| 589993 Dup | 0.706 | 0.005 | 0.009 | 0.012 | 0.008 | 3.19 | 5.58 | 0.003 | 0.018 | < 0.003 |
| 590024 Orig | 0.398 | 0.011 | 0.014 | 0.009 | 0.081 | 9.61 | 6.56 | < 0.003 | 0.015 | < 0.003 |
| 590024 Dup | 0.389 | 0.007 | 0.013 | 0.009 | 0.079 | 9.60 | 6.50 | < 0.003 | 0.016 | < 0.003 |
| 590034 Orig | 0.206 | < 0.003 | < 0.005 | 0.009 | < 0.003 | 2.46 | 1.40 | < 0.003 | 0.013 | 0.004 |
| 590034 Split PREP DUP | 0.200 | < 0.003 | 0.006 | 0.009 | < 0.003 | 2.46 | 1.38 | < 0.003 | 0.014 | 0.003 |
| 590054 Orig | 0.118 | 0.004 | < 0.005 | 0.008 | 0.041 | 8.60 | 0.78 | < 0.003 | 0.007 | 0.003 |
| 590054 Dup | 0.117 | 0.004 | < 0.005 | 0.007 | 0.040 | 8.64 | 0.80 | < 0.003 | 0.007 | 0.004 |
| 590084 Orig | 0.202 | 0.004 | 0.007 | 0.017 | 0.036 | 5.24 | 1.13 | < 0.003 | 0.015 | 0.004 |
| 590084 Split PREP DUP | 0.203 | 0.003 | 0.006 | 0.017 | 0.034 | 5.34 | 1.17 | < 0.003 | 0.015 | 0.004 |
| 590087 Orig | 0.041 | < 0.003 | < 0.005 | 0.006 | 0.026 | 5.97 | 2.09 | 0.003 | 0.010 | 0.004 |
| 590087 Dup | 0.040 | < 0.003 | < 0.005 | 0.005 | 0.029 | 5.90 | 2.04 | < 0.003 | 0.011 | 0.004 |
| 589766 Orig | 0.013 | 0.004 | < 0.005 | < 0.005 | 0.023 | 5.10 | 0.28 | < 0.003 | 0.003 | 0.003 |
| 589766 Dup | 0.012 | < 0.003 | < 0.005 | < 0.005 | 0.026 | 5.05 | 0.28 | < 0.003 | 0.004 | 0.003 |
| Method Blank | < 0.003 | | | | | | | | | |
| Method Blank | | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 22-May-18
Invoice No.: A18-06697
Invoice Date: 13-Jul-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

274 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-06697**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized with loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590091 | < 0.003 | 0.031 | 0.005 | 0.007 | < 0.003 | 4.92 | 2.36 | < 0.003 | 0.011 | 0.003 |
| 590092 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.005 | 5.76 | 0.59 | < 0.003 | 0.005 | 0.003 |
| 590093 | < 0.003 | 0.019 | < 0.005 | < 0.005 | 0.009 | 5.14 | 1.00 | < 0.003 | 0.006 | < 0.003 |
| 590094 | < 0.003 | 0.029 | < 0.005 | 0.006 | < 0.003 | 4.23 | 1.20 | < 0.003 | 0.009 | < 0.003 |
| 590095 | < 0.003 | 0.032 | 0.010 | 0.012 | < 0.003 | 3.63 | 1.45 | < 0.003 | 0.013 | 0.003 |
| 590096 | 0.004 | 0.030 | < 0.005 | < 0.005 | < 0.003 | 6.50 | 0.85 | < 0.003 | 0.006 | 0.005 |
| 590097 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.018 | 5.72 | 0.64 | 0.003 | 0.005 | 0.004 |
| 590098 | < 0.003 | 0.051 | < 0.005 | 0.007 | 0.009 | 6.60 | 2.18 | < 0.003 | 0.015 | 0.003 |
| 590099 | < 0.003 | 0.018 | < 0.005 | 0.007 | 0.012 | 5.16 | 2.43 | < 0.003 | 0.015 | 0.006 |
| 590100 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.017 | 6.47 | 0.39 | < 0.003 | 0.005 | < 0.003 |
| 590101 | 0.003 | 0.034 | < 0.005 | 0.005 | 0.007 | 8.13 | 0.99 | < 0.003 | 0.008 | 0.003 |
| 590102 | < 0.003 | 0.049 | < 0.005 | 0.009 | < 0.003 | 7.12 | 1.64 | < 0.003 | 0.012 | 0.005 |
| 590103 | < 0.003 | 0.013 | < 0.005 | 0.005 | 0.011 | 6.24 | 0.19 | < 0.003 | 0.005 | < 0.003 |
| 590104 | < 0.003 | 0.026 | 0.005 | 0.008 | 0.049 | 6.78 | 5.31 | < 0.003 | 0.017 | 0.004 |
| 590105 | < 0.003 | 0.016 | < 0.005 | 0.011 | 0.011 | 6.77 | 1.81 | < 0.003 | 0.012 | 0.003 |
| 590106 | 0.003 | 0.024 | < 0.005 | 0.005 | 0.020 | 6.48 | 0.81 | < 0.003 | 0.006 | < 0.003 |
| 590107 | < 0.003 | 0.081 | < 0.005 | 0.007 | 0.003 | 7.74 | 1.49 | < 0.003 | 0.006 | < 0.003 |
| 590108 | 0.003 | 0.011 | < 0.005 | 0.007 | 0.012 | 6.40 | 0.13 | < 0.003 | 0.005 | 0.004 |
| 590109 | < 0.003 | 0.026 | < 0.005 | 0.008 | 0.024 | 7.09 | 0.98 | 0.003 | 0.009 | 0.004 |
| 590110 | < 0.003 | 0.015 | < 0.005 | 0.006 | 0.006 | 6.64 | 0.13 | 0.003 | 0.003 | 0.004 |
| 590111 | 0.003 | 0.026 | < 0.005 | 0.008 | 0.006 | 7.23 | 1.39 | 0.003 | 0.009 | 0.003 |
| 590112 | < 0.003 | 0.063 | < 0.005 | 0.019 | < 0.003 | 8.62 | 0.11 | < 0.003 | 0.005 | 0.004 |
| 590113 | 0.005 | 0.056 | < 0.005 | 0.011 | 0.005 | 7.43 | 0.74 | < 0.003 | 0.006 | 0.003 |
| 590114 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.005 | 0.17 | 0.02 | < 0.003 | 0.004 | 0.005 |
| 590115 | 0.005 | 0.333 | 0.011 | 0.009 | 0.006 | 9.80 | 0.05 | 0.015 | < 0.003 | 0.004 |
| 590116 | < 0.003 | 0.048 | < 0.005 | 0.010 | 0.006 | 6.54 | 3.00 | < 0.003 | 0.015 | 0.004 |
| 590117 | < 0.003 | 0.027 | < 0.005 | 0.008 | 0.010 | 7.05 | 1.14 | < 0.003 | 0.010 | 0.003 |
| 590118 | < 0.003 | 0.033 | < 0.005 | 0.005 | < 0.003 | 6.15 | 1.03 | < 0.003 | 0.008 | 0.006 |
| 590119 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.013 | 5.08 | 0.76 | 0.005 | 0.004 | 0.003 |
| 590120 | < 0.003 | 0.032 | < 0.005 | 0.005 | 0.025 | 4.70 | 3.66 | < 0.003 | 0.013 | 0.005 |
| 590121 | < 0.003 | 0.006 | < 0.005 | < 0.005 | < 0.003 | 3.76 | 0.21 | < 0.003 | < 0.003 | 0.004 |
| 590122 | < 0.003 | 0.029 | < 0.005 | 0.005 | < 0.003 | 5.92 | 1.74 | < 0.003 | 0.010 | 0.004 |
| 590123 | < 0.003 | 0.041 | < 0.005 | < 0.005 | 0.003 | 5.09 | 1.71 | < 0.003 | 0.008 | 0.004 |
| 590124 | < 0.003 | 0.029 | < 0.005 | < 0.005 | 0.035 | 5.53 | 0.81 | < 0.003 | 0.005 | < 0.003 |
| 590125 | < 0.003 | 0.030 | < 0.005 | 0.005 | 0.014 | 5.59 | 2.35 | < 0.003 | 0.008 | 0.004 |
| 590126 | 0.003 | 0.034 | < 0.005 | 0.007 | 0.052 | 3.97 | 2.96 | < 0.003 | 0.014 | 0.006 |
| 590127 | < 0.003 | 0.031 | < 0.005 | 0.007 | 0.052 | 5.29 | 3.01 | < 0.003 | 0.011 | 0.003 |
| 590128 | < 0.003 | 0.035 | < 0.005 | < 0.005 | 0.010 | 8.27 | 1.49 | 0.005 | 0.007 | 0.003 |
| 590129 | 0.007 | 0.552 | 0.014 | 0.011 | < 0.003 | 4.23 | 2.48 | < 0.003 | 0.007 | 0.003 |
| 590130 | 0.004 | 0.016 | < 0.005 | < 0.005 | 0.025 | 8.22 | 0.39 | 0.004 | < 0.003 | 0.004 |
| 590131 | 0.005 | 0.031 | < 0.005 | < 0.005 | < 0.003 | 8.06 | 1.17 | < 0.003 | 0.004 | 0.009 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590132 | 0.006 | 0.018 | < 0.005 | < 0.005 | 0.009 | 8.67 | 0.27 | < 0.003 | < 0.003 | 0.013 |
| 590133 | < 0.003 | 0.042 | 0.005 | < 0.005 | 0.036 | 6.78 | 3.40 | < 0.003 | 0.009 | 0.003 |
| 590134 | < 0.003 | 0.025 | < 0.005 | < 0.005 | 0.015 | 6.65 | 1.46 | 0.003 | 0.005 | 0.004 |
| 590135 | 0.003 | 0.012 | < 0.005 | 0.008 | 0.005 | 6.13 | 1.12 | 0.004 | 0.008 | 0.003 |
| 590136 | 0.004 | 0.023 | < 0.005 | < 0.005 | 0.014 | 7.97 | 0.91 | < 0.003 | 0.006 | 0.004 |
| 590137 | 0.004 | 0.014 | < 0.005 | < 0.005 | 0.018 | 7.19 | 0.83 | < 0.003 | 0.007 | 0.003 |
| 590138 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.015 | 7.21 | 0.68 | < 0.003 | 0.005 | < 0.003 |
| 590139 | < 0.003 | < 0.003 | < 0.005 | 0.012 | < 0.003 | 6.17 | 4.34 | < 0.003 | 0.027 | 0.003 |
| 590140 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.28 | 0.05 | < 0.003 | 0.004 | 0.003 |
| 590141 | < 0.003 | 0.013 | < 0.005 | 0.005 | 0.007 | 6.60 | 0.25 | < 0.003 | 0.004 | < 0.003 |
| 590142 | 0.003 | 0.039 | < 0.005 | 0.006 | 0.015 | 5.76 | 2.73 | < 0.003 | 0.015 | 0.003 |
| 590143 | < 0.003 | 0.022 | < 0.005 | 0.005 | < 0.003 | 6.61 | 0.13 | < 0.003 | < 0.003 | 0.004 |
| 590144 | 0.003 | 0.016 | < 0.005 | < 0.005 | 0.023 | 6.40 | 0.61 | < 0.003 | 0.005 | < 0.003 |
| 590145 | 0.003 | 0.700 | 0.012 | 0.008 | 0.011 | 7.54 | 3.94 | 0.006 | 0.011 | 0.005 |
| 590146 | < 0.003 | 0.113 | < 0.005 | 0.005 | 0.011 | 7.60 | 0.26 | < 0.003 | 0.005 | < 0.003 |
| 590147 | < 0.003 | 0.022 | < 0.005 | < 0.005 | 0.005 | 5.63 | 1.55 | < 0.003 | 0.009 | 0.004 |
| 590148 | < 0.003 | 0.024 | < 0.005 | 0.007 | < 0.003 | 5.76 | 1.35 | < 0.003 | 0.008 | < 0.003 |
| 590149 | 0.003 | 0.032 | < 0.005 | 0.007 | 0.020 | 5.53 | 1.94 | 0.007 | 0.010 | 0.003 |
| 590150 | 0.004 | 0.539 | 0.012 | 0.013 | < 0.003 | 4.26 | 2.49 | < 0.003 | 0.009 | < 0.003 |
| 590151 | < 0.003 | 0.071 | < 0.005 | 0.007 | 0.018 | 5.42 | 3.79 | < 0.003 | 0.015 | < 0.003 |
| 590152 | < 0.003 | 0.130 | 0.009 | 0.009 | 0.004 | 3.93 | 5.88 | < 0.003 | 0.022 | < 0.003 |
| 590153 | < 0.003 | 0.117 | 0.008 | 0.009 | 0.005 | 4.05 | 5.60 | < 0.003 | 0.020 | < 0.003 |
| 590154 | < 0.003 | 0.073 | < 0.005 | 0.007 | 0.010 | 3.27 | 3.51 | < 0.003 | 0.013 | 0.004 |
| 590155 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.018 | 4.24 | 0.76 | < 0.003 | 0.005 | 0.006 |
| 590156 | 0.003 | 0.058 | < 0.005 | 0.005 | < 0.003 | 4.10 | 2.82 | < 0.003 | 0.012 | 0.005 |
| 590157 | < 0.003 | 0.100 | < 0.005 | 0.005 | 0.006 | 7.87 | 1.43 | < 0.003 | 0.006 | 0.005 |
| 590158 | 0.004 | 0.030 | < 0.005 | 0.005 | 0.011 | 8.59 | 0.56 | < 0.003 | 0.004 | 0.003 |
| 590159 | 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.19 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 590160 | 0.003 | 0.211 | 0.009 | 0.008 | < 0.003 | 5.31 | 2.93 | < 0.003 | 0.012 | < 0.003 |
| 590161 | < 0.003 | 0.053 | < 0.005 | 0.005 | 0.024 | 7.32 | 1.08 | < 0.003 | 0.005 | < 0.003 |
| 590162 | 0.003 | 0.068 | 0.007 | 0.013 | < 0.003 | 4.38 | 5.67 | < 0.003 | 0.025 | 0.003 |
| 590163 | 0.004 | 0.101 | 0.006 | 0.007 | 0.019 | 4.75 | 4.29 | < 0.003 | 0.013 | 0.003 |
| 590164 | 0.003 | 0.108 | < 0.005 | 0.007 | 0.038 | 8.52 | 4.12 | < 0.003 | 0.013 | 0.005 |
| 590165 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.012 | 5.11 | 0.24 | < 0.003 | 0.003 | < 0.003 |
| 590166 | < 0.003 | 0.025 | < 0.005 | < 0.005 | 0.009 | 6.72 | 0.42 | 0.006 | 0.004 | 0.004 |
| 590167 | 0.003 | 0.064 | < 0.005 | 0.005 | 0.004 | 9.81 | 2.15 | < 0.003 | 0.008 | 0.003 |
| 590168 | < 0.003 | 0.158 | 0.007 | 0.007 | 0.005 | 7.51 | 1.96 | < 0.003 | 0.011 | 0.004 |
| 590169 | < 0.003 | 0.060 | < 0.005 | 0.006 | 0.004 | 7.64 | 1.55 | < 0.003 | 0.007 | < 0.003 |
| 590170 | < 0.003 | 0.079 | < 0.005 | 0.010 | 0.022 | 12.53 | 2.06 | < 0.003 | 0.011 | 0.003 |
| 590171 | < 0.003 | 0.055 | 0.005 | 0.011 | < 0.003 | 2.91 | 2.00 | < 0.003 | 0.014 | 0.003 |
| 590172 | 0.004 | 0.237 | 0.011 | 0.007 | < 0.003 | 2.15 | 3.51 | < 0.003 | 0.012 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590173 | 0.003 | 0.085 | < 0.005 | 0.005 | 0.030 | 14.32 | 1.86 | < 0.003 | 0.006 | 0.005 |
| 590174 | 0.003 | 0.115 | 0.007 | 0.006 | < 0.003 | 6.69 | 2.46 | 0.004 | 0.008 | 0.003 |
| 590175 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.17 | 0.02 | < 0.003 | < 0.003 | 0.003 |
| 590176 | < 0.003 | 0.082 | 0.009 | 0.007 | < 0.003 | 8.54 | 2.03 | < 0.003 | 0.008 | < 0.003 |
| 590177 | < 0.003 | 0.024 | < 0.005 | 0.005 | 0.015 | 8.83 | 0.80 | < 0.003 | 0.005 | 0.004 |
| 590178 | 0.004 | 0.065 | < 0.005 | < 0.005 | 0.020 | 7.24 | 0.92 | < 0.003 | 0.005 | 0.003 |
| 590179 | < 0.003 | 0.042 | < 0.005 | 0.005 | 0.016 | 7.47 | 1.34 | < 0.003 | 0.008 | 0.003 |
| 590180 | < 0.003 | 0.169 | < 0.005 | 0.007 | < 0.003 | 8.26 | 0.25 | < 0.003 | 0.004 | 0.005 |
| 590181 | 0.004 | 0.339 | 0.005 | 0.005 | 0.003 | 8.33 | 0.97 | < 0.003 | 0.005 | < 0.003 |
| 590182 | < 0.003 | 0.267 | 0.005 | 0.006 | < 0.003 | 10.53 | 2.38 | < 0.003 | 0.010 | < 0.003 |
| 590183 | < 0.003 | 0.053 | < 0.005 | < 0.005 | 0.008 | 9.99 | 1.37 | < 0.003 | 0.006 | 0.003 |
| 590184 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.26 | 0.04 | < 0.003 | 0.004 | 0.003 |
| 590185 | < 0.003 | 0.082 | 0.006 | 0.008 | 0.009 | 5.21 | 7.78 | < 0.003 | 0.033 | 0.004 |
| 590186 | < 0.003 | 0.039 | 0.006 | 0.014 | < 0.003 | 3.91 | 7.20 | < 0.003 | 0.044 | < 0.003 |
| 590187 | 0.003 | 0.072 | 0.005 | 0.013 | 0.003 | 4.57 | 6.49 | < 0.003 | 0.040 | 0.003 |
| 590188 | 0.004 | 0.112 | 0.005 | 0.009 | 0.010 | 4.00 | 5.02 | < 0.003 | 0.023 | 0.003 |
| 590189 | < 0.003 | 0.075 | < 0.005 | 0.008 | 0.016 | 6.47 | 1.74 | < 0.003 | 0.014 | 0.003 |
| 590190 | < 0.003 | 0.110 | < 0.005 | 0.005 | 0.015 | 7.25 | 0.67 | < 0.003 | 0.004 | 0.004 |
| 590191 | 0.006 | 0.548 | 0.012 | 0.012 | < 0.003 | 4.26 | 2.51 | < 0.003 | 0.009 | 0.003 |
| 590192 | < 0.003 | 0.132 | < 0.005 | 0.005 | 0.018 | 7.93 | 2.10 | < 0.003 | 0.007 | 0.003 |
| 590193 | < 0.003 | 0.063 | < 0.005 | 0.005 | 0.011 | 15.00 | 1.07 | < 0.003 | 0.007 | < 0.003 |
| 590194 | 0.003 | 0.125 | < 0.005 | 0.005 | 0.024 | 7.59 | 1.12 | < 0.003 | 0.008 | 0.004 |
| 590195 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.015 | 4.71 | 0.28 | 0.005 | 0.003 | 0.005 |
| 590196 | < 0.003 | 0.050 | < 0.005 | 0.006 | < 0.003 | 6.26 | 0.47 | < 0.003 | 0.011 | < 0.003 |
| 590197 | < 0.003 | 0.029 | 0.008 | 0.006 | < 0.003 | 9.67 | 0.65 | < 0.003 | 0.013 | 0.003 |
| 590198 | < 0.003 | 0.012 | < 0.005 | < 0.005 | < 0.003 | 19.87 | 0.74 | < 0.003 | 0.008 | < 0.003 |
| 590199 | 0.003 | 0.024 | < 0.005 | 0.006 | < 0.003 | 15.09 | 0.88 | < 0.003 | 0.010 | 0.003 |
| 590200 | < 0.003 | 0.127 | < 0.005 | 0.006 | 0.005 | 8.04 | 2.05 | < 0.003 | 0.010 | 0.003 |
| 590201 | < 0.003 | 0.010 | < 0.005 | 0.007 | < 0.003 | 3.32 | 0.59 | < 0.003 | 0.010 | 0.005 |
| 590202 | 0.005 | 0.552 | 0.011 | 0.013 | < 0.003 | 4.35 | 2.57 | < 0.003 | 0.008 | < 0.003 |
| 590203 | 0.006 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.18 | 0.02 | < 0.003 | 0.003 | 0.004 |
| 590204 | < 0.003 | 0.035 | < 0.005 | 0.007 | 0.014 | 6.06 | 0.68 | < 0.003 | 0.006 | < 0.003 |
| 590205 | < 0.003 | 0.060 | < 0.005 | 0.007 | 0.016 | 6.80 | 2.72 | < 0.003 | 0.016 | 0.003 |
| 590206 | < 0.003 | 0.067 | < 0.005 | 0.005 | 0.013 | 8.01 | 1.02 | < 0.003 | 0.008 | 0.004 |
| 590207 | < 0.003 | 0.087 | < 0.005 | 0.011 | 0.006 | 6.88 | 1.15 | < 0.003 | 0.010 | 0.004 |
| 590208 | < 0.003 | 0.096 | < 0.005 | 0.010 | 0.012 | 9.59 | 2.77 | < 0.003 | 0.015 | < 0.003 |
| 590209 | < 0.003 | 0.021 | 0.007 | 0.009 | < 0.003 | 4.32 | 2.68 | < 0.003 | 0.015 | 0.003 |
| 590210 | < 0.003 | 0.034 | < 0.005 | 0.005 | 0.012 | 7.25 | 0.75 | < 0.003 | 0.005 | < 0.003 |
| 590211 | 0.004 | 0.050 | 0.006 | 0.007 | < 0.003 | 7.45 | 2.24 | < 0.003 | 0.011 | 0.004 |
| 590212 | 0.003 | 0.050 | < 0.005 | 0.006 | 0.006 | 8.28 | 1.98 | < 0.003 | 0.007 | < 0.003 |
| 590213 | < 0.003 | 0.100 | < 0.005 | 0.005 | 0.016 | 8.01 | 1.74 | < 0.003 | 0.007 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590214 | < 0.003 | 0.030 | 0.005 | 0.007 | 0.102 | 8.05 | 4.81 | < 0.003 | 0.013 | 0.003 |
| 590215 | < 0.003 | 0.033 | < 0.005 | 0.006 | 0.074 | 7.99 | 4.80 | < 0.003 | 0.012 | < 0.003 |
| 590216 | 0.004 | 0.055 | < 0.005 | 0.005 | 0.028 | 8.26 | 1.31 | 0.003 | 0.006 | < 0.003 |
| 590217 | 0.003 | 0.028 | < 0.005 | 0.005 | 0.015 | 6.62 | 0.85 | < 0.003 | 0.006 | < 0.003 |
| 590218 | 0.003 | 0.216 | 0.014 | 0.008 | < 0.003 | 3.98 | 2.88 | < 0.003 | 0.015 | 0.003 |
| 590219 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.007 | 5.12 | 0.36 | < 0.003 | 0.003 | 0.003 |
| 590220 | < 0.003 | 0.036 | 0.008 | 0.008 | 0.019 | 5.68 | 4.42 | < 0.003 | 0.018 | 0.003 |
| 590221 | < 0.003 | 0.035 | < 0.005 | 0.008 | < 0.003 | 6.90 | 2.44 | < 0.003 | 0.016 | 0.006 |
| 590222 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.017 | 4.78 | 0.40 | < 0.003 | < 0.003 | < 0.003 |
| 590223 | < 0.003 | 0.021 | < 0.005 | 0.005 | < 0.003 | 5.36 | 1.01 | < 0.003 | 0.006 | 0.004 |
| 590224 | < 0.003 | 0.022 | 0.005 | 0.005 | < 0.003 | 4.28 | 1.33 | < 0.003 | 0.005 | 0.003 |
| 590225 | < 0.003 | 0.116 | < 0.005 | < 0.005 | 0.027 | 6.17 | 2.02 | < 0.003 | 0.005 | 0.004 |
| 590226 | < 0.003 | 0.118 | < 0.005 | < 0.005 | 0.024 | 6.87 | 1.83 | < 0.003 | 0.005 | 0.003 |
| 590227 | < 0.003 | 0.080 | < 0.005 | 0.006 | 0.101 | 11.71 | 4.77 | < 0.003 | 0.012 | 0.003 |
| 590228 | < 0.003 | 0.007 | 0.007 | 0.008 | < 0.003 | 2.34 | 6.73 | < 0.003 | 0.018 | 0.004 |
| 590229 | < 0.003 | 0.097 | 0.005 | < 0.005 | < 0.003 | 6.42 | 1.23 | < 0.003 | 0.006 | 0.003 |
| 590230 | < 0.003 | 0.223 | 0.005 | 0.005 | < 0.003 | 3.70 | 2.27 | < 0.003 | 0.007 | 0.003 |
| 590231 | 0.004 | 0.044 | 0.006 | 0.007 | < 0.003 | 6.98 | 2.45 | < 0.003 | 0.008 | 0.004 |
| 590232 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.018 | 5.58 | 0.47 | < 0.003 | 0.004 | < 0.003 |
| 590233 | < 0.003 | 0.088 | 0.009 | 0.007 | < 0.003 | 1.77 | 1.05 | < 0.003 | 0.011 | 0.003 |
| 590234 | < 0.003 | 0.094 | 0.008 | 0.010 | < 0.003 | 2.44 | 1.14 | < 0.003 | 0.013 | < 0.003 |
| 590235 | 0.003 | 0.210 | 0.008 | 0.009 | < 0.003 | 2.65 | 2.96 | < 0.003 | 0.012 | 0.003 |
| 590236 | < 0.003 | 0.133 | 0.010 | 0.007 | < 0.003 | 5.30 | 1.90 | < 0.003 | 0.007 | < 0.003 |
| 590237 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.007 | 5.79 | 0.88 | < 0.003 | < 0.003 | < 0.003 |
| 590238 | < 0.003 | 0.081 | 0.006 | < 0.005 | < 0.003 | 5.75 | 1.78 | < 0.003 | 0.006 | 0.005 |
| 590239 | 0.004 | 0.031 | < 0.005 | < 0.005 | 0.003 | 4.22 | 0.88 | < 0.003 | 0.003 | 0.008 |
| 590240 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.22 | 0.02 | < 0.003 | < 0.003 | < 0.003 |
| 590241 | < 0.003 | 0.023 | 0.010 | 0.007 | < 0.003 | 4.94 | 2.28 | < 0.003 | 0.010 | 0.003 |
| 590242 | < 0.003 | 0.017 | 0.006 | 0.007 | < 0.003 | 5.87 | 2.95 | < 0.003 | 0.011 | < 0.003 |
