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**Technical Report for MNDM  
Assessment,**

**Palladium One Mining Inc.  
Tyko Ni-Cu-PGE Property**

Thunder Bay Mining Division, Northwestern Ontario

Prepared For:

**PALLADIUM ONE MINING INC.**

Prepared by:

**Alexander Hughes**

**Fladgate Exploration Consulting Corporation**

Date:

March 1, 2021

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## 2 Introduction

This report details Palladium One's 2020 winter drill program on its 100% owned Tyko Ni-Cu-PGE project, located near White River, Ontario. The program consists of 14 diamond drill holes totalling 1123 meters drilled designed to test the Smoke Lake electromagnetic (EM) anomaly.

High-resolution drone-based magnetic and ground based loop time domain survey (TDEM) surveys, done previously in the year, refined the anomaly resulting in the discovery of massive magmatic sulphides returning 8.7% Ni<sub>Eq</sub>\* over 3.8 meters (6.6% Ni, 3.7% Cu, 1.5g/t PGE)

## 3 Terms of Reference

This report was prepared at the request of Palladium One Mining Inc. for the use of filing assessment as required under the Ontario Mining Act.

## 4 Disclaimer

This report is based on information from Palladium One Mining's (then known as Tyko Resources Inc.) NI-43-101 report written by Alan Albut (Albut, 2010), as well as assessment reports, private reports, and general geological reports and maps. The author takes no responsibility for the information provided in such reports.

## 5 Property Description and Location

The property is located in Northwestern Ontario, Canada, approximately 275 km east-northeast of Thunder Bay and 28 km south-east of Manitowadge (Figure 5-1). It is located within NTS 42C/13NW and 42C/14NE, in UTM Zone 16 (NAD 83), or Latitude 48°56'14", Longitude 85°32'54"W. The property is centered at approximately 606,300mE and 5,421,500mN.

The Tyko Property consists of 1192 unpatented claims (Figures 5-2). A list of all claims can be found in Appendix I. Table 5-1 indicates the claims on which drilling work was performed. The claims are registered in the name of Tyko Resources Inc. On February 25, 2016, Nickel One Resources Inc. announced the acquisition of Tyko Resources Inc. and through this transaction took possession of the Tyko Cu-Ni-PGE property and all of the claims held within it. On May 3rd, 2019 Nickel One Resources announced that the company's name will be officially changed to Palladium One Mining Inc. ("Palladium One").

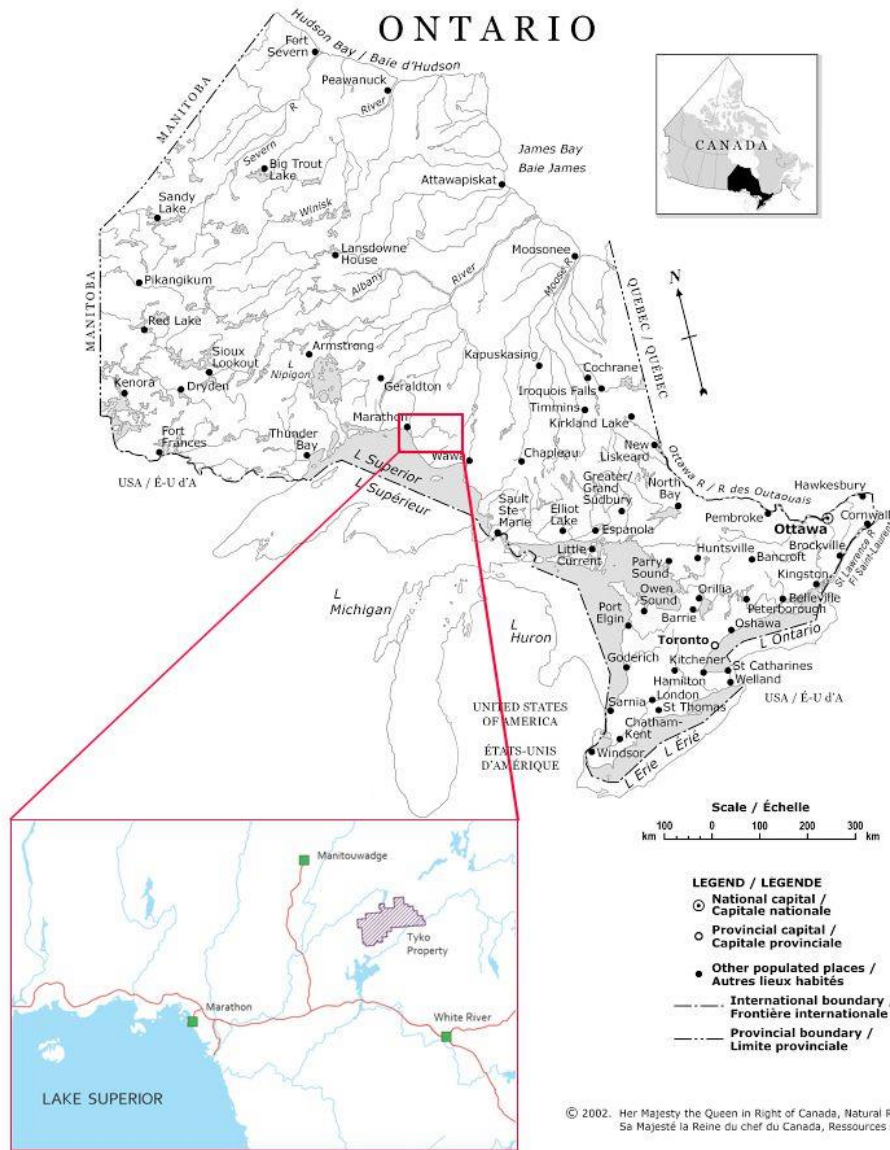


Figure 5-1 – Regional Location Map

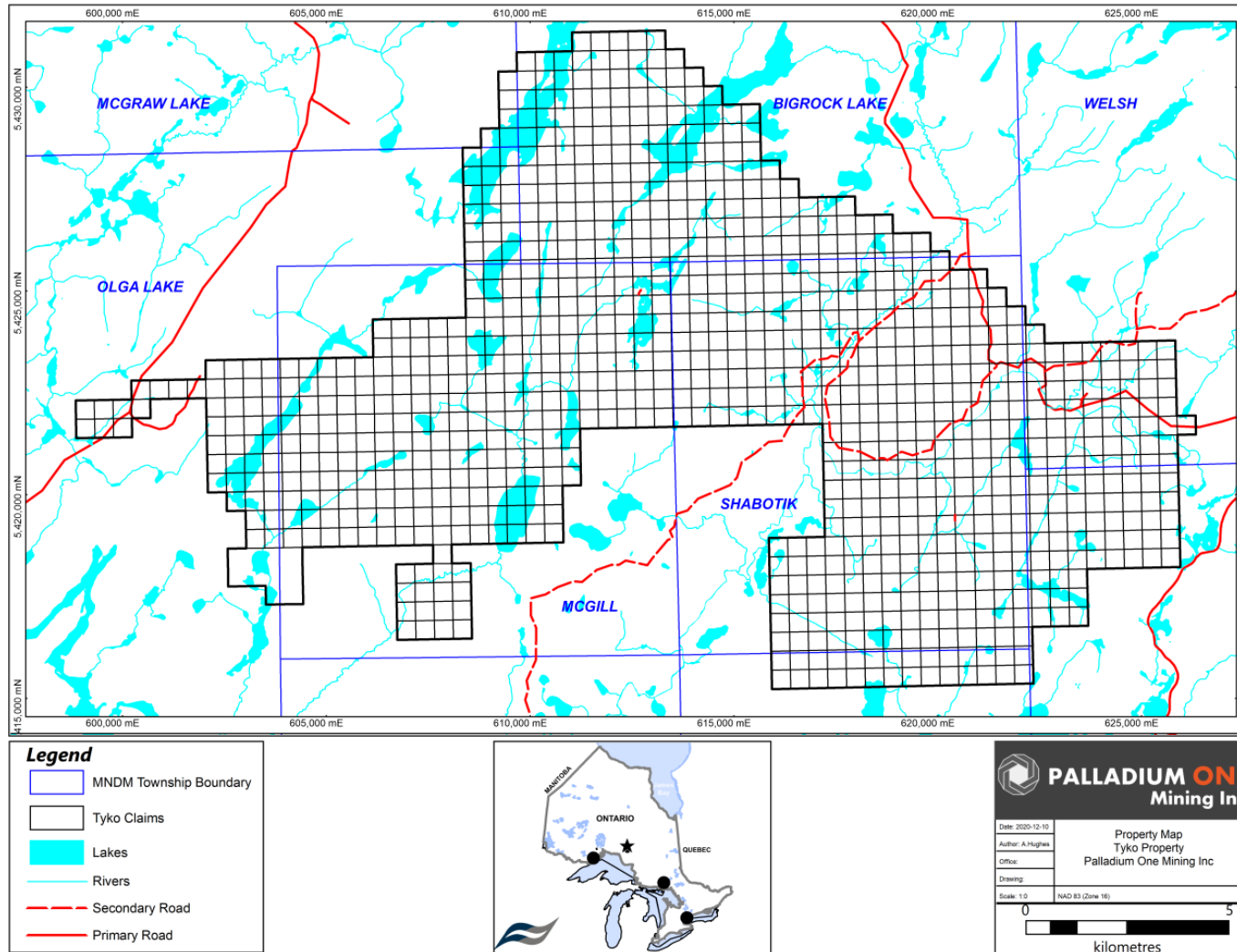


Figure 5-2 – Tyko Property Boundary

Table 5-1 – Drilled Tyko Property Claims

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	548188	2021-04-14	Active	100
MAGONE, SHABOTIK, WELSH	548180	2021-04-14	Active	100
WELSH	566846	2021-12-17	Active	100

## 6 Accessibility, Local Resources and Infrastructure

The property is predominantly accessible by logging roads originating from Manitouadge and White River, which have increased seasonal access to the eastern and western property extents. More remote sections of the property are best accessed by helicopter. The drive to White River from Thunder Bay is approximately 400 km east on Trans-Canada Highway 17.

White River has a population of roughly 1000 and has services and infrastructure required to operate a modern mineral exploration program. White River is capable of providing modern housing and lodging along with basic educational, medical, recreational, and shopping facilities.

The local economy is traditionally upheld by railway and forestry activities. This allows for labour, industrial supplies and services for mining to be locally sourced with limited availability. Thunder Bay, Ontario, is the closest major city center that can supply a vast range of geological, exploration and mining-related equipment and services.

## 7 Climate and Physiography

White River is situated within a region of subarctic continental climate that is moderated by Lake Superiors lake effect. Climate data for White River is sourced from Environment Canada. Mean daily temperatures range from 17.5°C in July to -22.8°C in January. Daily recorded highs and lows have reached 39.4°C in July 1975 and -45.0°C in January 1982, respectively. Mean total precipitation is 859.3 mm, which includes 563.6 mm of rainfall and 295.6 mm of snowfall. The highest amount of rainfall occurs in July (average 107.4 mm), while snowfall generally peaks in January (average 64.2 mm).

The Tyko property has an undulating terrain with low to moderate relief. Approximate elevations range from 340 meters to 460 meters above sea level. Low lying areas commonly occur as small bogs, meandering rivers and streams that drain into White Lake and White River, which ultimately drain into Lake Superior. The majority of the property was originally covered by glacial overburden, wetlands, and water, while outcrop can commonly be found on lake shores and some cut blocks.

Situated in the Northern Coniferous section of the Boreal Forest Region of Northwestern Ontario, the Tyko property is characterized by mixed wood forest stands of black and white spruce, balsam fir,



aspen and birch. Jack pine stands can occur in well-drained, coarse sandy soil along with areas that have been replanted.

Wildlife in the region include wolf, lynx, bobcat, fisher, marten, wolverine, river otter, least weasel, short-tail weasel, mink, snowshoe hare, red squirrel and beaver. Numerous species of wild birds are known to occur in the region. Many of the lakes and rivers in the region will have sport fish.

## 8 Geological Setting

The Tyko project is in the eastern Wawa Subprovince located in the Superior Structural Province (Williams et al., 1991). Minimal government mapping programs and historic mineral exploration in the area have taken place. Regional-scale mapping (Milne, 1968) indicates a dominance of compositionally granitic to tonalitic rock resulting from the older Black Pic Tonalite Gneissic Batholith and the younger granitic Dotted Lake Pluton in the southwest of the property.

Mapping and prospecting carried out by Spence (2000) show that the granites typically contain mafic to ultramafic xenoliths, with some bearing Ni-Cu-PGE mineralization. Xenoliths are well represented at the Tyko Main Showing and can be subdivided into groups. The most important of the subdivisions are the medium- to coarse-grained, dark green ultramafics and mafics varying from hornblendite to biotite-hornblendite to hornblend gabbro. These xenoliths are the host to the majority of Ni-Cu mineralization on the Tyko property. A smaller portion of mineralization, but often associated with the highest grade, can be found in coarse-grained pyroxenite fragments.

The mafic-ultramafic Bulldozer Intrusion is also located in the Tyko property. This intrusion is similar to the Tyko Main Showing in that it is heavily brecciated by granitic rocks and has locally-hosted Cu-Pd mineralization. Little exploration has been conducted on the Bulldozer Intrusion and no mapping has occurred.

The Archean rock units are cut by Proterozoic diabase dykes; Matachewan (NW trending), Biscotasing/Abitibi (NE trending), and Marathon (N trending) swarms (Figure 8-1).