| 590243 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.016 | 5.27 | 0.50 | < 0.003 | 0.003 | 0.003 |
| 590244 | < 0.003 | 0.050 | < 0.005 | 0.005 | < 0.003 | 6.47 | 1.47 | < 0.003 | 0.007 | 0.003 |
| 590245 | 0.003 | 0.054 | < 0.005 | 0.007 | 0.060 | 9.84 | 1.22 | < 0.003 | 0.009 | < 0.003 |
| 590246 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.28 | 0.05 | < 0.003 | 0.004 | 0.003 |
| 590247 | < 0.003 | 0.029 | < 0.005 | 0.006 | < 0.003 | 5.77 | 0.63 | < 0.003 | 0.007 | < 0.003 |
| 590248 | < 0.003 | 0.078 | < 0.005 | 0.005 | 0.003 | 8.30 | 1.63 | < 0.003 | 0.005 | 0.004 |
| 590249 | 0.003 | 0.090 | < 0.005 | 0.005 | 0.012 | 5.83 | 1.35 | < 0.003 | 0.006 | < 0.003 |
| 590250 | < 0.003 | 0.052 | 0.005 | 0.006 | 0.105 | 10.21 | 5.29 | < 0.003 | 0.011 | 0.003 |
| 590251 | < 0.003 | 0.038 | 0.006 | 0.006 | 0.004 | 6.52 | 2.35 | < 0.003 | 0.010 | < 0.003 |
| 590252 | 0.003 | 0.038 | 0.006 | 0.007 | < 0.003 | 6.21 | 2.44 | < 0.003 | 0.008 | < 0.003 |
| 590253 | < 0.003 | 0.072 | 0.007 | 0.007 | 0.013 | 4.30 | 1.80 | < 0.003 | 0.010 | < 0.003 |
| 590254 | < 0.003 | 0.047 | < 0.005 | 0.007 | 0.110 | 10.83 | 2.23 | < 0.003 | 0.008 | 0.005 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590255 | 0.006 | 0.534 | 0.010 | 0.012 | < 0.003 | 4.24 | 2.45 | < 0.003 | 0.008 | 0.003 |
| 590256 | 0.003 | 0.074 | 0.005 | < 0.005 | 0.013 | 4.74 | 1.48 | < 0.003 | 0.004 | < 0.003 |
| 590257 | < 0.003 | 0.037 | 0.006 | 0.011 | < 0.003 | 5.66 | 0.63 | < 0.003 | 0.006 | < 0.003 |
| 590258 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.007 | 3.61 | 0.31 | < 0.003 | 0.003 | < 0.003 |
| 590259 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.013 | 5.17 | 0.41 | < 0.003 | 0.003 | < 0.003 |
| 590260 | < 0.003 | 0.159 | 0.010 | 0.011 | < 0.003 | 4.69 | 3.21 | < 0.003 | 0.011 | 0.003 |
| 590261 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.018 | 4.19 | 0.26 | < 0.003 | 0.003 | < 0.003 |
| 590262 | < 0.003 | 0.112 | 0.006 | < 0.005 | 0.006 | 4.23 | 1.70 | < 0.003 | 0.006 | 0.003 |
| 590263 | 0.004 | 0.119 | 0.009 | 0.006 | < 0.003 | 5.39 | 2.71 | < 0.003 | 0.009 | 0.004 |
| 590264 | 0.003 | 0.070 | 0.008 | 0.005 | < 0.003 | 4.24 | 1.95 | < 0.003 | 0.007 | 0.003 |
| 590265 | < 0.003 | 0.040 | < 0.005 | 0.005 | 0.004 | 5.46 | 1.59 | < 0.003 | 0.006 | < 0.003 |
| 590266 | < 0.003 | 0.055 | 0.007 | 0.007 | 0.012 | 6.73 | 3.05 | < 0.003 | 0.011 | < 0.003 |
| 590267 | 0.003 | 0.054 | 0.006 | 0.005 | 0.013 | 6.07 | 2.16 | < 0.003 | 0.008 | < 0.003 |
| 590268 | 0.003 | 0.106 | 0.006 | 0.007 | 0.008 | 5.25 | 2.29 | < 0.003 | 0.011 | 0.003 |
| 590269 | < 0.003 | 0.019 | < 0.005 | < 0.005 | 0.009 | 4.88 | 0.31 | < 0.003 | 0.003 | 0.003 |
| 590270 | < 0.003 | 0.118 | 0.005 | 0.008 | 0.087 | 10.68 | 3.07 | < 0.003 | 0.012 | 0.004 |
| 590271 | < 0.003 | 0.102 | 0.011 | 0.012 | 0.008 | 7.34 | 1.04 | < 0.003 | 0.007 | 0.004 |
| 590272 | 0.005 | 0.537 | 0.011 | 0.011 | < 0.003 | 4.21 | 2.47 | < 0.003 | 0.008 | < 0.003 |
| 590273 | 0.003 | 0.092 | 0.006 | 0.007 | 0.031 | 9.36 | 3.33 | < 0.003 | 0.009 | 0.004 |
| 590274 | < 0.003 | 0.094 | 0.006 | 0.006 | 0.037 | 9.66 | 3.18 | < 0.003 | 0.010 | 0.004 |
| 590275 | < 0.003 | 0.045 | 0.005 | 0.006 | < 0.003 | 3.46 | 1.51 | < 0.003 | 0.008 | < 0.003 |
| 590276 | < 0.003 | 0.005 | 0.005 | 0.006 | < 0.003 | 3.52 | 0.75 | < 0.003 | 0.009 | 0.003 |
| 590277 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.007 | 4.53 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| 590278 | < 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 0.18 | 0.02 | < 0.003 | 0.003 | 0.003 |
| 590279 | < 0.003 | 0.062 | 0.008 | 0.009 | < 0.003 | 4.08 | 2.12 | < 0.003 | 0.011 | < 0.003 |
| 590280 | 0.003 | 0.013 | < 0.005 | < 0.005 | 0.013 | 5.38 | 0.35 | < 0.003 | < 0.003 | 0.004 |
| 590281 | < 0.003 | 0.017 | 0.005 | < 0.005 | 0.006 | 4.78 | 0.59 | < 0.003 | < 0.003 | < 0.003 |
| 590282 | < 0.003 | 0.040 | 0.010 | 0.006 | < 0.003 | 3.92 | 2.77 | < 0.003 | 0.008 | 0.004 |
| 590283 | 0.003 | 0.041 | < 0.005 | 0.006 | < 0.003 | 6.05 | 1.26 | < 0.003 | 0.005 | 0.005 |
| 590284 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.18 | 0.02 | < 0.003 | < 0.003 | 0.004 |
| 590285 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.012 | 6.20 | 0.25 | 0.003 | < 0.003 | 0.003 |
| 590286 | < 0.003 | 0.141 | < 0.005 | 0.007 | < 0.003 | 6.07 | 2.08 | < 0.003 | 0.011 | 0.004 |
| 590287 | < 0.003 | 0.056 | < 0.005 | < 0.005 | 0.009 | 5.24 | 0.24 | < 0.003 | 0.004 | 0.003 |
| 590288 | 0.003 | 0.027 | < 0.005 | < 0.005 | 0.014 | 5.23 | 0.14 | < 0.003 | < 0.003 | < 0.003 |
| 590289 | < 0.003 | 0.153 | 0.006 | 0.007 | < 0.003 | 6.10 | 2.70 | < 0.003 | 0.011 | 0.003 |
| 590290 | 0.003 | 0.045 | < 0.005 | 0.005 | 0.054 | 14.40 | 1.61 | < 0.003 | 0.006 | 0.003 |
| 590291 | 0.004 | 0.041 | < 0.005 | 0.005 | 0.072 | 15.28 | 2.29 | < 0.003 | 0.005 | 0.004 |
| 590292 | < 0.003 | 0.381 | 0.007 | 0.013 | 0.010 | 6.81 | 5.24 | < 0.003 | 0.016 | < 0.003 |
| 590293 | < 0.003 | 0.150 | < 0.005 | 0.007 | 0.006 | 9.28 | 0.71 | < 0.003 | 0.004 | 0.003 |
| 590294 | 0.003 | 0.268 | 0.009 | 0.011 | < 0.003 | 5.99 | 2.53 | < 0.003 | 0.013 | 0.004 |
| 590295 | 0.005 | 0.355 | 0.015 | 0.012 | < 0.003 | 3.52 | 4.27 | < 0.003 | 0.021 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590296 | 0.003 | 0.162 | 0.007 | 0.010 | 0.020 | 4.01 | 3.26 | < 0.003 | 0.019 | 0.003 |
| 590297 | < 0.003 | 0.171 | 0.005 | 0.007 | < 0.003 | 7.86 | 1.92 | < 0.003 | 0.007 | < 0.003 |
| 590298 | 0.005 | 0.538 | 0.010 | 0.012 | < 0.003 | 4.24 | 2.49 | < 0.003 | 0.008 | 0.003 |
| 590299 | 0.003 | 0.273 | 0.007 | 0.008 | < 0.003 | 6.88 | 4.29 | < 0.003 | 0.015 | 0.005 |
| 590300 | < 0.003 | 0.125 | < 0.005 | 0.008 | 0.011 | 7.22 | 2.57 | < 0.003 | 0.013 | 0.006 |
| 590301 | < 0.003 | 0.324 | < 0.005 | 0.007 | 0.011 | 7.12 | 1.43 | < 0.003 | 0.006 | 0.004 |
| 590302 | 0.004 | 0.200 | < 0.005 | 0.005 | < 0.003 | 7.38 | 1.99 | < 0.003 | 0.008 | 0.005 |
| 590303 | < 0.003 | 0.885 | 0.005 | 0.010 | < 0.003 | 3.14 | 4.59 | < 0.003 | 0.010 | 0.003 |
| 590304 | 0.003 | 0.149 | < 0.005 | < 0.005 | 0.013 | 7.19 | 0.93 | < 0.003 | 0.003 | < 0.003 |
| 590305 | 0.004 | 0.114 | 0.011 | 0.009 | < 0.003 | 2.56 | 2.33 | < 0.003 | 0.013 | < 0.003 |
| 590306 | 0.004 | 0.066 | < 0.005 | 0.007 | 0.041 | 11.53 | 3.37 | < 0.003 | 0.009 | < 0.003 |
| 590307 | 0.003 | 0.054 | < 0.005 | 0.007 | 0.052 | 14.92 | 2.10 | < 0.003 | 0.007 | < 0.003 |
| 590308 | < 0.003 | 0.034 | < 0.005 | 0.006 | 0.051 | 10.20 | 1.95 | < 0.003 | 0.007 | 0.005 |
| 590309 | 0.006 | 0.062 | < 0.005 | 0.006 | 0.055 | 8.44 | 1.94 | < 0.003 | 0.010 | 0.004 |
| 590310 | 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 0.15 | 0.03 | < 0.003 | 0.003 | 0.003 |
| 590311 | 0.006 | 0.532 | 0.011 | 0.013 | < 0.003 | 4.20 | 2.45 | < 0.003 | 0.009 | 0.003 |
| 590312 | 0.003 | 0.114 | 0.006 | 0.008 | < 0.003 | 5.34 | 0.92 | < 0.003 | 0.009 | 0.005 |
| 590313 | 0.003 | 0.042 | 0.007 | 0.007 | 0.007 | 3.97 | 2.01 | < 0.003 | 0.014 | 0.006 |
| 590314 | 0.003 | 0.023 | < 0.005 | 0.007 | 0.006 | 6.88 | 0.52 | < 0.003 | 0.008 | 0.003 |
| 590315 | 0.005 | 0.123 | 0.012 | 0.010 | < 0.003 | 5.42 | 3.14 | < 0.003 | 0.016 | 0.003 |
| 590316 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.016 | 7.25 | 0.38 | < 0.003 | 0.004 | 0.003 |
| 590317 | < 0.003 | 0.059 | < 0.005 | 0.005 | 0.017 | 8.15 | 0.67 | < 0.003 | 0.005 | < 0.003 |
| 590318 | < 0.003 | 0.038 | < 0.005 | 0.007 | 0.005 | 8.07 | 0.95 | 0.004 | 0.005 | 0.003 |
| 590319 | 0.003 | 0.041 | < 0.005 | < 0.005 | 0.004 | 7.96 | 0.81 | < 0.003 | 0.006 | 0.003 |
| 590320 | 0.003 | 0.015 | < 0.005 | < 0.005 | 0.011 | 6.21 | 0.69 | < 0.003 | 0.003 | < 0.003 |
| 590321 | < 0.003 | 0.037 | 0.006 | 0.007 | < 0.003 | 1.48 | 1.67 | < 0.003 | 0.013 | 0.003 |
| 590322 | 0.005 | 0.161 | 0.011 | 0.011 | 0.003 | 2.90 | 5.14 | < 0.003 | 0.020 | 0.006 |
| 590323 | 0.004 | 0.078 | 0.007 | 0.009 | < 0.003 | 5.07 | 2.40 | < 0.003 | 0.010 | < 0.003 |
| 590324 | 0.003 | 0.133 | 0.007 | 0.008 | < 0.003 | 4.62 | 1.58 | < 0.003 | 0.008 | < 0.003 |
| 590325 | 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.16 | 0.02 | < 0.003 | 0.004 | 0.003 |
| 590326 | 0.003 | 0.068 | 0.005 | 0.006 | 0.006 | 6.34 | 0.96 | < 0.003 | 0.007 | 0.004 |
| 590327 | 0.005 | 0.187 | 0.010 | 0.010 | < 0.003 | 5.16 | 2.09 | < 0.003 | 0.008 | 0.006 |
| 590328 | 0.003 | 0.140 | 0.012 | 0.008 | < 0.003 | 5.47 | 4.53 | < 0.003 | 0.013 | < 0.003 |
| 590329 | < 0.003 | 0.045 | < 0.005 | 0.005 | 0.003 | 6.45 | 0.89 | < 0.003 | 0.005 | < 0.003 |
| 590330 | 0.005 | 0.536 | 0.010 | 0.013 | < 0.003 | 4.25 | 2.47 | < 0.003 | 0.009 | 0.003 |
| 590331 | 0.004 | 0.052 | < 0.005 | 0.007 | < 0.003 | 7.77 | 1.64 | < 0.003 | 0.009 | 0.004 |
| 590332 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.007 | 5.96 | 0.22 | < 0.003 | 0.003 | < 0.003 |
| 590333 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.009 | 5.67 | 0.52 | < 0.003 | 0.006 | < 0.003 |
| 590334 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.008 | 6.26 | 0.49 | < 0.003 | 0.004 | < 0.003 |
| 590335 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.008 | 5.85 | 0.22 | < 0.003 | 0.003 | < 0.003 |
| 590336 | 0.003 | 0.028 | < 0.005 | < 0.005 | 0.003 | 7.13 | 0.24 | < 0.003 | 0.003 | 0.004 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590337 | < 0.003 | 0.022 | < 0.005 | 0.008 | < 0.003 | 7.71 | 0.45 | < 0.003 | 0.006 | < 0.003 |
| 590338 | < 0.003 | 0.070 | 0.005 | 0.017 | < 0.003 | 9.30 | 6.59 | < 0.003 | 0.044 | 0.004 |
| 590339 | < 0.003 | 0.027 | < 0.005 | 0.007 | < 0.003 | 8.69 | 0.46 | < 0.003 | 0.004 | < 0.003 |
| 590340 | < 0.003 | 0.054 | < 0.005 | 0.007 | 0.010 | 8.37 | 0.82 | < 0.003 | 0.008 | < 0.003 |
| 590341 | 0.004 | 0.089 | 0.006 | 0.015 | 0.035 | 4.14 | 4.74 | < 0.003 | 0.022 | 0.004 |
| 590342 | 0.008 | 0.525 | 0.012 | 0.012 | < 0.003 | 4.10 | 2.41 | < 0.003 | 0.008 | 0.004 |
| 590343 | < 0.003 | 0.064 | 0.005 | 0.015 | 0.032 | 3.72 | 6.18 | < 0.003 | 0.025 | 0.004 |
| 590344 | 0.004 | 0.067 | 0.008 | 0.008 | 0.022 | 2.40 | 3.71 | < 0.003 | 0.011 | < 0.003 |
| 590345 | < 0.003 | 0.042 | 0.009 | 0.009 | 0.037 | 2.15 | 3.59 | < 0.003 | 0.015 | < 0.003 |
| 590346 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.14 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590347 | < 0.003 | 0.118 | 0.007 | 0.011 | 0.037 | 2.66 | 4.15 | < 0.003 | 0.015 | 0.003 |
| 590348 | < 0.003 | 0.043 | < 0.005 | 0.008 | < 0.003 | 1.65 | 0.93 | < 0.003 | 0.012 | 0.005 |
| 590349 | < 0.003 | 0.010 | < 0.005 | 0.010 | < 0.003 | 2.86 | 0.13 | < 0.003 | 0.006 | 0.006 |
| 590350 | < 0.003 | 0.091 | 0.006 | 0.013 | 0.041 | 3.86 | 3.03 | < 0.003 | 0.014 | 0.004 |
| 590351 | 0.012 | 0.888 | 0.025 | 0.019 | 0.245 | 4.61 | 6.14 | < 0.003 | 0.016 | 0.005 |
| 590352 | 0.009 | 0.724 | 0.018 | 0.017 | 0.196 | 4.01 | 4.58 | < 0.003 | 0.015 | 0.006 |
| 590353 | 0.003 | 0.013 | < 0.005 | < 0.005 | 0.013 | 6.74 | 0.33 | < 0.003 | 0.004 | 0.004 |
| 590354 | 0.006 | 0.479 | 0.011 | 0.013 | 0.076 | 4.57 | 5.46 | < 0.003 | 0.017 | 0.003 |
| 590355 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.013 | 5.44 | 0.15 | < 0.003 | 0.003 | 0.006 |
| 590356 | 0.003 | 0.029 | < 0.005 | 0.005 | 0.004 | 12.37 | 1.12 | < 0.003 | 0.008 | 0.003 |
| 590357 | 0.005 | 0.138 | 0.005 | < 0.005 | 0.036 | 8.08 | 1.23 | < 0.003 | 0.006 | 0.003 |
| 590358 | < 0.003 | 0.088 | 0.005 | 0.009 | 0.013 | 2.00 | 1.03 | < 0.003 | 0.011 | 0.003 |
| 590359 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.029 | 7.95 | 0.58 | < 0.003 | 0.005 | 0.003 |
| 590360 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.029 | 8.75 | 0.81 | < 0.003 | 0.005 | 0.004 |
| 590361 | 0.004 | 0.248 | 0.006 | 0.011 | 0.004 | 7.27 | 2.26 | < 0.003 | 0.011 | 0.003 |
| 590362 | < 0.003 | 0.072 | < 0.005 | 0.008 | 0.063 | 9.77 | 3.43 | < 0.003 | 0.014 | 0.005 |
| 590363 | 0.003 | 0.009 | < 0.005 | < 0.005 | 0.006 | 4.44 | 0.21 | < 0.003 | 0.003 | < 0.003 |
| 590364 | < 0.003 | 0.055 | < 0.005 | 0.008 | < 0.003 | 6.21 | 4.85 | < 0.003 | 0.017 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | | 0.015 | | | 0.033 | 12.96 | 1.08 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| OKA-1 Meas | | 0.540 | | | | | | | | |
| OKA-1 Cert | | 0.529 | | | | | | | | |
| ZW-C Meas | 0.010 | | < 0.005 | 0.006 | 0.011 | 9.55 | 0.02 | 0.161 | | 0.040 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.100 | 0.105 | | | 0.100 | 3.95 | | 0.103 | 0.106 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | 0.100 | 0.106 | | | 0.101 | 3.98 | | 0.101 | 0.106 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.005 | 0.674 | | 0.019 | 0.088 | 8.23 | 3.84 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | 0.007 | 0.675 | | 0.018 | 0.089 | 8.25 | 3.84 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | 0.007 | 1.288 | < 0.005 | 0.028 | 0.163 | 11.21 | 5.22 | | 0.024 | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-04 Meas | 0.008 | 1.286 | < 0.005 | 0.028 | 0.162 | 11.10 | 5.19 | | 0.023 | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.005 | 0.941 | < 0.005 | 0.028 | 0.210 | 10.68 | 5.71 | | 0.030 | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| SX18-05 Meas | 0.004 | 0.937 | < 0.005 | 0.028 | 0.209 | 10.50 | 5.77 | | 0.031 | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| MA-N (2011) Meas | 0.035 | | < 0.005 | | 0.006 | 0.46 | 1.44 | 0.111 | | 0.009 |
| MA-N (2011) Cert | 0.035 | | 0.001 | | 0.003 | 0.47 | 1.39 | 0.114 | | 0.009 |
| 590120 Orig | < 0.003 | 0.031 | < 0.005 | 0.005 | 0.026 | 4.69 | 3.65 | 0.006 | 0.013 | 0.005 |
| 590120 Dup | 0.003 | 0.032 | < 0.005 | 0.005 | 0.025 | 4.72 | 3.68 | < 0.003 | 0.013 | 0.005 |
| 590141 Orig | < 0.003 | 0.013 | < 0.005 | 0.005 | 0.007 | 6.60 | 0.25 | < 0.003 | 0.004 | < 0.003 |
| 590141 Split PREP DUP | < 0.003 | 0.012 | < 0.005 | 0.005 | 0.009 | 6.69 | 0.26 | < 0.003 | 0.004 | < 0.003 |
| 590150 Orig | 0.005 | 0.539 | 0.012 | 0.013 | < 0.003 | 4.29 | 2.49 | < 0.003 | 0.008 | < 0.003 |
| 590150 Dup | 0.004 | 0.539 | 0.012 | 0.012 | < 0.003 | 4.24 | 2.49 | < 0.003 | 0.009 | < 0.003 |
| 590180 Orig | < 0.003 | 0.170 | 0.005 | 0.006 | < 0.003 | 8.25 | 0.22 | 0.005 | 0.004 | 0.006 |
| 590180 Dup | 0.003 | 0.169 | < 0.005 | 0.007 | < 0.003 | 8.28 | 0.27 | < 0.003 | 0.004 | 0.005 |
| 590190 Orig | < 0.003 | 0.110 | < 0.005 | 0.005 | 0.015 | 7.25 | 0.67 | < 0.003 | 0.004 | 0.004 |
| 590190 Split PREP DUP | < 0.003 | 0.108 | < 0.005 | < 0.005 | 0.015 | 7.18 | 0.65 | < 0.003 | 0.004 | < 0.003 |
| 590210 Orig | < 0.003 | 0.033 | < 0.005 | 0.005 | 0.010 | 7.13 | 0.74 | < 0.003 | 0.004 | < 0.003 |
| 590210 Dup | < 0.003 | 0.034 | < 0.005 | 0.005 | 0.013 | 7.37 | 0.75 | < 0.003 | 0.006 | < 0.003 |
| 590240 Orig | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.23 | 0.02 | < 0.003 | < 0.003 | < 0.003 |
| 590240 Dup | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.21 | 0.02 | < 0.003 | < 0.003 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|--------------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590241 Orig | < 0.003 | 0.023 | 0.010 | 0.007 | < 0.003 | 4.94 | 2.28 | < 0.003 | 0.010 | 0.003 |
| 590241 Split PREP DUP | < 0.003 | 0.025 | 0.010 | 0.006 | < 0.003 | 5.20 | 2.24 | < 0.003 | 0.009 | 0.004 |
| 590270 Orig | < 0.003 | 0.124 | 0.006 | 0.007 | 0.088 | 10.80 | 3.09 | < 0.003 | 0.011 | 0.004 |
| 590270 Dup | < 0.003 | 0.113 | 0.005 | 0.008 | 0.086 | 10.56 | 3.04 | < 0.003 | 0.012 | 0.004 |
| 590290 Orig | 0.003 | 0.045 | < 0.005 | 0.005 | 0.054 | 14.40 | 1.61 | < 0.003 | 0.006 | 0.003 |
| 590290 Split PREP DUP | 0.004 | 0.044 | < 0.005 | 0.005 | 0.055 | 14.52 | 1.59 | < 0.003 | 0.007 | 0.003 |
| 590300 Orig | < 0.003 | 0.122 | < 0.005 | 0.008 | 0.012 | 7.21 | 2.55 | < 0.003 | 0.014 | 0.004 |
| 590300 Dup | 0.005 | 0.127 | < 0.005 | 0.008 | 0.010 | 7.23 | 2.58 | < 0.003 | 0.012 | 0.008 |
| 590330 Orig | 0.005 | 0.539 | 0.011 | 0.013 | < 0.003 | 4.24 | 2.48 | < 0.003 | 0.009 | 0.003 |
| 590330 Dup | 0.005 | 0.534 | 0.009 | 0.012 | < 0.003 | 4.26 | 2.45 | < 0.003 | 0.009 | 0.003 |
| 590340 Orig | < 0.003 | 0.054 | < 0.005 | 0.007 | 0.010 | 8.37 | 0.82 | < 0.003 | 0.008 | < 0.003 |
| 590340 Split PREP DUP | 0.004 | 0.052 | < 0.005 | 0.007 | 0.010 | 8.48 | 0.85 | < 0.003 | 0.008 | < 0.003 |
| 590360 Orig | 0.003 | 0.019 | < 0.005 | < 0.005 | 0.029 | 8.80 | 0.83 | < 0.003 | 0.005 | 0.004 |
| 590360 Dup | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.029 | 8.70 | 0.80 | < 0.003 | 0.005 | 0.003 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 25-Jun-18
Invoice No.: A18-08115
Invoice Date: 03-Aug-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

235 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-08115**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Footnote: ZrO2 cannot be reported for several samples due to the interference by Sr.

CERTIFIED BY:

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590596 | 9.87 | 0.083 | 5.21 | < 0.003 | 0.004 | 0.010 | 0.007 | 0.004 | 0.027 | 0.010 |
| 590597 | 9.92 | 0.051 | 1.08 | < 0.003 | < 0.003 | 0.006 | 0.005 | < 0.003 | 0.007 | 0.005 |
| 590598 | 9.56 | 0.016 | 0.39 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.007 |
| 590599 | 11.19 | 0.018 | 0.08 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.009 |
| 590600 | 7.84 | 0.028 | 6.74 | < 0.003 | 0.003 | 0.016 | 0.005 | < 0.003 | 0.049 | < 0.003 |
| 590601 | 9.29 | 0.017 | 0.07 | < 0.003 | 0.004 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.006 |
| 590602 | 6.42 | 0.055 | 3.04 | < 0.003 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 0.018 | < 0.003 |
| 590603 | 8.07 | 0.058 | 0.66 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.006 |
| 590604 | 5.74 | 0.059 | 4.75 | < 0.003 | < 0.003 | 0.016 | < 0.005 | 0.003 | 0.038 | < 0.003 |
| 590605 | 5.52 | 0.025 | 0.13 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.005 | 0.006 |
| 590606 | 6.11 | 0.017 | 0.59 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.007 | 0.009 |
| 590607 | 0.19 | < 0.003 | 0.01 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.004 |
| 590608 | 6.41 | 0.028 | 0.76 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.010 | 0.004 |
| 590609 | 4.02 | 0.034 | 0.81 | < 0.003 | 0.003 | 0.012 | < 0.005 | 0.003 | 0.018 | < 0.003 |
| 590610 | 7.42 | 0.028 | 0.35 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.015 |
| 590611 | 6.79 | 0.035 | 0.65 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.007 |
| 590612 | 5.36 | 0.023 | 0.31 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.010 |
| 590613 | 6.36 | 0.020 | 2.55 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.016 | < 0.003 |
| 590614 | 4.20 | 0.062 | 1.85 | < 0.003 | < 0.003 | 0.010 | < 0.005 | 0.004 | 0.012 | 0.005 |
| 590615 | 5.06 | 0.065 | 1.95 | 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.013 | < 0.003 |
| 590616 | 7.53 | 0.032 | 2.69 | < 0.003 | 0.003 | 0.013 | < 0.005 | 0.003 | 0.018 | 0.052 |
| 590617 | 3.68 | 0.013 | 0.51 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.005 |
| 590618 | 5.09 | 0.044 | 5.13 | < 0.003 | 0.004 | 0.012 | 0.005 | < 0.003 | 0.018 | 0.059 |
| 590619 | 4.84 | 0.030 | 1.39 | < 0.003 | 0.004 | 0.007 | < 0.005 | 0.003 | 0.009 | 0.005 |
| 590620 | 4.93 | 0.061 | 3.58 | < 0.003 | < 0.003 | 0.012 | 0.005 | 0.003 | 0.026 | < 0.003 |
| 590621 | 5.34 | 0.039 | 0.33 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.004 | < 0.003 |
| 590622 | 6.24 | 0.081 | 0.33 | < 0.003 | < 0.003 | 0.010 | < 0.005 | 0.003 | 0.005 | 0.017 |
| 590623 | 4.53 | 0.057 | 0.39 | < 0.003 | 0.004 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.003 |
| 590624 | 4.70 | 0.099 | 6.83 | < 0.003 | 0.005 | 0.010 | 0.006 | 0.004 | 0.026 | 0.019 |
| 590625 | 8.57 | 0.029 | 0.20 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.009 |
| 590626 | 7.10 | 0.054 | 3.64 | < 0.003 | 0.004 | 0.009 | < 0.005 | < 0.003 | 0.024 | 0.005 |
| 590627 | 6.90 | 0.024 | 0.48 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.004 |
| 590628 | 7.52 | 0.019 | 0.15 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.003 |
| 590629 | 7.92 | 0.010 | 0.19 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.012 |
| 590630 | 7.83 | 0.038 | 0.29 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.005 | 0.004 |
| 590631 | 7.62 | 0.052 | 1.22 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.008 | 0.003 |
| 590632 | 8.12 | 0.022 | 0.10 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | 0.005 |
| 590633 | 8.34 | 0.038 | 0.42 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.007 | < 0.003 |
| 590634 | 7.40 | 0.017 | 0.97 | 0.004 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.006 |
| 590635 | 5.59 | 0.006 | 0.10 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.011 |
| 590636 | 5.80 | 0.096 | 5.37 | < 0.003 | 0.003 | 0.010 | < 0.005 | < 0.003 | 0.016 | < 0.003 |

| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590637 | 8.47 | 0.247 | 1.06 | < 0.003 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 0.008 | 0.007 |
| 590638 | 0.19 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | < 0.003 |
| 590639 | 4.29 | 0.045 | 5.80 | < 0.003 | 0.003 | 0.016 | 0.006 | 0.003 | 0.034 | 0.004 |
| 590640 | 8.81 | 0.041 | 2.27 | < 0.003 | < 0.003 | 0.007 | < 0.005 | 0.003 | 0.009 | 0.025 |
| 590641 | 6.89 | 0.237 | 4.28 | < 0.003 | 0.004 | 0.011 | 0.005 | 0.003 | 0.023 | 0.004 |
| 590642 | 9.36 | 0.015 | 0.24 | 0.003 | < 0.003 | 0.008 | < 0.005 | 0.003 | 0.006 | 0.010 |
| 590643 | 9.36 | 0.016 | 0.18 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.005 | 0.005 |
| 590644 | 7.38 | 0.009 | 0.02 | < 0.003 | < 0.003 | 0.019 | < 0.005 | < 0.003 | 0.005 | < 0.003 |
| 590645 | 4.89 | 0.398 | 0.54 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.008 | 0.004 |
| 590646 | 5.66 | 0.015 | 0.08 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.003 | 0.012 |
| 590647 | 6.76 | 0.187 | 2.29 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | < 0.003 |
| 590648 | 8.83 | 0.120 | 2.56 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.015 | < 0.003 |
| 590649 | 9.83 | 0.021 | 0.46 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.010 |
| 590650 | 9.07 | 0.094 | 1.22 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.012 | < 0.003 |
| 590651 | 10.81 | 0.044 | 0.86 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.006 | 0.006 |
| 590652 | 9.57 | 0.060 | 0.92 | < 0.003 | 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | 0.011 |
| 590653 | 10.41 | 0.037 | 0.77 | < 0.003 | 0.003 | 0.006 | < 0.005 | < 0.003 | 0.008 | 0.007 |
| 590654 | 2.74 | 0.008 | 0.73 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.019 | < 0.003 |
| 590655 | 10.30 | 0.335 | 1.39 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | 0.008 |
| 590656 | 3.89 | 0.274 | 7.58 | < 0.003 | 0.004 | 0.013 | 0.007 | 0.003 | 0.016 | 0.045 |
| 590657 | 0.19 | < 0.003 | 0.01 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.003 |
| 590658 | 7.26 | 0.019 | 1.54 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | 0.009 |
| 590659 | 1.70 | < 0.003 | 0.09 | < 0.003 | < 0.003 | 0.012 | 0.008 | 0.003 | 0.014 | |
| 590660 | 2.21 | < 0.003 | 0.20 | < 0.003 | 0.003 | 0.017 | < 0.005 | 0.003 | 0.018 | < 0.003 |
| 590661 | 1.56 | < 0.003 | 0.03 | < 0.003 | < 0.003 | 0.012 | 0.005 | < 0.003 | 0.013 | < 0.003 |
| 590662 | 10.65 | 0.048 | 0.65 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.010 |
| 590663 | 6.90 | 0.040 | 0.51 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.009 | 0.015 |
| 590664 | 10.70 | 0.128 | 1.54 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.011 | 0.092 |
| 590665 | 13.76 | 0.088 | 0.57 | < 0.003 | 0.004 | 0.009 | < 0.005 | < 0.003 | 0.008 | 0.059 |
| 590666 | 13.01 | 0.135 | 0.48 | 0.005 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 0.007 | 0.022 |
| 590667 | 4.29 | 0.203 | 4.43 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.004 | 0.020 | < 0.003 |
| 590668 | 3.48 | 0.006 | 0.43 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.010 |
| 590669 | 13.80 | 0.084 | 0.86 | 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | 0.056 |
| 590670 | 13.80 | 0.139 | 0.66 | 0.004 | 0.005 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.089 |
| 590671 | 7.32 | 0.128 | 4.66 | < 0.003 | < 0.003 | 0.016 | 0.009 | < 0.003 | 0.028 | 0.028 |
| 590672 | 6.87 | 0.043 | 0.90 | < 0.003 | 0.004 | 0.018 | < 0.005 | < 0.003 | 0.015 | < 0.003 |
| 590673 | 7.28 | 0.011 | 4.46 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.044 | < 0.003 |
| 590674 | 5.56 | 0.058 | 5.91 | < 0.003 | < 0.003 | 0.017 | 0.009 | 0.003 | 0.038 | < 0.003 |
| 590675 | 0.17 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | < 0.003 |
| 590676 | 14.32 | 0.045 | 1.69 | < 0.003 | 0.004 | 0.012 | < 0.005 | < 0.003 | 0.011 | 0.079 |
| 590677 | 13.24 | 0.104 | 0.88 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | 0.025 |

| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590678 | 14.76 | 0.091 | 1.77 | < 0.003 | 0.003 | 0.011 | < 0.005 | < 0.003 | 0.010 | 0.064 |
| 590679 | 9.46 | 0.152 | 3.14 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.012 | 0.034 |
| 590680 | 5.44 | 0.066 | 0.38 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.005 | 0.007 |
| 590681 | 5.08 | < 0.003 | 0.39 | < 0.003 | < 0.003 | 0.033 | < 0.005 | < 0.003 | 0.016 | 0.012 |
| 590682 | 4.92 | < 0.003 | 0.22 | < 0.003 | < 0.003 | 0.019 | < 0.005 | < 0.003 | 0.009 | < 0.003 |
| 590683 | 4.83 | < 0.003 | 0.22 | < 0.003 | < 0.003 | 0.022 | < 0.005 | < 0.003 | 0.012 | 0.006 |
| 590684 | 3.88 | 0.015 | 0.58 | < 0.003 | 0.004 | 0.017 | < 0.005 | < 0.003 | 0.014 | < 0.003 |
| 590685 | 0.16 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | < 0.003 |
| 590686 | 5.84 | 0.036 | 0.26 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.010 |
| 590687 | 3.67 | 0.021 | 0.43 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.013 |
| 590688 | 1.56 | < 0.003 | 0.23 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.013 | < 0.003 |
| 590689 | 5.66 | 0.030 | 6.36 | < 0.003 | < 0.003 | 0.026 | < 0.005 | < 0.003 | 0.039 | 0.008 |
| 590690 | 7.20 | 0.579 | 6.39 | < 0.003 | < 0.003 | 0.011 | 0.007 | 0.003 | 0.015 | 0.004 |
| 590691 | 2.78 | 0.867 | 3.34 | < 0.003 | < 0.003 | 0.011 | 0.007 | < 0.003 | 0.012 | < 0.003 |
| 590692 | 3.56 | 0.031 | 2.33 | < 0.003 | < 0.003 | 0.011 | 0.007 | < 0.003 | 0.020 | < 0.003 |
| 590693 | 4.19 | 0.083 | 3.86 | < 0.003 | < 0.003 | 0.007 | 0.005 | 0.004 | 0.012 | < 0.003 |
| 590694 | 6.04 | 0.034 | 0.99 | < 0.003 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.003 |
| 590695 | 6.40 | 0.032 | 4.78 | < 0.003 | 0.003 | 0.021 | < 0.005 | 0.003 | 0.025 | < 0.003 |
| 590696 | 8.31 | 0.059 | 1.81 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.009 | 0.022 |
| 590697 | 2.47 | 0.008 | 1.02 | < 0.003 | < 0.003 | 0.013 | 0.006 | < 0.003 | 0.013 | < 0.003 |
| 590698 | 6.01 | 0.223 | 3.20 | < 0.003 | < 0.003 | 0.014 | 0.005 | 0.004 | 0.018 | < 0.003 |
| 590699 | 4.15 | 0.524 | 2.41 | < 0.003 | 0.004 | 0.015 | 0.010 | < 0.003 | 0.009 | < 0.003 |
| 590700 | 5.86 | 0.157 | 3.75 | < 0.003 | < 0.003 | 0.016 | 0.005 | 0.003 | 0.024 | < 0.003 |
| 590701 | 2.40 | 0.007 | 0.13 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.008 |
| 590702 | 6.82 | 0.122 | 4.75 | < 0.003 | 0.004 | 0.021 | 0.006 | < 0.003 | 0.026 | 0.011 |
| 590703 | 4.87 | 0.017 | 0.29 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.006 |
| 590704 | 8.60 | 0.023 | 0.63 | < 0.003 | < 0.003 | 0.044 | < 0.005 | < 0.003 | 0.016 | < 0.003 |
| 590705 | 4.92 | 0.011 | 0.04 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.003 | 0.010 |
| 590706 | 4.67 | 0.085 | 1.68 | < 0.003 | < 0.003 | 0.013 | < 0.005 | 0.003 | 0.018 | < 0.003 |
| 590707 | 6.08 | 0.066 | 2.68 | 0.004 | 0.003 | 0.013 | < 0.005 | < 0.003 | 0.015 | 0.005 |
| 590708 | 11.98 | 0.109 | 0.31 | < 0.003 | 0.005 | 0.008 | < 0.005 | 0.004 | 0.005 | 0.061 |
| 590709 | 4.60 | 0.067 | 0.88 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.006 | 0.003 |
| 590710 | 4.11 | 0.081 | 1.83 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.008 | 0.003 |
| 590711 | 4.30 | 0.009 | 0.92 | 0.004 | 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | 0.024 |
| 590712 | 1.65 | < 0.003 | 0.51 | < 0.003 | 0.004 | 0.009 | 0.010 | 0.003 | 0.012 | |
| 590713 | 4.07 | 0.014 | 0.67 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.006 | < 0.003 |
| 590714 | 0.18 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.004 | 0.004 |
| 590715 | 1.60 | 0.007 | 0.22 | < 0.003 | < 0.003 | 0.012 | 0.008 | < 0.003 | 0.013 | |
| 590716 | 5.29 | 0.040 | 1.45 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.006 | 0.012 |
| 590717 | 7.39 | 0.118 | 1.34 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | 0.011 | 0.003 |
| 590718 | 12.94 | 0.036 | 0.56 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.015 |

| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590719 | 4.25 | 0.528 | 2.48 | < 0.003 | 0.003 | 0.019 | 0.010 | 0.003 | 0.010 | < 0.003 |
| 590720 | 6.25 | 0.485 | 4.16 | < 0.003 | 0.003 | 0.011 | 0.010 | < 0.003 | 0.011 | 0.088 |
| 590721 | 2.75 | 0.059 | 1.59 | < 0.003 | 0.003 | 0.014 | 0.005 | < 0.003 | 0.014 | < 0.003 |
| 590722 | 0.19 | < 0.003 | 0.03 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | 0.005 | 0.005 |
| 590723 | 3.24 | 0.352 | 4.24 | < 0.003 | 0.004 | 0.012 | 0.016 | < 0.003 | 0.015 | < 0.003 |
| 590724 | 6.18 | 0.043 | 0.27 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.007 | 0.004 |
| 590725 | 1.93 | < 0.003 | 0.53 | < 0.003 | < 0.003 | 0.012 | 0.006 | < 0.003 | 0.014 | < 0.003 |
| 590726 | 2.86 | 0.020 | 1.30 | < 0.003 | < 0.003 | 0.012 | 0.006 | < 0.003 | 0.013 | < 0.003 |
| 590727 | 10.87 | 0.033 | 0.53 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.005 | 0.016 |
| 590728 | 2.87 | 0.256 | 2.16 | < 0.003 | < 0.003 | 0.012 | 0.008 | 0.003 | 0.014 | < 0.003 |
| 590729 | 8.64 | 0.021 | 0.13 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.005 | 0.010 |
| 590730 | 7.74 | 0.020 | 0.17 | < 0.003 | 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.013 |
| 590731 | 7.92 | 0.025 | 0.17 | < 0.003 | < 0.003 | 0.011 | < 0.005 | < 0.003 | 0.005 | 0.028 |
| 590732 | 7.69 | 0.055 | 1.92 | < 0.003 | < 0.003 | 0.014 | < 0.005 | < 0.003 | 0.022 | 0.022 |
| 590733 | 7.98 | 0.045 | 0.17 | < 0.003 | < 0.003 | 0.017 | < 0.005 | < 0.003 | 0.007 | 0.008 |
| 590734 | 7.82 | 0.158 | 0.47 | < 0.003 | < 0.003 | 0.034 | 0.005 | < 0.003 | 0.017 | 0.010 |
| 590735 | 4.70 | 0.155 | 3.00 | < 0.003 | < 0.003 | 0.025 | 0.006 | < 0.003 | 0.022 | 0.009 |
| 590736 | 2.96 | 0.040 | 4.08 | < 0.003 | 0.004 | 0.013 | 0.006 | 0.003 | 0.018 | 0.043 |
| 590737 | 6.62 | 0.059 | 0.05 | 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.015 |
| 590738 | 2.33 | 0.059 | 1.52 | < 0.003 | < 0.003 | 0.018 | 0.005 | 0.003 | 0.017 | < 0.003 |
| 590739 | 2.85 | 0.057 | 1.18 | < 0.003 | < 0.003 | 0.024 | < 0.005 | < 0.003 | 0.018 | 0.006 |
| 590740 | 3.44 | 0.084 | 3.62 | < 0.003 | 0.003 | 0.025 | 0.005 | < 0.003 | 0.034 | 0.020 |
| 590741 | 6.21 | 0.022 | 0.23 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.012 |
| 590742 | 8.79 | 0.023 | 0.03 | < 0.003 | < 0.003 | 0.051 | < 0.005 | < 0.003 | 0.007 | 0.006 |
| 590743 | 7.21 | 0.065 | 0.54 | < 0.003 | < 0.003 | 0.009 | < 0.005 | < 0.003 | 0.006 | 0.004 |
| 590744 | 7.14 | 0.030 | 0.04 | < 0.003 | < 0.003 | 0.016 | < 0.005 | < 0.003 | 0.004 | < 0.003 |
| 590745 | 6.64 | 0.030 | 0.45 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.003 | 0.004 | 0.008 |
| 590746 | 11.00 | 0.040 | 0.88 | < 0.003 | < 0.003 | 0.072 | 0.005 | 0.003 | 0.014 | 0.028 |
| 590747 | 6.95 | 0.013 | 0.94 | < 0.003 | < 0.003 | 0.019 | < 0.005 | 0.003 | 0.010 | < 0.003 |
| 590748 | 7.03 | 0.060 | 0.56 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.005 | 0.006 |
| 590749 | 4.51 | 0.028 | 2.10 | < 0.003 | < 0.003 | 0.016 | < 0.005 | 0.003 | 0.032 | < 0.003 |
| 590750 | 4.29 | 0.554 | 2.50 | < 0.003 | 0.005 | 0.017 | 0.011 | 0.004 | 0.008 | < 0.003 |
| 590751 | 4.85 | 0.103 | 0.85 | < 0.003 | < 0.003 | 0.010 | 0.006 | < 0.003 | 0.020 | < 0.003 |
| 590752 | 5.69 | 0.013 | 1.67 | < 0.003 | < 0.003 | 0.012 | < 0.005 | < 0.003 | 0.010 | 0.004 |
| 590753 | 6.67 | 0.008 | 0.52 | < 0.003 | 0.004 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.023 |
| 590754 | 4.29 | 0.084 | 1.57 | < 0.003 | < 0.003 | 0.011 | 0.005 | < 0.003 | 0.014 | < 0.003 |
| 590755 | 3.64 | 0.016 | 3.60 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.013 | < 0.003 |
| 590756 | 6.88 | 0.259 | 3.43 | < 0.003 | < 0.003 | 0.009 | 0.005 | < 0.003 | 0.015 | 0.005 |
| 590757 | 4.06 | 0.171 | 3.98 | < 0.003 | 0.004 | 0.012 | 0.011 | 0.003 | 0.018 | 0.009 |
| 590758 | 6.70 | 0.038 | 0.81 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.003 |
| 590759 | 0.16 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.005 | 0.004 |

| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590760 | 3.27 | 0.095 | 3.06 | < 0.003 | 0.004 | 0.010 | 0.013 | < 0.003 | 0.013 | 0.023 |
| 590761 | 5.38 | 0.158 | 1.46 | < 0.003 | < 0.003 | 0.013 | 0.005 | 0.003 | 0.013 | < 0.003 |
| 590762 | 2.95 | 0.121 | 2.32 | < 0.003 | 0.003 | 0.011 | 0.009 | 0.003 | 0.015 | < 0.003 |
| 590763 | 2.67 | 0.136 | 1.91 | < 0.003 | < 0.003 | 0.015 | 0.009 | 0.003 | 0.017 | |
| 590764 | 3.92 | 0.009 | 0.27 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.004 | 0.009 |
| 590765 | 6.59 | 0.047 | 3.03 | < 0.003 | 0.004 | 0.008 | 0.007 | 0.003 | 0.012 | 0.039 |
| 590766 | 5.81 | 0.022 | 0.65 | < 0.003 | 0.004 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.016 |
| 590767 | 5.32 | 0.024 | 0.09 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | < 0.003 |
| 590768 | 6.29 | 0.088 | 1.89 | < 0.003 | < 0.003 | 0.017 | 0.008 | 0.003 | 0.017 | 0.018 |
| 590769 | 11.74 | 0.068 | 2.42 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.011 | 0.184 |
| 590770 | 3.47 | 0.068 | 1.25 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.009 | < 0.003 |
| 590771 | 4.26 | 0.533 | 2.48 | < 0.003 | 0.008 | 0.016 | 0.011 | < 0.003 | 0.009 | < 0.003 |
| 590772 | 4.97 | 0.041 | 1.78 | < 0.003 | 0.003 | 0.007 | 0.005 | 0.013 | 0.008 | < 0.003 |
| 590773 | 10.09 | 0.096 | 3.24 | < 0.003 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.013 | 0.112 |
| 590774 | 7.09 | 0.048 | 1.77 | < 0.003 | < 0.003 | 0.005 | < 0.005 | 0.004 | 0.008 | 0.066 |
| 590775 | 5.81 | 0.082 | 2.43 | < 0.003 | < 0.003 | 0.013 | 0.009 | 0.003 | 0.016 | < 0.003 |
| 590776 | 0.12 | < 0.003 | 0.01 | < 0.003 | < 0.003 | 0.005 | < 0.005 | < 0.003 | < 0.003 | < 0.003 |
| 590777 | 10.30 | 0.042 | 1.38 | < 0.003 | 0.004 | 0.008 | < 0.005 | 0.003 | 0.008 | < 0.003 |
| 590778 | 7.78 | 0.018 | 0.52 | < 0.003 | 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.005 | 0.009 |
| 590779 | 7.12 | 0.064 | 1.12 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.005 | < 0.003 |
| 590780 | 8.29 | 0.042 | 1.23 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.008 | < 0.003 |
| 590781 | 5.79 | 0.021 | 0.15 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.003 | 0.007 |
| 590782 | 6.50 | 0.044 | 1.84 | < 0.003 | < 0.003 | 0.010 | < 0.005 | < 0.003 | 0.011 | < 0.003 |
| 590783 | 5.33 | 0.100 | 2.10 | < 0.003 | < 0.003 | 0.010 | 0.007 | 0.004 | 0.011 | < 0.003 |
| 590784 | 3.67 | 0.222 | 2.87 | < 0.003 | 0.005 | 0.014 | 0.008 | < 0.003 | 0.016 | < 0.003 |
| 590785 | 4.61 | 0.066 | 1.19 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.006 | < 0.003 |
| 590786 | 0.12 | < 0.003 | 0.01 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.003 |
| 590787 | 4.49 | 0.111 | 1.45 | < 0.003 | < 0.003 | 0.008 | < 0.005 | < 0.003 | 0.007 | < 0.003 |
| 590788 | 1.93 | 0.200 | 3.46 | < 0.003 | 0.003 | 0.011 | 0.008 | < 0.003 | 0.015 | < 0.003 |
| 590789 | 4.26 | 0.523 | 2.45 | < 0.003 | 0.005 | 0.016 | 0.011 | < 0.003 | 0.010 | < 0.003 |
| 590790 | 2.10 | 0.119 | 2.17 | < 0.003 | 0.004 | 0.011 | 0.011 | < 0.003 | 0.014 | |
| 590791 | 7.30 | 0.115 | 3.50 | < 0.003 | < 0.003 | 0.018 | 0.010 | 0.003 | 0.021 | |
| 590792 | 2.85 | 0.099 | 2.39 | < 0.003 | < 0.003 | 0.013 | 0.011 | < 0.003 | 0.015 | |
| 590793 | 2.62 | 0.120 | 2.99 | < 0.003 | < 0.003 | 0.012 | 0.010 | < 0.003 | 0.015 | < 0.003 |
| 590794 | 3.17 | 0.306 | 3.73 | < 0.003 | 0.004 | 0.018 | 0.009 | < 0.003 | 0.020 | < 0.003 |
| 590795 | 3.12 | 0.278 | 3.51 | < 0.003 | < 0.003 | 0.016 | 0.010 | < 0.003 | 0.019 | < 0.003 |
| 590796 | 13.06 | 0.065 | 0.78 | < 0.003 | 0.005 | 0.006 | < 0.005 | 0.004 | 0.003 | 0.078 |
| 590797 | 11.53 | 0.066 | 1.47 | < 0.003 | 0.004 | 0.010 | < 0.005 | 0.003 | 0.007 | 0.054 |
| 590798 | 2.69 | 0.306 | 3.72 | < 0.003 | 0.004 | 0.015 | 0.011 | < 0.003 | 0.017 | 0.016 |
| 590799 | 2.03 | 0.211 | 4.40 | < 0.003 | 0.006 | 0.017 | 0.025 | < 0.003 | 0.018 | 0.062 |
| 590800 | 1.73 | 0.200 | 3.66 | < 0.003 | 0.007 | 0.016 | 0.018 | < 0.003 | 0.015 | 0.016 |

| Analyte Symbol | Fe2O3(T) | Nb2O5 | P2O5 | SnO2 | Ta2O5 | ThO2 | U3O8 | WO3 | Y2O3 | ZrO2 |
|----------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.01 | 0.003 | 0.01 | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590801 | 4.22 | 0.162 | 1.65 | < 0.003 | < 0.003 | 0.011 | 0.009 | < 0.003 | 0.012 | < 0.003 |
| 590802 | 7.58 | 0.050 | 0.25 | < 0.003 | < 0.003 | 0.008 | 0.006 | 0.003 | 0.005 | 0.003 |
| 590803 | 8.03 | 0.127 | 0.94 | < 0.003 | 0.003 | 0.012 | < 0.005 | < 0.003 | 0.008 | < 0.003 |
| 590804 | 9.58 | 0.070 | 0.37 | < 0.003 | 0.003 | 0.011 | < 0.005 | < 0.003 | 0.006 | < 0.003 |
| 590805 | 11.67 | 0.036 | 0.17 | < 0.003 | < 0.003 | 0.009 | < 0.005 | 0.003 | < 0.003 | < 0.003 |
| 590806 | 5.45 | 0.024 | 1.20 | < 0.003 | < 0.003 | 0.013 | < 0.005 | < 0.003 | 0.010 | < 0.003 |
| 590807 | 7.32 | 0.060 | 0.09 | < 0.003 | < 0.003 | 0.010 | < 0.005 | 0.003 | 0.004 | 0.013 |
| 590808 | 0.16 | < 0.003 | 0.02 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.004 | 0.004 |
| 590809 | 8.49 | 0.087 | 0.42 | < 0.003 | < 0.003 | 0.016 | 0.008 | 0.003 | 0.004 | < 0.003 |
| 590810 | 2.19 | 0.009 | 0.19 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.003 |
| 590811 | 4.14 | 0.159 | 3.76 | < 0.003 | 0.003 | 0.018 | 0.008 | < 0.003 | 0.020 | < 0.003 |
| 590812 | 3.29 | 0.018 | 0.13 | < 0.003 | < 0.003 | 0.007 | < 0.005 | < 0.003 | 0.004 | 0.029 |
| 590813 | 4.92 | 0.064 | 3.35 | < 0.003 | < 0.003 | 0.015 | < 0.005 | < 0.003 | 0.019 | 0.027 |
| 590814 | 3.47 | 0.013 | 0.26 | < 0.003 | < 0.003 | 0.006 | < 0.005 | 0.003 | 0.003 | < 0.003 |
| 590815 | 1.78 | 0.026 | 3.25 | < 0.003 | 0.003 | 0.010 | 0.006 | < 0.003 | 0.012 | < 0.003 |
| 590816 | 8.85 | 0.142 | 1.39 | < 0.003 | < 0.003 | 0.008 | 0.005 | < 0.003 | 0.009 | < 0.003 |
| 590817 | 3.00 | 0.063 | 1.48 | < 0.003 | 0.003 | 0.011 | 0.008 | < 0.003 | 0.011 | < 0.003 |
| 590818 | 5.55 | 0.338 | 5.04 | < 0.003 | 0.005 | 0.013 | 0.015 | 0.003 | 0.013 | < 0.003 |
| 590819 | 6.73 | 0.029 | 0.59 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.003 | 0.012 |
| 590820 | 2.84 | 0.275 | 2.80 | < 0.003 | 0.004 | 0.014 | 0.016 | 0.003 | 0.014 | < 0.003 |
| 590821 | 4.84 | 0.155 | 3.20 | < 0.003 | 0.004 | 0.011 | 0.012 | < 0.003 | 0.012 | < 0.003 |
| 590822 | 3.45 | 0.121 | 2.82 | < 0.003 | < 0.003 | 0.010 | 0.011 | < 0.003 | 0.014 | < 0.003 |
| 590823 | 2.10 | 0.149 | 3.69 | < 0.003 | 0.004 | 0.013 | 0.017 | < 0.003 | 0.016 | < 0.003 |
| 590824 | 3.53 | 0.191 | 4.11 | < 0.003 | 0.003 | 0.021 | 0.015 | 0.004 | 0.025 | < 0.003 |
| 590825 | 6.10 | 0.036 | 0.13 | < 0.003 | < 0.003 | 0.006 | < 0.005 | < 0.003 | 0.003 | 0.013 |
| 590826 | 9.89 | 0.053 | 2.06 | < 0.003 | 0.003 | 0.010 | < 0.005 | < 0.003 | 0.013 | 0.126 |
| 590827 | 4.70 | 0.140 | 2.55 | < 0.003 | 0.004 | 0.015 | 0.005 | < 0.003 | 0.019 | < 0.003 |
| 590828 | 4.70 | 0.140 | 1.86 | < 0.003 | < 0.003 | 0.013 | 0.007 | 0.005 | 0.013 | < 0.003 |
| 590829 | 0.16 | < 0.003 | 0.01 | < 0.003 | 0.003 | 0.007 | < 0.005 | < 0.003 | 0.003 | 0.003 |
| 590830 | 5.68 | 0.042 | 1.63 | < 0.003 | 0.004 | 0.017 | 0.007 | < 0.003 | 0.012 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | | 0.015 | | | 0.032 | 13.00 | 1.08 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| BE-N Meas | | 0.015 | | | 0.033 | 13.03 | 1.09 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| MA-N (Depleted) Meas | 0.036 | 0.026 | | | 0.007 | | | | | |
| MA-N (Depleted) Cert | 0.035 | 0.025 | | | 0.003 | | | | | |
| ZW-C Meas | 0.012 | | < 0.005 | 0.006 | 0.011 | 9.53 | 0.03 | 0.167 | | 0.042 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| ZW-C Meas | 0.009 | | < 0.005 | | 0.012 | 9.48 | 0.03 | 0.167 | | 0.039 |
| ZW-C Cert | 0.010 | | 0.002 | | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.098 | 0.104 | | | 0.101 | 4.03 | | 0.103 | 0.105 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | 0.099 | 0.103 | | | 0.101 | 4.01 | | 0.100 | | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | | |
| SX18-01 Meas | 0.006 | 0.688 | | 0.021 | 0.088 | 8.27 | 3.88 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | 0.004 | 0.686 | | | 0.087 | 8.23 | 3.87 | | | |
| SX18-01 Cert | 0.005 | 0.695 | | | 0.093 | 8.12 | 3.84 | | | |
| SX18-04 Meas | 0.006 | 1.308 | < 0.005 | | 0.161 | 11.19 | 5.18 | | | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | | 0.146 | 11.24 | 5.20 | | | |
| SX18-05 Meas | 0.003 | 0.957 | 0.005 | | 0.209 | 10.66 | 5.73 | | | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | | 0.218 | 10.54 | 5.78 | | | |
| 590625 Orig | < 0.003 | 0.029 | < 0.005 | 0.005 | 0.009 | 8.58 | 0.20 | < 0.003 | 0.005 | < 0.003 |
| 590625 Dup | < 0.003 | 0.028 | < 0.005 | 0.006 | 0.008 | 8.57 | 0.20 | < 0.003 | 0.005 | 0.003 |
| 590645 Orig | < 0.003 | 0.398 | < 0.005 | 0.011 | 0.004 | 4.89 | 0.54 | < 0.003 | 0.008 | 0.003 |
| 590645 Split PREP DUP | 0.003 | 0.383 | < 0.005 | 0.010 | 0.004 | 4.77 | 0.50 | < 0.003 | 0.007 | < 0.003 |
| 590655 Orig | < 0.003 | 0.337 | < 0.005 | 0.009 | 0.008 | 10.40 | 1.40 | < 0.003 | 0.008 | < 0.003 |
| 590655 Dup | < 0.003 | 0.333 | < 0.005 | 0.007 | 0.007 | 10.20 | 1.39 | < 0.003 | 0.007 | < 0.003 |
| 590685 Orig | < 0.003 | < 0.003 | < 0.005 | 0.006 | < 0.003 | 0.15 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590685 Dup | 0.003 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 0.17 | 0.02 | < 0.003 | 0.006 | < 0.003 |
| 590695 Orig | 0.003 | 0.032 | < 0.005 | 0.021 | < 0.003 | 6.40 | 4.78 | < 0.003 | 0.025 | 0.003 |
| 590695 Split PREP DUP | < 0.003 | 0.033 | 0.006 | 0.021 | < 0.003 | 6.30 | 5.02 | < 0.003 | 0.025 | < 0.003 |
| 590715 Orig | < 0.003 | 0.007 | 0.008 | 0.012 | | 1.60 | 0.22 | < 0.003 | 0.012 | < 0.003 |
| 590715 Dup | < 0.003 | 0.007 | 0.007 | 0.012 | | 1.60 | 0.23 | < 0.003 | 0.013 | < 0.003 |
| 590744 Orig | < 0.003 | 0.029 | < 0.005 | 0.017 | < 0.003 | 7.12 | 0.04 | < 0.003 | 0.004 | < 0.003 |
| 590744 Dup | < 0.003 | 0.031 | < 0.005 | 0.016 | < 0.003 | 7.17 | 0.04 | < 0.003 | 0.003 | 0.004 |
| 590745 Orig | < 0.003 | 0.030 | < 0.005 | 0.011 | 0.008 | 6.64 | 0.45 | < 0.003 | 0.004 | 0.003 |
| 590745 Split | < 0.003 | 0.029 | < 0.005 | 0.011 | 0.007 | 6.65 | 0.45 | < 0.003 | 0.004 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| PREP DUP | | | | | | | | | | |
| 590775 Orig | < 0.003 | 0.078 | 0.008 | 0.013 | < 0.003 | 5.73 | 2.40 | < 0.003 | 0.017 | 0.003 |
| 590775 Dup | < 0.003 | 0.086 | 0.009 | 0.013 | < 0.003 | 5.89 | 2.46 | < 0.003 | 0.016 | 0.003 |
| 590795 Orig | < 0.003 | 0.278 | 0.010 | 0.016 | < 0.003 | 3.12 | 3.51 | < 0.003 | 0.019 | < 0.003 |
| 590795 Split | < 0.003 | 0.272 | 0.011 | 0.017 | < 0.003 | 3.21 | 3.51 | < 0.003 | 0.019 | < 0.003 |
| PREP DUP | | | | | | | | | | |
| 590805 Orig | < 0.003 | 0.034 | < 0.005 | 0.010 | < 0.003 | 11.65 | 0.18 | < 0.003 | 0.005 | 0.003 |
| 590805 Dup | 0.004 | 0.037 | < 0.005 | 0.009 | < 0.003 | 11.70 | 0.16 | < 0.003 | < 0.003 | 0.003 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 25-Jun-18
Invoice No.: A18-08116
Invoice Date: 09-Aug-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