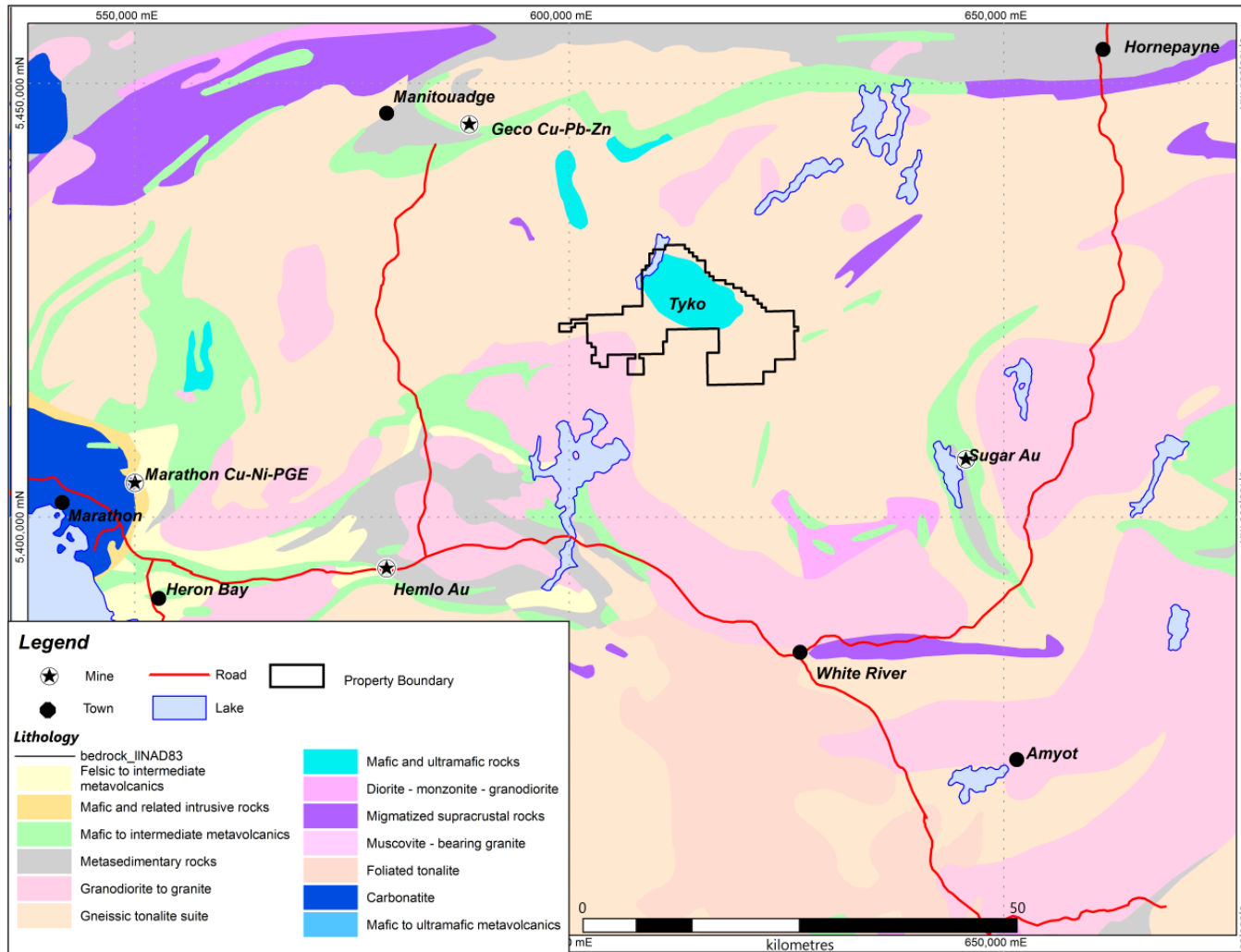


Figure 8-1 – Simplified Regional Geology map with Tyko property boundary

## 9 History of Exploration on the Property

Previous work done by industry and government geologists on the property is listed below. Detailed exploration work at Tyko since its discovery in 1999 includes stripping, channel sampling, mapping, ground magnetics, VLF-EM, and IP/resistivity.

- 1989 – Noranda Exploration Co. Ltd. conducted a large-scale, Aeodat helicopter-borne magnetometer and EM survey which included much of the Manitouwadge, eastern Schreiber-Hemlo, and Dayohessarah greenstone belts.
- 1999 – Brian Mealey and Ian Spence prospected the Tyko area which resulted in the discovery of the main Tyko Cu-Ni-PGE showing in Fall of 1999. The discovery samples contained 4528 ppm Cu, 6896 ppm Ni, 1085 ppb Pd, and 840 ppb Pt (Spence, 1999).
- 1999 – OGS Resident Geologist samples return 3.82% Ni, 0.86% Cu, 624 ppb Pd, and 444 ppb Pt (Schneiders, 2000).
- 1999 to 2000 – Freewest Resources Canada Inc. optioned the property and performed a helicopter-borne magnetic and electromagnetic survey by AEROQUEST Ltd. Two separate IP surveys were completed by GEOSIG Inc. and JVX Inc. along a cut grid. Geological mapping and hand-trenching were completed in the summer of 2000 (Spence, 2000; MacTavish, 2000).
- 2005 – North American Palladium (NAP) conducted a prospecting program on the property during the periods June 1 - June 20 and August 6 - August 15. This program was designed as a ground follow-up to an airborne magnetic/electromagnetic survey as well as uncovering and sampling the RJ showing (Rickard, 2006).
- 2006 – NAP employees were on the property September 10 to do a follow-up on a magnetic/electromagnetic target that was not investigated during the 2005 field season (Rickard, 2006).
- 2006 – NAP completed a 29.1 km cut grid in the western portion of the Tyko property and an IP survey was completed following this grid. To evaluate the main Tyko showing and an IP anomaly corresponding to the RJ showing, a 711 m diamond drill program was undertaken. Drilling results achieved values of 1.093% Ni, 0.765% Cu over 4.15 m and 1.021% Ni, 0.579% Cu over 1.46 m, which were intersected in holes TK-06-001 and TK-06-002 at the Main Tyko showing, respectively. The area surrounding the RJ showing revealed Ni and Cu values of 1.065% Ni, 0.511% Cu over 4.08 m (TK-06-003), 1.195% Ni, 0.506% Cu over 2.0 m (TK-06-004) and 1.046% Ni, 0.466% Cu over 6.2 m (TK-06-005) (Rickard, 2006). For a complete list of assays of the drilling results see North American Palladium's Prospecting-Geology-Geophysics-Drilling Report by Jason Rickard dated December 4, 2006 (Nielsen, 2007).
- 2007 – NAP contracted Lunic Exploration to cut a 17.3 km grid on the western portion of the property cross-cutting the grid cut the previous year. An IP and magnetic survey were again carried out over-top of this new grid. Geophysics was then followed by a 1519 m diamond drill program to further evaluate the IP anomalies associated with the RJ showing (Nielsen, 2007).

- 2011 – Tyko Resources Inc. completed several geophysical surveys including Airborne geophysical surveys consisting of 751 km flown over the Tyko property by AeroQuest (Harper, 2011). Surveys completed include Total Magnetic Intensity (TMI) and AeroTEM IV electromagnetics. A ground-based B-Field InfnitTEM II survey was conducted by Abitibi Geophysics over the grid covering both the Tyko and RJ showings (Martin Dubois, 2011), as well as a ground-based IP survey covering both the Tyko and RJ showings (Webster, 2011).
- 2012 – Tyko Resources Inc. completed an extension of the grid and extension of the IP survey to the south of the Tyko showing (Webster, 2012).
- 2016 – Nickel One Inc. completed helicopter supported drill program consisting of 14 BTW diamond drill holes totaling 1,780m testing the Tyko, RJ, and Bruce Lake anomalies.
- 2019 – Palladium One Mining Inc. completed a Ni-Cu-PGE prospecting program with the goals being to extend known mineralized showings and to follow up on untested airborne EM and Mag anomalies. 39 soil samples and 34 grab samples were taken. Samples were analyzed for Copper, Nickel and PGEs using fire assay, acid digestion and ICP-OES. Highlights include Ni-Cu signature returning up to 238ppm Ni and 106ppm Cu.

## 10 Current Program

The 2020 Tyko drill program consisted of 14 drill holes totalling 1,123 meters. This program was the first to drill test the Smoke Lake EM anomaly. 13 holes were drilled into the Smoke Lake electromagnetic anomaly and one hole (TK20-028) was drilled to test a separate magnetic anomaly interpreted to be related to the smoke lake anomaly. High-resolution drone-based magnetic and ground-based horizontal loop EM surveys, undertaken shortly before drilling, refined the anomaly resulting in the successful discovery of massive magmatic sulphides.

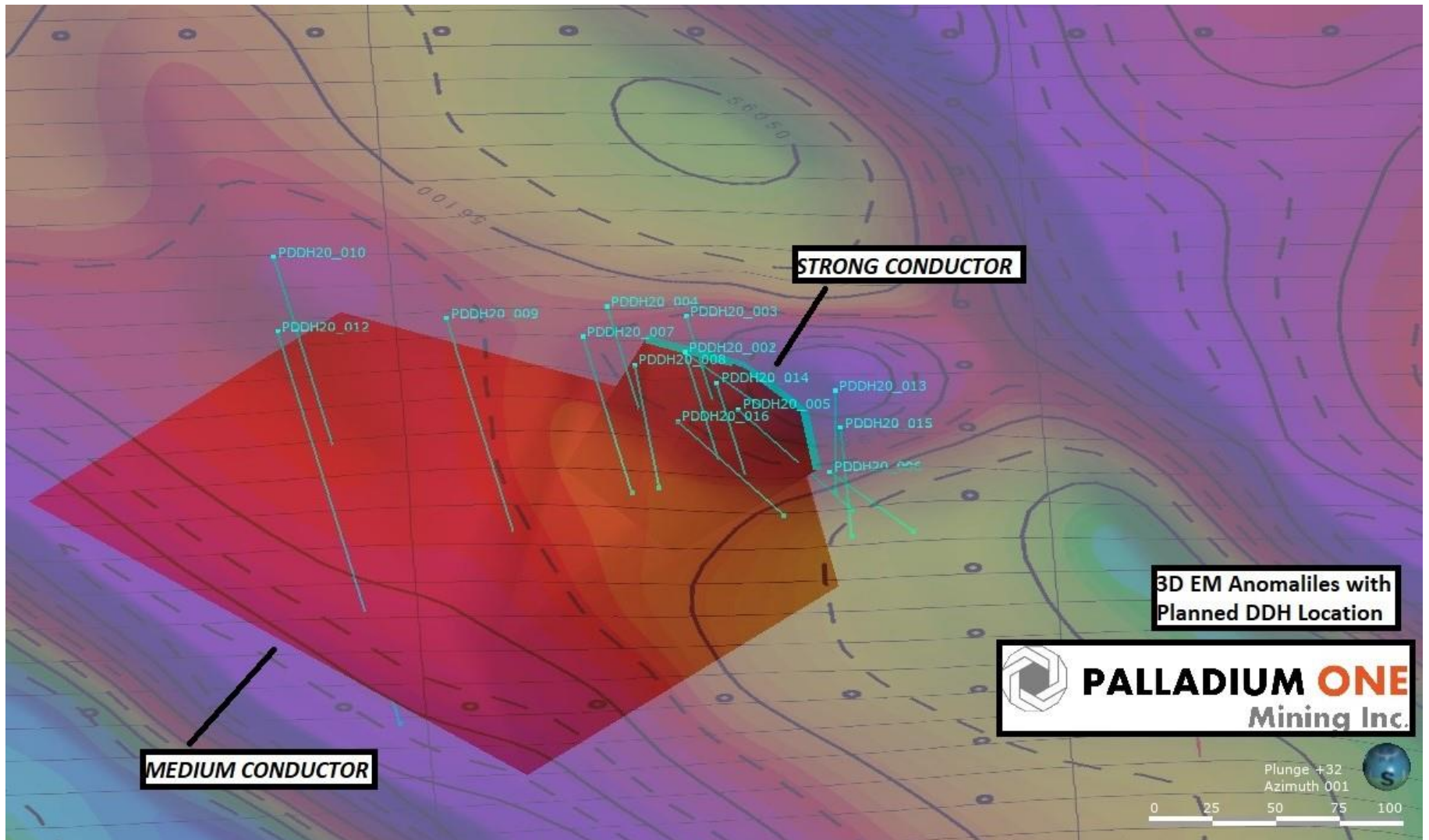


Figure 10-1 – 3D inclined view looking north with 1st Vertical Mag background showing planned 2020 drill holes.

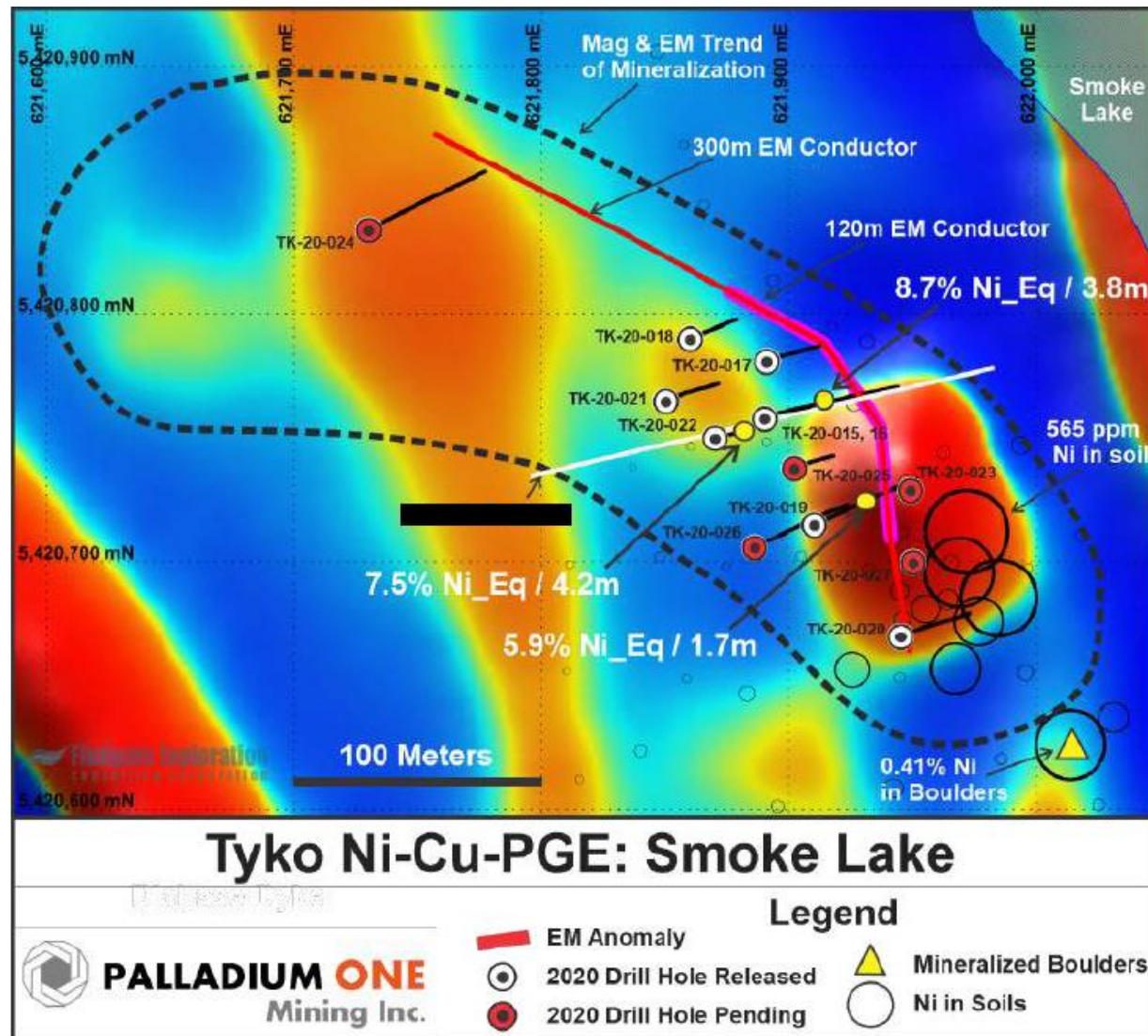


Figure 10-2 - Plan map of the Smoke Lake area with 1st Vertical Mag background showing soil samples and 2020 drill holes. The red line indicates the axial traces of the two closely spaced ground based horizontal loop EM anomalies.

## 10.1 Personnel

The program was designed based on recommendations from both Palladium One and Fladgate Exploration geologists. The drill program was managed and executed by Fladgate Exploration staff under the supervision of the Project Geologists. Logistics for the program began on October 28, 2020. Drilling started November 28, 2020 and was completed by December 14, 2020. Logging started December 02, 2020 and was completed December 17, 2020.

**Table 10-1 – Personnel Log**

Name	Working Title	Responsibilities	From/To Dates on Project
Neil Pettigrew	Senior Geologist	Program management	28-Oct-2020 to 17-Dec-2020
Kyle Pederson	Project Geologist	Core logging	2-Dec-2020 to 17-Dec-2020
Richard Brett	Geotechnician	Core cutting	2-Dec-2020 to 17-Dec-2020
Jordan Quinn	Project Geologist	Hole spotting, 3D modeling, drone surveying	28-Oct-2020 to 5-Nov-2020
Alex Hughes	Project Geologist	GIS mapping, report writing	28-Oct-2020 to 3-Nov-2020
Bonnie Craig	Administrative Assistant	Logistics	28-Oct-2020

## 10.2 Drilling

The program consisted of 14 diamond drill holes totaling 1123 meters drilled, all of which were drilled by drilling contractors 3M. Holes were spotted with a Garmin 64. Final collar locations were found using SSXBlue. Core was cut and stored in a converted car wash in White River, ON. Logged and cut core was later moved via flatbed truck and unloaded with a fork-lift at the long-term MNM storage facility in Conmee, ON.

**Table 10-2 – 2020 DDH Summary**

Planned Hole ID	Hole ID	Azimuth	Dip	Length (m)	Easting	Northing	Number of samples collected
PPDH20-002	TK20-015	68.8587	-45	77	621890	5420758	27
PPDH20-001	TK20-016	68.8587	-75	77	621890	5420758	18
PPDH20-003	TK20-017	68.8587	-75	89	621891	5420781	37
PPDH20-004	TK20-018	68.8587	-75	77	621860	5420790	16
PPDH20-005	TK20-019	68.8587	-50	77	621910	5420715	16

Planned Hole ID	Hole ID	Azimuth	Dip	Length (m)	Easting	Northing	Number of samples collected
PPDH20-006	<b>TK20-020</b>	68.8587	-75	50	621945	5420670	32
PPDH20-007	<b>TK20-021</b>	68.8587	-75	80	621850	5420765	15
PPDH20-008	<b>TK20-022</b>	68.8587	-80	62	621870	5420750	19
PPDH20-013	<b>TK20-023</b>	268.8587	-85	47	621949	5420729	24
PPDH20-010	<b>TK20-024</b>	68.8587	-75	202	621730	5420834	16
PPDH20-014	<b>TK20-025</b>	68.8587	-75	62	621902	5420738	23
PPDH20-016	<b>TK20-026</b>	68.8587	-75	71	621886	5420706	28
PPDH20-015	<b>TK20-027</b>	268.8587	-85	50	621950	5420700	41
PPDH20-011	<b>TK20-028</b>	358.8587	-75	102	622984	5420975	12

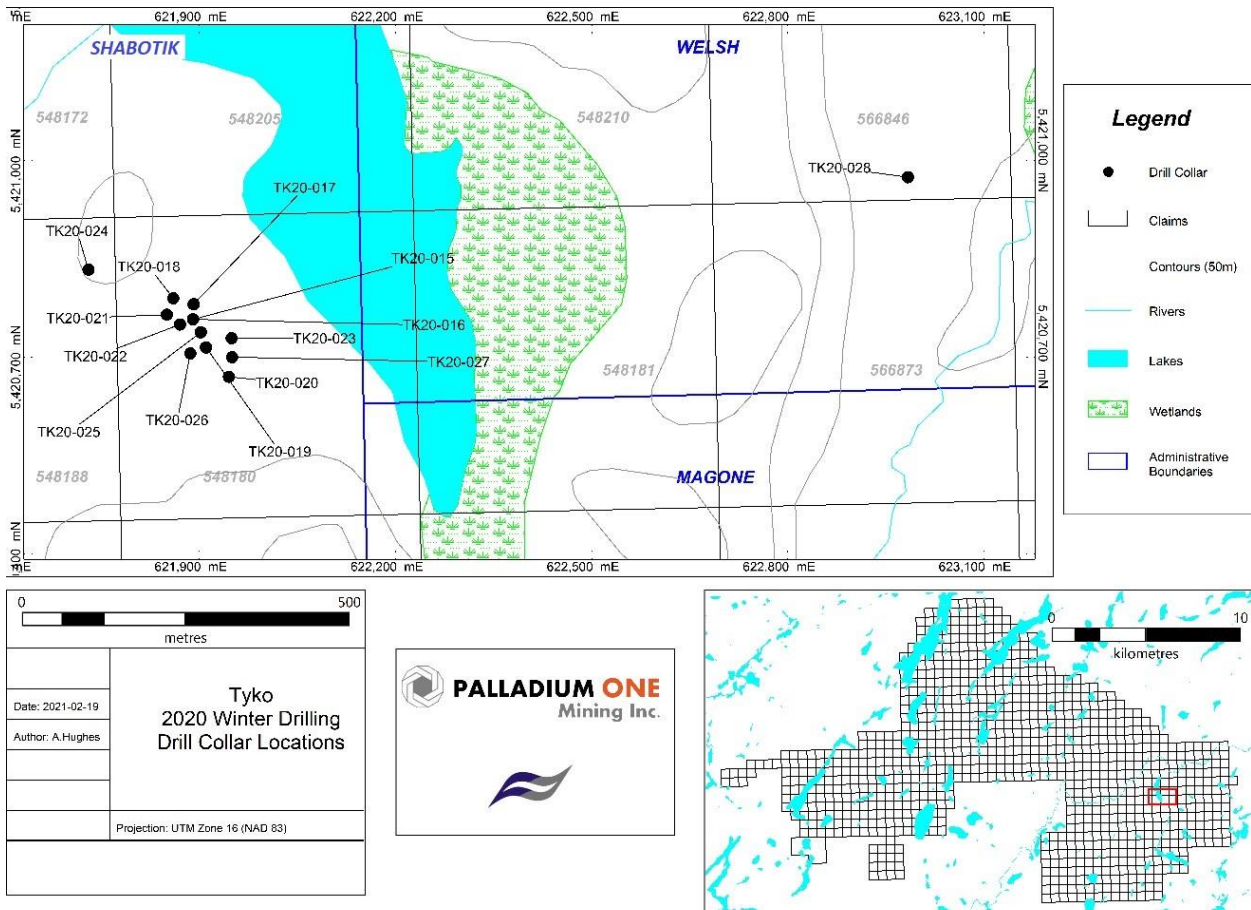


Figure 10-3 – Plan map showing drill collar location



## 11 Sampling, Analytical Methods, and QA/QC

Core Logging procedure followed the common practice used for exploration drill programs. Data collected included overburden and casing depth, meter marks and box meterage, core photos, core photos, geological descriptions and sample intervals. Data management for the project was organized directly into Fladgate laptops. All core logging and sampling information was collected and entered into Geotic core logging software.

Sample intervals were marked out on the core and recorded before placing sequential barcoded ActLabs sample tags. Sample length ranged from 0.3 meters to 1 meter with respect given to lithology contacts. 3-meter shoulder samples were taken on major mineralized intervals and 1–2-meter shoulder samples were taken on minor mineralized intervals. All samples were cut using a Husqvarna core saw. The core was cut along the top of the foliation of the rocks. The backside of the core remains in the box while the front side of the core was put into individual sample bags with the corresponding sample ticket. All individual sample bags were labeled and put into rice bags where they were transported to ActLabs in Thunder Bay.

Actlabs analysed the samples for PGEs using a 30 g fire assay with an ICP-OES finish and for Ni, Cu, and Co using 0.25 g by 4-acid digestion with ICP-OES finish. Ni, Cu and Co samples over 0.5 wt% were re-analysed using 2.5 g by 4-acid digestion with ICP-OES finish. All samples >0.25% Ni were analysed for total sulfur.

Certified standards, blanks and crushed duplicates are placed in at a rate of one QA/QC sample per ten core samples. Results are analyzed for acceptance at the time of import. All standards associated with the results in this assessment report were determined to be acceptable within the defined limits of the standard used.

## 12 Results

The Smoke Lake focused drilling consistently yielded exceptionally high-grade, nickel-copper, massive sulphide intersections. Drilling indicated a mineralized ultramafic body at surface, transitioning to massive sulphides which dip shallowly (~32°) to the southwest. The massive sulphides occur as a consistent sheet with a possible fault near its base. The lithologies at Smoke Lake closely resemble those found at both the Tyko and RJ showings, located 17-kilometers to the west.

Key highlights from the drill program are summarized in Table 12-1.

**Table 12-1 – Tyko 2020 Drilling Significant Intercepts**

Hole ID	From (m)	To (m)	Width (m)	Ni_Eq (%)	Ni_Eq (lbs/t)	Ni %	Cu %	PGE g/t (Pd+Pt+Au)
TK20-015	30.0	32.4	2.3	4.78	105	3.90	1.41	0.84
TK20-016	29.0	32.8	3.8	8.74	193	6.65	3.7	1.51
TK20-019	28.7	30.4	1.7	5.87	129	3.89	3.9	0.94

Hole ID	From (m)	To (m)	Width (m)	Ni <sub>Eq</sub> (%)	Ni <sub>Eq</sub> (lbs/t)	Ni %	Cu %	PGE g/t (Pd+Pt+Au)
<i>Including</i>	29.5	30.4	0.8	8.71	192	6.17	4.73	1.59
<b>TK20-022</b>	46.8	51.0	4.2	7.46	164	5.83	2.74	1.28
<i>Including</i>	48.5	50.6	2.1	8.78	193	7.26	2.34	1.30
<b>TK20-023</b>	5.3	12.8	7.5	6.07	134	4.49	2.86	1.01
<i>Including</i>	8.9	12.8	3.8	9.87	218	8.13	2.88	1.33
<b>TK20-025</b>	36.6	39.8	3.2	6.32	139	4.43	3.36	0.87
<i>Including</i>	37.2	37.8	0.6	11.82	261	9.65	3.69	1.48

## 13 Conclusion and Recommendations

The winter drill program yielded delivered very consistent high-grade results (Table 12-1). Drilling and geophysical surveys done to date indicate a mineralized ultramafic body at surface, transitioning to a massive sulphide that dips shallowly to the southwest. This massive sulphide was found to occur as a consistent sheet with a possible fault near its base.

A new ground EM survey with the loop located over the lake is recommended as the 2020 EM survey did not have the loop in the correct position to couple with the Smoke Lake EM conductor. A down hole EM survey is also recommended to further delineate the extent of the Smoke Lake massive sulphide mineralization.

Once the results of the new EM surveys are received an additional ~2,000m drill program is recommended to trace the massive sulphide mineralization to depth.

In addition a large, 100m spaced Airborne Mag and EM survey such as the GEOTEM system is recommended to cover the entire Tyko property to search for additional Smoke Lake EM conductors, which can form very discrete mag and EM anomalies.

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## 15 Statement of Qualifications

**Alexander Hughes, HB.Sc., G.I.T.**

402 Algoma St. North

Thunder Bay, Ontario

Canada

### **CERTIFICATE OF THE AUTHOR**

I, Alexander Hughes, do hereby certify that:

1. I am an employee of Fladgate Exploration Consulting Corporation, the geological consulting firm tasked with this report.
2. I am a member in good standing of the Association of Professional Geoscientists of Ontario (APGO #10625).
3. I am a graduate of the Lakehead University (Hons. B.Sc., 2017).
4. I have practiced geology for 4 years in Northwestern Ontario, Canada.
5. I have no previous involvement with the property that forms the subject of this Technical Report.
6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

Dated March 1, 2021

Alexander Hughes HB.Sc., G.I.T

## **16 Appendix I – Tyko Property Claims**

See attached document(s).

## **17 Appendix II – Drill Sections**

See attached document(s).

## **18 Appendix III – Assay Certificates**

See attached document(s).

## **19 Appendix IV – Expenditures and Invoices**

See attached document(s).

## **20 Appendix V – Total Cost by Claim**

See attached document(s).



Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	537178	2020-12-18	Active	100
MCGILL, SHABOTIK	537177	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537176	2020-12-18	Active	100
BIGROCK LAKE AREA	537175	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537174	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537173	2020-12-18	Active	100
MCGILL	537172	2020-12-18	Active	100
MCGILL	537171	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537170	2020-12-18	Active	100
BIGROCK LAKE AREA	537169	2020-12-18	Active	100
BIGROCK LAKE AREA	537168	2020-12-18	Active	100
BIGROCK LAKE AREA	537167	2020-12-18	Active	100
MCGILL	537166	2020-12-18	Active	100
BIGROCK LAKE AREA	537165	2020-12-18	Active	100
BIGROCK LAKE AREA	537164	2020-12-18	Active	100
BIGROCK LAKE AREA	537163	2020-12-18	Active	100
MCGILL	537162	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537161	2020-12-18	Active	100
MCGILL	537160	2020-12-18	Active	100
BIGROCK LAKE AREA	537159	2020-12-18	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	537158	2020-12-18	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	537157	2020-12-18	Active	100
SHABOTIK	537156	2020-12-18	Active	100
BIGROCK LAKE AREA	537155	2020-12-18	Active	100
BIGROCK LAKE AREA	537154	2020-12-18	Active	100
MCGILL	537153	2020-12-18	Active	100
BIGROCK LAKE AREA	537152	2020-12-18	Active	100
BIGROCK LAKE AREA	537151	2020-12-18	Active	100
OLGA LAKE AREA	537150	2020-12-18	Active	100
OLGA LAKE AREA	537149	2020-12-18	Active	100
MCGILL	537148	2020-12-18	Active	100
BIGROCK LAKE AREA, MCGILL	537147	2020-12-18	Active	100
SHABOTIK	537055	2020-12-18	Active	100
SHABOTIK	537054	2020-12-18	Active	100
SHABOTIK	537053	2020-12-18	Active	100
MCGILL	537052	2020-12-18	Active	100
SHABOTIK	537051	2020-12-18	Active	100
SHABOTIK	537050	2020-12-18	Active	100
SHABOTIK	537049	2020-12-18	Active	100
SHABOTIK	537048	2020-12-18	Active	100
MCGILL	537047	2020-12-18	Active	100
MCGILL	537046	2020-12-18	Active	100
MCGILL	537045	2020-12-18	Active	100
SHABOTIK	537044	2020-12-18	Active	100
SHABOTIK	537043	2020-12-18	Active	100
MCGILL, SHABOTIK	537042	2020-12-18	Active	100
MCGILL	537041	2020-12-18	Active	100
MCGILL	537040	2020-12-18	Active	100
MCGILL	537039	2020-12-18	Active	100
SHABOTIK	537038	2020-12-18	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	537037	2020-12-18	Active	100
SHABOTIK	537036	2020-12-18	Active	100
SHABOTIK	537035	2020-12-18	Active	100
SHABOTIK	537034	2020-12-18	Active	100
MCGILL	537033	2020-12-18	Active	100
MCGILL	537032	2020-12-18	Active	100
MCGILL	537031	2020-12-18	Active	100
MCGILL	537030	2020-12-18	Active	100
SHABOTIK	537029	2020-12-18	Active	100
SHABOTIK	537028	2020-12-18	Active	100
MCGILL, SHABOTIK	537027	2020-12-18	Active	100
MCGILL	537026	2020-12-18	Active	100
MCGILL	537025	2020-12-18	Active	100
MCGILL	537024	2020-12-18	Active	100
SHABOTIK	537023	2020-12-18	Active	100
SHABOTIK	537022	2020-12-18	Active	100
MCGILL	537021	2020-12-18	Active	100
SHABOTIK	537020	2020-12-18	Active	100
MCGILL, SHABOTIK	537019	2020-12-18	Active	100
MCGILL, SHABOTIK	537018	2020-12-18	Active	100
MCGILL	537017	2020-12-18	Active	100
SHABOTIK	537016	2020-12-18	Active	100
MCGILL, SHABOTIK	537015	2020-12-18	Active	100
MCGILL	537014	2020-12-18	Active	100
MCGILL	537013	2020-12-18	Active	100
MCGILL	537012	2020-12-18	Active	100
SHABOTIK	537477	2020-12-19	Active	100
MCGILL	257864	2020-12-20	Active	100
MCGILL	110731	2020-12-20	Active	100
MCGILL	309886	2020-12-20	Active	100
MCGILL	262002	2020-12-20	Active	100
MCGILL	257864	2020-12-20	Active	100
OLGA LAKE AREA	345145	2020-12-20	Active	100
OLGA LAKE AREA	325842	2020-12-20	Active	100
MCGILL, OLGA LAKE AREA	308746	2020-12-20	Active	100
OLGA LAKE AREA	275821	2020-12-20	Active	100
OLGA LAKE AREA	190959	2020-12-20	Active	100
OLGA LAKE AREA	158446	2020-12-20	Active	100
OLGA LAKE AREA	158445	2020-12-20	Active	100
MCGILL, OLGA LAKE AREA	140659	2020-12-20	Active	100
MCGILL, OLGA LAKE AREA	308746	2020-12-20	Active	100
MCGILL	288482	2020-12-20	Active	100
MCGILL	249385	2020-12-20	Active	100
MCGILL	221914	2020-12-20	Active	100
MCGILL	192671	2020-12-20	Active	100
MCGILL	175327	2020-12-20	Active	100
MCGILL	146071	2020-12-20	Active	100
MCGILL, OLGA LAKE AREA	140659	2020-12-20	Active	100
MCGILL	249385	2020-12-20	Active	100
MCGILL	236124	2020-12-20	Active	100
MCGILL	192671	2020-12-20	Active	100
MCGILL	141527	2020-12-20	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
OLGA LAKE AREA	298371	2020-12-20	Active	100
OLGA LAKE AREA	261063	2020-12-20	Active	100
OLGA LAKE AREA	231708	2020-12-20	Active	100
OLGA LAKE AREA	158369	2020-12-20	Active	100
OLGA LAKE AREA	158368	2020-12-20	Active	100
OLGA LAKE AREA	158367	2020-12-20	Active	100
OLGA LAKE AREA	103411	2020-12-20	Active	100
OLGA LAKE AREA	261063	2020-12-20	Active	100
MCGILL	164455	2020-12-20	Active	100
MCGILL	158344	2020-12-20	Active	100
MCGILL	297846	2020-12-20	Active	100
MCGILL	164455	2020-12-20	Active	100
MCGILL	158344	2020-12-20	Active	100
MCGILL	119852	2020-12-20	Active	100
MCGILL	119851	2020-12-20	Active	100
MCGILL	119015	2020-12-20	Active	100
MCGILL	248928	2020-12-20	Active	100
MCGILL	211018	2020-12-20	Active	100
MCGILL	211017	2020-12-20	Active	100
MCGILL	140254	2020-12-20	Active	100
MCGILL	128724	2020-12-20	Active	100
MCGILL	109457	2020-12-20	Active	100
MCGILL	250353	2020-12-20	Active	100
MCGILL	164455	2020-12-20	Active	100
MCGILL	140254	2020-12-20	Active	100
MCGILL	130154	2020-12-20	Active	100
MCGILL	119851	2020-12-20	Active	100
MCGILL	119015	2020-12-20	Active	100
MCGILL	109457	2020-12-20	Active	100
MCGILL	108512	2020-12-20	Active	100
MCGILL	333775	2020-12-31	Active	100
MCGILL	328723	2020-12-31	Active	100
MCGILL	320523	2020-12-31	Active	100
MCGILL	254252	2020-12-31	Active	100
MCGILL	225455	2020-12-31	Active	100
MCGILL	195327	2020-12-31	Active	100
MCGILL	166066	2020-12-31	Active	100
MCGILL	333775	2020-12-31	Active	100
MCGILL	328723	2020-12-31	Active	100
MCGILL	225455	2020-12-31	Active	100
MCGILL	213417	2020-12-31	Active	100
MCGILL	195384	2020-12-31	Active	100
MCGILL	166103	2020-12-31	Active	100
MCGILL	166102	2020-12-31	Active	100
MCGILL	147233	2020-12-31	Active	100
MCGILL	147232	2020-12-31	Active	100
MCGILL	333775	2020-12-31	Active	100
MCGILL	320525	2020-12-31	Active	100
MCGILL	320523	2020-12-31	Active	100
MCGILL	266571	2020-12-31	Active	100
MCGILL	254504	2020-12-31	Active	100
MCGILL	207351	2020-12-31	Active	100



Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	187813	2020-12-31	Active	100
MCGILL	135148	2020-12-31	Active	100
MCGILL	135147	2020-12-31	Active	100
MCGILL	112904	2020-12-31	Active	100
MCGILL	333775	2020-12-31	Active	100
MCGILL	320525	2020-12-31	Active	100
MCGILL	316605	2020-12-31	Active	100
MCGILL	214024	2020-12-31	Active	100
MCGILL	166708	2020-12-31	Active	100
MCGILL	166707	2020-12-31	Active	100
MCGILL	166103	2020-12-31	Active	100
MCGILL	166102	2020-12-31	Active	100
MCGILL	112904	2020-12-31	Active	100
SHABOTIK	332554	2020-12-31	Active	100
SHABOTIK	332418	2020-12-31	Active	100
SHABOTIK	318593	2020-12-31	Active	100
SHABOTIK	262013	2020-12-31	Active	100
SHABOTIK	216881	2020-12-31	Active	100
SHABOTIK	147356	2020-12-31	Active	100
SHABOTIK	131232	2020-12-31	Active	100
SHABOTIK	113920	2020-12-31	Active	100
SHABOTIK	216881	2020-12-31	Active	100
SHABOTIK	147356	2020-12-31	Active	100
SHABOTIK	332418	2020-12-31	Active	100
SHABOTIK	262013	2020-12-31	Active	100
SHABOTIK	147356	2020-12-31	Active	100
SHABOTIK	131232	2020-12-31	Active	100
SHABOTIK	131232	2020-12-31	Active	100
SHABOTIK	332554	2020-12-31	Active	100
SHABOTIK	131232	2020-12-31	Active	100
MCGILL	254252	2020-12-31	Active	100
MCGILL	333776	2021-03-03	Active	100
MCGILL	268704	2021-03-03	Active	100
MCGILL	146587	2021-03-03	Active	100
MCGILL	106879	2021-03-03	Active	100
MCGILL	333776	2021-03-03	Active	100
MCGILL	333776	2021-03-03	Active	100
MCGILL	288483	2021-03-03	Active	100
MCGILL	268704	2021-03-03	Active	100
MCGILL	213279	2021-03-03	Active	100
MCGILL	194731	2021-03-03	Active	100
MCGILL	160632	2021-03-03	Active	100
MCGILL	146587	2021-03-03	Active	100
MCGILL	114013	2021-03-03	Active	100
MCGILL	106880	2021-03-03	Active	100
MCGILL	106879	2021-03-03	Active	100
MCGILL	288483	2021-03-03	Active	100
MCGILL	106880	2021-03-03	Active	100
MCGILL	106879	2021-03-03	Active	100
MCGILL	106879	2021-03-03	Active	100
MCGILL, OLGA LAKE AREA	544920	2021-03-06	Active	100
OLGA LAKE AREA	544919	2021-03-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
<b>MCGILL, OLGA LAKE AREA</b>	544918	2021-03-06	Active	100
<b>OLGA LAKE AREA</b>	544917	2021-03-06	Active	100
<b>MCGILL</b>	544915	2021-03-06	Active	100
<b>MCGILL</b>	544914	2021-03-06	Active	100
<b>MCGILL</b>	544913	2021-03-06	Active	100
<b>MCGILL</b>	544912	2021-03-06	Active	100
<b>MCGILL</b>	544911	2021-03-06	Active	100
<b>MCGILL</b>	544910	2021-03-06	Active	100
<b>MCGILL</b>	544909	2021-03-06	Active	100
<b>MCGILL</b>	544908	2021-03-06	Active	100
<b>MCGILL</b>	544907	2021-03-06	Active	100
<b>MCGILL</b>	544906	2021-03-06	Active	100
<b>MCGILL</b>	544905	2021-03-06	Active	100
<b>MCGILL</b>	544904	2021-03-06	Active	100
<b>MCGILL</b>	544903	2021-03-06	Active	100
<b>MCGILL</b>	544902	2021-03-06	Active	100
<b>MCGILL</b>	544901	2021-03-06	Active	100
<b>MCGILL</b>	544900	2021-03-06	Active	100
<b>MCGILL</b>	544899	2021-03-06	Active	100
<b>MCGILL</b>	544898	2021-03-06	Active	100
<b>MCGILL</b>	544897	2021-03-06	Active	100
<b>MCGILL</b>	544896	2021-03-06	Active	100
<b>MCGILL</b>	544895	2021-03-06	Active	100
<b>MCGILL</b>	544894	2021-03-06	Active	100
<b>MCGILL</b>	544893	2021-03-06	Active	100
<b>MCGILL</b>	544892	2021-03-06	Active	100
<b>MCGILL</b>	544891	2021-03-06	Active	100
<b>MCGILL</b>	544890	2021-03-06	Active	100
<b>MCGILL</b>	544889	2021-03-06	Active	100
<b>MCGILL</b>	544888	2021-03-06	Active	100
<b>MCGILL</b>	544887	2021-03-06	Active	100
<b>MCGILL</b>	544886	2021-03-06	Active	100
<b>MCGILL</b>	544885	2021-03-06	Active	100
<b>MCGILL</b>	544884	2021-03-06	Active	100
<b>MCGILL</b>	544883	2021-03-06	Active	100
<b>MCGILL</b>	544882	2021-03-06	Active	100
<b>MCGILL</b>	544881	2021-03-06	Active	100
<b>MCGILL</b>	544880	2021-03-06	Active	100
<b>MCGILL</b>	544879	2021-03-06	Active	100
<b>MCGILL</b>	544878	2021-03-06	Active	100
<b>MCGILL</b>	544877	2021-03-06	Active	100
<b>MCGILL</b>	544876	2021-03-06	Active	100
<b>MCGILL</b>	544875	2021-03-06	Active	100
<b>MCGILL</b>	544874	2021-03-06	Active	100
<b>MCGILL</b>	544873	2021-03-06	Active	100
<b>MCGILL</b>	544872	2021-03-06	Active	100
<b>MCGILL</b>	544871	2021-03-06	Active	100
<b>MCGILL</b>	544870	2021-03-06	Active	100
<b>MCGILL</b>	544869	2021-03-06	Active	100
<b>MCGILL</b>	544868	2021-03-06	Active	100
<b>MCGILL</b>	544867	2021-03-06	Active	100
<b>MCGILL</b>	544866	2021-03-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	544865	2021-03-06	Active	100
BIGROCK LAKE AREA, MCGILL, OLGA LAKE AREA	544864	2021-03-06	Active	100
BIGROCK LAKE AREA, MCGILL, OLGA LAKE AREA	544863	2021-03-06	Active	100
MCGILL, OLGA LAKE AREA	544862	2021-03-06	Active	100
MCGILL, OLGA LAKE AREA	544861	2021-03-06	Active	100
MCGILL	544860	2021-03-06	Active	100
MCGILL	544859	2021-03-06	Active	100
MCGILL	544858	2021-03-06	Active	100
MCGILL	544857	2021-03-06	Active	100
MCGILL	544856	2021-03-06	Active	100
MCGILL	544855	2021-03-06	Active	100
MCGILL	544854	2021-03-06	Active	100
MCGILL	544853	2021-03-06	Active	100
MCGILL	544852	2021-03-06	Active	100
MCGILL	544851	2021-03-06	Active	100
MCGILL	544850	2021-03-06	Active	100
MCGILL	544849	2021-03-06	Active	100
MCGILL	544848	2021-03-06	Active	100
MCGILL	544847	2021-03-06	Active	100
MCGILL	544846	2021-03-06	Active	100
MCGILL	544845	2021-03-06	Active	100
MCGILL	544844	2021-03-06	Active	100
MCGILL	544843	2021-03-06	Active	100
MCGILL	544842	2021-03-06	Active	100
MCGILL	544841	2021-03-06	Active	100
MCGILL	544840	2021-03-06	Active	100
MCGILL	544839	2021-03-06	Active	100
MCGILL	544838	2021-03-06	Active	100
MCGILL	544837	2021-03-06	Active	100
MCGILL	544836	2021-03-06	Active	100
MCGILL	544835	2021-03-06	Active	100
MCGILL	544834	2021-03-06	Active	100
MCGILL	544833	2021-03-06	Active	100
MCGILL	544832	2021-03-06	Active	100
MCGILL	544831	2021-03-06	Active	100
MCGILL	544830	2021-03-06	Active	100
MCGILL	544829	2021-03-06	Active	100
MCGILL	544828	2021-03-06	Active	100
MCGILL	544827	2021-03-06	Active	100
MCGILL	544826	2021-03-06	Active	100
MCGILL	544825	2021-03-06	Active	100
MCGILL	546059	2021-03-21	Active	100
MCGILL	546058	2021-03-21	Active	100
MCGILL	546057	2021-03-21	Active	100
MCGILL	546056	2021-03-21	Active	100
MCGILL	546055	2021-03-21	Active	100
MCGILL	546054	2021-03-21	Active	100
MCGILL	546053	2021-03-21	Active	100
MCGILL	546052	2021-03-21	Active	100
MCGILL	546051	2021-03-21	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	546050	2021-03-21	Active	100
MCGILL	546049	2021-03-21	Active	100
MCGILL	546048	2021-03-21	Active	100
MCGILL	546047	2021-03-21	Active	100
MCGILL	546046	2021-03-21	Active	100
MCGILL	546045	2021-03-21	Active	100
MCGILL	546044	2021-03-21	Active	100
MCGILL	546043	2021-03-21	Active	100
MCGILL	546042	2021-03-21	Active	100
MCGILL	546041	2021-03-21	Active	100
MCGILL	546040	2021-03-21	Active	100
MCGILL	546039	2021-03-21	Active	100
MCGILL	546038	2021-03-21	Active	100
MCGILL	546037	2021-03-21	Active	100
MCGILL	546036	2021-03-21	Active	100
MCGILL	546035	2021-03-21	Active	100
MCGILL	546034	2021-03-21	Active	100
MCGILL	546033	2021-03-21	Active	100
MCGILL	546032	2021-03-21	Active	100
MCGILL	546031	2021-03-21	Active	100
MCGILL	546030	2021-03-21	Active	100
MCGILL	546029	2021-03-21	Active	100
MCGILL, OLGA LAKE AREA	546245	2021-03-26	Active	100
LECKIE LAKE AREA	310991	2021-03-31	Active	100
LECKIE LAKE AREA	292240	2021-03-31	Active	100
LECKIE LAKE AREA	292239	2021-03-31	Active	100
LECKIE LAKE AREA	267046	2021-03-31	Active	100
LECKIE LAKE AREA	255064	2021-03-31	Active	100
LECKIE LAKE AREA	188240	2021-03-31	Active	100
LECKIE LAKE AREA	180277	2021-03-31	Active	100
LECKIE LAKE AREA	135635	2021-03-31	Active	100
LECKIE LAKE AREA	110335	2021-03-31	Active	100
LECKIE LAKE AREA	328436	2021-03-31	Active	100
LECKIE LAKE AREA	315717	2021-03-31	Active	100
LECKIE LAKE AREA	268509	2021-03-31	Active	100
LECKIE LAKE AREA	261219	2021-03-31	Active	100
LECKIE LAKE AREA	255064	2021-03-31	Active	100
LECKIE LAKE AREA	194528	2021-03-31	Active	100
LECKIE LAKE AREA	194527	2021-03-31	Active	100
LECKIE LAKE AREA	193071	2021-03-31	Active	100
LECKIE LAKE AREA	180277	2021-03-31	Active	100
LECKIE LAKE AREA	175001	2021-03-31	Active	100
LECKIE LAKE AREA	175000	2021-03-31	Active	100
LECKIE LAKE AREA	146401	2021-03-31	Active	100
LECKIE LAKE AREA	140457	2021-03-31	Active	100
LECKIE LAKE AREA	140456	2021-03-31	Active	100
LECKIE LAKE AREA	140455	2021-03-31	Active	100
LECKIE LAKE AREA	135635	2021-03-31	Active	100
LECKIE LAKE AREA	110981	2021-03-31	Active	100
LECKIE LAKE AREA	110980	2021-03-31	Active	100
LITTLE STURGE LAKE AREA	510263	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510262	2021-04-10	Active	100