231 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-08116**

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Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized with loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590365 | < 0.003 | 0.020 | < 0.005 | 0.017 | < 0.003 | 5.84 | 4.82 | < 0.003 | 0.038 | 0.003 |
| 590366 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.012 | 2.56 | 0.08 | 0.004 | < 0.003 | < 0.003 |
| 590367 | < 0.003 | 0.019 | < 0.005 | 0.012 | < 0.003 | 6.68 | 1.85 | < 0.003 | 0.013 | < 0.003 |
| 590368 | 0.003 | 0.205 | < 0.005 | 0.006 | 0.015 | 4.58 | 1.27 | < 0.003 | 0.011 | 0.003 |
| 590369 | 0.006 | 0.554 | 0.011 | 0.014 | < 0.003 | 4.22 | 2.50 | < 0.003 | 0.008 | 0.003 |
| 590370 | < 0.003 | 0.014 | < 0.005 | 0.011 | 0.006 | 4.46 | 0.49 | < 0.003 | 0.008 | < 0.003 |
| 590371 | < 0.003 | 0.034 | < 0.005 | 0.008 | 0.029 | 5.82 | 1.47 | < 0.003 | 0.012 | < 0.003 |
| 590372 | < 0.003 | 0.020 | < 0.005 | 0.010 | 0.011 | 4.13 | 0.09 | < 0.003 | 0.004 | < 0.003 |
| 590373 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.015 | 2.64 | 0.08 | < 0.003 | 0.003 | < 0.003 |
| 590374 | < 0.003 | 0.099 | < 0.005 | 0.006 | 0.009 | 3.85 | 0.54 | < 0.003 | 0.007 | < 0.003 |
| 590375 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.010 | 3.95 | 0.48 | < 0.003 | 0.006 | < 0.003 |
| 590376 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.008 | 4.67 | 0.29 | < 0.003 | 0.005 | < 0.003 |
| 590377 | < 0.003 | 0.051 | < 0.005 | 0.006 | 0.030 | 9.45 | 0.18 | < 0.003 | 0.003 | 0.003 |
| 590378 | < 0.003 | 0.086 | < 0.005 | 0.008 | 0.005 | 6.94 | 0.12 | < 0.003 | 0.004 | 0.013 |
| 590379 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.009 | 3.33 | 0.25 | < 0.003 | 0.004 | < 0.003 |
| 590380 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.22 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590381 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.011 | 3.47 | 0.47 | 0.003 | 0.005 | < 0.003 |
| 590382 | < 0.003 | 0.091 | < 0.005 | 0.009 | < 0.003 | 5.71 | 0.73 | < 0.003 | 0.008 | < 0.003 |
| 590383 | < 0.003 | 0.086 | < 0.005 | 0.006 | 0.011 | 5.52 | 0.36 | < 0.003 | 0.005 | < 0.003 |
| 590384 | < 0.003 | 0.010 | < 0.005 | 0.010 | 0.003 | 3.96 | 1.81 | < 0.003 | 0.011 | < 0.003 |
| 590385 | < 0.003 | 0.019 | < 0.005 | 0.007 | < 0.003 | 5.44 | 2.03 | < 0.003 | 0.013 | < 0.003 |
| 590386 | < 0.003 | 0.005 | < 0.005 | 0.006 | 0.010 | 3.06 | 0.22 | < 0.003 | 0.004 | 0.003 |
| 590387 | 0.003 | 0.017 | < 0.005 | < 0.005 | 0.035 | 3.92 | 1.42 | 0.003 | 0.008 | < 0.003 |
| 590388 | < 0.003 | 0.035 | < 0.005 | 0.009 | 0.003 | 5.26 | 1.33 | < 0.003 | 0.012 | < 0.003 |
| 590389 | < 0.003 | 0.014 | < 0.005 | 0.006 | 0.007 | 5.17 | 0.27 | 0.003 | 0.005 | < 0.003 |
| 590390 | < 0.003 | 0.073 | < 0.005 | 0.011 | 0.022 | 7.39 | 1.83 | < 0.003 | 0.019 | 0.003 |
| 590391 | < 0.003 | 0.015 | < 0.005 | 0.007 | 0.008 | 4.52 | 0.06 | < 0.003 | 0.004 | < 0.003 |
| 590392 | < 0.003 | 0.029 | < 0.005 | 0.010 | 0.010 | 6.01 | 0.83 | < 0.003 | 0.010 | < 0.003 |
| 590393 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.22 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590394 | < 0.003 | 0.124 | < 0.005 | 0.012 | 0.007 | 6.93 | 2.28 | < 0.003 | 0.021 | < 0.003 |
| 590395 | < 0.003 | 0.101 | < 0.005 | 0.014 | < 0.003 | 5.97 | 2.94 | < 0.003 | 0.024 | < 0.003 |
| 590396 | 0.003 | 0.140 | < 0.005 | 0.007 | 0.005 | 3.71 | 1.14 | < 0.003 | 0.011 | < 0.003 |
| 590397 | < 0.003 | 0.021 | < 0.005 | 0.006 | 0.009 | 4.09 | 1.71 | < 0.003 | 0.013 | < 0.003 |
| 590398 | < 0.003 | 0.147 | < 0.005 | 0.009 | 0.003 | 5.21 | 2.11 | < 0.003 | 0.014 | < 0.003 |
| 590399 | < 0.003 | 0.063 | < 0.005 | 0.005 | 0.006 | 4.36 | 0.87 | < 0.003 | 0.007 | 0.003 |
| 590400 | < 0.003 | 0.040 | < 0.005 | 0.007 | 0.006 | 4.32 | 0.12 | < 0.003 | 0.004 | < 0.003 |
| 590401 | < 0.003 | 0.210 | 0.005 | 0.010 | 0.011 | 7.90 | 1.51 | < 0.003 | 0.012 | 0.003 |
| 590402 | < 0.003 | 0.089 | < 0.005 | 0.006 | 0.007 | 6.22 | 0.04 | < 0.003 | 0.003 | < 0.003 |
| 590403 | 0.003 | 0.092 | < 0.005 | 0.008 | 0.007 | 5.34 | 0.37 | 0.003 | 0.005 | < 0.003 |
| 590404 | < 0.003 | 0.029 | < 0.005 | 0.011 | 0.026 | 6.12 | 0.25 | < 0.003 | 0.004 | < 0.003 |
| 590405 | < 0.003 | 0.207 | < 0.005 | 0.008 | 0.015 | 6.63 | 1.03 | < 0.003 | 0.007 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590406 | < 0.003 | 0.107 | < 0.005 | 0.011 | 0.013 | 5.01 | 5.60 | < 0.003 | 0.025 | < 0.003 |
| 590407 | < 0.003 | 0.181 | < 0.005 | < 0.005 | 0.011 | 3.23 | 0.49 | < 0.003 | 0.005 | 0.005 |
| 590408 | < 0.003 | < 0.003 | < 0.005 | 0.005 | < 0.003 | 0.28 | 0.03 | < 0.003 | 0.003 | 0.003 |
| 590409 | < 0.003 | 0.008 | < 0.005 | 0.005 | 0.008 | 3.04 | 0.27 | < 0.003 | 0.004 | < 0.003 |
| 590410 | 0.003 | 0.006 | < 0.005 | 0.018 | < 0.003 | 7.48 | 2.12 | < 0.003 | 0.022 | 0.003 |
| 590411 | < 0.003 | 0.008 | < 0.005 | 0.010 | < 0.003 | 6.40 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590412 | 0.003 | 0.195 | 0.008 | 0.015 | 0.013 | 9.84 | 5.10 | < 0.003 | 0.040 | 0.004 |
| 590413 | < 0.003 | 0.145 | 0.005 | 0.009 | < 0.003 | 3.36 | 1.32 | < 0.003 | 0.013 | 0.003 |
| 590414 | < 0.003 | 0.033 | < 0.005 | 0.005 | 0.008 | 6.08 | 0.59 | < 0.003 | 0.005 | 0.005 |
| 590415 | 0.003 | 0.036 | < 0.005 | 0.011 | 0.005 | 6.52 | 0.36 | < 0.003 | 0.007 | < 0.003 |
| 590416 | < 0.003 | 0.042 | < 0.005 | 0.009 | 0.036 | 7.90 | 1.84 | < 0.003 | 0.013 | 0.004 |
| 590417 | < 0.003 | 0.052 | < 0.005 | 0.010 | 0.004 | 5.69 | 0.93 | < 0.003 | 0.010 | < 0.003 |
| 590418 | < 0.003 | 0.104 | < 0.005 | 0.007 | 0.012 | 5.87 | 0.36 | < 0.003 | 0.004 | < 0.003 |
| 590419 | 0.004 | 0.034 | < 0.005 | 0.016 | 0.027 | 7.43 | 10.47 | < 0.003 | 0.066 | 0.004 |
| 590420 | < 0.003 | 0.015 | < 0.005 | 0.016 | 0.009 | 7.48 | 5.03 | < 0.003 | 0.029 | 0.003 |
| 590421 | < 0.003 | 0.026 | < 0.005 | 0.022 | 0.009 | 8.42 | 8.50 | < 0.003 | 0.050 | 0.004 |
| 590422 | 0.003 | 0.019 | < 0.005 | 0.012 | < 0.003 | 7.10 | 2.25 | < 0.003 | 0.015 | < 0.003 |
| 590423 | 0.004 | 0.044 | < 0.005 | 0.010 | 0.029 | 5.33 | 4.07 | < 0.003 | 0.021 | 0.003 |
| 590424 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.25 | 0.05 | < 0.003 | 0.003 | < 0.003 |
| 590425 | < 0.003 | 0.050 | < 0.005 | 0.010 | 0.003 | 6.00 | 1.37 | < 0.003 | 0.012 | < 0.003 |
| 590426 | < 0.003 | 0.056 | < 0.005 | 0.010 | 0.004 | 5.62 | 1.22 | < 0.003 | 0.011 | 0.003 |
| 590427 | < 0.003 | 0.054 | < 0.005 | 0.009 | < 0.003 | 7.40 | 0.49 | < 0.003 | 0.006 | < 0.003 |
| 590428 | < 0.003 | 0.068 | 0.005 | 0.017 | < 0.003 | 8.05 | 7.44 | < 0.003 | 0.054 | 0.005 |
| 590429 | 0.003 | 0.179 | < 0.005 | 0.006 | 0.007 | 6.80 | 1.03 | < 0.003 | 0.009 | < 0.003 |
| 590430 | 0.004 | 0.067 | < 0.005 | 0.006 | < 0.003 | 6.45 | 1.76 | < 0.003 | 0.012 | < 0.003 |
| 590431 | < 0.003 | 0.024 | < 0.005 | 0.010 | 0.007 | 6.00 | 1.64 | < 0.003 | 0.015 | < 0.003 |
| 590432 | 0.003 | 0.018 | < 0.005 | 0.009 | 0.004 | 5.52 | 1.16 | < 0.003 | 0.013 | < 0.003 |
| 590433 | < 0.003 | < 0.003 | < 0.005 | 0.020 | 0.004 | 3.82 | 0.04 | < 0.003 | 0.008 | < 0.003 |
| 590434 | < 0.003 | 0.023 | < 0.005 | 0.010 | 0.011 | 4.79 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 590435 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.009 | 6.30 | 0.15 | 0.003 | < 0.003 | < 0.003 |
| 590436 | 0.004 | 0.151 | < 0.005 | 0.007 | 0.066 | 13.63 | 0.98 | < 0.003 | 0.006 | < 0.003 |
| 590437 | < 0.003 | 0.136 | < 0.005 | 0.012 | 0.079 | 10.77 | 0.42 | < 0.003 | 0.007 | 0.003 |
| 590438 | < 0.003 | 0.032 | < 0.005 | 0.025 | 0.006 | 8.84 | 2.82 | < 0.003 | 0.025 | 0.003 |
| 590439 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.006 | 2.63 | 0.24 | < 0.003 | 0.003 | < 0.003 |
| 590440 | 0.003 | 0.016 | < 0.005 | < 0.005 | 0.004 | 4.39 | 0.08 | < 0.003 | < 0.003 | 0.008 |
| 590441 | < 0.003 | 0.058 | < 0.005 | 0.008 | 0.014 | 7.54 | 0.04 | < 0.003 | 0.003 | < 0.003 |
| 590442 | < 0.003 | 0.036 | < 0.005 | 0.009 | 0.011 | 5.06 | 2.04 | < 0.003 | 0.011 | < 0.003 |
| 590443 | 0.005 | 0.052 | < 0.005 | 0.010 | 0.010 | 5.57 | 2.53 | < 0.003 | 0.017 | < 0.003 |
| 590444 | 0.003 | 0.064 | < 0.005 | 0.006 | 0.008 | 4.66 | 0.46 | < 0.003 | 0.006 | < 0.003 |
| 590445 | 0.004 | 0.101 | < 0.005 | 0.008 | 0.018 | 6.42 | 0.37 | < 0.003 | 0.005 | < 0.003 |
| 590446 | 0.003 | 0.065 | < 0.005 | 0.009 | 0.031 | 7.27 | 0.50 | < 0.003 | 0.007 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590447 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.24 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590448 | < 0.003 | 0.015 | < 0.005 | 0.006 | 0.004 | 3.81 | 0.48 | < 0.003 | 0.004 | < 0.003 |
| 590449 | 0.007 | 0.548 | 0.010 | 0.014 | < 0.003 | 4.18 | 2.47 | < 0.003 | 0.008 | < 0.003 |
| 590450 | < 0.003 | 0.019 | < 0.005 | 0.007 | 0.004 | 5.07 | 0.32 | < 0.003 | 0.004 | < 0.003 |
| 590451 | < 0.003 | 0.007 | < 0.005 | 0.008 | < 0.003 | 4.49 | 1.21 | < 0.003 | 0.010 | 0.004 |
| 590452 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.004 | 3.73 | 0.27 | 0.006 | 0.003 | < 0.003 |
| 590453 | < 0.003 | 0.005 | < 0.005 | < 0.005 | 0.006 | 2.22 | 0.16 | < 0.003 | 0.003 | < 0.003 |
| 590454 | < 0.003 | 0.294 | 0.005 | 0.010 | < 0.003 | 2.74 | 2.81 | < 0.003 | 0.016 | 0.005 |
| 590455 | < 0.003 | 0.120 | < 0.005 | 0.010 | 0.020 | 2.87 | 3.00 | < 0.003 | 0.012 | 0.003 |
| 590456 | < 0.003 | 0.119 | 0.006 | 0.009 | 0.064 | 3.13 | 4.35 | < 0.003 | 0.015 | 0.004 |
| 590457 | < 0.003 | 0.182 | 0.005 | 0.010 | 0.032 | 4.30 | 5.32 | < 0.003 | 0.023 | 0.004 |
| 590458 | < 0.003 | 0.085 | < 0.005 | 0.010 | 0.004 | 3.05 | 3.22 | < 0.003 | 0.020 | 0.004 |
| 590459 | < 0.003 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 1.71 | 0.32 | < 0.003 | 0.008 | < 0.003 |
| 590460 | < 0.003 | 0.063 | < 0.005 | 0.006 | < 0.003 | 3.58 | 2.06 | < 0.003 | 0.012 | < 0.003 |
| 590461 | 0.005 | 0.120 | < 0.005 | 0.024 | 0.013 | 5.71 | 8.75 | < 0.003 | 0.062 | 0.005 |
| 590462 | 0.004 | 0.099 | < 0.005 | 0.020 | 0.011 | 5.35 | 5.40 | < 0.003 | 0.040 | 0.003 |
| 590463 | < 0.003 | 0.071 | < 0.005 | 0.013 | < 0.003 | 7.38 | 2.13 | < 0.003 | 0.017 | 0.004 |
| 590464 | 0.004 | 0.090 | < 0.005 | 0.012 | 0.014 | 6.86 | 2.34 | < 0.003 | 0.016 | 0.003 |
| 590465 | 0.003 | 0.088 | < 0.005 | 0.008 | 0.010 | 1.68 | 2.26 | < 0.003 | 0.013 | 0.005 |
| 590466 | 0.003 | 0.209 | 0.009 | 0.011 | 0.015 | 3.01 | 3.84 | < 0.003 | 0.020 | 0.003 |
| 590467 | 0.005 | 0.552 | 0.011 | 0.013 | < 0.003 | 4.22 | 2.51 | < 0.003 | 0.009 | < 0.003 |
| 590468 | 0.005 | 0.182 | 0.009 | 0.011 | 0.011 | 3.04 | 4.40 | < 0.003 | 0.019 | 0.004 |
| 590469 | < 0.003 | 0.038 | < 0.005 | 0.009 | < 0.003 | 4.51 | 1.95 | < 0.003 | 0.018 | 0.003 |
| 590470 | < 0.003 | 0.063 | < 0.005 | 0.010 | < 0.003 | 2.53 | 1.22 | < 0.003 | 0.011 | < 0.003 |
| 590471 | < 0.003 | 0.213 | < 0.005 | 0.009 | < 0.003 | 3.32 | 1.97 | < 0.003 | 0.012 | < 0.003 |
| 590472 | 0.006 | 0.181 | < 0.005 | 0.009 | 0.005 | 3.33 | 1.87 | < 0.003 | 0.009 | < 0.003 |
| 590473 | < 0.003 | 0.153 | < 0.005 | 0.008 | 0.046 | 5.31 | 1.96 | < 0.003 | 0.012 | < 0.003 |
| 590474 | < 0.003 | 0.027 | < 0.005 | 0.009 | 0.003 | 5.02 | 2.11 | < 0.003 | 0.016 | 0.003 |
| 590475 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.17 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590476 | 0.003 | 0.305 | 0.005 | 0.011 | 0.011 | 3.88 | 2.09 | < 0.003 | 0.013 | 0.004 |
| 590477 | < 0.003 | 0.019 | < 0.005 | 0.005 | 0.006 | 3.58 | 1.31 | < 0.003 | 0.010 | 0.003 |
| 590478 | < 0.003 | 0.064 | < 0.005 | 0.010 | 0.003 | 5.00 | 0.84 | < 0.003 | 0.008 | 0.004 |
| 590479 | < 0.003 | 0.024 | < 0.005 | 0.006 | 0.004 | 5.90 | 0.12 | < 0.003 | 0.003 | 0.003 |
| 590480 | < 0.003 | 0.033 | < 0.005 | 0.007 | 0.006 | 6.54 | 0.71 | < 0.003 | 0.005 | < 0.003 |
| 590481 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.004 | 4.64 | 0.25 | < 0.003 | < 0.003 | 0.003 |
| 590482 | < 0.003 | 0.050 | < 0.005 | 0.012 | < 0.003 | 6.44 | 4.09 | < 0.003 | 0.027 | 0.004 |
| 590483 | < 0.003 | 0.139 | < 0.005 | 0.010 | 0.012 | 5.57 | 2.27 | < 0.003 | 0.014 | 0.003 |
| 590484 | 0.004 | 0.121 | < 0.005 | 0.008 | 0.010 | 5.83 | 1.75 | < 0.003 | 0.010 | < 0.003 |
| 590485 | 0.006 | 0.549 | 0.011 | 0.013 | < 0.003 | 4.19 | 2.50 | < 0.003 | 0.008 | 0.004 |
| 590486 | < 0.003 | 0.053 | < 0.005 | 0.014 | 0.004 | 4.42 | 0.46 | < 0.003 | 0.008 | 0.003 |
| 590487 | 0.003 | 0.031 | < 0.005 | 0.005 | 0.013 | 4.74 | 1.01 | < 0.003 | 0.008 | 0.004 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590488 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.18 | 0.02 | < 0.003 | 0.004 | 0.003 |
| 590489 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.012 | 4.35 | 0.13 | < 0.003 | 0.003 | 0.004 |
| 590490 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.006 | 3.24 | 0.11 | < 0.003 | < 0.003 | 0.004 |
| 590491 | < 0.003 | 0.086 | < 0.005 | 0.023 | 0.017 | 3.70 | 2.88 | < 0.003 | 0.028 | 0.005 |
| 590492 | < 0.003 | 0.028 | < 0.005 | 0.010 | 0.009 | 4.20 | 0.52 | < 0.003 | 0.008 | 0.004 |
| 590493 | < 0.003 | 0.057 | < 0.005 | 0.018 | 0.014 | 5.43 | 1.54 | < 0.003 | 0.016 | 0.003 |
| 590494 | 0.004 | 0.009 | < 0.005 | < 0.005 | 0.011 | 4.07 | 0.20 | < 0.003 | 0.003 | 0.005 |
| 590495 | 0.004 | 0.081 | 0.007 | 0.012 | 0.025 | 2.60 | 2.61 | < 0.003 | 0.013 | < 0.003 |
| 590496 | 0.003 | 0.099 | 0.008 | 0.010 | 0.021 | 3.73 | 2.43 | < 0.003 | 0.011 | 0.003 |
| 590497 | < 0.003 | 0.033 | < 0.005 | 0.007 | 0.017 | 11.52 | 0.37 | < 0.003 | 0.007 | 0.003 |
| 590498 | < 0.003 | 0.045 | < 0.005 | 0.006 | 0.021 | 6.87 | 0.85 | < 0.003 | 0.010 | 0.003 |
| 590499 | < 0.003 | 0.051 | < 0.005 | 0.006 | 0.011 | 5.88 | 1.00 | < 0.003 | 0.010 | < 0.003 |
| 590500 | < 0.003 | 0.045 | < 0.005 | 0.010 | 0.022 | 2.09 | 2.01 | < 0.003 | 0.013 | 0.005 |
| 590501 | < 0.003 | 0.094 | < 0.005 | 0.012 | 0.022 | 6.17 | 0.09 | < 0.003 | 0.004 | < 0.003 |
| 590502 | < 0.003 | 0.237 | 0.007 | 0.013 | < 0.003 | 2.72 | 2.06 | < 0.003 | 0.014 | 0.005 |
| 590503 | < 0.003 | 0.148 | 0.005 | 0.011 | 0.005 | 5.82 | 2.14 | < 0.003 | 0.019 | 0.003 |
| 590504 | < 0.003 | 0.158 | 0.007 | 0.014 | 0.003 | 2.07 | 2.82 | < 0.003 | 0.020 | 0.004 |
| 590505 | 0.003 | 0.041 | 0.005 | 0.010 | < 0.003 | 1.33 | 1.48 | < 0.003 | 0.012 | < 0.003 |
| 590506 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.21 | 0.03 | < 0.003 | 0.004 | 0.003 |
| 590507 | 0.005 | 0.062 | < 0.005 | 0.011 | 0.014 | 6.65 | 2.41 | < 0.003 | 0.016 | 0.003 |
| 590508 | 0.003 | 0.075 | 0.008 | 0.011 | < 0.003 | 1.66 | 2.19 | < 0.003 | 0.020 | < 0.003 |
| 590509 | < 0.003 | 0.058 | < 0.005 | 0.017 | 0.016 | 7.00 | 0.43 | < 0.003 | 0.009 | 0.005 |
| 590510 | 0.004 | 0.044 | < 0.005 | 0.009 | 0.008 | 7.51 | 0.50 | < 0.003 | 0.008 | < 0.003 |
| 590511 | < 0.003 | 0.019 | < 0.005 | 0.006 | 0.007 | 7.48 | 0.11 | < 0.003 | 0.004 | 0.005 |
| 590512 | < 0.003 | 0.069 | < 0.005 | 0.015 | 0.006 | 3.43 | 0.83 | < 0.003 | 0.010 | 0.004 |
| 590513 | 0.004 | 0.692 | 0.008 | 0.016 | 0.029 | 3.14 | 5.39 | < 0.003 | 0.021 | 0.007 |
| 590514 | < 0.003 | 0.141 | < 0.005 | 0.015 | 0.028 | 2.93 | 2.13 | < 0.003 | 0.013 | 0.004 |
| 590515 | < 0.003 | 0.227 | 0.008 | 0.014 | 0.051 | 2.90 | 3.61 | < 0.003 | 0.016 | 0.003 |
| 590516 | 0.003 | 0.100 | < 0.005 | 0.014 | 0.028 | 3.12 | 1.64 | < 0.003 | 0.016 | < 0.003 |
| 590517 | 0.003 | 0.182 | < 0.005 | 0.016 | 0.021 | 5.40 | 2.13 | < 0.003 | 0.015 | < 0.003 |
| 590518 | < 0.003 | 0.059 | < 0.005 | 0.021 | 0.018 | 5.90 | 2.59 | < 0.003 | 0.020 | 0.003 |
| 590519 | 0.006 | 0.532 | 0.011 | 0.013 | < 0.003 | 4.03 | 2.48 | < 0.003 | 0.008 | 0.003 |
| 590520 | < 0.003 | 0.047 | < 0.005 | 0.011 | 0.011 | 8.96 | 1.20 | < 0.003 | 0.011 | 0.005 |
| 590521 | 0.004 | 0.069 | < 0.005 | 0.010 | 0.009 | 5.84 | 1.21 | < 0.003 | 0.011 | 0.003 |
| 590522 | < 0.003 | 0.080 | < 0.005 | 0.015 | 0.064 | 6.49 | 4.15 | < 0.003 | 0.027 | 0.004 |
| 590523 | < 0.003 | 0.030 | < 0.005 | 0.006 | 0.005 | 4.43 | 0.53 | < 0.003 | 0.006 | < 0.003 |
| 590524 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.005 | 4.61 | 0.09 | < 0.003 | 0.003 | 0.004 |
| 590525 | < 0.003 | 0.050 | < 0.005 | 0.006 | 0.014 | 4.92 | 0.17 | < 0.003 | 0.003 | < 0.003 |
| 590526 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.19 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590527 | < 0.003 | 0.614 | 0.006 | 0.022 | 0.006 | 4.82 | 4.95 | < 0.003 | 0.041 | 0.005 |
| 590528 | 0.004 | 0.038 | < 0.005 | 0.005 | < 0.003 | 5.43 | 0.24 | < 0.003 | 0.003 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590529 | < 0.003 | 0.127 | < 0.005 | 0.011 | 0.016 | 6.14 | 2.97 | < 0.003 | 0.020 | 0.005 |
| 590530 | 0.003 | 0.073 | 0.005 | 0.008 | 0.130 | 10.52 | 2.24 | < 0.003 | 0.011 | 0.004 |
| 590531 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.011 | 5.09 | 0.16 | < 0.003 | 0.003 | < 0.003 |
| 590532 | < 0.003 | 0.100 | < 0.005 | 0.010 | 0.011 | 7.45 | 0.90 | < 0.003 | 0.009 | 0.004 |
| 590533 | < 0.003 | 0.051 | < 0.005 | 0.007 | < 0.003 | 6.59 | 0.46 | < 0.003 | 0.006 | < 0.003 |
| 590534 | < 0.003 | 0.085 | < 0.005 | 0.009 | 0.011 | 6.58 | 0.80 | < 0.003 | 0.006 | < 0.003 |
| 590535 | 0.004 | 0.070 | < 0.005 | 0.007 | 0.009 | 7.67 | 0.98 | < 0.003 | 0.008 | 0.003 |
| 590536 | 0.006 | 0.552 | 0.011 | 0.014 | < 0.003 | 4.24 | 2.52 | < 0.003 | 0.008 | < 0.003 |
| 590537 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.006 | 5.26 | 0.10 | 0.004 | 0.003 | < 0.003 |
| 590538 | < 0.003 | 0.012 | < 0.005 | 0.005 | 0.007 | 4.80 | 0.49 | 0.004 | 0.006 | 0.003 |
| 590539 | 0.004 | 0.006 | < 0.005 | < 0.005 | 0.007 | 3.54 | 0.33 | < 0.003 | 0.004 | 0.003 |
| 590540 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.007 | 3.21 | 0.19 | < 0.003 | 0.004 | 0.004 |
| 590541 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.21 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590542 | < 0.003 | 0.023 | < 0.005 | < 0.005 | 0.006 | 4.10 | 0.65 | < 0.003 | 0.005 | 0.003 |
| 590543 | < 0.003 | 0.238 | < 0.005 | 0.010 | < 0.003 | 3.96 | 2.89 | < 0.003 | 0.014 | < 0.003 |
| 590544 | < 0.003 | 0.074 | < 0.005 | 0.008 | 0.014 | 2.71 | 2.96 | < 0.003 | 0.013 | < 0.003 |
| 590545 | < 0.003 | 0.092 | < 0.005 | 0.013 | 0.047 | 4.64 | 5.38 | < 0.003 | 0.023 | 0.004 |
| 590546 | < 0.003 | 0.075 | < 0.005 | 0.012 | 0.023 | 3.99 | 3.82 | < 0.003 | 0.017 | < 0.003 |
| 590547 | < 0.003 | 0.044 | < 0.005 | 0.013 | < 0.003 | 2.97 | 2.08 | < 0.003 | 0.013 | 0.006 |
| 590548 | < 0.003 | 0.355 | < 0.005 | 0.012 | < 0.003 | 2.64 | 5.79 | < 0.003 | 0.019 | < 0.003 |
| 590549 | 0.003 | 0.049 | < 0.005 | < 0.005 | 0.009 | 5.91 | 0.18 | < 0.003 | 0.003 | < 0.003 |
| 590550 | < 0.003 | 0.214 | < 0.005 | 0.009 | 0.008 | 6.49 | 1.75 | < 0.003 | 0.010 | 0.003 |
| 590551 | 0.003 | 0.245 | < 0.005 | 0.012 | < 0.003 | 6.79 | 1.87 | < 0.003 | 0.014 | 0.003 |
| 590552 | < 0.003 | 0.063 | < 0.005 | 0.006 | 0.005 | 4.98 | 0.59 | < 0.003 | 0.006 | 0.003 |
| 590553 | < 0.003 | 0.023 | < 0.005 | 0.007 | < 0.003 | 5.13 | 0.37 | < 0.003 | 0.005 | 0.004 |
| 590554 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.011 | 3.03 | 0.10 | < 0.003 | < 0.003 | 0.004 |
| 590555 | < 0.003 | 0.182 | 0.005 | 0.008 | < 0.003 | 1.96 | 2.24 | < 0.003 | 0.010 | 0.004 |
| 590556 | 0.003 | 0.040 | < 0.005 | 0.010 | < 0.003 | 2.24 | 0.34 | < 0.003 | 0.008 | 0.004 |
| 590557 | < 0.003 | 0.099 | < 0.005 | 0.010 | < 0.003 | 2.82 | 0.49 | < 0.003 | 0.008 | 0.003 |
| 590558 | < 0.003 | 0.035 | < 0.005 | 0.012 | 0.015 | 3.35 | 2.02 | < 0.003 | 0.014 | 0.004 |
| 590559 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.026 | 13.15 | 0.70 | < 0.003 | 0.003 | 0.003 |
| 590560 | < 0.003 | 0.040 | < 0.005 | 0.011 | < 0.003 | 4.29 | 0.44 | < 0.003 | 0.007 | < 0.003 |
| 590561 | 0.003 | 0.071 | < 0.005 | 0.010 | 0.016 | 4.52 | 1.11 | < 0.003 | 0.009 | < 0.003 |
| 590562 | < 0.003 | 0.066 | < 0.005 | 0.010 | 0.018 | 4.12 | 0.29 | < 0.003 | 0.006 | < 0.003 |
| 590563 | 0.004 | 0.134 | 0.005 | 0.023 | < 0.003 | 5.50 | 8.51 | < 0.003 | 0.057 | 0.003 |
| 590564 | < 0.003 | 0.067 | < 0.005 | 0.008 | 0.040 | 8.58 | 2.96 | < 0.003 | 0.008 | < 0.003 |
| 590565 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.009 | 4.43 | 0.06 | < 0.003 | < 0.003 | < 0.003 |
| 590566 | < 0.003 | 0.067 | < 0.005 | 0.008 | < 0.003 | 6.06 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 590567 | < 0.003 | 0.039 | < 0.005 | 0.006 | < 0.003 | 6.04 | 0.07 | < 0.003 | < 0.003 | < 0.003 |
| 590568 | < 0.003 | 0.023 | < 0.005 | 0.005 | < 0.003 | 7.11 | 0.40 | < 0.003 | 0.005 | < 0.003 |
| 590569 | < 0.003 | 0.014 | < 0.005 | < 0.005 | < 0.003 | 5.11 | 0.31 | < 0.003 | 0.005 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590570 | < 0.003 | 0.011 | < 0.005 | 0.005 | 0.005 | 5.55 | 0.69 | < 0.003 | 0.006 | < 0.003 |
| 590571 | 0.004 | 0.041 | < 0.005 | 0.005 | 0.021 | 5.14 | 1.24 | < 0.003 | 0.007 | 0.003 |
| 590572 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.33 | 0.02 | < 0.003 | < 0.003 | < 0.003 |
| 590573 | < 0.003 | 0.022 | < 0.005 | 0.006 | 0.003 | 4.10 | 0.76 | < 0.003 | 0.008 | < 0.003 |
| 590574 | < 0.003 | 0.015 | < 0.005 | 0.009 | < 0.003 | 3.37 | 1.30 | < 0.003 | 0.012 | < 0.003 |
| 590575 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.005 | 3.50 | 0.28 | < 0.003 | 0.003 | < 0.003 |
| 590576 | < 0.003 | 0.039 | < 0.005 | 0.005 | 0.043 | 5.40 | 1.65 | < 0.003 | 0.006 | < 0.003 |
| 590577 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.010 | 4.37 | 0.42 | < 0.003 | 0.003 | 0.003 |
| 590578 | < 0.003 | 0.095 | < 0.005 | 0.009 | 0.063 | 6.53 | 2.15 | < 0.003 | 0.013 | 0.003 |
| 590579 | < 0.003 | 0.040 | < 0.005 | < 0.005 | 0.042 | 6.64 | 1.59 | < 0.003 | 0.008 | < 0.003 |
| 590580 | < 0.003 | 0.071 | < 0.005 | 0.010 | 0.086 | 7.79 | 2.92 | < 0.003 | 0.016 | < 0.003 |
| 590581 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.013 | 2.93 | 1.14 | < 0.003 | 0.007 | < 0.003 |
| 590582 | < 0.003 | 0.133 | < 0.005 | 0.018 | 0.029 | 4.50 | 2.00 | < 0.003 | 0.015 | < 0.003 |
| 590583 | < 0.003 | 0.075 | 0.006 | 0.017 | 0.011 | 3.03 | 2.09 | < 0.003 | 0.014 | 0.004 |
| 590584 | < 0.003 | 0.052 | < 0.005 | 0.006 | 0.003 | 5.22 | 0.98 | 0.003 | 0.008 | < 0.003 |
| 590585 | < 0.003 | 0.056 | < 0.005 | 0.014 | < 0.003 | 4.52 | 1.32 | < 0.003 | 0.014 | < 0.003 |
| 590586 | < 0.003 | 0.108 | < 0.005 | 0.012 | 0.004 | 3.69 | 0.22 | < 0.003 | 0.006 | < 0.003 |
| 590587 | 0.004 | 0.053 | < 0.005 | < 0.005 | 0.066 | 7.24 | 3.03 | < 0.003 | 0.008 | 0.004 |
| 590588 | 0.003 | 0.077 | < 0.005 | 0.013 | < 0.003 | 3.44 | 4.91 | < 0.003 | 0.025 | 0.003 |
| 590589 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.006 | 1.77 | 0.22 | < 0.003 | < 0.003 | 0.003 |
| 590590 | < 0.003 | 0.034 | < 0.005 | 0.006 | 0.059 | 6.52 | 4.33 | < 0.003 | 0.019 | 0.003 |
| 590591 | 0.004 | 0.048 | 0.010 | 0.008 | 0.027 | 3.88 | 4.83 | < 0.003 | 0.012 | < 0.003 |
| 590592 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.34 | 0.21 | < 0.003 | 0.003 | < 0.003 |
| 590593 | < 0.003 | 0.034 | < 0.005 | 0.010 | 0.050 | 7.74 | 2.15 | < 0.003 | 0.011 | < 0.003 |
| 590594 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.012 | 7.15 | 0.24 | < 0.003 | < 0.003 | < 0.003 |
| 590595 | < 0.003 | 0.022 | < 0.005 | 0.010 | 0.016 | 6.27 | 4.24 | < 0.003 | 0.017 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | | 0.015 | | | 0.032 | 13.08 | 1.10 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| MA-N (Depleted) Meas | 0.035 | 0.026 | | | 0.006 | | | | | |
| MA-N (Depleted) Cert | 0.035 | 0.025 | | | 0.003 | | | | | |
| ZW-C Meas | 0.010 | | < 0.005 | 0.008 | 0.012 | 9.46 | 0.02 | 0.166 | | 0.039 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| ZW-C Meas | 0.010 | | < 0.005 | 0.006 | 0.012 | 9.51 | 0.02 | 0.163 | | 0.040 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.098 | 0.104 | | | 0.100 | 4.02 | | 0.103 | 0.105 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | 0.099 | 0.103 | | | 0.101 | 4.01 | | 0.101 | 0.105 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.005 | 0.684 | | 0.020 | 0.088 | 8.24 | 3.87 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | 0.005 | 1.311 | < 0.005 | 0.030 | 0.162 | 11.28 | 5.22 | | 0.023 | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.005 | 0.952 | < 0.005 | 0.031 | 0.208 | 10.66 | 5.74 | | 0.031 | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| 590394 Orig | < 0.003 | 0.124 | 0.005 | 0.011 | 0.006 | 6.92 | 2.27 | < 0.003 | 0.020 | < 0.003 |
| 590394 Dup | < 0.003 | 0.123 | < 0.005 | 0.012 | 0.007 | 6.95 | 2.29 | < 0.003 | 0.021 | 0.003 |
| 590414 Orig | < 0.003 | 0.033 | < 0.005 | 0.005 | 0.008 | 6.08 | 0.59 | < 0.003 | 0.005 | 0.005 |
| 590414 Split PREP DUP | < 0.003 | 0.036 | < 0.005 | 0.006 | 0.010 | 6.10 | 0.59 | < 0.003 | 0.005 | 0.003 |
| 590424 Orig | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.003 | 0.25 | 0.05 | < 0.003 | 0.003 | < 0.003 |
| 590424 Dup | 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.25 | 0.05 | < 0.003 | 0.003 | < 0.003 |
| 590454 Orig | < 0.003 | 0.292 | 0.006 | 0.010 | < 0.003 | 2.74 | 2.80 | < 0.003 | 0.017 | 0.004 |
| 590454 Dup | < 0.003 | 0.295 | 0.005 | 0.010 | < 0.003 | 2.73 | 2.82 | < 0.003 | 0.016 | 0.006 |
| 590464 Orig | 0.004 | 0.090 | < 0.005 | 0.012 | 0.014 | 6.86 | 2.34 | < 0.003 | 0.016 | 0.003 |
| 590464 Split PREP DUP | 0.003 | 0.089 | < 0.005 | 0.012 | 0.013 | 7.01 | 2.23 | < 0.003 | 0.016 | 0.004 |
| 590484 Orig | 0.003 | 0.121 | < 0.005 | 0.007 | 0.010 | 5.84 | 1.75 | < 0.003 | 0.010 | < 0.003 |
| 590484 Dup | 0.004 | 0.121 | < 0.005 | 0.009 | 0.010 | 5.82 | 1.75 | < 0.003 | 0.011 | 0.004 |
| 590513 Orig | 0.004 | 0.691 | 0.008 | 0.016 | 0.027 | 3.11 | 5.34 | < 0.003 | 0.021 | 0.008 |
| 590513 Dup | 0.005 | 0.694 | 0.007 | 0.017 | 0.030 | 3.17 | 5.45 | < 0.003 | 0.022 | 0.005 |
| 590514 Orig | < 0.003 | 0.141 | < 0.005 | 0.015 | 0.028 | 2.93 | 2.13 | < 0.003 | 0.013 | 0.004 |
| 590514 Split PREP DUP | 0.004 | 0.141 | < 0.005 | 0.014 | 0.028 | 3.03 | 2.14 | < 0.003 | 0.014 | 0.003 |
| 590544 Orig | 0.004 | 0.074 | < 0.005 | 0.007 | 0.013 | 2.68 | 2.92 | < 0.003 | 0.013 | < 0.003 |
| 590544 Dup | < 0.003 | 0.074 | < 0.005 | 0.008 | 0.015 | 2.74 | 3.00 | < 0.003 | 0.013 | < 0.003 |
| 590564 Orig | < 0.003 | 0.067 | < 0.005 | 0.008 | 0.040 | 8.58 | 2.96 | < 0.003 | 0.008 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590564 Split PREP DUP | 0.003 | 0.068 | < 0.005 | 0.008 | 0.040 | 8.59 | 2.97 | < 0.003 | 0.008 | < 0.003 |
| 590574 Orig | < 0.003 | 0.016 | < 0.005 | 0.009 | < 0.003 | 3.37 | 1.32 | < 0.003 | 0.012 | < 0.003 |
| 590574 Dup | < 0.003 | 0.015 | < 0.005 | 0.009 | < 0.003 | 3.37 | 1.28 | < 0.003 | 0.012 | < 0.003 |
| 590594 Orig | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.011 | 7.23 | 0.25 | < 0.003 | < 0.003 | < 0.003 |
| 590594 Dup | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.013 | 7.08 | 0.23 | < 0.003 | < 0.003 | < 0.003 |
| 590595 Orig | < 0.003 | 0.022 | < 0.005 | 0.010 | 0.016 | 6.27 | 4.24 | < 0.003 | 0.017 | 0.003 |
| 590595 Split PREP DUP | < 0.003 | 0.021 | 0.005 | 0.009 | 0.016 | 6.14 | 4.22 | < 0.003 | 0.017 | < 0.003 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 25-Jun-18
Invoice No.: A18-08117
Invoice Date: 03-Aug-18
Your Reference:

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

276 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-08117**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Footnote: ZrO2 cannot be reported for sample #s 590897, 590903, 590905 and 590916 due to the interference by Sr.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized with a large, looped 'E' and a long horizontal stroke at the end.

Emmanuel Esemé , Ph.D.
Quality Control

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| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590851 | < 0.003 | 0.069 | < 0.005 | 0.009 | 0.021 | 7.93 | 2.73 | < 0.003 | 0.012 | 0.003 |
| 590852 | < 0.003 | 0.030 | < 0.005 | 0.005 | 0.021 | 6.48 | 1.11 | < 0.003 | 0.006 | < 0.003 |
| 590853 | 0.003 | 0.025 | < 0.005 | 0.006 | 0.005 | 7.65 | 1.10 | 0.005 | 0.007 | < 0.003 |
| 590854 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.012 | 5.47 | 0.50 | < 0.003 | 0.004 | < 0.003 |
| 590855 | 0.005 | 0.040 | < 0.005 | 0.006 | 0.004 | 6.25 | 1.18 | < 0.003 | 0.005 | 0.003 |
| 590856 | 0.003 | 0.020 | < 0.005 | < 0.005 | 0.037 | 15.23 | 1.38 | 0.004 | 0.005 | < 0.003 |
| 590857 | < 0.003 | 0.053 | < 0.005 | 0.007 | 0.011 | 7.08 | 2.00 | < 0.003 | 0.009 | < 0.003 |
| 590858 | < 0.003 | 0.028 | < 0.005 | < 0.005 | 0.014 | 6.71 | 0.56 | < 0.003 | 0.004 | < 0.003 |
| 590859 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.003 | 0.17 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| 590860 | < 0.003 | 0.030 | < 0.005 | < 0.005 | 0.013 | 7.66 | 0.48 | < 0.003 | 0.004 | < 0.003 |
| 590861 | < 0.003 | 0.024 | < 0.005 | < 0.005 | 0.014 | 7.38 | 0.30 | < 0.003 | 0.003 | < 0.003 |
| 590862 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.003 | 0.23 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 590863 | 0.004 | 0.089 | < 0.005 | 0.010 | 0.011 | 6.89 | 1.83 | < 0.003 | 0.009 | < 0.003 |
| 590864 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.021 | 7.99 | 0.20 | < 0.003 | 0.003 | < 0.003 |
| 590865 | < 0.003 | 0.069 | < 0.005 | 0.006 | 0.004 | 6.93 | 0.47 | < 0.003 | 0.005 | < 0.003 |
| 590866 | < 0.003 | 0.026 | < 0.005 | < 0.005 | 0.011 | 6.74 | 0.37 | < 0.003 | 0.004 | < 0.003 |
| 590867 | < 0.003 | 0.041 | < 0.005 | 0.005 | < 0.003 | 6.22 | 0.58 | < 0.003 | 0.005 | < 0.003 |
| 590868 | 0.003 | 0.032 | < 0.005 | 0.006 | 0.009 | 6.77 | 0.15 | < 0.003 | 0.004 | < 0.003 |
| 590869 | 0.006 | 0.531 | 0.010 | 0.012 | < 0.003 | 4.08 | 2.52 | < 0.003 | 0.007 | < 0.003 |
| 590870 | 0.003 | 0.013 | < 0.005 | < 0.005 | 0.013 | 6.43 | 0.45 | < 0.003 | 0.004 | < 0.003 |
| 590871 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.031 | 5.15 | 0.31 | < 0.003 | 0.004 | < 0.003 |
| 590872 | < 0.003 | 0.017 | < 0.005 | 0.006 | 0.019 | 5.61 | 0.40 | < 0.003 | 0.005 | < 0.003 |
| 590873 | < 0.003 | 0.107 | < 0.005 | 0.011 | < 0.003 | 4.88 | 1.27 | < 0.003 | 0.010 | < 0.003 |
| 590874 | < 0.003 | 0.058 | < 0.005 | 0.010 | < 0.003 | 4.16 | 1.41 | < 0.003 | 0.008 | < 0.003 |
| 590875 | 0.003 | 0.058 | < 0.005 | 0.011 | 0.020 | 5.57 | 11.23 | < 0.003 | 0.030 | 0.003 |
| 590876 | 0.006 | 0.072 | 0.009 | 0.009 | 0.117 | 8.18 | 5.14 | < 0.003 | 0.013 | 0.003 |
| 590877 | < 0.003 | 0.049 | < 0.005 | 0.012 | 0.007 | 8.58 | 1.65 | < 0.003 | 0.016 | < 0.003 |
| 590878 | < 0.003 | 0.013 | < 0.005 | 0.006 | 0.013 | 7.04 | 0.33 | < 0.003 | 0.003 | 0.003 |
| 590879 | 0.003 | 0.037 | 0.007 | 0.013 | < 0.003 | 7.03 | 1.89 | < 0.003 | 0.011 | 0.003 |
| 590880 | < 0.003 | 0.102 | < 0.005 | 0.009 | < 0.003 | 9.37 | 1.73 | < 0.003 | 0.011 | < 0.003 |
| 590881 | 0.004 | 0.047 | 0.005 | 0.009 | < 0.003 | 6.83 | 1.60 | < 0.003 | 0.010 | < 0.003 |
| 590882 | 0.003 | 0.037 | 0.006 | 0.006 | 0.010 | 8.40 | 1.77 | < 0.003 | 0.007 | < 0.003 |
| 590883 | < 0.003 | 0.036 | 0.007 | 0.053 | < 0.003 | 6.80 | 1.52 | < 0.003 | 0.022 | < 0.003 |
| 590884 | < 0.003 | 0.021 | < 0.005 | < 0.005 | 0.017 | 6.83 | 0.29 | < 0.003 | 0.004 | < 0.003 |
| 590885 | < 0.003 | 0.096 | 0.007 | 0.011 | < 0.003 | 3.50 | 2.40 | < 0.003 | 0.012 | < 0.003 |
| 590886 | 0.003 | 0.015 | < 0.005 | 0.006 | 0.010 | 6.96 | 0.60 | < 0.003 | 0.005 | < 0.003 |
| 590887 | < 0.003 | 0.027 | < 0.005 | < 0.005 | 0.011 | 7.75 | 0.43 | < 0.003 | 0.004 | < 0.003 |
| 590888 | 0.004 | 0.106 | < 0.005 | 0.007 | 0.009 | 8.87 | 1.00 | < 0.003 | 0.005 | 0.004 |
| 590889 | 0.003 | 0.021 | < 0.005 | < 0.005 | 0.036 | 6.02 | 0.45 | < 0.003 | 0.003 | < 0.003 |
| 590890 | < 0.003 | 0.018 | < 0.005 | 0.006 | 0.021 | 6.57 | 0.47 | < 0.003 | 0.005 | 0.018 |
| 590891 | < 0.003 | 0.021 | < 0.005 | 0.005 | 0.029 | 8.37 | 0.14 | < 0.003 | 0.004 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590892 | < 0.003 | 0.043 | 0.005 | 0.010 | 0.008 | 6.44 | 1.47 | < 0.003 | 0.009 | 0.003 |
| 590893 | < 0.003 | 0.018 | < 0.005 | 0.006 | 0.012 | 6.99 | 0.27 | < 0.003 | 0.005 | < 0.003 |
| 590894 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.015 | 6.03 | 0.20 | < 0.003 | 0.004 | < 0.003 |
| 590895 | < 0.003 | 0.014 | < 0.005 | 0.006 | 0.005 | 5.98 | 0.14 | < 0.003 | 0.005 | < 0.003 |
| 590896 | 0.003 | 0.004 | < 0.005 | 0.006 | 0.003 | 4.12 | 0.62 | < 0.003 | 0.006 | < 0.003 |
| 590897 | < 0.003 | 0.004 | 0.010 | 0.017 | | 5.71 | 0.36 | < 0.003 | 0.008 | < 0.003 |
| 590898 | 0.003 | 0.011 | < 0.005 | < 0.005 | 0.030 | 5.38 | 0.32 | 0.005 | 0.005 | < 0.003 |
| 590899 | < 0.003 | 0.030 | 0.009 | 0.012 | < 0.003 | 5.05 | 0.02 | < 0.003 | 0.005 | < 0.003 |
| 590900 | 0.003 | < 0.003 | < 0.005 | 0.006 | 0.005 | 0.14 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590901 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.007 | 5.51 | 0.14 | < 0.003 | < 0.003 | 0.003 |
| 590902 | 0.003 | 0.182 | 0.006 | 0.010 | < 0.003 | 8.10 | 3.51 | < 0.003 | 0.013 | < 0.003 |
| 590903 | < 0.003 | 0.044 | 0.017 | 0.018 | | 6.13 | 6.22 | < 0.003 | 0.030 | 0.003 |
| 590904 | 0.003 | 0.045 | < 0.005 | 0.009 | 0.030 | 8.89 | 4.43 | < 0.003 | 0.019 | < 0.003 |
| 590905 | < 0.003 | 0.017 | 0.014 | 0.020 | | 5.62 | 3.96 | < 0.003 | 0.034 | < 0.003 |
| 590906 | < 0.003 | 0.015 | < 0.005 | 0.005 | 0.017 | 6.22 | 0.63 | < 0.003 | 0.006 | 0.003 |
| 590907 | < 0.003 | 0.019 | 0.008 | 0.010 | < 0.003 | 6.24 | 0.27 | < 0.003 | 0.006 | 0.003 |
| 590908 | < 0.003 | 0.053 | < 0.005 | 0.005 | 0.022 | 6.18 | 0.16 | < 0.003 | 0.005 | < 0.003 |
| 590909 | < 0.003 | 0.009 | < 0.005 | 0.012 | 0.029 | 6.03 | 0.29 | < 0.003 | 0.008 | < 0.003 |
| 590910 | 0.004 | 0.015 | < 0.005 | 0.012 | 0.015 | 5.56 | 0.49 | < 0.003 | 0.008 | < 0.003 |
| 590911 | 0.003 | 0.047 | 0.007 | 0.021 | 0.013 | 7.00 | 3.28 | < 0.003 | 0.023 | 0.004 |
| 590912 | < 0.003 | 0.021 | 0.005 | 0.010 | 0.027 | 4.44 | 3.45 | < 0.003 | 0.011 | < 0.003 |
| 590913 | 0.003 | 0.067 | 0.009 | 0.012 | < 0.003 | 5.71 | 4.87 | < 0.003 | 0.018 | < 0.003 |
| 590914 | < 0.003 | 0.026 | 0.006 | 0.008 | < 0.003 | 7.52 | 0.91 | < 0.003 | 0.007 | < 0.003 |
| 590915 | < 0.003 | 0.016 | < 0.005 | 0.006 | 0.011 | 6.59 | 0.66 | < 0.003 | 0.005 | < 0.003 |
| 590916 | < 0.003 | 0.036 | 0.022 | 0.014 | | 5.91 | 0.71 | < 0.003 | 0.004 | < 0.003 |
| 590917 | < 0.003 | < 0.003 | < 0.005 | 0.006 | 0.004 | 0.19 | 0.02 | < 0.003 | 0.005 | < 0.003 |
| 590918 | < 0.003 | 0.014 | 0.007 | 0.005 | < 0.003 | 2.57 | 1.59 | < 0.003 | 0.011 | < 0.003 |
| 590919 | < 0.003 | 0.036 | 0.005 | 0.007 | 0.013 | 7.01 | 1.25 | < 0.003 | 0.010 | < 0.003 |
| 590920 | < 0.003 | 0.071 | < 0.005 | 0.006 | 0.011 | 6.84 | 0.34 | < 0.003 | 0.005 | < 0.003 |
| 590921 | 0.005 | < 0.003 | < 0.005 | 0.006 | 0.004 | 0.14 | 0.02 | < 0.003 | 0.004 | < 0.003 |
| 590922 | 0.007 | 0.009 | < 0.005 | < 0.005 | 0.035 | 6.01 | 0.42 | < 0.003 | 0.005 | 0.006 |
| 590923 | 0.004 | 0.053 | < 0.005 | < 0.005 | 0.010 | 6.51 | 1.03 | < 0.003 | 0.007 | < 0.003 |
| 590924 | < 0.003 | 0.055 | 0.005 | 0.010 | < 0.003 | 7.52 | 5.04 | < 0.003 | 0.017 | < 0.003 |
| 590925 | < 0.003 | 0.003 | 0.005 | 0.008 | < 0.003 | 7.06 | 0.57 | < 0.003 | 0.006 | < 0.003 |
| 590926 | 0.003 | 0.048 | 0.005 | 0.010 | 0.005 | 6.13 | 3.84 | < 0.003 | 0.016 | 0.003 |
| 590927 | < 0.003 | < 0.003 | < 0.005 | 0.014 | < 0.003 | 6.30 | 4.21 | < 0.003 | 0.017 | < 0.003 |
| 590928 | 0.003 | 0.025 | < 0.005 | 0.005 | 0.035 | 9.75 | 0.29 | < 0.003 | 0.005 | < 0.003 |
| 590929 | 0.003 | 0.042 | < 0.005 | 0.009 | 0.010 | 4.75 | 3.30 | < 0.003 | 0.014 | < 0.003 |
| 590930 | < 0.003 | 0.214 | < 0.005 | 0.010 | 0.008 | 5.48 | 2.80 | < 0.003 | 0.011 | < 0.003 |
| 590931 | < 0.003 | 0.096 | 0.008 | 0.010 | < 0.003 | 4.89 | 1.75 | < 0.003 | 0.012 | < 0.003 |
| 590932 | < 0.003 | 0.110 | 0.005 | 0.010 | < 0.003 | 7.61 | 0.28 | < 0.003 | 0.006 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590933 | < 0.003 | 0.085 | < 0.005 | < 0.005 | 0.018 | 7.30 | 0.77 | < 0.003 | 0.004 | < 0.003 |
| 590934 | 0.003 | 0.414 | 0.011 | 0.010 | < 0.003 | 4.71 | 4.86 | < 0.003 | 0.017 | < 0.003 |
| 590935 | < 0.003 | 0.031 | < 0.005 | < 0.005 | 0.021 | 7.67 | 0.51 | < 0.003 | 0.004 | 0.005 |
| 590936 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.012 | 7.11 | 0.48 | < 0.003 | 0.005 | < 0.003 |
| 590937 | 0.003 | 0.031 | 0.006 | 0.005 | < 0.003 | 6.48 | 0.87 | < 0.003 | 0.005 | 0.021 |
| 590938 | < 0.003 | 0.025 | < 0.005 | 0.006 | 0.005 | 6.57 | 1.27 | < 0.003 | 0.006 | < 0.003 |
| 590939 | 0.005 | 0.550 | 0.013 | 0.014 | < 0.003 | 4.29 | 2.48 | < 0.003 | 0.008 | < 0.003 |
| 590940 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.020 | 7.20 | 0.25 | < 0.003 | 0.004 | < 0.003 |
| 590941 | < 0.003 | 0.401 | 0.007 | 0.011 | < 0.003 | 4.05 | 2.18 | < 0.003 | 0.014 | 0.004 |
| 590942 | 0.003 | 0.076 | 0.006 | 0.007 | < 0.003 | 7.23 | 0.91 | < 0.003 | 0.006 | < 0.003 |
| 590943 | < 0.003 | 0.032 | 0.006 | 0.008 | < 0.003 | 6.93 | 0.37 | < 0.003 | 0.008 | < 0.003 |
| 590944 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.015 | 6.72 | 0.40 | < 0.003 | 0.004 | 0.003 |
| 590945 | < 0.003 | 0.020 | 0.005 | 0.006 | < 0.003 | 6.43 | 0.47 | < 0.003 | 0.004 | 0.016 |
| 590946 | < 0.003 | 0.088 | 0.005 | 0.007 | 0.067 | 11.93 | 1.74 | < 0.003 | 0.008 | < 0.003 |
| 590947 | 0.003 | 0.013 | < 0.005 | 0.007 | < 0.003 | 4.41 | 0.51 | < 0.003 | 0.004 | < 0.003 |
| 590948 | 0.003 | 0.008 | < 0.005 | < 0.005 | 0.012 | 4.46 | 0.44 | < 0.003 | < 0.003 | < 0.003 |
| 590949 | < 0.003 | 0.328 | < 0.005 | 0.006 | 0.011 | 7.19 | 1.51 | < 0.003 | 0.006 | < 0.003 |
| 590950 | < 0.003 | 0.081 | 0.006 | 0.009 | < 0.003 | 1.79 | 0.40 | < 0.003 | 0.010 | 0.003 |
| 590951 | 0.003 | 0.279 | < 0.005 | 0.009 | 0.003 | 7.31 | 1.23 | < 0.003 | 0.007 | 0.003 |
| 590952 | < 0.003 | 0.025 | < 0.005 | 0.006 | 0.014 | 6.59 | 0.45 | < 0.003 | 0.005 | < 0.003 |
| 590953 | < 0.003 | < 0.003 | < 0.005 | 0.011 | < 0.003 | 7.53 | 0.01 | < 0.003 | 0.005 | 0.003 |
| 590954 | < 0.003 | 0.056 | < 0.005 | < 0.005 | 0.007 | 6.72 | 0.38 | < 0.003 | 0.003 | < 0.003 |
| 590955 | < 0.003 | 0.011 | < 0.005 | 0.008 | < 0.003 | 4.73 | 0.80 | < 0.003 | 0.007 | < 0.003 |
| 590956 | < 0.003 | 0.183 | < 0.005 | 0.006 | 0.013 | 6.75 | 0.61 | < 0.003 | 0.005 | < 0.003 |
| 590957 | < 0.003 | 0.020 | < 0.005 | 0.006 | 0.035 | 6.46 | 0.62 | < 0.003 | 0.004 | < 0.003 |
| 590958 | < 0.003 | 0.036 | < 0.005 | 0.006 | 0.015 | 6.97 | 1.16 | < 0.003 | 0.006 | 0.003 |
| 590959 | < 0.003 | 0.083 | < 0.005 | 0.008 | 0.005 | 6.80 | 2.34 | < 0.003 | 0.013 | < 0.003 |
| 590960 | < 0.003 | 0.038 | < 0.005 | 0.007 | 0.009 | 6.80 | 0.80 | < 0.003 | 0.007 | < 0.003 |
| 590961 | < 0.003 | 0.032 | < 0.005 | 0.005 | 0.019 | 4.72 | 0.62 | < 0.003 | 0.004 | < 0.003 |
| 590962 | < 0.003 | 0.041 | < 0.005 | 0.010 | < 0.003 | 4.85 | 1.10 | < 0.003 | 0.011 | < 0.003 |
| 590963 | < 0.003 | 0.040 | < 0.005 | 0.006 | 0.018 | 5.16 | 0.52 | < 0.003 | 0.005 | < 0.003 |
| 590964 | < 0.003 | 0.020 | < 0.005 | 0.006 | 0.010 | 4.46 | 0.61 | < 0.003 | 0.006 | < 0.003 |
| 590965 | < 0.003 | 0.124 | < 0.005 | 0.006 | 0.006 | 6.59 | 2.33 | < 0.003 | 0.013 | < 0.003 |
| 590966 | < 0.003 | 0.043 | < 0.005 | 0.007 | 0.017 | 5.00 | 0.59 | < 0.003 | 0.007 | 0.003 |
| 590967 | 0.006 | 0.530 | 0.011 | 0.014 | < 0.003 | 4.16 | 2.41 | < 0.003 | 0.008 | < 0.003 |
| 590968 | < 0.003 | 0.044 | < 0.005 | 0.006 | 0.010 | 6.87 | 0.72 | < 0.003 | 0.005 | < 0.003 |
| 590969 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.23 | 0.02 | < 0.003 | < 0.003 | 0.008 |
| 590970 | < 0.003 | 0.102 | < 0.005 | 0.005 | 0.023 | 7.80 | 1.28 | < 0.003 | 0.006 | < 0.003 |
| 590971 | < 0.003 | 0.032 | < 0.005 | < 0.005 | 0.014 | 6.26 | 0.95 | < 0.003 | 0.004 | < 0.003 |
| 590972 | < 0.003 | 0.061 | < 0.005 | < 0.005 | 0.009 | 7.42 | 1.08 | < 0.003 | 0.006 | < 0.003 |
| 590973 | < 0.003 | 0.205 | 0.006 | 0.008 | < 0.003 | 4.11 | 0.80 | < 0.003 | 0.009 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 590974 | < 0.003 | 0.036 | 0.005 | 0.010 | < 0.003 | 7.41 | 2.33 | < 0.003 | 0.013 | < 0.003 |
| 590975 | < 0.003 | 0.018 | 0.008 | 0.006 | < 0.003 | 9.30 | 0.81 | < 0.003 | 0.007 | 0.003 |
| 590976 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.020 | 8.37 | 0.68 | < 0.003 | 0.003 | < 0.003 |
| 590977 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.012 | 15.71 | 1.02 | < 0.003 | 0.005 | < 0.003 |
| 590978 | < 0.003 | 0.016 | < 0.005 | 0.006 | < 0.003 | 14.62 | 1.40 | < 0.003 | 0.007 | < 0.003 |
| 590979 | < 0.003 | 0.157 | 0.005 | 0.007 | < 0.003 | 6.66 | 2.11 | < 0.003 | 0.011 | 0.004 |
| 590980 | < 0.003 | 0.008 | 0.010 | 0.013 | < 0.003 | 8.01 | 1.33 | < 0.003 | 0.009 | < 0.003 |
| 590981 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.017 | 6.29 | 0.48 | < 0.003 | 0.005 | 0.003 |
| 590982 | 0.003 | 0.081 | < 0.005 | 0.005 | 0.009 | 7.32 | 2.22 | < 0.003 | 0.008 | < 0.003 |
| 590983 | < 0.003 | 0.041 | < 0.005 | 0.006 | 0.004 | 8.89 | 0.73 | < 0.003 | 0.004 | < 0.003 |
| 590984 | < 0.003 | 0.059 | < 0.005 | 0.007 | < 0.003 | 5.80 | 2.45 | < 0.003 | 0.010 | < 0.003 |
| 590985 | < 0.003 | 0.030 | < 0.005 | < 0.005 | 0.016 | 6.97 | 0.35 | < 0.003 | 0.003 | < 0.003 |
| 590986 | < 0.003 | 0.093 | < 0.005 | 0.005 | 0.012 | 7.21 | 0.66 | < 0.003 | 0.005 | 0.003 |
| 590987 | < 0.003 | 0.431 | < 0.005 | 0.006 | 0.015 | 7.93 | 2.45 | < 0.003 | 0.007 | < 0.003 |
| 590988 | < 0.003 | 0.263 | 0.005 | 0.009 | 0.024 | 3.81 | 3.67 | < 0.003 | 0.018 | < 0.003 |
| 590989 | < 0.003 | 0.087 | 0.005 | 0.010 | < 0.003 | 4.30 | 0.82 | < 0.003 | 0.012 | < 0.003 |
| 590990 | < 0.003 | 0.067 | < 0.005 | 0.006 | 0.015 | 6.83 | 0.98 | < 0.003 | 0.007 | 0.003 |
| 590991 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.035 | 5.69 | 0.38 | < 0.003 | 0.006 | 0.003 |
| 590992 | < 0.003 | 0.018 | < 0.005 | 0.006 | 0.028 | 5.82 | 1.39 | < 0.003 | 0.009 | < 0.003 |
| 590993 | 0.003 | < 0.003 | < 0.005 | 0.008 | < 0.003 | 7.92 | 0.04 | < 0.003 | 0.006 | < 0.003 |
| 590994 | 0.005 | 0.016 | < 0.005 | 0.005 | 0.014 | 5.84 | 0.26 | < 0.003 | 0.004 | 0.003 |
| 590995 | 0.003 | 0.021 | < 0.005 | 0.014 | < 0.003 | 6.21 | 2.85 | < 0.003 | 0.020 | 0.003 |
| 590996 | < 0.003 | 0.072 | < 0.005 | 0.007 | 0.013 | 7.73 | 0.46 | < 0.003 | 0.006 | < 0.003 |
| 590997 | < 0.003 | 0.223 | < 0.005 | 0.006 | 0.005 | 6.53 | 1.32 | < 0.003 | 0.007 | < 0.003 |
| 590998 | 0.004 | 0.759 | 0.005 | 0.010 | 0.020 | 7.63 | 0.76 | < 0.003 | 0.005 | 0.003 |
| 590999 | < 0.003 | 0.129 | < 0.005 | < 0.005 | 0.015 | 5.85 | 0.50 | < 0.003 | 0.004 | < 0.003 |
| 591000 | 0.004 | 0.049 | < 0.005 | 0.006 | 0.107 | 9.95 | 2.48 | < 0.003 | 0.007 | < 0.003 |
| 655401 | < 0.003 | 0.048 | < 0.005 | < 0.005 | 0.023 | 6.51 | 1.12 | 0.003 | 0.005 | < 0.003 |
| 655402 | < 0.003 | 0.080 | < 0.005 | 0.005 | 0.011 | 7.17 | 1.16 | < 0.003 | 0.006 | < 0.003 |
| 655403 | 0.003 | 0.168 | < 0.005 | 0.006 | 0.011 | 8.79 | 2.13 | < 0.003 | 0.009 | < 0.003 |
| 655404 | < 0.003 | 0.064 | < 0.005 | < 0.005 | 0.004 | 7.42 | 0.85 | < 0.003 | 0.004 | 0.003 |
| 655405 | < 0.003 | 0.059 | < 0.005 | 0.005 | < 0.003 | 8.01 | 1.38 | < 0.003 | 0.003 | 0.003 |
| 655406 | < 0.003 | 0.104 | < 0.005 | < 0.005 | < 0.003 | 6.05 | 1.22 | < 0.003 | 0.005 | 0.003 |
| 655407 | < 0.003 | 0.124 | < 0.005 | 0.006 | 0.022 | 8.00 | 3.12 | < 0.003 | 0.007 | < 0.003 |
| 655408 | < 0.003 | 0.162 | < 0.005 | 0.006 | 0.010 | 7.96 | 2.27 | < 0.003 | 0.006 | < 0.003 |
| 655409 | < 0.003 | 0.185 | < 0.005 | 0.009 | < 0.003 | 5.09 | 1.21 | < 0.003 | 0.012 | < 0.003 |
| 655410 | 0.006 | 0.536 | 0.009 | 0.014 | < 0.003 | 4.25 | 2.49 | < 0.003 | 0.008 | < 0.003 |
| 655411 | < 0.003 | 0.096 | < 0.005 | < 0.005 | 0.011 | 7.25 | 1.02 | < 0.003 | 0.005 | < 0.003 |
| 655412 | < 0.003 | 0.035 | < 0.005 | 0.007 | 0.006 | 6.76 | 0.65 | < 0.003 | 0.006 | 0.003 |
| 655413 | < 0.003 | 0.035 | < 0.005 | < 0.005 | 0.023 | 7.48 | 1.47 | < 0.003 | 0.008 | < 0.003 |
| 655414 | < 0.003 | 0.040 | < 0.005 | 0.007 | 0.106 | 10.07 | 4.15 | < 0.003 | 0.012 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 655415 | 0.003 | 0.053 | < 0.005 | 0.009 | 0.086 | 15.50 | 3.12 | < 0.003 | 0.008 | < 0.003 |
| 655416 | < 0.003 | 0.076 | < 0.005 | 0.006 | 0.010 | 8.10 | 1.93 | < 0.003 | 0.008 | < 0.003 |
| 655417 | < 0.003 | 0.211 | 0.006 | 0.006 | 0.015 | 8.30 | 1.72 | 0.003 | 0.007 | < 0.003 |
| 655418 | < 0.003 | 0.048 | < 0.005 | < 0.005 | 0.007 | 7.99 | 0.18 | < 0.003 | 0.003 | < 0.003 |
| 655419 | < 0.003 | 0.076 | 0.005 | 0.009 | < 0.003 | 2.79 | 2.15 | < 0.003 | 0.013 | < 0.003 |
| 655420 | < 0.003 | 0.115 | < 0.005 | 0.011 | < 0.003 | 2.74 | 3.61 | < 0.003 | 0.013 | 0.003 |
| 655421 | < 0.003 | 0.056 | < 0.005 | 0.008 | < 0.003 | 1.71 | 1.98 | < 0.003 | 0.011 | < 0.003 |
| 655422 | < 0.003 | < 0.003 | < 0.005 | 0.005 | 0.004 | 0.21 | 0.03 | < 0.003 | 0.004 | < 0.003 |
| 655423 | < 0.003 | 0.012 | < 0.005 | 0.005 | 0.019 | 5.22 | 2.30 | < 0.003 | 0.011 | < 0.003 |
| 655424 | 0.003 | 0.030 | < 0.005 | 0.006 | 0.072 | 16.43 | 2.22 | < 0.003 | 0.007 | < 0.003 |
| 655425 | < 0.003 | 0.077 | < 0.005 | 0.005 | 0.027 | 8.17 | 1.61 | < 0.003 | 0.006 | < 0.003 |
| 655426 | < 0.003 | 0.061 | < 0.005 | 0.006 | < 0.003 | 7.74 | 1.58 | < 0.003 | 0.010 | 0.005 |
| 655427 | < 0.003 | 0.040 | < 0.005 | < 0.005 | 0.017 | 8.72 | 1.38 | < 0.003 | 0.005 | < 0.003 |
| 655428 | 0.005 | 0.523 | < 0.005 | 0.012 | 0.039 | 11.13 | 4.37 | < 0.003 | 0.008 | < 0.003 |
| 655429 | 0.004 | 0.196 | < 0.005 | 0.011 | 0.057 | 12.10 | 0.48 | < 0.003 | 0.003 | 0.003 |
| 655430 | 0.005 | 0.094 | < 0.005 | 0.007 | 0.064 | 13.94 | 0.75 | < 0.003 | 0.005 | < 0.003 |
| 655431 | 0.004 | 0.151 | < 0.005 | 0.006 | 0.080 | 14.66 | 2.28 | < 0.003 | 0.007 | < 0.003 |
| 655432 | < 0.003 | 0.073 | < 0.005 | 0.006 | 0.112 | 13.86 | 2.57 | < 0.003 | 0.010 | < 0.003 |
| 655433 | < 0.003 | 0.032 | < 0.005 | < 0.005 | 0.016 | 7.55 | 1.70 | < 0.003 | 0.008 | < 0.003 |
| 655434 | < 0.003 | 0.039 | < 0.005 | 0.006 | 0.016 | 7.26 | 1.04 | < 0.003 | 0.007 | < 0.003 |
| 655435 | < 0.003 | 0.075 | < 0.005 | 0.007 | 0.056 | 9.25 | 0.92 | < 0.003 | 0.006 | < 0.003 |
| 655436 | 0.003 | 0.158 | < 0.005 | 0.005 | 0.029 | 7.98 | 1.48 | < 0.003 | 0.006 | < 0.003 |
| 655437 | 0.004 | 0.108 | < 0.005 | 0.006 | 0.051 | 14.43 | 0.84 | < 0.003 | 0.004 | 0.003 |
| 655438 | 0.003 | 0.064 | < 0.005 | 0.008 | 0.057 | 11.36 | 1.19 | < 0.003 | 0.007 | < 0.003 |
| 655439 | 0.003 | 0.096 | < 0.005 | 0.007 | 0.063 | 12.17 | 1.30 | < 0.003 | 0.007 | 0.003 |
| 655440 | 0.003 | 0.306 | < 0.005 | 0.006 | 0.079 | 10.96 | 3.88 | < 0.003 | 0.008 | < 0.003 |
| 655441 | 0.003 | 0.077 | < 0.005 | 0.005 | 0.039 | 7.14 | 1.10 | < 0.003 | 0.008 | < 0.003 |
| 655442 | < 0.003 | 0.046 | < 0.005 | < 0.005 | 0.016 | 6.80 | 1.30 | < 0.003 | 0.008 | < 0.003 |
| 655443 | < 0.003 | 0.019 | < 0.005 | < 0.005 | 0.036 | 6.52 | 0.59 | < 0.003 | 0.005 | < 0.003 |
| 655444 | < 0.003 | 0.143 | 0.005 | 0.008 | < 0.003 | 3.74 | 1.08 | < 0.003 | 0.010 | < 0.003 |
| 655445 | 0.003 | 0.028 | < 0.005 | < 0.005 | 0.021 | 6.10 | 0.33 | < 0.003 | 0.004 | < 0.003 |
| 655446 | < 0.003 | 0.041 | < 0.005 | < 0.005 | 0.027 | 7.11 | 0.66 | < 0.003 | 0.004 | < 0.003 |
| 655447 | < 0.003 | 0.066 | < 0.005 | 0.005 | 0.018 | 7.85 | 0.59 | < 0.003 | 0.003 | < 0.003 |
| 655448 | < 0.003 | 0.044 | < 0.005 | 0.010 | < 0.003 | 3.53 | 2.04 | < 0.003 | 0.017 | 0.003 |
| 655449 | < 0.003 | 0.024 | < 0.005 | < 0.005 | 0.027 | 5.36 | 0.40 | < 0.003 | 0.004 | 0.003 |
| 655450 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.025 | 5.50 | 0.57 | 0.003 | 0.004 | 0.003 |
| 655451 | 0.003 | 0.055 | < 0.005 | < 0.005 | 0.016 | 5.91 | 1.18 | < 0.003 | 0.005 | < 0.003 |
| 655452 | 0.004 | 0.203 | < 0.005 | < 0.005 | 0.015 | 5.00 | 1.64 | < 0.003 | 0.004 | < 0.003 |
| 655453 | 0.004 | 0.428 | < 0.005 | 0.006 | 0.015 | 5.72 | 4.76 | < 0.003 | 0.009 | 0.003 |
| 655454 | < 0.003 | 0.035 | < 0.005 | < 0.005 | 0.009 | 5.08 | 0.26 | < 0.003 | 0.003 | < 0.003 |
| 655455 | < 0.003 | 0.022 | 0.007 | 0.010 | < 0.003 | 2.11 | 0.75 | < 0.003 | 0.013 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 655456 | < 0.003 | 0.024 | < 0.005 | < 0.005 | 0.065 | 6.12 | 0.39 | < 0.003 | 0.003 | < 0.003 |
| 655457 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.030 | 6.35 | 0.56 | < 0.003 | 0.005 | < 0.003 |
| 655458 | < 0.003 | 0.325 | 0.005 | 0.008 | < 0.003 | 5.39 | 3.05 | < 0.003 | 0.012 | 0.004 |
| 655459 | < 0.003 | 0.454 | 0.005 | 0.010 | < 0.003 | 2.34 | 3.35 | < 0.003 | 0.012 | 0.005 |
| 655460 | 0.005 | 0.556 | 0.011 | 0.014 | < 0.003 | 4.23 | 2.45 | < 0.003 | 0.007 | < 0.003 |
| 655461 | < 0.003 | 0.633 | < 0.005 | 0.011 | 0.011 | 2.64 | 3.96 | < 0.003 | 0.013 | 0.005 |
| 655462 | 0.003 | 0.509 | < 0.005 | 0.009 | 0.039 | 4.63 | 6.60 | < 0.003 | 0.012 | < 0.003 |
| 655463 | < 0.003 | 0.211 | 0.007 | 0.008 | < 0.003 | 1.21 | 0.57 | < 0.003 | 0.012 | < 0.003 |
| 655464 | < 0.003 | 0.330 | 0.007 | 0.010 | < 0.003 | 1.44 | 0.77 | < 0.003 | 0.012 | < 0.003 |
| 655465 | < 0.003 | 0.184 | 0.007 | 0.007 | < 0.003 | 2.98 | 3.21 | < 0.003 | 0.013 | < 0.003 |
| 655466 | < 0.003 | 0.383 | 0.005 | 0.008 | < 0.003 | 3.11 | 3.14 | < 0.003 | 0.014 | < 0.003 |
| 655467 | 0.003 | 0.481 | 0.008 | 0.010 | 0.013 | 3.00 | 3.86 | < 0.003 | 0.015 | 0.003 |
| 655468 | 0.004 | 0.384 | 0.010 | 0.010 | < 0.003 | 2.03 | 3.43 | < 0.003 | 0.013 | 0.003 |
| 655469 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.19 | 0.03 | < 0.003 | < 0.003 | < 0.003 |
| 655470 | 0.004 | 0.198 | 0.007 | 0.009 | 0.022 | 3.79 | 3.18 | < 0.003 | 0.012 | < 0.003 |
| 655471 | 0.006 | 0.545 | 0.010 | 0.009 | 0.036 | 3.75 | 3.52 | < 0.003 | 0.012 | < 0.003 |
| 655472 | < 0.003 | 0.209 | 0.007 | 0.008 | < 0.003 | 2.53 | 5.11 | < 0.003 | 0.017 | < 0.003 |
| 655473 | 0.004 | 0.222 | 0.005 | 0.007 | 0.037 | 3.97 | 4.61 | < 0.003 | 0.015 | < 0.003 |
| 655474 | < 0.003 | 0.205 | 0.005 | 0.009 | 0.040 | 4.23 | 4.40 | < 0.003 | 0.015 | < 0.003 |
| 655475 | < 0.003 | 0.076 | 0.006 | 0.010 | 0.008 | 1.88 | 2.28 | < 0.003 | 0.014 | < 0.003 |
| 655476 | 0.003 | 0.161 | 0.008 | 0.009 | < 0.003 | 2.09 | 2.94 | < 0.003 | 0.013 | < 0.003 |
| 655477 | 0.004 | 0.263 | 0.010 | 0.010 | 0.006 | 2.72 | 3.43 | < 0.003 | 0.016 | < 0.003 |
| 655478 | 0.003 | 0.137 | < 0.005 | 0.010 | < 0.003 | 2.31 | 1.56 | < 0.003 | 0.014 | 0.004 |
| 655479 | 0.003 | 0.113 | 0.005 | 0.007 | < 0.003 | 1.71 | 1.65 | < 0.003 | 0.012 | < 0.003 |
| 655480 | < 0.003 | 0.215 | < 0.005 | 0.010 | 0.003 | 2.14 | 3.43 | < 0.003 | 0.015 | 0.003 |
| 655481 | 0.003 | 0.747 | 0.009 | 0.016 | 0.019 | 5.06 | 5.51 | < 0.003 | 0.030 | < 0.003 |
| 655482 | 0.004 | 0.599 | 0.007 | 0.013 | 0.003 | 2.55 | 4.18 | < 0.003 | 0.017 | < 0.003 |
| 655483 | < 0.003 | 0.155 | 0.006 | 0.009 | < 0.003 | 1.89 | 1.96 | < 0.003 | 0.012 | 0.003 |
| 655484 | 0.005 | 0.550 | 0.013 | 0.013 | < 0.003 | 4.26 | 2.48 | < 0.003 | 0.007 | < 0.003 |
| 655485 | < 0.003 | 0.268 | 0.005 | 0.014 | 0.008 | 5.12 | 0.69 | < 0.003 | 0.009 | < 0.003 |
| 655486 | 0.003 | 0.387 | 0.005 | 0.011 | < 0.003 | 2.65 | 3.47 | < 0.003 | 0.015 | < 0.003 |
| 655487 | < 0.003 | 0.185 | < 0.005 | < 0.005 | 0.006 | 5.52 | 1.59 | < 0.003 | 0.006 | < 0.003 |
| 655488 | 0.003 | 0.068 | < 0.005 | < 0.005 | 0.028 | 6.55 | 0.60 | < 0.003 | 0.005 | < 0.003 |
| 655489 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.036 | 5.71 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| 655490 | < 0.003 | 0.618 | 0.005 | 0.011 | 0.004 | 4.21 | 4.11 | < 0.003 | 0.015 | < 0.003 |
| 655491 | < 0.003 | 0.283 | 0.005 | 0.010 | < 0.003 | 5.66 | 2.38 | < 0.003 | 0.012 | 0.003 |
| 655492 | 0.003 | 0.072 | < 0.005 | < 0.005 | 0.018 | 7.33 | 0.85 | < 0.003 | 0.004 | 0.003 |
| 655493 | < 0.003 | 0.025 | < 0.005 | < 0.005 | 0.027 | 5.68 | 0.51 | 0.007 | 0.004 | < 0.003 |
| 655494 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.023 | 5.29 | 0.74 | < 0.003 | 0.007 | < 0.003 |
| 655495 | < 0.003 | 0.027 | < 0.005 | < 0.005 | 0.019 | 6.11 | 0.54 | 0.005 | 0.004 | < 0.003 |
| 655496 | < 0.003 | 0.061 | < 0.005 | 0.006 | 0.022 | 7.80 | 0.29 | < 0.003 | 0.003 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 655497 | < 0.003 | 0.326 | 0.006 | 0.010 | < 0.003 | 5.74 | 4.22 | < 0.003 | 0.013 | < 0.003 |
| 655498 | 0.003 | 0.317 | 0.006 | 0.011 | < 0.003 | 6.48 | 5.21 | < 0.003 | 0.018 | < 0.003 |
| 655499 | 0.003 | 0.316 | < 0.005 | 0.007 | < 0.003 | 4.75 | 3.94 | < 0.003 | 0.009 | < 0.003 |
| 655500 | < 0.003 | 0.126 | < 0.005 | < 0.005 | 0.012 | 5.96 | 2.05 | < 0.003 | 0.005 | < 0.003 |
| 655351 | < 0.003 | 0.044 | < 0.005 | < 0.005 | 0.017 | 4.36 | 1.42 | < 0.003 | 0.006 | < 0.003 |
| 655352 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.027 | 5.51 | 0.52 | < 0.003 | 0.004 | < 0.003 |
| 655353 | 0.004 | 0.075 | < 0.005 | 0.005 | 0.022 | 6.28 | 1.69 | < 0.003 | 0.006 | 0.003 |
| 655354 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.036 | 6.27 | 0.38 | 0.003 | 0.004 | < 0.003 |
| 655355 | < 0.003 | 0.014 | < 0.005 | 0.006 | 0.013 | 4.82 | 0.35 | < 0.003 | 0.007 | < 0.003 |
| 655356 | 0.003 | 0.033 | < 0.005 | < 0.005 | 0.036 | 7.14 | 0.93 | < 0.003 | 0.007 | < 0.003 |
| 655357 | 0.003 | 0.111 | < 0.005 | 0.005 | 0.012 | 6.43 | 2.49 | < 0.003 | 0.010 | < 0.003 |
| 655358 | < 0.003 | 0.068 | < 0.005 | < 0.005 | 0.022 | 5.22 | 0.86 | < 0.003 | 0.005 | < 0.003 |
| 655359 | < 0.003 | 0.250 | 0.009 | 0.008 | < 0.003 | 2.68 | 2.34 | < 0.003 | 0.012 | 0.003 |
| 655360 | 0.005 | 0.525 | 0.014 | 0.013 | < 0.003 | 4.09 | 2.37 | < 0.003 | 0.008 | < 0.003 |
| 655361 | < 0.003 | 0.196 | 0.008 | 0.008 | < 0.003 | 1.92 | 2.02 | < 0.003 | 0.010 | < 0.003 |
| 655362 | < 0.003 | 0.062 | 0.008 | 0.006 | < 0.003 | 2.16 | 1.32 | < 0.003 | 0.011 | 0.003 |
| 655363 | < 0.003 | < 0.003 | < 0.005 | < 0.005 | 0.004 | 0.20 | 0.03 | < 0.003 | 0.003 | < 0.003 |
| 655364 | < 0.003 | 0.070 | 0.006 | 0.007 | < 0.003 | 1.96 | 1.01 | < 0.003 | 0.010 | < 0.003 |
| 655365 | < 0.003 | 0.117 | 0.006 | 0.007 | < 0.003 | 1.92 | 2.11 | < 0.003 | 0.010 | < 0.003 |
| 655366 | < 0.003 | 0.148 | 0.005 | 0.008 | < 0.003 | 2.67 | 1.30 | < 0.003 | 0.011 | < 0.003 |
| 655367 | < 0.003 | 0.039 | < 0.005 | < 0.005 | 0.011 | 5.91 | 0.71 | < 0.003 | 0.005 | < 0.003 |
| 655368 | < 0.003 | 0.215 | < 0.005 | < 0.005 | 0.004 | 5.67 | 1.50 | < 0.003 | 0.005 | 0.004 |
| 655369 | 0.003 | 0.077 | < 0.005 | 0.007 | < 0.003 | 2.85 | 2.95 | < 0.003 | 0.013 | < 0.003 |
| 655370 | < 0.003 | 0.211 | 0.005 | 0.009 | < 0.003 | 2.10 | 4.80 | < 0.003 | 0.017 | < 0.003 |
| 655371 | < 0.003 | 0.104 | < 0.005 | 0.005 | 0.016 | 6.03 | 0.62 | < 0.003 | 0.004 | < 0.003 |
| 655372 | 0.003 | 0.048 | < 0.005 | < 0.005 | 0.005 | 5.10 | 1.39 | < 0.003 | 0.008 | 0.003 |
| 655373 | < 0.003 | 0.128 | < 0.005 | < 0.005 | 0.005 | 4.62 | 2.25 | < 0.003 | 0.010 | < 0.003 |
| 655374 | 0.004 | 0.124 | < 0.005 | 0.007 | < 0.003 | 3.46 | 1.39 | < 0.003 | 0.009 | 0.004 |
| 655375 | < 0.003 | 0.402 | < 0.005 | 0.011 | 0.004 | 4.36 | 4.12 | < 0.003 | 0.016 | 0.003 |
| 655376 | < 0.003 | 0.069 | < 0.005 | < 0.005 | 0.020 | 8.14 | 0.76 | 0.004 | 0.004 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|-----------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | | 0.015 | | | 0.032 | 13.00 | 1.08 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| BE-N Meas | | 0.015 | | | 0.033 | 12.97 | 1.07 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| ZW-C Meas | 0.012 | | < 0.005 | 0.006 | 0.011 | 9.53 | 0.03 | 0.167 | | 0.042 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| ZW-C Meas | 0.012 | | < 0.005 | 0.006 | 0.011 | 9.46 | 0.02 | 0.165 | | 0.039 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.098 | 0.104 | | | 0.101 | 4.03 | | 0.103 | 0.105 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| VS-N Meas | 0.099 | 0.103 | | | 0.100 | 4.01 | | 0.101 | 0.099 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.006 | 0.688 | | 0.021 | 0.088 | 8.27 | 3.88 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | 0.007 | 0.685 | | 0.019 | 0.088 | 8.23 | 3.84 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | 0.006 | 1.309 | < 0.005 | 0.027 | 0.162 | 11.17 | 5.18 | | 0.023 | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.005 | 0.953 | 0.005 | 0.030 | 0.209 | 10.65 | 5.71 | | 0.030 | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| MA-N (2011) Meas | 0.033 | | < 0.005 | | 0.006 | 0.46 | 1.44 | 0.116 | | 0.009 |
| MA-N (2011) Cert | 0.035 | | 0.001 | | 0.003 | 0.47 | 1.39 | 0.114 | | 0.009 |
| 590880 Orig | 0.004 | 0.101 | < 0.005 | 0.009 | < 0.003 | 9.36 | 1.72 | < 0.003 | 0.011 | < 0.003 |
| 590880 Dup | < 0.003 | 0.102 | < 0.005 | 0.010 | < 0.003 | 9.38 | 1.73 | < 0.003 | 0.011 | < 0.003 |
| 590901 Orig | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.007 | 5.51 | 0.14 | < 0.003 | < 0.003 | 0.003 |
| 590901 Split PREP DUP | < 0.003 | 0.012 | 0.005 | 0.005 | 0.006 | 5.57 | 0.16 | < 0.003 | < 0.003 | 0.004 |
| 590910 Orig | 0.004 | 0.016 | < 0.005 | 0.012 | 0.015 | 5.59 | 0.48 | < 0.003 | 0.008 | < 0.003 |
| 590910 Dup | 0.003 | 0.015 | < 0.005 | 0.011 | 0.015 | 5.53 | 0.50 | < 0.003 | 0.007 | 0.003 |
| 590940 Orig | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.020 | 7.30 | 0.25 | 0.003 | 0.004 | < 0.003 |
| 590940 Dup | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.020 | 7.09 | 0.25 | < 0.003 | 0.003 | < 0.003 |
| 590950 Orig | < 0.003 | 0.081 | 0.006 | 0.009 | < 0.003 | 1.79 | 0.40 | < 0.003 | 0.010 | 0.003 |
| 590950 Split PREP DUP | < 0.003 | 0.074 | < 0.005 | 0.010 | < 0.003 | 1.87 | 0.44 | < 0.003 | 0.010 | 0.003 |
| 590970 Orig | < 0.003 | 0.102 | < 0.005 | 0.005 | 0.023 | 7.87 | 1.29 | < 0.003 | 0.006 | < 0.003 |
| 590970 Dup | 0.004 | 0.101 | < 0.005 | 0.006 | 0.023 | 7.73 | 1.28 | < 0.003 | 0.006 | < 0.003 |
| 590999 Orig | < 0.003 | 0.131 | < 0.005 | < 0.005 | 0.015 | 5.84 | 0.50 | < 0.003 | 0.003 | < 0.003 |
| 590999 Dup | 0.003 | 0.127 | < 0.005 | < 0.005 | 0.016 | 5.85 | 0.51 | < 0.003 | 0.004 | < 0.003 |
| 591000 Orig | 0.004 | 0.049 | < 0.005 | 0.006 | 0.107 | 9.95 | 2.48 | < 0.003 | 0.007 | < 0.003 |
| 591000 Split PREP DUP | < 0.003 | 0.050 | < 0.005 | 0.005 | 0.107 | 9.86 | 2.42 | < 0.003 | 0.006 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|--------------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 655430 Orig | 0.005 | 0.094 | < 0.005 | 0.007 | 0.064 | 13.97 | 0.75 | < 0.003 | 0.005 | < 0.003 |
| 655430 Dup | 0.006 | 0.093 | < 0.005 | 0.007 | 0.063 | 13.91 | 0.76 | < 0.003 | 0.005 | 0.003 |
| 655450 Orig | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.025 | 5.50 | 0.57 | 0.003 | 0.004 | 0.003 |
| 655450 Split PREP DUP | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.023 | 5.48 | 0.55 | < 0.003 | 0.004 | 0.004 |
| 655460 Orig | 0.005 | 0.552 | 0.011 | 0.014 | < 0.003 | 4.22 | 2.47 | < 0.003 | 0.007 | < 0.003 |
| 655460 Dup | 0.006 | 0.559 | 0.011 | 0.013 | < 0.003 | 4.25 | 2.44 | < 0.003 | 0.006 | < 0.003 |
| 655490 Orig | < 0.003 | 0.625 | 0.005 | 0.011 | 0.004 | 4.27 | 4.16 | < 0.003 | 0.016 | < 0.003 |
| 655490 Dup | < 0.003 | 0.610 | 0.006 | 0.011 | 0.003 | 4.15 | 4.06 | < 0.003 | 0.015 | < 0.003 |
| 655500 Orig | < 0.003 | 0.126 | < 0.005 | < 0.005 | 0.012 | 5.96 | 2.05 | < 0.003 | 0.005 | < 0.003 |
| 655500 Split PREP DUP | < 0.003 | 0.127 | < 0.005 | 0.005 | 0.011 | 5.92 | 2.04 | < 0.003 | 0.005 | < 0.003 |
| 655370 Orig | 0.003 | 0.211 | 0.006 | 0.008 | < 0.003 | 2.09 | 4.80 | < 0.003 | 0.016 | 0.003 |
| 655370 Dup | < 0.003 | 0.211 | 0.005 | 0.009 | < 0.003 | 2.11 | 4.79 | < 0.003 | 0.018 | < 0.003 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |



Date Submitted: 17-Jul-18
Invoice No.: A18-09217
Invoice Date: 15-Aug-18
Your Reference: Good Hope

Plato Gold Corp.
Suite 300, 1300 Bay St.
Toronto M5R 3K8
Canada

ATTN: President Anthony Cohen

CERTIFICATE OF ANALYSIS

143 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 8-Coltan XRF Fusion-XRF