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LITTLE STURGE LAKE AREA	510261	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510260	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510259	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510258	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510257	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510256	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510255	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510254	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510253	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510252	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510251	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510250	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510249	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510248	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510247	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510246	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510245	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510244	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510243	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510242	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510241	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510240	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510239	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510238	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	510237	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509638	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509637	2021-04-10	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509636	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509635	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509634	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509633	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509632	2021-04-10	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509631	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509630	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509629	2021-04-10	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509628	2021-04-10	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509627	2021-04-10	Active	100
EAGLEHEAD LAKE AREA, LECKIE LAKE AREA, LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509626	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509625	2021-04-10	Active	100
LECKIE LAKE AREA	509624	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	509623	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	509622	2021-04-10	Active	100
EAGLEHEAD LAKE AREA, LECKIE LAKE AREA	509621	2021-04-10	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	509620	2021-04-10	Active	100
LECKIE LAKE AREA	509619	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	509618	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509617	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	509616	2021-04-10	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	509615	2021-04-10	Active	100
LECKIE LAKE AREA	509614	2021-04-10	Active	100
LECKIE LAKE AREA	509613	2021-04-10	Active	100
LECKIE LAKE AREA	509612	2021-04-10	Active	100
LECKIE LAKE AREA	509611	2021-04-10	Active	100
LECKIE LAKE AREA	509610	2021-04-10	Active	100
LECKIE LAKE AREA	509609	2021-04-10	Active	100
LECKIE LAKE AREA	509608	2021-04-10	Active	100
LECKIE LAKE AREA	509607	2021-04-10	Active	100
LECKIE LAKE AREA	509118	2021-04-10	Active	100
LECKIE LAKE AREA	509117	2021-04-10	Active	100
LECKIE LAKE AREA	509116	2021-04-10	Active	100
LECKIE LAKE AREA	509115	2021-04-10	Active	100
LECKIE LAKE AREA	509114	2021-04-10	Active	100
LECKIE LAKE AREA	509113	2021-04-10	Active	100
LECKIE LAKE AREA	509112	2021-04-10	Active	100
LECKIE LAKE AREA	509111	2021-04-10	Active	100
LECKIE LAKE AREA	509110	2021-04-10	Active	100
LECKIE LAKE AREA	509109	2021-04-10	Active	100
LECKIE LAKE AREA	509108	2021-04-10	Active	100
LECKIE LAKE AREA	509107	2021-04-10	Active	100
LECKIE LAKE AREA	509106	2021-04-10	Active	100
LECKIE LAKE AREA	509105	2021-04-10	Active	100
LECKIE LAKE AREA	509104	2021-04-10	Active	100
LECKIE LAKE AREA	509103	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508877	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508876	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508875	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508874	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508873	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508872	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508871	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508870	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508869	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508868	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508867	2021-04-10	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
LECKIE LAKE AREA	508866	2021-04-10	Active	100
LITTLE STURGE LAKE AREA	508865	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508864	2021-04-10	Active	100
LECKIE LAKE AREA	508863	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508862	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508861	2021-04-10	Active	100
LECKIE LAKE AREA	508860	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508859	2021-04-10	Active	100
LECKIE LAKE AREA	508858	2021-04-10	Active	100
LECKIE LAKE AREA	508857	2021-04-10	Active	100
LECKIE LAKE AREA	508856	2021-04-10	Active	100
LECKIE LAKE AREA	508855	2021-04-10	Active	100
LECKIE LAKE AREA	508854	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508853	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508852	2021-04-10	Active	100
LECKIE LAKE AREA	508851	2021-04-10	Active	100
LECKIE LAKE AREA	508850	2021-04-10	Active	100
LECKIE LAKE AREA	508849	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508848	2021-04-10	Active	100
LECKIE LAKE AREA	508847	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508846	2021-04-10	Active	100
LECKIE LAKE AREA	508845	2021-04-10	Active	100
LECKIE LAKE AREA	508844	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508843	2021-04-10	Active	100
LECKIE LAKE AREA	508842	2021-04-10	Active	100
LECKIE LAKE AREA	508841	2021-04-10	Active	100
LECKIE LAKE AREA, LITTLE STURGE LAKE AREA	508840	2021-04-10	Active	100
LECKIE LAKE AREA	508839	2021-04-10	Active	100
LECKIE LAKE AREA	508838	2021-04-10	Active	100
LECKIE LAKE AREA	508837	2021-04-10	Active	100
LECKIE LAKE AREA	508836	2021-04-10	Active	100
LECKIE LAKE AREA	508835	2021-04-10	Active	100
LECKIE LAKE AREA	508834	2021-04-10	Active	100
LECKIE LAKE AREA	508833	2021-04-10	Active	100
MCGILL	320524	2021-04-12	Active	100
MCGILL	273329	2021-04-12	Active	100
MCGILL	273328	2021-04-12	Active	100
MCGILL	236427	2021-04-12	Active	100
MCGILL	154693	2021-04-12	Active	100
MCGILL	135149	2021-04-12	Active	100
MCGILL	320524	2021-04-12	Active	100
MCGILL	307246	2021-04-12	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	320524	2021-04-12	Active	100
MCGILL	307246	2021-04-12	Active	100
MCGILL	273329	2021-04-12	Active	100
MCGILL	273328	2021-04-12	Active	100
MCGILL	239222	2021-04-12	Active	100
MCGILL	236427	2021-04-12	Active	100
MCGILL	154693	2021-04-12	Active	100
MCGILL	135149	2021-04-12	Active	100
SHABOTIK	548212	2021-04-14	Active	100
WELSH	548211	2021-04-14	Active	100
WELSH	548210	2021-04-14	Active	100
SHABOTIK	548209	2021-04-14	Active	100
SHABOTIK	548208	2021-04-14	Active	100
SHABOTIK	548207	2021-04-14	Active	100
MCGILL, SHABOTIK	548206	2021-04-14	Active	100
SHABOTIK, WELSH	548205	2021-04-14	Active	100
SHABOTIK	548204	2021-04-14	Active	100
SHABOTIK	548203	2021-04-14	Active	100
SHABOTIK	548202	2021-04-14	Active	100
SHABOTIK	548201	2021-04-14	Active	100
MCGILL	548200	2021-04-14	Active	100
MAGONE	548199	2021-04-14	Active	100
SHABOTIK	548198	2021-04-14	Active	100
SHABOTIK	548197	2021-04-14	Active	100
SHABOTIK	548196	2021-04-14	Active	100
MCGILL	548195	2021-04-14	Active	100
MCGILL	548194	2021-04-14	Active	100
SHABOTIK	548193	2021-04-14	Active	100
SHABOTIK	548192	2021-04-14	Active	100
MCGILL	548191	2021-04-14	Active	100
MCGILL	548190	2021-04-14	Active	100
MAGONE, SHABOTIK	548189	2021-04-14	Active	100
SHABOTIK	548188	2021-04-14	Active	100
SHABOTIK	548187	2021-04-14	Active	100
SHABOTIK	548186	2021-04-14	Active	100
SHABOTIK	548185	2021-04-14	Active	100
SHABOTIK	548184	2021-04-14	Active	100
SHABOTIK	548183	2021-04-14	Active	100
SHABOTIK	548182	2021-04-14	Active	100
MAGONE, WELSH	548181	2021-04-14	Active	100
MAGONE, SHABOTIK, WELSH	548180	2021-04-14	Active	100
SHABOTIK	548179	2021-04-14	Active	100
SHABOTIK	548178	2021-04-14	Active	100
SHABOTIK	548177	2021-04-14	Active	100
SHABOTIK	548176	2021-04-14	Active	100
SHABOTIK	548175	2021-04-14	Active	100
SHABOTIK	548174	2021-04-14	Active	100
SHABOTIK, WELSH	548173	2021-04-14	Active	100
SHABOTIK	548172	2021-04-14	Active	100
MCGILL, OLGA LAKE AREA	548385	2021-04-15	Active	100
MCGILL, OLGA LAKE AREA	548384	2021-04-15	Active	100
MCGILL, OLGA LAKE AREA	548383	2021-04-15	Active	100



Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL, OLGA LAKE AREA	548382	2021-04-15	Active	100
OLGA LAKE AREA	548720	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548719	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548718	2021-04-17	Active	100
OLGA LAKE AREA	548717	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548716	2021-04-17	Active	100
OLGA LAKE AREA	548715	2021-04-17	Active	100
OLGA LAKE AREA	548714	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548713	2021-04-17	Active	100
OLGA LAKE AREA	548712	2021-04-17	Active	100
OLGA LAKE AREA	548711	2021-04-17	Active	100
OLGA LAKE AREA	548710	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548709	2021-04-17	Active	100
OLGA LAKE AREA	548708	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548707	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548706	2021-04-17	Active	100
BIGROCK LAKE AREA, OLGA LAKE AREA	548705	2021-04-17	Active	100
MCGILL, OLGA LAKE AREA	157362	2021-05-03	Active	100
MCGILL, OLGA LAKE AREA	157362	2021-05-03	Active	100
MCGILL, OLGA LAKE AREA	157362	2021-05-03	Active	100
OLGA LAKE AREA	549409	2021-05-06	Active	100
OLGA LAKE AREA	549408	2021-05-06	Active	100
OLGA LAKE AREA	549407	2021-05-06	Active	100
OLGA LAKE AREA	549406	2021-05-06	Active	100
OLGA LAKE AREA	549405	2021-05-06	Active	100
OLGA LAKE AREA	549404	2021-05-06	Active	100
MCGILL, OLGA LAKE AREA	549403	2021-05-06	Active	100
OLGA LAKE AREA	549402	2021-05-06	Active	100
OLGA LAKE AREA	549401	2021-05-06	Active	100
OLGA LAKE AREA	549400	2021-05-06	Active	100
OLGA LAKE AREA	549399	2021-05-06	Active	100
SHABOTIK	555711	2021-08-14	Active	100
SHABOTIK	555710	2021-08-14	Active	100
SHABOTIK	555709	2021-08-14	Active	100
SHABOTIK	555708	2021-08-14	Active	100
SHABOTIK	555707	2021-08-14	Active	100
SHABOTIK	555706	2021-08-14	Active	100
SHABOTIK	555705	2021-08-14	Active	100
SHABOTIK	555704	2021-08-14	Active	100
SHABOTIK	555703	2021-08-14	Active	100
SHABOTIK	555702	2021-08-14	Active	100
SHABOTIK	555701	2021-08-14	Active	100
SHABOTIK	555700	2021-08-14	Active	100
OLGA LAKE AREA	566905	2021-12-17	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
OLGA LAKE AREA	566904	2021-12-17	Active	100
OLGA LAKE AREA	566903	2021-12-17	Active	100
OLGA LAKE AREA	566902	2021-12-17	Active	100
OLGA LAKE AREA	566901	2021-12-17	Active	100
OLGA LAKE AREA	566900	2021-12-17	Active	100
OLGA LAKE AREA	566899	2021-12-17	Active	100
OLGA LAKE AREA	566898	2021-12-17	Active	100
OLGA LAKE AREA	566897	2021-12-17	Active	100
OLGA LAKE AREA	566896	2021-12-17	Active	100
OLGA LAKE AREA	566895	2021-12-17	Active	100
SHABOTIK	566894	2021-12-17	Active	100
SHABOTIK	566893	2021-12-17	Active	100
SHABOTIK	566892	2021-12-17	Active	100
SHABOTIK	566891	2021-12-17	Active	100
SHABOTIK	566890	2021-12-17	Active	100
SHABOTIK	566889	2021-12-17	Active	100
SHABOTIK	566888	2021-12-17	Active	100
SHABOTIK	566887	2021-12-17	Active	100
SHABOTIK	566886	2021-12-17	Active	100
SHABOTIK	566885	2021-12-17	Active	100
SHABOTIK	566884	2021-12-17	Active	100
WELSH	566883	2021-12-17	Active	100
MAGONE, WELSH	566882	2021-12-17	Active	100
MAGONE	566881	2021-12-17	Active	100
MAGONE	566880	2021-12-17	Active	100
MAGONE, SHABOTIK	566879	2021-12-17	Active	100
SHABOTIK	566878	2021-12-17	Active	100
SHABOTIK	566877	2021-12-17	Active	100
SHABOTIK	566876	2021-12-17	Active	100
WELSH	566875	2021-12-17	Active	100
WELSH	566874	2021-12-17	Active	100
MAGONE, WELSH	566873	2021-12-17	Active	100
WELSH	566872	2021-12-17	Active	100
MAGONE, SHABOTIK	566871	2021-12-17	Active	100
SHABOTIK	566870	2021-12-17	Active	100
SHABOTIK	566869	2021-12-17	Active	100
SHABOTIK	566868	2021-12-17	Active	100
SHABOTIK	566867	2021-12-17	Active	100
SHABOTIK	566866	2021-12-17	Active	100
WELSH	566865	2021-12-17	Active	100
MAGONE	566864	2021-12-17	Active	100
WELSH	566863	2021-12-17	Active	100
SHABOTIK, WELSH	566862	2021-12-17	Active	100
SHABOTIK	566861	2021-12-17	Active	100
SHABOTIK	566860	2021-12-17	Active	100
MAGONE	566859	2021-12-17	Active	100
MAGONE	566858	2021-12-17	Active	100
SHABOTIK	566857	2021-12-17	Active	100
SHABOTIK	566856	2021-12-17	Active	100
SHABOTIK	566855	2021-12-17	Active	100
SHABOTIK	566854	2021-12-17	Active	100
WELSH	566853	2021-12-17	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MAGONE	566852	2021-12-17	Active	100
SHABOTIK, WELSH	566851	2021-12-17	Active	100
WELSH	566850	2021-12-17	Active	100
SHABOTIK	566849	2021-12-17	Active	100
SHABOTIK	566848	2021-12-17	Active	100
WELSH	566847	2021-12-17	Active	100
WELSH	566846	2021-12-17	Active	100
SHABOTIK, WELSH	566845	2021-12-17	Active	100
SHABOTIK	566844	2021-12-17	Active	100
SHABOTIK	566843	2021-12-17	Active	100
MAGONE	566842	2021-12-17	Active	100
WELSH	566841	2021-12-17	Active	100
MAGONE	566840	2021-12-17	Active	100
SHABOTIK	566839	2021-12-17	Active	100
SHABOTIK	566838	2021-12-17	Active	100
SHABOTIK	566837	2021-12-17	Active	100
SHABOTIK	566836	2021-12-17	Active	100
MCGILL	566922	2021-12-18	Active	100
MCGILL	566921	2021-12-18	Active	100
MCGILL	566920	2021-12-18	Active	100
MCGILL	566919	2021-12-18	Active	100
MCGILL	566918	2021-12-18	Active	100
MCGILL	566917	2021-12-18	Active	100
MCGILL	567028	2021-12-19	Active	100
MCGILL	567027	2021-12-19	Active	100
MCGILL	567026	2021-12-19	Active	100
MCGILL	567025	2021-12-19	Active	100
MCGILL	567024	2021-12-19	Active	100
MCGILL	567023	2021-12-19	Active	100
MCGILL	567022	2021-12-19	Active	100
MCGILL	567021	2021-12-19	Active	100
MCGILL	567020	2021-12-19	Active	100
MCGILL	567019	2021-12-19	Active	100
MCGILL	567018	2021-12-19	Active	100
LECKIE LAKE AREA	578868	2022-02-21	Active	100
LECKIE LAKE AREA	578867	2022-02-21	Active	100
LECKIE LAKE AREA	578866	2022-02-21	Active	100
LECKIE LAKE AREA	578865	2022-02-21	Active	100
LECKIE LAKE AREA	578864	2022-02-21	Active	100
LECKIE LAKE AREA	578863	2022-02-21	Active	100
LECKIE LAKE AREA	578862	2022-02-21	Active	100
LECKIE LAKE AREA	578861	2022-02-21	Active	100
LECKIE LAKE AREA	578860	2022-02-21	Active	100
LECKIE LAKE AREA	578859	2022-02-21	Active	100
LECKIE LAKE AREA	578858	2022-02-21	Active	100
MCGILL	585771	2022-04-27	Active	100
MCGILL	585770	2022-04-27	Active	100
MCGILL	585763	2022-04-27	Active	100
MCGILL	585762	2022-04-27	Active	100
MCGILL	585761	2022-04-27	Active	100
MCGILL	585760	2022-04-27	Active	100
MCGILL	585759	2022-04-27	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MCGILL	585758	2022-04-27	Active	100
MCGILL	585757	2022-04-27	Active	100
MCGILL	585756	2022-04-27	Active	100
RIGHTANGLE LAKE AREA	595967	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595966	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595965	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595964	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595963	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595962	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595961	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595960	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595959	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595958	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595957	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595956	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595955	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595954	2022-06-15	Active	100
RIGHTANGLE LAKE AREA	595953	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595952	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595951	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595950	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595949	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595948	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595947	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595946	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595945	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595944	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595943	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595942	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595941	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595940	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595939	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595938	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595937	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595936	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595935	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595934	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595933	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595932	2022-06-15	Active	100
LITTLE STURGE LAKE AREA, RIGHTANGLE LAKE AREA	595931	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595930	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595929	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595928	2022-06-15	Active	100
LITTLE STURGE LAKE AREA	595927	2022-06-15	Active	100
SHABOTIK, WELSH	622755	2022-12-06	Active	100
SHABOTIK	622754	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	622753	2022-12-06	Active	100
SHABOTIK	622752	2022-12-06	Active	100
SHABOTIK	622751	2022-12-06	Active	100
SHABOTIK, WELSH	622750	2022-12-06	Active	100
SHABOTIK	622749	2022-12-06	Active	100
SHABOTIK	622748	2022-12-06	Active	100
SHABOTIK	622747	2022-12-06	Active	100
SHABOTIK	622746	2022-12-06	Active	100
BIGROCK LAKE AREA	622745	2022-12-06	Active	100
SHABOTIK	622744	2022-12-06	Active	100
SHABOTIK	622743	2022-12-06	Active	100
BIGROCK LAKE AREA	622742	2022-12-06	Active	100
SHABOTIK	622741	2022-12-06	Active	100
SHABOTIK	622740	2022-12-06	Active	100
SHABOTIK	622739	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622738	2022-12-06	Active	100
SHABOTIK	622737	2022-12-06	Active	100
SHABOTIK	622736	2022-12-06	Active	100
SHABOTIK	622735	2022-12-06	Active	100
SHABOTIK	622734	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622733	2022-12-06	Active	100
SHABOTIK	622732	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622731	2022-12-06	Active	100
SHABOTIK	622730	2022-12-06	Active	100
SHABOTIK	622729	2022-12-06	Active	100
WELSH	622728	2022-12-06	Active	100
SHABOTIK	622727	2022-12-06	Active	100
SHABOTIK	622726	2022-12-06	Active	100
SHABOTIK	622725	2022-12-06	Active	100
BIGROCK LAKE AREA	622724	2022-12-06	Active	100
BIGROCK LAKE AREA	622723	2022-12-06	Active	100
BIGROCK LAKE AREA	622722	2022-12-06	Active	100
BIGROCK LAKE AREA	622721	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622720	2022-12-06	Active	100
BIGROCK LAKE AREA	622719	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622718	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622717	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622716	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA, OLGA LAKE AREA	622715	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA, OLGA LAKE AREA	622714	2022-12-06	Active	100
BIGROCK LAKE AREA	622713	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622712	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGRAW LAKE AREA	622711	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
<b>MCGRAW LAKE AREA, OLGA LAKE AREA</b>	622710	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622709	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622708	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622707	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, MCGRAW LAKE AREA</b>	622706	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622705	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622704	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622703	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622702	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, MCGRAW LAKE AREA</b>	622701	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, MCGRAW LAKE AREA, OLGA LAKE AREA</b>	622700	2022-12-06	Active	100
<b>MCGRAW LAKE AREA, OLGA LAKE AREA</b>	622699	2022-12-06	Active	100
<b>MCGRAW LAKE AREA, OLGA LAKE AREA</b>	622698	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622697	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622696	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622695	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622694	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622693	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622692	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, SHABOTIK</b>	622691	2022-12-06	Active	100
<b>SHABOTIK</b>	622690	2022-12-06	Active	100
<b>SHABOTIK</b>	622689	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622688	2022-12-06	Active	100
<b>SHABOTIK</b>	622687	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622686	2022-12-06	Active	100
<b>SHABOTIK</b>	622685	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622684	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622683	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, SHABOTIK</b>	622682	2022-12-06	Active	100
<b>SHABOTIK</b>	622681	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622680	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622679	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622678	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622677	2022-12-06	Active	100
<b>SHABOTIK</b>	622676	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622675	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622674	2022-12-06	Active	100
<b>SHABOTIK</b>	622673	2022-12-06	Active	100
<b>SHABOTIK</b>	622672	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622671	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622670	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622669	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622668	2022-12-06	Active	100
<b>BIGROCK LAKE AREA</b>	622667	2022-12-06	Active	100
<b>BIGROCK LAKE AREA, SHABOTIK</b>	622666	2022-12-06	Active	100
<b>SHABOTIK</b>	622665	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
BIGROCK LAKE AREA	622664	2022-12-06	Active	100
SHABOTIK	622663	2022-12-06	Active	100
SHABOTIK	622662	2022-12-06	Active	100
BIGROCK LAKE AREA	622661	2022-12-06	Active	100
SHABOTIK	622660	2022-12-06	Active	100
SHABOTIK	622659	2022-12-06	Active	100
BIGROCK LAKE AREA	622658	2022-12-06	Active	100
BIGROCK LAKE AREA	622657	2022-12-06	Active	100
SHABOTIK	622656	2022-12-06	Active	100
BIGROCK LAKE AREA	622655	2022-12-06	Active	100
BIGROCK LAKE AREA	622654	2022-12-06	Active	100
SHABOTIK	622653	2022-12-06	Active	100
SHABOTIK	622652	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622651	2022-12-06	Active	100
BIGROCK LAKE AREA	622650	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622649	2022-12-06	Active	100
SHABOTIK	622648	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622647	2022-12-06	Active	100
SHABOTIK	622646	2022-12-06	Active	100
BIGROCK LAKE AREA	622645	2022-12-06	Active	100
SHABOTIK	622644	2022-12-06	Active	100
BIGROCK LAKE AREA	622643	2022-12-06	Active	100
SHABOTIK	622642	2022-12-06	Active	100
SHABOTIK	622641	2022-12-06	Active	100
BIGROCK LAKE AREA	622640	2022-12-06	Active	100
SHABOTIK	622639	2022-12-06	Active	100
SHABOTIK	622638	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622637	2022-12-06	Active	100
SHABOTIK	622636	2022-12-06	Active	100
BIGROCK LAKE AREA	622635	2022-12-06	Active	100
BIGROCK LAKE AREA	622634	2022-12-06	Active	100
SHABOTIK	622633	2022-12-06	Active	100
BIGROCK LAKE AREA	622632	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622631	2022-12-06	Active	100
SHABOTIK	622630	2022-12-06	Active	100
SHABOTIK	622629	2022-12-06	Active	100
SHABOTIK	622628	2022-12-06	Active	100
SHABOTIK	622627	2022-12-06	Active	100
BIGROCK LAKE AREA	622626	2022-12-06	Active	100
SHABOTIK	622625	2022-12-06	Active	100
SHABOTIK	622624	2022-12-06	Active	100
SHABOTIK	622623	2022-12-06	Active	100
SHABOTIK	622622	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622621	2022-12-06	Active	100
BIGROCK LAKE AREA	622620	2022-12-06	Active	100
BIGROCK LAKE AREA	622619	2022-12-06	Active	100
BIGROCK LAKE AREA	622618	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622617	2022-12-06	Active	100
BIGROCK LAKE AREA	622616	2022-12-06	Active	100
BIGROCK LAKE AREA	622615	2022-12-06	Active	100
BIGROCK LAKE AREA	622614	2022-12-06	Active	100
BIGROCK LAKE AREA, SHABOTIK	622613	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	622612	2022-12-06	Active	100
BIGROCK LAKE AREA	622611	2022-12-06	Active	100
BIGROCK LAKE AREA	622610	2022-12-06	Active	100
BIGROCK LAKE AREA	622609	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGILL	622608	2022-12-06	Active	100
BIGROCK LAKE AREA	622607	2022-12-06	Active	100
BIGROCK LAKE AREA	622606	2022-12-06	Active	100
BIGROCK LAKE AREA	622605	2022-12-06	Active	100
BIGROCK LAKE AREA	622604	2022-12-06	Active	100
BIGROCK LAKE AREA	622603	2022-12-06	Active	100
BIGROCK LAKE AREA	622602	2022-12-06	Active	100
BIGROCK LAKE AREA	622601	2022-12-06	Active	100
BIGROCK LAKE AREA	622600	2022-12-06	Active	100
BIGROCK LAKE AREA	622599	2022-12-06	Active	100
BIGROCK LAKE AREA	622598	2022-12-06	Active	100
BIGROCK LAKE AREA	622597	2022-12-06	Active	100
SHABOTIK	622596	2022-12-06	Active	100
BIGROCK LAKE AREA	622595	2022-12-06	Active	100
BIGROCK LAKE AREA	622594	2022-12-06	Active	100
MCGILL	622593	2022-12-06	Active	100
BIGROCK LAKE AREA	622592	2022-12-06	Active	100
BIGROCK LAKE AREA	622591	2022-12-06	Active	100
BIGROCK LAKE AREA	622590	2022-12-06	Active	100
BIGROCK LAKE AREA	622589	2022-12-06	Active	100
BIGROCK LAKE AREA	622588	2022-12-06	Active	100
BIGROCK LAKE AREA	622587	2022-12-06	Active	100
BIGROCK LAKE AREA, MCGILL, SHABOTIK	622586	2022-12-06	Active	100
MCGILL, SHABOTIK	622585	2022-12-06	Active	100
BIGROCK LAKE AREA	622584	2022-12-06	Active	100
BIGROCK LAKE AREA	622583	2022-12-06	Active	100
BIGROCK LAKE AREA	622582	2022-12-06	Active	100
BIGROCK LAKE AREA	622581	2022-12-06	Active	100
BIGROCK LAKE AREA	622580	2022-12-06	Active	100
BIGROCK LAKE AREA	622579	2022-12-06	Active	100
BIGROCK LAKE AREA	622578	2022-12-06	Active	100
BIGROCK LAKE AREA	622577	2022-12-06	Active	100
BIGROCK LAKE AREA	622576	2022-12-06	Active	100
BIGROCK LAKE AREA	622575	2022-12-06	Active	100
BIGROCK LAKE AREA	622574	2022-12-06	Active	100
BIGROCK LAKE AREA	622573	2022-12-06	Active	100
BIGROCK LAKE AREA	622572	2022-12-06	Active	100
BIGROCK LAKE AREA	622571	2022-12-06	Active	100
BIGROCK LAKE AREA	622570	2022-12-06	Active	100
BIGROCK LAKE AREA	622569	2022-12-06	Active	100
BIGROCK LAKE AREA	622568	2022-12-06	Active	100
BIGROCK LAKE AREA	622567	2022-12-06	Active	100
BIGROCK LAKE AREA	622566	2022-12-06	Active	100
BIGROCK LAKE AREA	622565	2022-12-06	Active	100
BIGROCK LAKE AREA	622564	2022-12-06	Active	100
BIGROCK LAKE AREA	622563	2022-12-06	Active	100
BIGROCK LAKE AREA	622562	2022-12-06	Active	100



Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
BIGROCK LAKE AREA	622561	2022-12-06	Active	100
BIGROCK LAKE AREA	622560	2022-12-06	Active	100
BIGROCK LAKE AREA	622559	2022-12-06	Active	100
BIGROCK LAKE AREA	622558	2022-12-06	Active	100
BIGROCK LAKE AREA	622557	2022-12-06	Active	100
BIGROCK LAKE AREA	622556	2022-12-06	Active	100
BIGROCK LAKE AREA	622555	2022-12-06	Active	100
BIGROCK LAKE AREA	622554	2022-12-06	Active	100
BIGROCK LAKE AREA	622553	2022-12-06	Active	100
BIGROCK LAKE AREA	622552	2022-12-06	Active	100
BIGROCK LAKE AREA	622551	2022-12-06	Active	100
BIGROCK LAKE AREA	622550	2022-12-06	Active	100
BIGROCK LAKE AREA	622549	2022-12-06	Active	100
BIGROCK LAKE AREA	622548	2022-12-06	Active	100
BIGROCK LAKE AREA	622547	2022-12-06	Active	100
BIGROCK LAKE AREA	622546	2022-12-06	Active	100
BIGROCK LAKE AREA	622545	2022-12-06	Active	100
BIGROCK LAKE AREA	622544	2022-12-06	Active	100
BIGROCK LAKE AREA	622543	2022-12-06	Active	100
BIGROCK LAKE AREA	622542	2022-12-06	Active	100
BIGROCK LAKE AREA	622541	2022-12-06	Active	100
BIGROCK LAKE AREA	622540	2022-12-06	Active	100
BIGROCK LAKE AREA	622539	2022-12-06	Active	100
BIGROCK LAKE AREA	622538	2022-12-06	Active	100
BIGROCK LAKE AREA	622537	2022-12-06	Active	100
BIGROCK LAKE AREA	622536	2022-12-06	Active	100
BIGROCK LAKE AREA	622535	2022-12-06	Active	100
BIGROCK LAKE AREA	622534	2022-12-06	Active	100
BIGROCK LAKE AREA	622533	2022-12-06	Active	100
BIGROCK LAKE AREA	622532	2022-12-06	Active	100
BIGROCK LAKE AREA	622531	2022-12-06	Active	100
BIGROCK LAKE AREA	622530	2022-12-06	Active	100
BIGROCK LAKE AREA	622529	2022-12-06	Active	100
BIGROCK LAKE AREA	622528	2022-12-06	Active	100
BIGROCK LAKE AREA	622527	2022-12-06	Active	100
BIGROCK LAKE AREA	622526	2022-12-06	Active	100
BIGROCK LAKE AREA	622525	2022-12-06	Active	100
BIGROCK LAKE AREA	622524	2022-12-06	Active	100
BIGROCK LAKE AREA	622523	2022-12-06	Active	100
WELSH	622522	2022-12-06	Active	100
WELSH	622521	2022-12-06	Active	100
SHABOTIK	622520	2022-12-06	Active	100
SHABOTIK	622519	2022-12-06	Active	100
SHABOTIK	622518	2022-12-06	Active	100
SHABOTIK	622517	2022-12-06	Active	100
WELSH	622516	2022-12-06	Active	100
WELSH	622515	2022-12-06	Active	100
WELSH	622514	2022-12-06	Active	100
SHABOTIK	622513	2022-12-06	Active	100
SHABOTIK	622512	2022-12-06	Active	100
SHABOTIK	622511	2022-12-06	Active	100
SHABOTIK	622510	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	622509	2022-12-06	Active	100
WELSH	622508	2022-12-06	Active	100
WELSH	622507	2022-12-06	Active	100
SHABOTIK	622506	2022-12-06	Active	100
SHABOTIK	622505	2022-12-06	Active	100
SHABOTIK	622504	2022-12-06	Active	100
WELSH	622503	2022-12-06	Active	100
SHABOTIK	622502	2022-12-06	Active	100
SHABOTIK	622501	2022-12-06	Active	100
WELSH	622500	2022-12-06	Active	100
WELSH	622499	2022-12-06	Active	100
WELSH	622498	2022-12-06	Active	100
SHABOTIK	622497	2022-12-06	Active	100
SHABOTIK	622496	2022-12-06	Active	100
SHABOTIK	622495	2022-12-06	Active	100
SHABOTIK	622494	2022-12-06	Active	100
SHABOTIK	622493	2022-12-06	Active	100
WELSH	622492	2022-12-06	Active	100
WELSH	622491	2022-12-06	Active	100
WELSH	622490	2022-12-06	Active	100
WELSH	622489	2022-12-06	Active	100
SHABOTIK	622488	2022-12-06	Active	100
SHABOTIK	622487	2022-12-06	Active	100
SHABOTIK, WELSH	622486	2022-12-06	Active	100
SHABOTIK	622485	2022-12-06	Active	100
SHABOTIK	622484	2022-12-06	Active	100
SHABOTIK	622483	2022-12-06	Active	100
SHABOTIK	622482	2022-12-06	Active	100
SHABOTIK	622481	2022-12-06	Active	100
SHABOTIK	622480	2022-12-06	Active	100
WELSH	622479	2022-12-06	Active	100
MAGONE, MIKANO, SHABOTIK	622478	2022-12-06	Active	100
MIKANO, SHABOTIK	622477	2022-12-06	Active	100
MIKANO	622476	2022-12-06	Active	100
MIKANO	622475	2022-12-06	Active	100
MIKANO	622474	2022-12-06	Active	100
MIKANO, SHABOTIK	622473	2022-12-06	Active	100
MIKANO	622472	2022-12-06	Active	100
SHABOTIK	622471	2022-12-06	Active	100
MAGONE, SHABOTIK	622470	2022-12-06	Active	100
MAGONE, MIKANO	622469	2022-12-06	Active	100
SHABOTIK	622468	2022-12-06	Active	100
MIKANO, SHABOTIK	622467	2022-12-06	Active	100
MIKANO, SHABOTIK	622466	2022-12-06	Active	100
MIKANO	622465	2022-12-06	Active	100
MIKANO, SHABOTIK	622464	2022-12-06	Active	100
MIKANO	622463	2022-12-06	Active	100
SHABOTIK	622462	2022-12-06	Active	100
SHABOTIK	622461	2022-12-06	Active	100
MIKANO	622460	2022-12-06	Active	100
MIKANO, SHABOTIK	622459	2022-12-06	Active	100
SHABOTIK	622458	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	622457	2022-12-06	Active	100
MIKANO	622456	2022-12-06	Active	100
MIKANO	622455	2022-12-06	Active	100
MIKANO	622454	2022-12-06	Active	100
SHABOTIK	622453	2022-12-06	Active	100
SHABOTIK	622452	2022-12-06	Active	100
MIKANO, SHABOTIK	622451	2022-12-06	Active	100
MIKANO	622450	2022-12-06	Active	100
SHABOTIK	622449	2022-12-06	Active	100
SHABOTIK	622448	2022-12-06	Active	100
MIKANO, SHABOTIK	622447	2022-12-06	Active	100
MIKANO	622446	2022-12-06	Active	100
MIKANO, SHABOTIK	622445	2022-12-06	Active	100
MIKANO, SHABOTIK	622444	2022-12-06	Active	100
SHABOTIK	622443	2022-12-06	Active	100
SHABOTIK	622442	2022-12-06	Active	100
MIKANO, SHABOTIK	622441	2022-12-06	Active	100
MIKANO	622440	2022-12-06	Active	100
MIKANO, SHABOTIK	622439	2022-12-06	Active	100
MIKANO, SHABOTIK	622438	2022-12-06	Active	100
SHABOTIK	622437	2022-12-06	Active	100
SHABOTIK	622436	2022-12-06	Active	100
SHABOTIK	622435	2022-12-06	Active	100
SHABOTIK	622434	2022-12-06	Active	100
SHABOTIK	622433	2022-12-06	Active	100
SHABOTIK	622432	2022-12-06	Active	100
SHABOTIK	622431	2022-12-06	Active	100
SHABOTIK	622430	2022-12-06	Active	100
SHABOTIK	622429	2022-12-06	Active	100
SHABOTIK	622428	2022-12-06	Active	100
SHABOTIK	622427	2022-12-06	Active	100
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SHABOTIK	622425	2022-12-06	Active	100
SHABOTIK	622424	2022-12-06	Active	100
SHABOTIK	622423	2022-12-06	Active	100
SHABOTIK	622422	2022-12-06	Active	100
SHABOTIK	622421	2022-12-06	Active	100
SHABOTIK	622420	2022-12-06	Active	100
SHABOTIK	622419	2022-12-06	Active	100
SHABOTIK	622418	2022-12-06	Active	100
SHABOTIK	622417	2022-12-06	Active	100
SHABOTIK	622416	2022-12-06	Active	100
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SHABOTIK	622414	2022-12-06	Active	100
SHABOTIK	622413	2022-12-06	Active	100
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SHABOTIK	622410	2022-12-06	Active	100
SHABOTIK	622409	2022-12-06	Active	100
SHABOTIK	622408	2022-12-06	Active	100
SHABOTIK	622407	2022-12-06	Active	100
SHABOTIK	622406	2022-12-06	Active	100

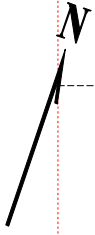
Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
SHABOTIK	622405	2022-12-06	Active	100
SHABOTIK	622404	2022-12-06	Active	100
SHABOTIK	622403	2022-12-06	Active	100
SHABOTIK	622402	2022-12-06	Active	100
SHABOTIK	622401	2022-12-06	Active	100
SHABOTIK	622400	2022-12-06	Active	100
SHABOTIK	622399	2022-12-06	Active	100
SHABOTIK	622398	2022-12-06	Active	100
SHABOTIK	622397	2022-12-06	Active	100
SHABOTIK	622396	2022-12-06	Active	100
SHABOTIK	622395	2022-12-06	Active	100
SHABOTIK	622394	2022-12-06	Active	100
SHABOTIK	622393	2022-12-06	Active	100
SHABOTIK	622392	2022-12-06	Active	100
SHABOTIK	622391	2022-12-06	Active	100
SHABOTIK	622390	2022-12-06	Active	100
SHABOTIK	622389	2022-12-06	Active	100
MAGONE	622388	2022-12-06	Active	100
MAGONE	622387	2022-12-06	Active	100
MAGONE	622386	2022-12-06	Active	100
SHABOTIK	622385	2022-12-06	Active	100
SHABOTIK	622384	2022-12-06	Active	100
MAGONE	622383	2022-12-06	Active	100
MAGONE	622382	2022-12-06	Active	100
MAGONE	622381	2022-12-06	Active	100
SHABOTIK	622380	2022-12-06	Active	100
SHABOTIK	622379	2022-12-06	Active	100
SHABOTIK	622378	2022-12-06	Active	100
SHABOTIK	622377	2022-12-06	Active	100
SHABOTIK	622376	2022-12-06	Active	100
MAGONE	622375	2022-12-06	Active	100
MAGONE, SHABOTIK	622374	2022-12-06	Active	100
MAGONE, SHABOTIK	622373	2022-12-06	Active	100
SHABOTIK	622372	2022-12-06	Active	100
SHABOTIK	622371	2022-12-06	Active	100
SHABOTIK	622370	2022-12-06	Active	100
MAGONE	622369	2022-12-06	Active	100
SHABOTIK	622368	2022-12-06	Active	100
MAGONE	622367	2022-12-06	Active	100
MAGONE, SHABOTIK	622366	2022-12-06	Active	100
MAGONE, SHABOTIK	622365	2022-12-06	Active	100
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SHABOTIK	622363	2022-12-06	Active	100
SHABOTIK	622362	2022-12-06	Active	100
MAGONE	622361	2022-12-06	Active	100
MAGONE	622360	2022-12-06	Active	100
SHABOTIK	622359	2022-12-06	Active	100
SHABOTIK	622358	2022-12-06	Active	100
SHABOTIK	622357	2022-12-06	Active	100
MAGONE	622356	2022-12-06	Active	100
MAGONE	622355	2022-12-06	Active	100
MAGONE	622354	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
MAGONE, SHABOTIK	622353	2022-12-06	Active	100
SHABOTIK	622352	2022-12-06	Active	100
SHABOTIK	622351	2022-12-06	Active	100
SHABOTIK	622350	2022-12-06	Active	100
MAGONE	622349	2022-12-06	Active	100
SHABOTIK	622348	2022-12-06	Active	100
SHABOTIK	622347	2022-12-06	Active	100
SHABOTIK	622346	2022-12-06	Active	100
SHABOTIK	622345	2022-12-06	Active	100
SHABOTIK	622344	2022-12-06	Active	100
WELSH	622343	2022-12-06	Active	100
WELSH	622342	2022-12-06	Active	100
MAGONE	622341	2022-12-06	Active	100
MAGONE	622340	2022-12-06	Active	100
MAGONE	622339	2022-12-06	Active	100
WELSH	622338	2022-12-06	Active	100
WELSH	622337	2022-12-06	Active	100
MAGONE	622336	2022-12-06	Active	100
WELSH	622335	2022-12-06	Active	100
MAGONE	622334	2022-12-06	Active	100
MAGONE	622333	2022-12-06	Active	100
MAGONE	622332	2022-12-06	Active	100
MAGONE	622331	2022-12-06	Active	100
WELSH	622330	2022-12-06	Active	100
MAGONE	622329	2022-12-06	Active	100
MAGONE, WELSH	622328	2022-12-06	Active	100
MAGONE	622327	2022-12-06	Active	100
MAGONE	622326	2022-12-06	Active	100
MAGONE	622325	2022-12-06	Active	100
MAGONE	622324	2022-12-06	Active	100
WELSH	622323	2022-12-06	Active	100
WELSH	622322	2022-12-06	Active	100
MAGONE	622321	2022-12-06	Active	100
MAGONE	622320	2022-12-06	Active	100
WELSH	622319	2022-12-06	Active	100
WELSH	622318	2022-12-06	Active	100
MAGONE	622317	2022-12-06	Active	100
MAGONE	622316	2022-12-06	Active	100
WELSH	622315	2022-12-06	Active	100
MAGONE	622314	2022-12-06	Active	100
MAGONE	622313	2022-12-06	Active	100
MAGONE, WELSH	622312	2022-12-06	Active	100
MAGONE, WELSH	622311	2022-12-06	Active	100
WELSH	622310	2022-12-06	Active	100
MAGONE, WELSH	622309	2022-12-06	Active	100
WELSH	622308	2022-12-06	Active	100
WELSH	622307	2022-12-06	Active	100
WELSH	622306	2022-12-06	Active	100
WELSH	622305	2022-12-06	Active	100
MAGONE	622304	2022-12-06	Active	100
MAGONE	622303	2022-12-06	Active	100
WELSH	622302	2022-12-06	Active	100

Township	Tenure ID	Anniversary Date	Tenure Status	Tenure Percentage
<b>MAGONE</b>	622301	2022-12-06	Active	100
<b>MAGONE, WELSH</b>	622300	2022-12-06	Active	100
<b>MAGONE</b>	622299	2022-12-06	Active	100
<b>WELSH</b>	622298	2022-12-06	Active	100
<b>MAGONE</b>	622297	2022-12-06	Active	100
<b>MAGONE</b>	622296	2022-12-06	Active	100
<b>WELSH</b>	622295	2022-12-06	Active	100
<b>WELSH</b>	622294	2022-12-06	Active	100

548188

548180



TK20-024  
Azimuth: 70  
Dip: -75

EOH: 202m

HoleID

Lithology

Ni<sub>eq</sub>  
Histogram

EOH

mm given at scale of 1:1000

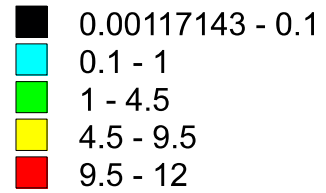
621,700mE 621,750mE 5,420,850mN 621,800mE