REPORT **A18-09217**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized and written over a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 351501 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.020 | 5.32 | 0.39 | 0.010 | 0.003 | 0.003 |
| 351502 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.025 | 6.91 | 0.52 | < 0.003 | 0.004 | < 0.003 |
| 351503 | 0.004 | 0.011 | < 0.005 | < 0.005 | 0.028 | 6.57 | 0.44 | < 0.003 | 0.004 | < 0.003 |
| 351504 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.016 | 7.23 | 0.57 | < 0.003 | 0.004 | < 0.003 |
| 351505 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.037 | 5.50 | 0.45 | < 0.003 | 0.003 | < 0.003 |
| 351506 | 0.004 | 0.027 | < 0.005 | < 0.005 | 0.021 | 6.48 | 0.66 | < 0.003 | 0.004 | < 0.003 |
| 351507 | 0.003 | 0.014 | < 0.005 | < 0.005 | 0.023 | 5.61 | 0.13 | < 0.003 | < 0.003 | < 0.003 |
| 351508 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.034 | 6.26 | 0.37 | 0.003 | 0.003 | < 0.003 |
| 351509 | 0.003 | 0.011 | < 0.005 | < 0.005 | 0.056 | 6.59 | 0.40 | < 0.003 | 0.003 | < 0.003 |
| 351510 | < 0.003 | 0.035 | < 0.005 | < 0.005 | 0.023 | 6.90 | 0.96 | < 0.003 | 0.005 | < 0.003 |
| 351511 | 0.004 | 0.012 | < 0.005 | < 0.005 | 0.027 | 5.99 | 0.98 | < 0.003 | 0.006 | < 0.003 |
| 351512 | < 0.003 | 0.005 | < 0.005 | < 0.005 | 0.021 | 7.60 | 0.48 | < 0.003 | 0.004 | < 0.003 |
| 351513 | 0.006 | 0.010 | < 0.005 | < 0.005 | 0.015 | 6.43 | 0.15 | < 0.003 | 0.003 | < 0.003 |
| 351514 | 0.004 | 0.007 | < 0.005 | < 0.005 | 0.008 | 5.66 | 0.24 | < 0.003 | < 0.003 | < 0.003 |
| 351515 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.011 | 4.91 | 0.25 | < 0.003 | < 0.003 | < 0.003 |
| 351516 | 0.003 | 0.006 | < 0.005 | < 0.005 | 0.018 | 5.25 | 0.31 | < 0.003 | 0.003 | < 0.003 |
| 351517 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.018 | 6.30 | 0.45 | < 0.003 | 0.004 | < 0.003 |
| 351518 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.019 | 5.75 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| 351519 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.028 | 5.49 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| 351520 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.023 | 5.73 | 0.33 | 0.004 | 0.003 | < 0.003 |
| 351521 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.021 | 5.58 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| 351522 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.019 | 2.57 | 0.31 | < 0.003 | 0.003 | < 0.003 |
| 351523 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.015 | 5.62 | 0.34 | < 0.003 | 0.003 | < 0.003 |
| 351524 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.013 | 5.09 | 0.21 | 0.003 | < 0.003 | < 0.003 |
| 351525 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.015 | 5.87 | 0.29 | < 0.003 | 0.003 | < 0.003 |
| 351526 | 0.003 | 0.006 | < 0.005 | < 0.005 | 0.010 | 5.17 | 0.25 | < 0.003 | 0.003 | 0.003 |
| 351527 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.009 | 6.07 | 0.37 | < 0.003 | 0.003 | < 0.003 |
| 351528 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.008 | 6.03 | 0.42 | < 0.003 | 0.003 | < 0.003 |
| 351529 | < 0.003 | 0.025 | < 0.005 | < 0.005 | 0.012 | 6.51 | 0.54 | < 0.003 | 0.003 | < 0.003 |
| 351530 | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.014 | 5.86 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| 351531 | < 0.003 | 0.024 | < 0.005 | < 0.005 | 0.016 | 6.79 | 0.56 | 0.004 | 0.004 | 0.003 |
| 351532 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.014 | 6.68 | 0.25 | < 0.003 | < 0.003 | < 0.003 |
| 351533 | 0.004 | 0.008 | < 0.005 | < 0.005 | 0.010 | 6.83 | 0.36 | < 0.003 | 0.004 | 0.003 |
| 351534 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.005 | 4.49 | 0.24 | < 0.003 | 0.004 | 0.003 |
| 351535 | < 0.003 | 0.019 | < 0.005 | 0.005 | 0.010 | 7.37 | 0.12 | < 0.003 | 0.003 | < 0.003 |
| 351536 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.013 | 5.11 | 0.25 | < 0.003 | 0.003 | < 0.003 |
| 351537 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.021 | 4.80 | 0.13 | < 0.003 | 0.003 | < 0.003 |
| 351538 | 0.003 | 0.005 | < 0.005 | < 0.005 | 0.024 | 4.34 | 0.24 | < 0.003 | 0.004 | < 0.003 |
| 351539 | < 0.003 | 0.004 | < 0.005 | < 0.005 | 0.023 | 5.62 | 0.28 | < 0.003 | 0.004 | 0.003 |
| 351540 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.023 | 6.11 | 0.27 | < 0.003 | 0.004 | < 0.003 |
| 351541 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.026 | 5.35 | 0.18 | 0.003 | 0.003 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| 351542 | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.008 | 3.76 | 0.38 | < 0.003 | 0.005 | < 0.003 |
| 351543 | < 0.003 | 0.049 | < 0.005 | < 0.005 | 0.009 | 5.74 | 1.81 | < 0.003 | 0.010 | < 0.003 |
| 351544 | < 0.003 | 0.028 | < 0.005 | < 0.005 | 0.011 | 4.37 | 1.12 | < 0.003 | 0.007 | < 0.003 |
| 351545 | < 0.003 | 0.046 | < 0.005 | 0.005 | 0.118 | 9.56 | 2.55 | < 0.003 | 0.010 | 0.003 |
| 351546 | < 0.003 | 0.037 | < 0.005 | 0.006 | 0.030 | 5.38 | 1.35 | < 0.003 | 0.007 | < 0.003 |
| 351547 | < 0.003 | 0.032 | < 0.005 | < 0.005 | 0.021 | 4.58 | 0.90 | < 0.003 | 0.005 | < 0.003 |
| 351548 | < 0.003 | 0.027 | < 0.005 | 0.006 | < 0.003 | 4.97 | 1.53 | < 0.003 | 0.009 | < 0.003 |
| 351549 | < 0.003 | 0.024 | < 0.005 | 0.005 | < 0.003 | 4.14 | 1.29 | < 0.003 | 0.007 | < 0.003 |
| 351550 | < 0.003 | 0.022 | < 0.005 | 0.006 | < 0.003 | 4.23 | 1.42 | < 0.003 | 0.009 | < 0.003 |
| 655377 | < 0.003 | 0.047 | < 0.005 | 0.008 | 0.029 | 6.91 | 1.22 | < 0.003 | 0.008 | < 0.003 |
| 655378 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.005 | 3.14 | 0.13 | < 0.003 | 0.003 | < 0.003 |
| 655379 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.007 | 2.78 | 0.22 | 0.003 | < 0.003 | < 0.003 |
| 655380 | < 0.003 | 0.015 | < 0.005 | 0.005 | 0.007 | 3.84 | 0.36 | < 0.003 | 0.005 | < 0.003 |
| 655381 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.007 | 4.24 | 0.19 | 0.006 | 0.003 | 0.004 |
| 655382 | < 0.003 | 0.061 | < 0.005 | 0.005 | 0.021 | 4.23 | 1.61 | < 0.003 | 0.009 | < 0.003 |
| 655383 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.013 | 5.68 | 0.31 | < 0.003 | 0.004 | 0.003 |
| 655384 | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.011 | 5.33 | 0.76 | < 0.003 | 0.005 | < 0.003 |
| 655385 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.008 | 4.80 | 0.61 | < 0.003 | 0.004 | 0.003 |
| 655386 | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.004 | 4.63 | 0.88 | < 0.003 | 0.006 | < 0.003 |
| 655387 | < 0.003 | 0.008 | < 0.005 | < 0.005 | 0.003 | 3.56 | 0.45 | < 0.003 | 0.003 | < 0.003 |
| 655388 | < 0.003 | 0.027 | < 0.005 | < 0.005 | 0.047 | 7.94 | 1.19 | < 0.003 | 0.004 | < 0.003 |
| 655389 | < 0.003 | 0.076 | < 0.005 | 0.005 | 0.043 | 7.83 | 1.51 | < 0.003 | 0.005 | < 0.003 |
| 655390 | 0.003 | 0.056 | < 0.005 | < 0.005 | 0.098 | 8.77 | 1.76 | < 0.003 | 0.005 | 0.003 |
| 655391 | < 0.003 | 0.046 | < 0.005 | < 0.005 | 0.004 | 2.84 | 0.32 | < 0.003 | < 0.003 | 0.003 |
| 655392 | < 0.003 | 0.035 | < 0.005 | < 0.005 | 0.007 | 2.81 | 0.26 | < 0.003 | < 0.003 | < 0.003 |
| 655393 | < 0.003 | 0.094 | < 0.005 | < 0.005 | 0.006 | 3.77 | 1.97 | 0.018 | 0.007 | < 0.003 |
| 655394 | < 0.003 | 0.058 | < 0.005 | < 0.005 | 0.008 | 3.16 | 0.64 | < 0.003 | 0.003 | < 0.003 |
| 655395 | < 0.003 | 0.007 | < 0.005 | < 0.005 | 0.005 | 3.12 | 0.30 | < 0.003 | < 0.003 | < 0.003 |
| 655396 | < 0.003 | 0.021 | < 0.005 | < 0.005 | 0.006 | 3.85 | 0.25 | 0.003 | 0.003 | < 0.003 |
| 655397 | < 0.003 | 0.052 | < 0.005 | < 0.005 | 0.006 | 6.59 | 0.83 | < 0.003 | 0.006 | 0.004 |
| 655398 | < 0.003 | 0.041 | < 0.005 | < 0.005 | < 0.003 | 6.97 | 0.69 | < 0.003 | 0.004 | < 0.003 |
| 655399 | < 0.003 | 0.016 | < 0.005 | < 0.005 | < 0.003 | 5.28 | 0.31 | < 0.003 | 0.004 | 0.003 |
| 655400 | 0.003 | 0.019 | < 0.005 | < 0.005 | 0.003 | 5.34 | 0.36 | < 0.003 | 0.003 | < 0.003 |
| 1674601 | < 0.003 | 0.017 | < 0.005 | < 0.005 | 0.006 | 5.74 | 0.66 | < 0.003 | 0.005 | < 0.003 |
| 1674602 | < 0.003 | 0.296 | < 0.005 | 0.010 | 0.005 | 7.51 | 3.52 | < 0.003 | 0.017 | 0.003 |
| 1674603 | 0.006 | 0.542 | 0.012 | 0.014 | < 0.003 | 4.19 | 2.43 | < 0.003 | 0.007 | < 0.003 |
| 1674604 | < 0.003 | 0.160 | < 0.005 | 0.006 | 0.011 | 7.82 | 0.34 | < 0.003 | 0.004 | < 0.003 |
| 1674605 | 0.004 | 0.164 | < 0.005 | 0.005 | 0.008 | 7.32 | 0.81 | < 0.003 | 0.006 | 0.003 |
| 1674606 | < 0.003 | 0.031 | < 0.005 | 0.005 | 0.004 | 6.77 | 0.23 | < 0.003 | < 0.003 | < 0.003 |
| 1674607 | < 0.003 | 0.098 | < 0.005 | 0.006 | 0.009 | 7.31 | 1.59 | < 0.003 | 0.009 | < 0.003 |
| 1674608 | < 0.003 | 0.083 | < 0.005 | 0.007 | 0.019 | 8.14 | 0.62 | < 0.003 | 0.004 | < 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| I674609 | < 0.003 | 0.017 | < 0.005 | 0.005 | 0.011 | 5.38 | 0.27 | < 0.003 | 0.003 | < 0.003 |
| I674610 | 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | 0.16 | 0.02 | < 0.003 | 0.003 | < 0.003 |
| I674611 | < 0.003 | 0.030 | < 0.005 | 0.005 | 0.004 | 6.98 | 0.40 | < 0.003 | 0.004 | < 0.003 |
| I674612 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.005 | 5.07 | 0.28 | < 0.003 | < 0.003 | < 0.003 |
| I674613 | < 0.003 | 0.041 | < 0.005 | 0.005 | 0.015 | 7.53 | 0.44 | < 0.003 | 0.004 | 0.003 |
| I674614 | < 0.003 | 0.067 | < 0.005 | 0.005 | 0.014 | 9.02 | 0.51 | < 0.003 | 0.004 | < 0.003 |
| I674615 | < 0.003 | 0.079 | < 0.005 | 0.006 | 0.006 | 7.93 | 0.90 | < 0.003 | 0.007 | < 0.003 |
| I674616 | < 0.003 | 0.054 | < 0.005 | < 0.005 | 0.034 | 6.60 | 0.84 | < 0.003 | 0.004 | < 0.003 |
| I674617 | < 0.003 | 0.021 | < 0.005 | < 0.005 | 0.010 | 5.67 | 0.28 | < 0.003 | < 0.003 | < 0.003 |
| I674618 | 0.003 | 0.104 | < 0.005 | 0.007 | 0.008 | 7.53 | 1.10 | < 0.003 | 0.006 | 0.003 |
| I674619 | < 0.003 | 0.062 | < 0.005 | 0.006 | 0.014 | 7.74 | 0.68 | 0.004 | 0.004 | < 0.003 |
| I674620 | < 0.003 | 0.022 | < 0.005 | < 0.005 | 0.016 | 6.98 | 0.37 | < 0.003 | 0.005 | 0.003 |
| I674621 | < 0.003 | 0.054 | < 0.005 | < 0.005 | 0.011 | 6.86 | 0.87 | < 0.003 | 0.006 | 0.003 |
| I674622 | < 0.003 | 0.216 | < 0.005 | 0.008 | 0.010 | 7.26 | 1.69 | < 0.003 | 0.007 | < 0.003 |
| I674623 | 0.003 | 0.110 | < 0.005 | 0.008 | 0.009 | 7.65 | 2.76 | < 0.003 | 0.011 | 0.003 |
| I674624 | 0.003 | 0.044 | < 0.005 | 0.005 | 0.028 | 6.72 | 0.44 | < 0.003 | 0.003 | 0.004 |
| I674625 | < 0.003 | 0.033 | < 0.005 | < 0.005 | 0.028 | 6.57 | 0.48 | < 0.003 | 0.003 | < 0.003 |
| I674626 | < 0.003 | 0.048 | < 0.005 | 0.007 | 0.012 | 5.81 | 0.94 | < 0.003 | 0.008 | < 0.003 |
| I674627 | < 0.003 | 0.083 | < 0.005 | 0.006 | 0.004 | 7.21 | 1.20 | < 0.003 | 0.009 | < 0.003 |
| I674628 | < 0.003 | 0.055 | < 0.005 | < 0.005 | 0.013 | 6.39 | 0.55 | < 0.003 | 0.005 | < 0.003 |
| I674629 | < 0.003 | 0.103 | < 0.005 | 0.008 | 0.029 | 5.76 | 1.00 | < 0.003 | 0.008 | < 0.003 |
| I674630 | 0.003 | 0.240 | < 0.005 | 0.008 | 0.073 | 6.41 | 3.47 | < 0.003 | 0.008 | < 0.003 |
| I674631 | < 0.003 | 0.382 | < 0.005 | 0.007 | 0.004 | 4.20 | 3.70 | < 0.003 | 0.011 | 0.003 |
| I674632 | < 0.003 | 0.040 | < 0.005 | 0.010 | 0.004 | 4.97 | 0.46 | < 0.003 | 0.006 | < 0.003 |
| I674633 | < 0.003 | 0.030 | < 0.005 | < 0.005 | 0.009 | 3.24 | 0.54 | 0.003 | 0.004 | < 0.003 |
| I674634 | < 0.003 | 0.042 | < 0.005 | 0.005 | 0.015 | 5.60 | 0.97 | < 0.003 | 0.006 | 0.004 |
| I674635 | < 0.003 | 0.027 | < 0.005 | < 0.005 | 0.009 | 2.89 | 0.41 | 0.004 | 0.003 | < 0.003 |
| I674636 | < 0.003 | 0.085 | < 0.005 | < 0.005 | 0.008 | 4.04 | 0.89 | < 0.003 | 0.005 | < 0.003 |
| I674637 | < 0.003 | 0.089 | < 0.005 | 0.006 | 0.009 | 8.33 | 0.28 | < 0.003 | 0.004 | 0.003 |
| I674638 | 0.004 | 0.042 | < 0.005 | < 0.005 | 0.011 | 6.42 | 0.48 | < 0.003 | 0.005 | 0.003 |
| I674639 | < 0.003 | 0.054 | < 0.005 | < 0.005 | 0.021 | 6.33 | 0.74 | < 0.003 | 0.006 | < 0.003 |
| I674640 | < 0.003 | 0.073 | < 0.005 | 0.006 | 0.020 | 8.79 | 0.65 | < 0.003 | 0.006 | < 0.003 |
| I674641 | 0.003 | 0.094 | < 0.005 | < 0.005 | 0.020 | 7.07 | 0.18 | < 0.003 | 0.003 | < 0.003 |
| I674642 | 0.003 | 0.018 | < 0.005 | < 0.005 | 0.017 | 6.34 | 0.42 | < 0.003 | 0.004 | < 0.003 |
| I674643 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.016 | 5.96 | 0.53 | < 0.003 | 0.005 | < 0.003 |
| I674644 | 0.003 | 0.024 | < 0.005 | < 0.005 | 0.023 | 8.66 | 0.20 | < 0.003 | 0.003 | < 0.003 |
| I674645 | < 0.003 | 0.025 | < 0.005 | < 0.005 | 0.015 | 6.38 | 0.58 | < 0.003 | 0.004 | 0.003 |
| I674646 | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.022 | 6.73 | 0.49 | < 0.003 | 0.004 | < 0.003 |
| I674647 | < 0.003 | 0.038 | < 0.005 | < 0.005 | 0.013 | 5.97 | 0.67 | < 0.003 | 0.006 | 0.003 |
| I674648 | < 0.003 | 0.024 | < 0.005 | 0.005 | 0.009 | 6.49 | 0.58 | < 0.003 | 0.006 | < 0.003 |
| I674649 | < 0.003 | 0.016 | < 0.005 | < 0.005 | 0.007 | 4.55 | 0.54 | < 0.003 | 0.006 | 0.003 |

| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|----------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| I674650 | < 0.003 | 0.080 | < 0.005 | 0.006 | 0.017 | 6.11 | 1.96 | < 0.003 | 0.009 | 0.003 |
| D08051 | < 0.003 | 0.139 | < 0.005 | < 0.005 | 0.020 | 5.98 | 1.27 | < 0.003 | 0.006 | 0.003 |
| D08052 | < 0.003 | 0.024 | < 0.005 | < 0.005 | 0.024 | 5.25 | 0.42 | < 0.003 | 0.003 | < 0.003 |
| D08053 | < 0.003 | 0.023 | < 0.005 | < 0.005 | 0.018 | 4.84 | 0.49 | < 0.003 | 0.005 | < 0.003 |
| D08054 | < 0.003 | 0.121 | < 0.005 | 0.006 | 0.004 | 4.81 | 1.85 | < 0.003 | 0.006 | < 0.003 |
| D08055 | < 0.003 | 0.383 | 0.005 | 0.006 | 0.010 | 7.25 | 2.38 | < 0.003 | 0.008 | 0.004 |
| D08056 | < 0.003 | 0.117 | < 0.005 | 0.005 | 0.016 | 6.15 | 0.74 | < 0.003 | 0.005 | < 0.003 |
| D08057 | 0.006 | 0.527 | 0.011 | 0.013 | < 0.003 | 4.14 | 2.39 | < 0.003 | 0.007 | 0.004 |
| D08058 | 0.004 | 0.067 | < 0.005 | 0.005 | 0.070 | 7.38 | 1.42 | < 0.003 | 0.005 | 0.003 |
| D08059 | < 0.003 | 0.020 | < 0.005 | < 0.005 | 0.013 | 6.52 | 0.35 | 0.003 | 0.004 | 0.003 |
| D08060 | < 0.003 | 0.024 | < 0.005 | < 0.005 | < 0.003 | 6.37 | 0.18 | < 0.003 | 0.005 | 0.014 |
| D08061 | < 0.003 | 0.043 | < 0.005 | < 0.005 | 0.029 | 6.66 | 0.92 | < 0.003 | 0.007 | < 0.003 |
| D08062 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.009 | 3.97 | 0.21 | < 0.003 | 0.003 | 0.003 |
| D08063 | < 0.003 | 0.011 | < 0.005 | < 0.005 | 0.009 | 3.12 | 0.12 | < 0.003 | < 0.003 | < 0.003 |
| D08064 | < 0.003 | 0.014 | < 0.005 | < 0.005 | 0.008 | 3.63 | 0.26 | < 0.003 | 0.003 | < 0.003 |
| D08065 | < 0.003 | 0.023 | < 0.005 | < 0.005 | 0.011 | 4.78 | 0.19 | < 0.003 | 0.004 | < 0.003 |
| D08066 | < 0.003 | 0.032 | < 0.005 | < 0.005 | 0.007 | 5.15 | 0.30 | < 0.003 | 0.005 | 0.003 |
| D08067 | < 0.003 | 0.018 | < 0.005 | < 0.005 | 0.008 | 4.40 | 0.12 | < 0.003 | < 0.003 | 0.003 |
| D08068 | < 0.003 | 0.079 | < 0.005 | 0.005 | 0.005 | 5.38 | 1.18 | < 0.003 | 0.007 | < 0.003 |
| D08069 | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.014 | 6.14 | 0.31 | < 0.003 | 0.004 | 0.004 |

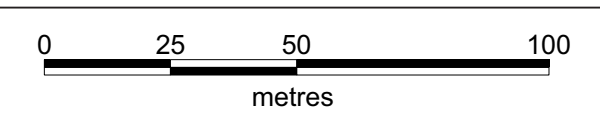
| Analyte Symbol | Ta2O5 | Nb2O5 | U3O8 | ThO2 | ZrO2 | Fe2O3(T) | P2O5 | SnO2 | Y2O3 | WO3 |
|------------------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Unit Symbol | % | % | % | % | % | % | % | % | % | % |
| Lower Limit | 0.003 | 0.003 | 0.005 | 0.005 | 0.003 | 0.01 | 0.01 | 0.003 | 0.003 | 0.003 |
| Method Code | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF | FUS-XRF |
| BE-N Meas | | 0.015 | | | 0.033 | 13.05 | 1.08 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| BE-N Meas | | 0.015 | | | 0.033 | 13.08 | 1.08 | | | |
| BE-N Cert | | 0.015 | | | 0.035 | 12.8 | 1.05 | | | |
| MA-N (Depleted) Meas | 0.034 | 0.026 | | | 0.007 | | | | | |
| MA-N (Depleted) Cert | 0.035 | 0.025 | | | 0.003 | | | | | |
| MA-N (Depleted) Meas | 0.035 | 0.026 | | | 0.007 | | | | | |
| MA-N (Depleted) Cert | 0.035 | 0.025 | | | 0.003 | | | | | |
| ZW-C Meas | 0.009 | | < 0.005 | 0.006 | 0.012 | 9.47 | 0.03 | 0.163 | | 0.042 |
| ZW-C Cert | 0.010 | | 0.002 | 0.005 | 0.011 | 9.46 | 0.025 | 0.165 | | 0.040 |
| VS-N Meas | 0.100 | 0.103 | | | 0.101 | 4.04 | | 0.100 | 0.105 | |
| VS-N Cert | 0.098 | 0.10 | | | 0.095 | 4.14 | | 0.102 | 0.101 | |
| SX18-01 Meas | 0.003 | 0.686 | | 0.019 | 0.089 | 8.26 | 3.85 | | 0.017 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-01 Meas | 0.006 | 0.684 | | 0.020 | 0.088 | 8.24 | 3.85 | | 0.018 | |
| SX18-01 Cert | 0.005 | 0.695 | | 0.018 | 0.093 | 8.12 | 3.84 | | 0.017 | |
| SX18-04 Meas | 0.006 | 1.309 | < 0.005 | 0.030 | 0.163 | 11.24 | 5.20 | | 0.024 | |
| SX18-04 Cert | 0.005 | 1.32 | 0.0032 | 0.025 | 0.146 | 11.24 | 5.20 | | 0.021 | |
| SX18-05 Meas | 0.006 | 0.951 | < 0.005 | 0.031 | 0.209 | 10.65 | 5.67 | | 0.030 | |
| SX18-05 Cert | 0.004 | 0.973 | 0.0045 | 0.029 | 0.218 | 10.54 | 5.78 | | 0.030 | |
| 351530 Orig | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.013 | 5.89 | 0.28 | < 0.003 | 0.004 | < 0.003 |
| 351530 Dup | < 0.003 | 0.006 | < 0.005 | < 0.005 | 0.014 | 5.82 | 0.29 | < 0.003 | 0.003 | < 0.003 |
| 351550 Orig | < 0.003 | 0.022 | < 0.005 | 0.006 | < 0.003 | 4.23 | 1.42 | < 0.003 | 0.009 | < 0.003 |
| 351550 Split PREP DUP | < 0.003 | 0.022 | < 0.005 | 0.006 | < 0.003 | 4.13 | 1.48 | < 0.003 | 0.010 | < 0.003 |
| 655386 Orig | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.005 | 4.62 | 0.87 | 0.003 | 0.006 | 0.003 |
| 655386 Dup | < 0.003 | 0.015 | < 0.005 | < 0.005 | 0.004 | 4.63 | 0.89 | < 0.003 | 0.006 | < 0.003 |
| 1674616 Orig | < 0.003 | 0.053 | < 0.005 | < 0.005 | 0.033 | 6.56 | 0.82 | < 0.003 | 0.004 | < 0.003 |
| 1674616 Dup | < 0.003 | 0.054 | < 0.005 | < 0.005 | 0.034 | 6.64 | 0.85 | < 0.003 | 0.004 | < 0.003 |
| 1674626 Orig | < 0.003 | 0.048 | < 0.005 | 0.007 | 0.012 | 5.81 | 0.94 | < 0.003 | 0.008 | < 0.003 |
| 1674626 Split PREP DUP | < 0.003 | 0.050 | < 0.005 | 0.006 | 0.011 | 5.84 | 0.93 | < 0.003 | 0.008 | 0.003 |
| 1674646 Orig | < 0.003 | 0.012 | < 0.005 | < 0.005 | 0.022 | 6.71 | 0.48 | < 0.003 | 0.005 | 0.003 |
| 1674646 Dup | < 0.003 | 0.013 | < 0.005 | < 0.005 | 0.022 | 6.75 | 0.49 | 0.004 | 0.004 | < 0.003 |
| D08069 Orig | < 0.003 | 0.009 | < 0.005 | < 0.005 | 0.015 | 6.11 | 0.31 | < 0.003 | 0.004 | 0.003 |
| D08069 Dup | < 0.003 | 0.010 | < 0.005 | < 0.005 | 0.014 | 6.18 | 0.31 | < 0.003 | 0.004 | 0.004 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |
| Method Blank | < 0.003 | < 0.003 | < 0.005 | < 0.005 | < 0.003 | < 0.01 | < 0.01 | < 0.003 | < 0.003 | < 0.003 |

APPENDIX C
Drill Plan

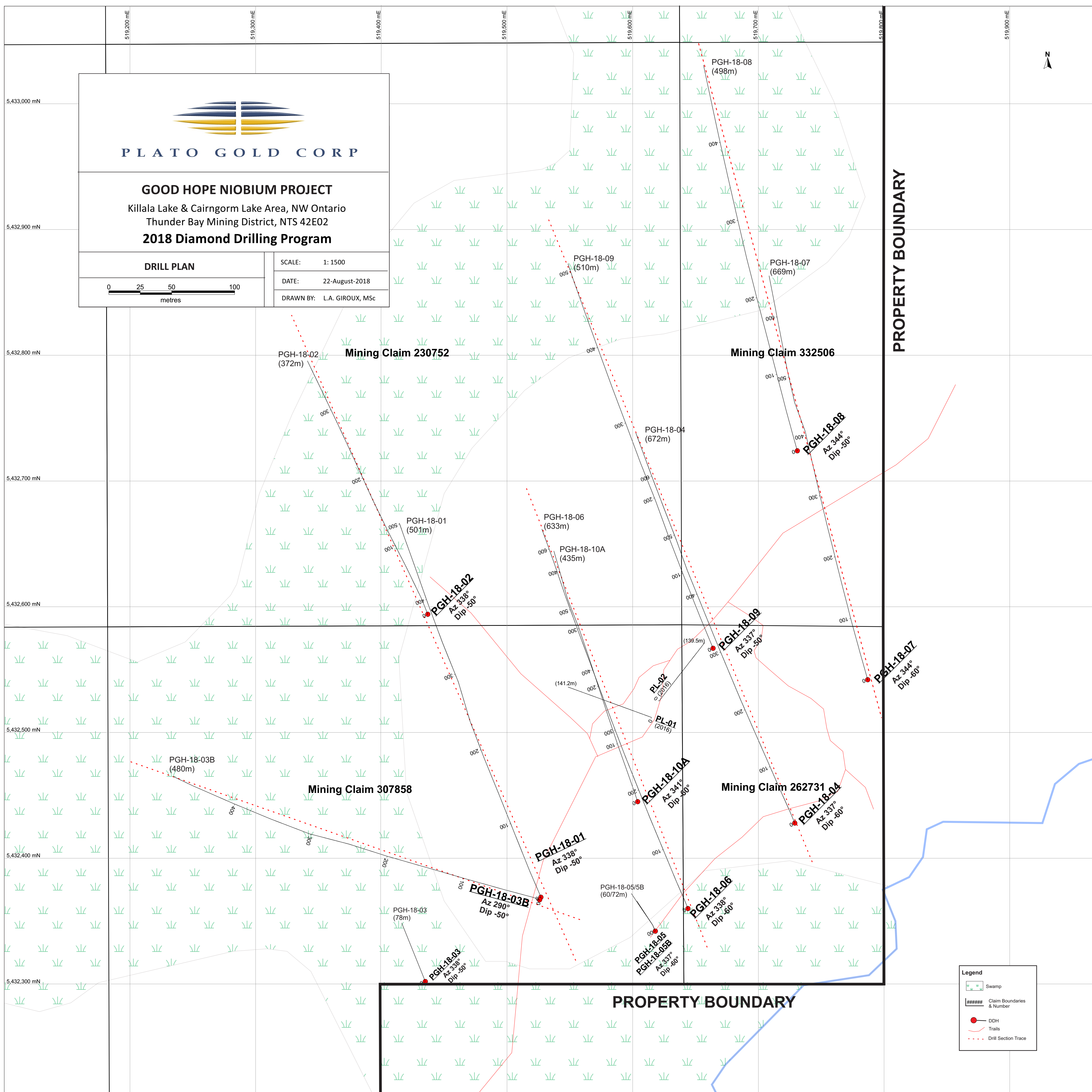


GOOD HOPE NIOBIUM PROJECT
Killala Lake & Cairngorm Lake Area, NW Ontario
Thunder Bay Mining District, NTS 42E02
2018 Diamond Drilling Program

DRILL PLAN



SCALE: 1: 1500
DATE: 22-August-2018
DRAWN BY: L.A. GIROUX, MSc



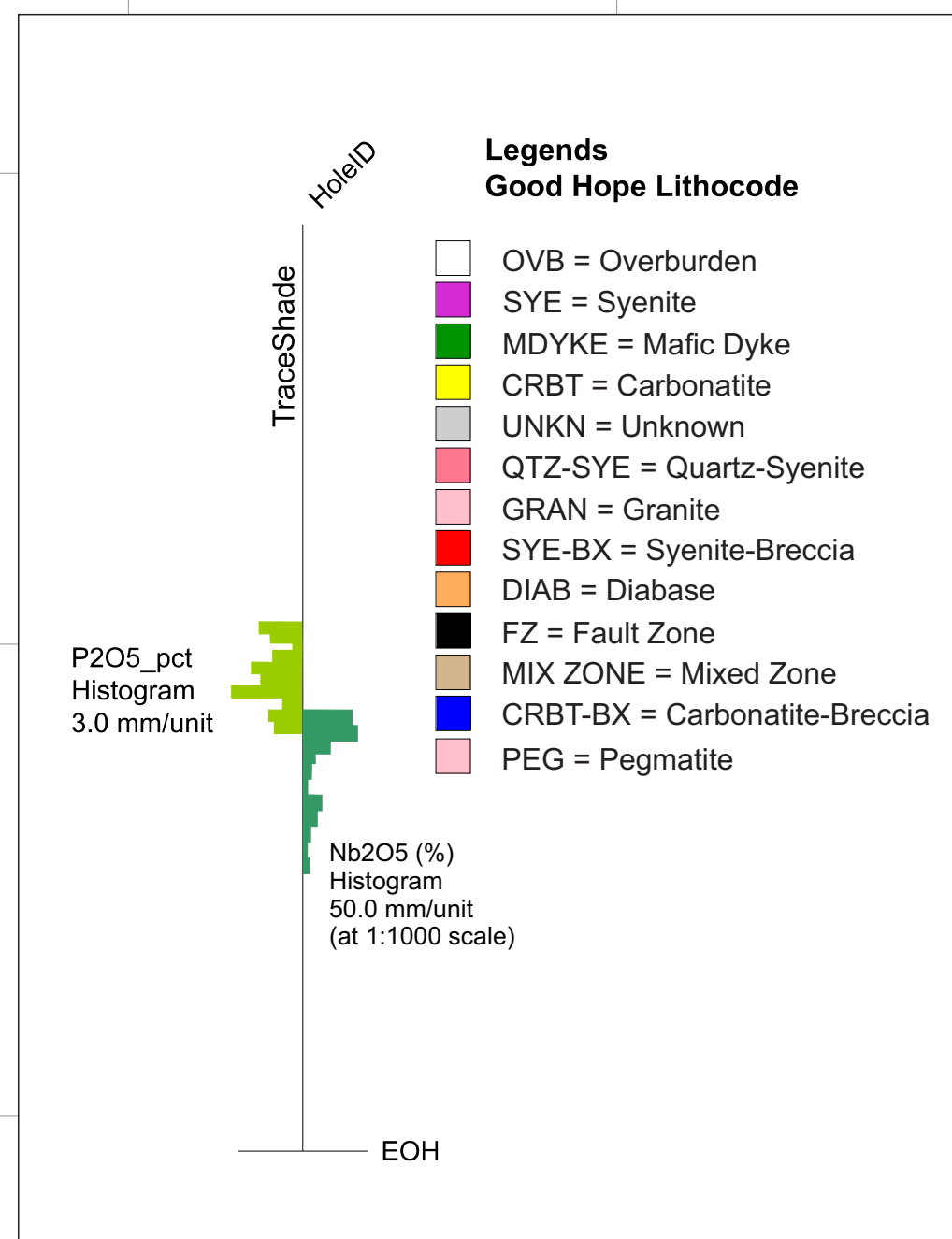
PROPERTY BOUNDARY

PROPERTY BOUNDARY

Legend

- Swamp
- Claim Boundaries & Number
- DDH
- Trails
- Drill Section Trace

APPENDIX D
Vertical Drill Sections



PGH-18-08
EOH = 498m

PGH-18-07
EOH = 669m

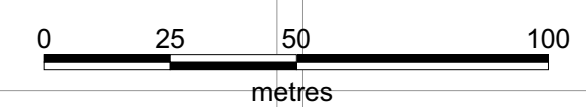
PGH-18-08
Az = 344°
Dip = -50°

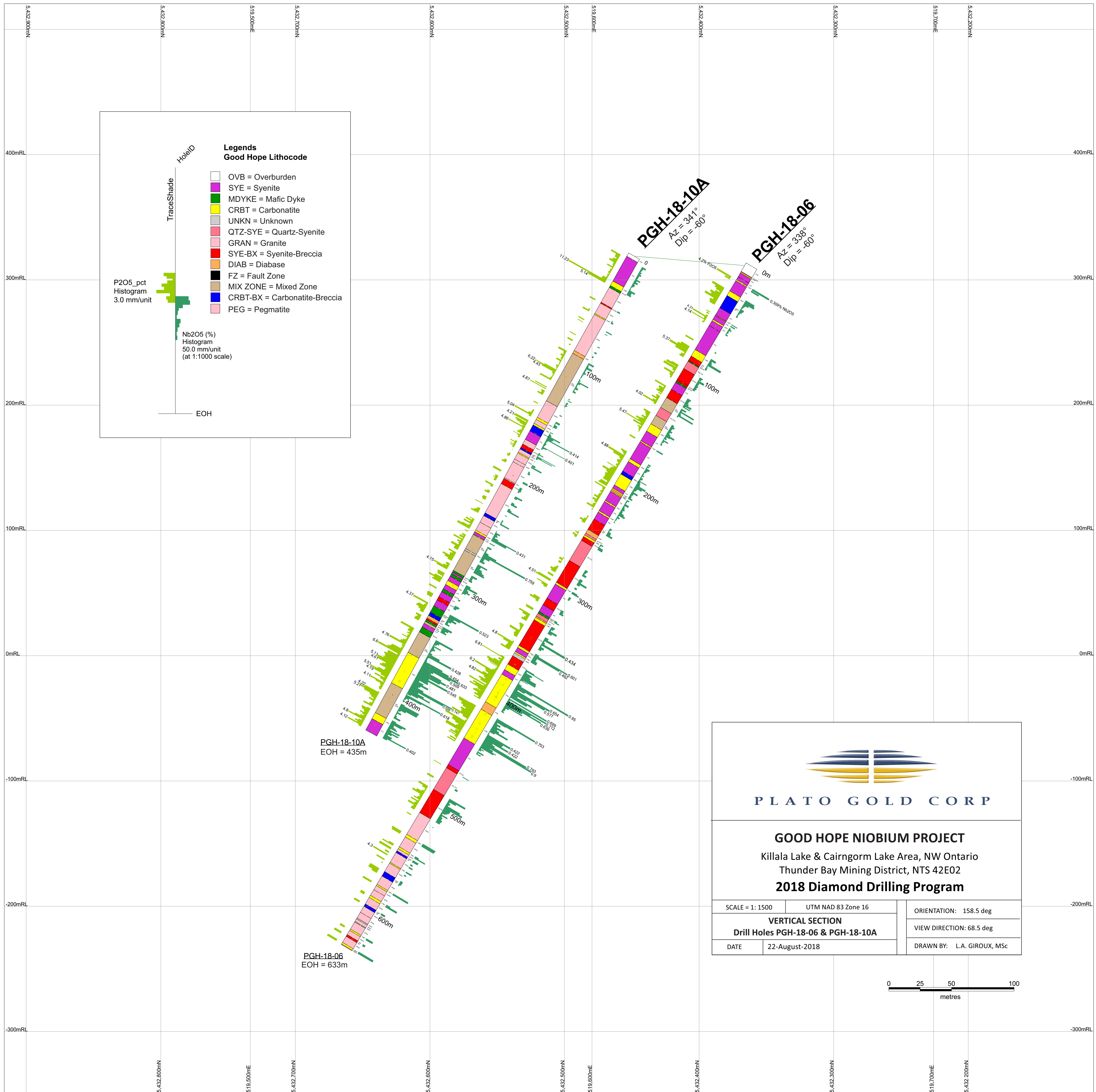
PGH-18-07
Az = 344°
Dip = -60°

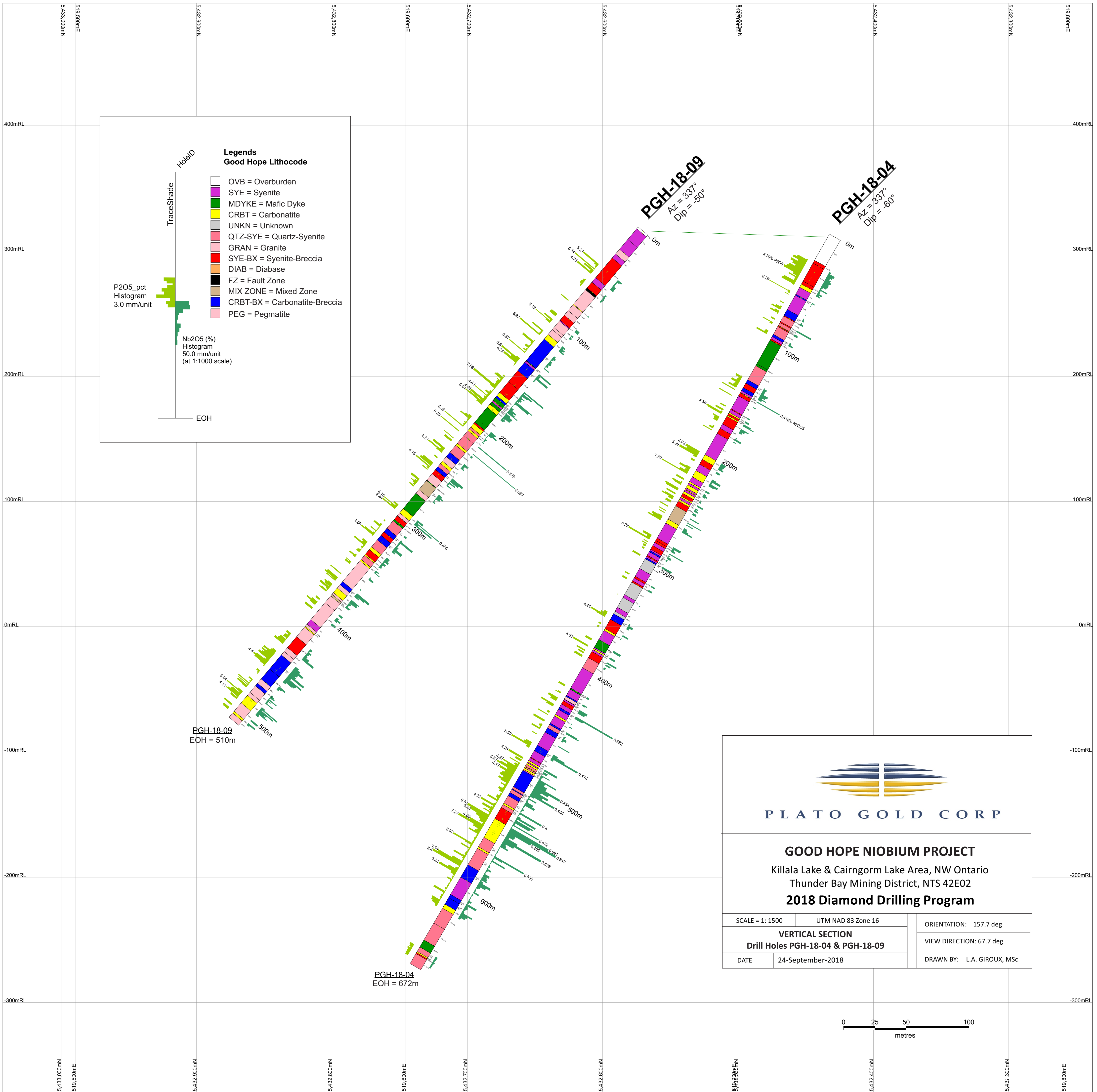
PLATO GOLD CORP

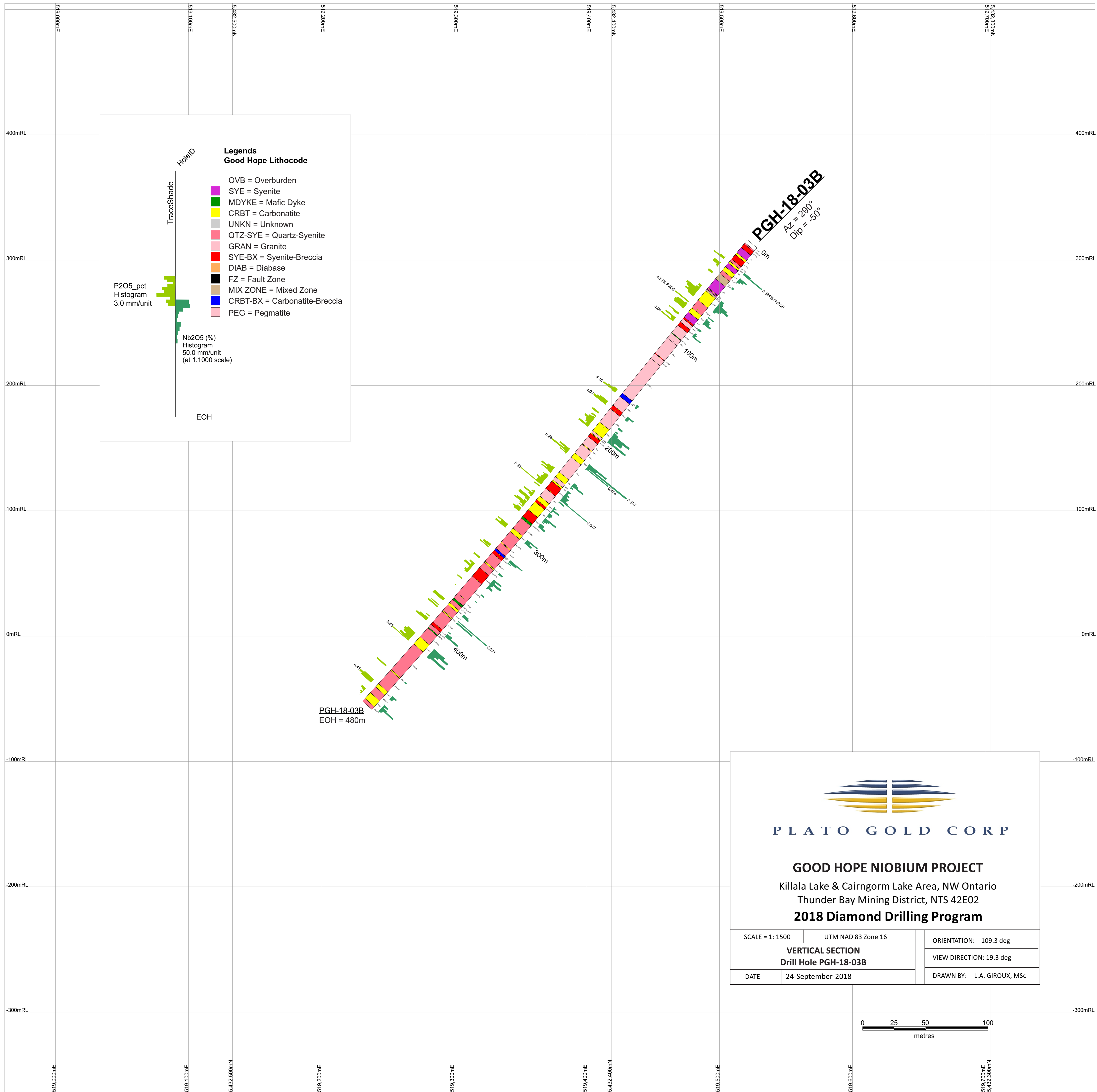
GOOD HOPE NIOBIUM PROJECT
Killala Lake & Cairngorm Lake Area, NW Ontario
Thunder Bay Mining District, NTS 42E02
2018 Diamond Drilling Program

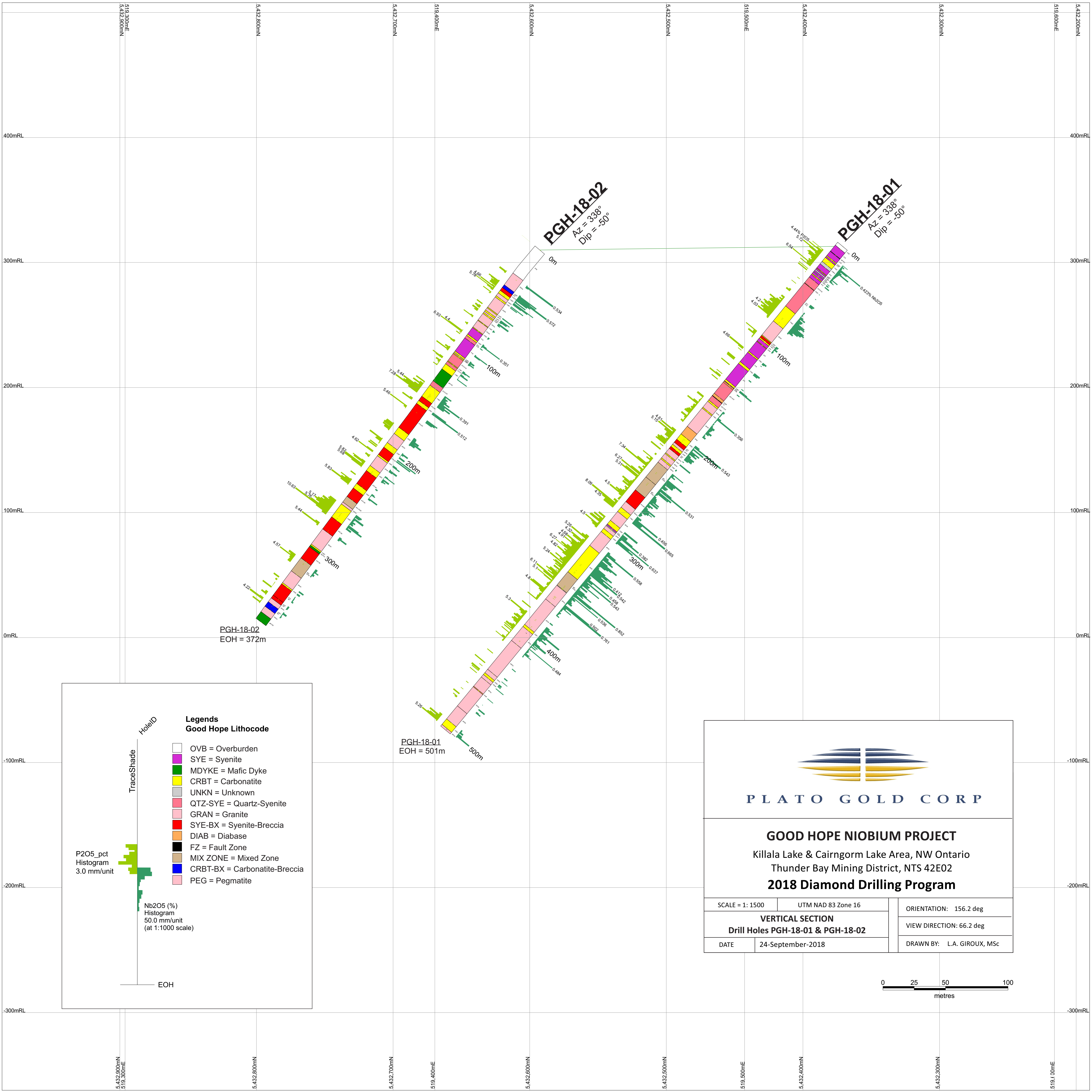
| | | |
|--|--------------------|----------------------------|
| SCALE = 1: 1500 | UTM NAD 83 Zone 16 | ORIENTATION: 164.8 deg |
| VERTICAL SECTION Drill Holes PGH-18-07 & PGH-18-08 | | VIEW DIRECTION: 74.8 deg |
| DATE | 24-September-2018 | DRAWN BY: L.A. GIROUX, MSc |











Legends
Good Hope Lithocode

- OVB = Overburden
- SYE = Syenite
- MDYKE = Mafic Dyke
- CRBT = Carbonatite
- UNKN = Unknown
- QTZ-SYE = Quartz-Syenite
- GRAN = Granite
- SYE-BX = Syenite-Breccia
- DIAB = Diabase
- FZ = Fault Zone
- MIX_ZONE = Mixed Zone
- CRBT-BX = Carbonatite-Breccia
- PEG = Pegmatite

P2O5_pct
Histogram
3.0 mm/unit

HoleID
TraceShade

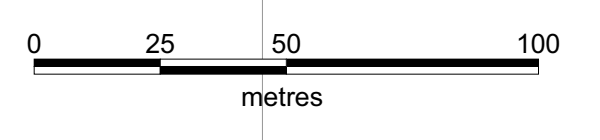
Nb2O5 (%)
Histogram
50.0 mm/unit
(at 1:1000 scale)

EOH



GOOD HOPE NIOBIUM PROJECT
Killala Lake & Cairngorm Lake Area, NW Ontario
Thunder Bay Mining District, NTS 42E02
2018 Diamond Drilling Program

| | | |
|--|--------------------|----------------------------|
| SCALE = 1: 1500 | UTM NAD 83 Zone 16 | ORIENTATION: 156.2 deg |
| VERTICAL SECTION | | VIEW DIRECTION: 66.2 deg |
| Drill Holes PGH-18-01 & PGH-18-02 | | DRAWN BY: L.A. GIROUX, MSc |
| DATE | 24-September-2018 | |



APPENDIX E
Tabulated Program Costs and Distribution

APPENDIX E: TABULATED PROGRAM COSTS - GOOD HOPE 2018 DRILL PROGRAM

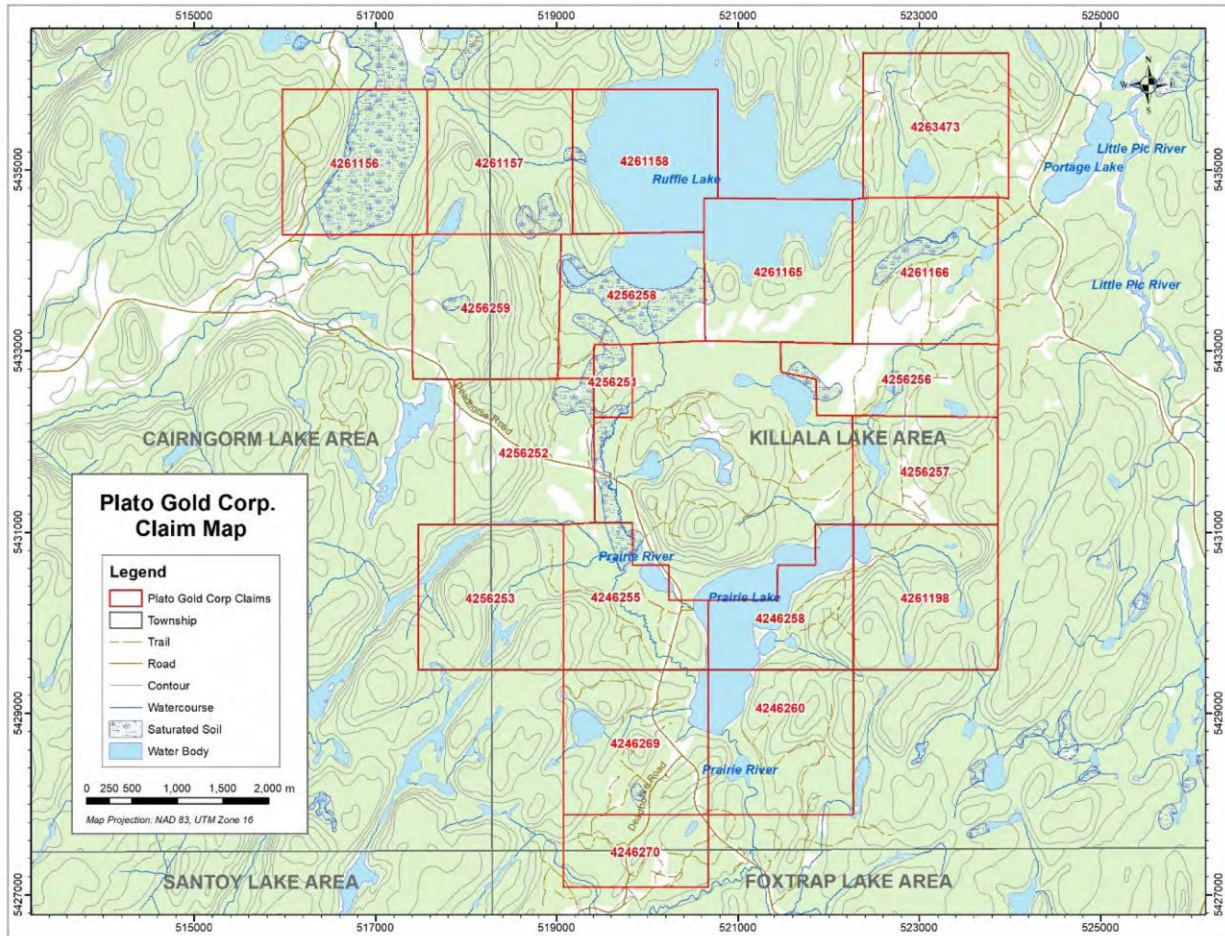
| | <u>Description or Cost/Unit</u> | <u>Cost (CDN\$)</u> |
|--|--|----------------------------|
| <u>Drilling Costs</u> | | |
| Chibougamau Diamond Drilling | Direct Drilling Costs (5016m) | \$536,449.65 |
| Florek Consulting | Core Shack and Saw Rental | \$24,505.82 |
| Phil's Septic Pumping Services Inc | Saw cutting disposal | \$700.00 |
| Major Machine Works | Forklift rental | \$49.00 |
| DP Diamond Blades | Saw Blades | \$1,061.54 |
| MKWA Timber LP | Site access | \$14,514.00 |
| <u>Geochemistry</u> | | |
| Activation Laboratories | 2249 samples | \$131,193.55 |
| <u>Personnel</u> | | |
| Brent Clark (Clark Exploration) | | |
| Consulting Geologist | 71.75 days @ \$530/day | \$38,027.50 |
| Mileage | 660km @ \$0.60/km | \$396.00 |
| Accommodations | \$115-117/night | \$7,918.00 |
| Other Expenses (Truck Rental, Meals, Fuel, Supplies) | | \$10,276.72 |
| Laura Giroux (QP/Consulting Geologist) | | |
| February-June 2018 (On site) | 54 days @ \$475/day | \$25,650.00 |
| June-October 2018 (Data/Maps/Reporting) | 40 days @ \$475/day | \$19,000.00 |
| Accommodations - Marathon/Thunder Bay | 16 nights | \$2,055.08 |
| Flights (Ottawa<->TBay), Truck Rental & Fuel | | \$6,680.05 |
| Other Expenses (Meals, Supplies) | | \$4,461.77 |
| Amy Cleaver (Consulting Geologist) | | |
| Consulting Geologist | 9 days @ \$250/day | \$2,250.00 |
| Expenses (Travel Kingston-Marathon) | | \$729.00 |
| Additional Accommodations | | |
| House Rental Marathon Harbour Inn - 2 ppl | 2 person, March 10th-31st | \$3,150.00 |
| Frederick Lowndes (Core Technician) | | |
| Core Technician | 96.5 days @ \$300/day | \$28,950.00 |
| Trailer Rental | 13 days @ \$50/day | \$650.00 |
| Quad/Skidoo Rental | 18 days @ \$125/day | \$2,250.00 |
| Mileage (drill visits, sample delivery) | 3290km @ \$0.50/km | \$1,670.00 |
| Expenses (fuel, supplies) | | \$4,043.23 |
| Michael Wesley (Core Technician) | | |
| Core Technician | 88 days @ \$300/day | \$26,400.00 |
| Expenses (safety equipment) | | \$50.24 |
| Michael Mitchell (Core Cutter) | | |
| Core Cutting | 36 days @ \$250/day | \$9,000.00 |
| Leonard Windover (Core Cutter) | | |
| Core Cutting | 58 days @ \$250/day | \$14,500.00 |
| Expenses (safety equipment) | | \$73.76 |
| TOTAL (not including tax) | | \$916,654.91 |

APPENDIX E: DISTRIBUTION OF EXPENDITURES BY CLAIM

| Drill hole | metres | Claims | | | |
|--------------------------|------------------|------------------|-----------------|------------------|------------------|
| | | 332506 | 262731 | 230752 | 307858 |
| PGH-18-01 | 501 | 0 | 0 | 150.3 | 350.7 |
| PGH-18-02 | 372 | 0 | 0 | 372 | 0 |
| PGH-18-03 | 78 | 0 | 0 | 0 | 78 |
| PGH-18-03B | 480 | 0 | 0 | 0 | 480 |
| PGH-18-04 | 672 | 336 | 336 | 0 | 0 |
| PGH-18-05 | 60 | 0 | 0 | 0 | 60 |
| PGH-18-05B | 72 | 0 | 0 | 0 | 72 |
| PGH-18-06 | 633 | 0 | 0 | 189.9 | 443.1 |
| PGH-18-07 | 669 | 568.65 | 100.35 | 0 | 0 |
| PGH-18-08 | 498 | 498 | 0 | 0 | 0 |
| PGH-18-09 | 510 | 102 | 25.5 | 382.5 | 0 |
| PGH-18-10 | 36 | 0 | 0 | 0 | 36 |
| PGH-18-10A | 435 | 0 | 0 | 130.5 | 304.5 |
| | | | | | |
| Total (m) | 5016 | 1504.65 | 461.85 | 1225.2 | 1824.3 |
| Percentage (%) | 100% | 30.0 | 10.0 | 24.0 | 36.0 |
| Expenditures (\$) | \$916,655 | \$274,996 | \$91,665 | \$219,997 | \$329,996 |

APPENDIX F
Pre-Conversion Claim List & Map

Appendix F: Pre-conversion Claim Map



Pre-conversion Claim Map (Selway, 2017)