TK20-024  
Azimuth: 70  
Dip: -75

548188

548180

### Nickle Equavlent



### Lithology

- Overburden
- Tonallite
- Tonallite - Breccia
- Amphibolite
- Hornblendite
- Gabbro
- Late Mafic Dyke
- Mafic Metavolcanics
- Felsic to Intermediate - Intrusive
- Feldspar Porphyry
- Granite
- Granite - Breccia
- Granodiorite
- Breccia
- Lamprophyre Dyke
- Ultramafic Metavolcanics
- Mineralization
- Veining
- Magnatic Sulphides - Massive



Date: 2021-02-22

Author: A. Hughes

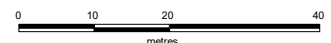
Office:

Drawing:

Scale: 1:1000

Tyko  
2020 Winter Drilling  
TYK20-024

UTM Zone 16 (NAD 83)



621,700mE 621,750mE 5,420,850mN 621,800mE

EOH: 202m

350mRL

300mRL

250mRL

200mRL

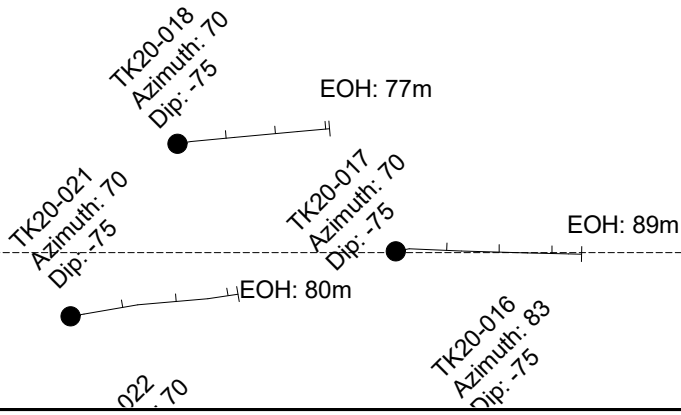
350mRL

300mRL

250mRL

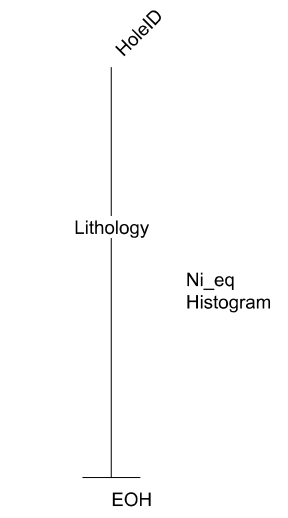
200mRL

548180



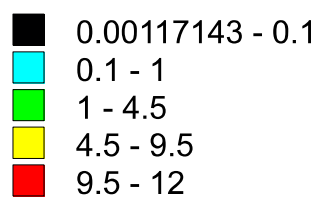
621,850mE 621,900mE 621,950mE

548180



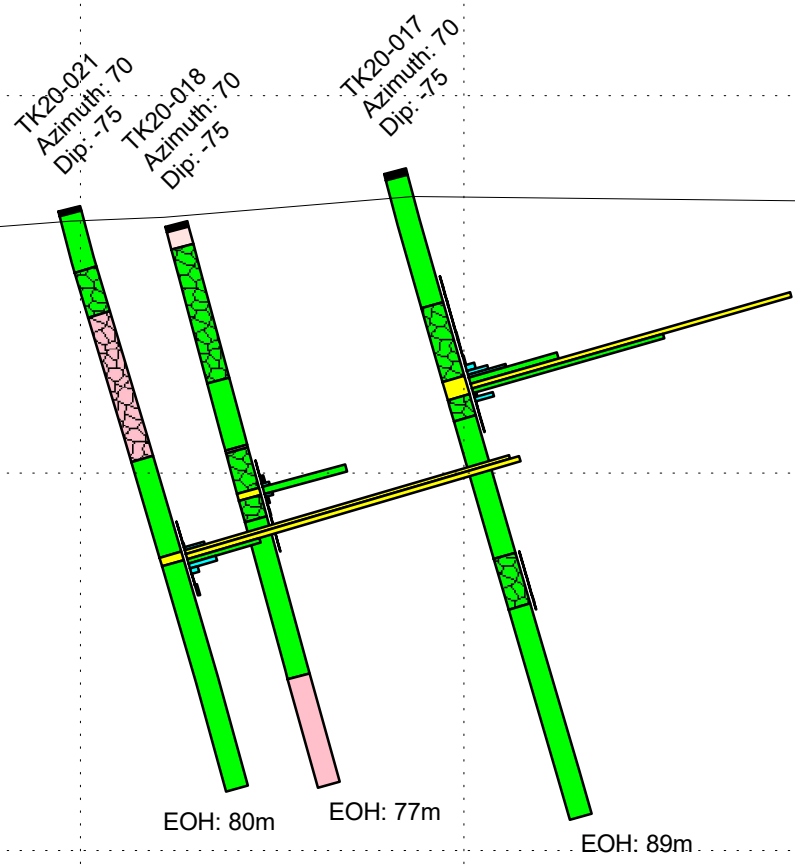
mm given at scale of 1:1000

### Nickle Equavlent



### Lithology

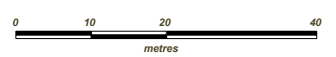
- Overburden
- Tonallite
- Tonallite - Breccia
- Amphibolite
- Hornblendite
- Gabbro
- Late Mafic Dyke
- Mafic Metavolcanics
- Felsic to Intermediate - Intrusive
- Feldspar Porphyry
- Granite
- Granite - Breccia
- Granodiorite
- Breccia
- Lamprophyre Dyke
- Ultramafic Metavolcanics
- Mineralization
- Veining
- Magnatic Sulphides - Massive



621,850mE 621,900mE 621,950mE



Date: 2021-02-22	Tyko 2020 Winter Drilling TK20-017, TK20-018 TK20-021
Author: AHughes	
Office:	
Drawing:	
Scale: 1:1000	
UTM Zone 18 (NAD 83)	





EOH: 80m

548180



TK20-022  
Azimuth: 70  
Dip: -80  
EOH: 62m

TK20-016  
Azimuth: 83  
Dip: -75  
EOH: 77m

TK20-015  
Azimuth: 83  
Dip: -45  
EOH: 62m

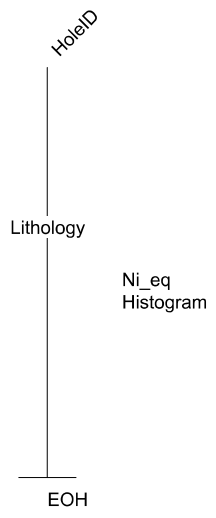
TK20-025  
Azimuth: 70  
Dip: -75  
EOH: 47m

TK20-019  
Azimuth: 70  
Dip: -75  
EOH: 71m

TK20-023  
Azimuth: 270  
Dip: -75  
EOH: 77m



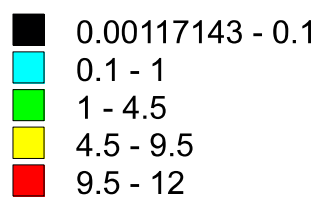
621,900mE 621,950mE 5,420,750mN 622,000mE



mm given at scale of 1:1000

548180

### Nickle Equavlent



### Lithology

- Overburden
- Tonalite
- Tonalite - Breccia
- Amphibolite
- Hornblendite
- Gabbro
- Late Mafic Dyke
- Mafic Metavolcanics
- Felsic to Intermediate - Intrusive
- Feldspar Porphyry
- Granite
- Granite - Breccia
- Granodiorite
- Breccia
- Lamprophyre Dyke
- Ultramafic Metavolcanics
- Mineralization
- Veining
- Magnatic Sulphides - Massive

TK20-022  
Azimuth: 70  
Dip: -80

TK20-016  
Azimuth: 83  
Dip: -75

TK20-015  
Azimuth: 83  
Dip: -45

TK20-025  
Azimuth: 70  
Dip: -75

EOH: 62m

EOH: 62m

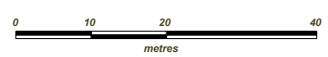
EOH: 77m

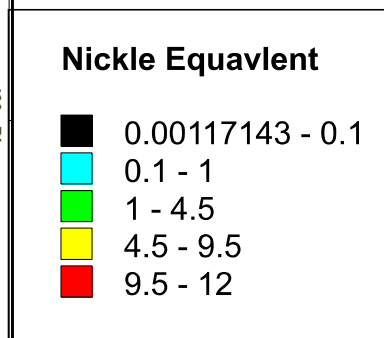
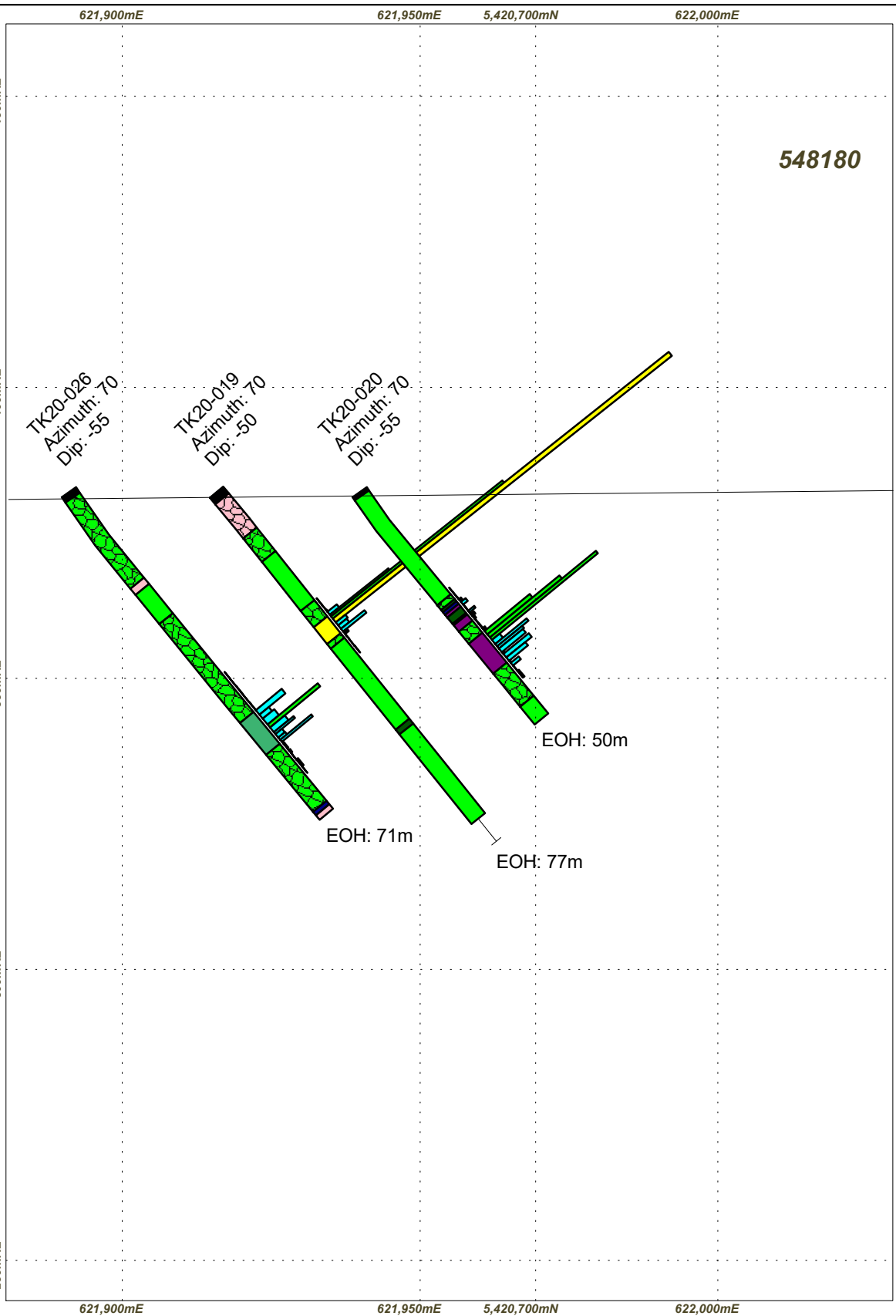
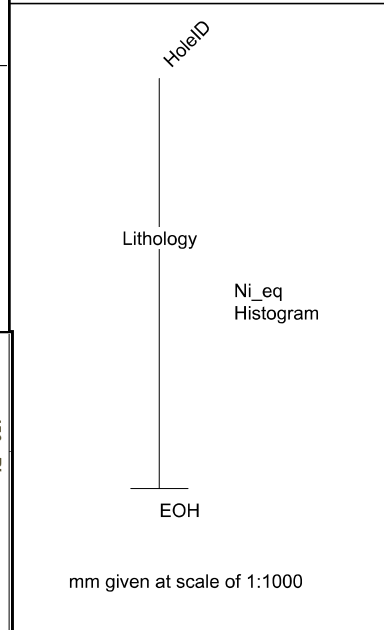
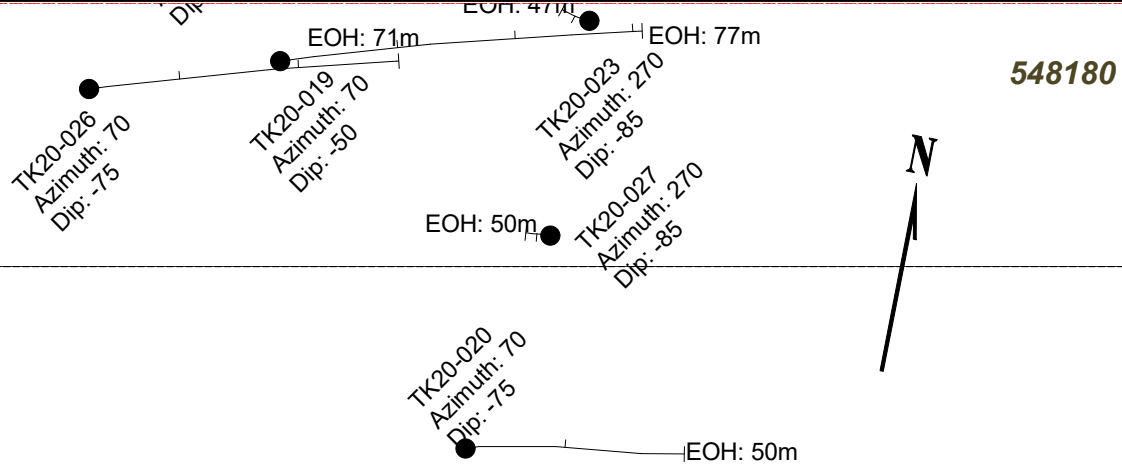
EOH: 77m

621,900mE 621,950mE 5,420,750mN

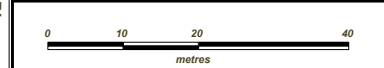


Date: 2021-02-22	Tyko 2020 Winter Drilling TY20-015, TY20-016 TY20-022, TY20-025
Author: A. Hughes	
Office:	
Drawing:	
Scale: 1:1000 UTM Zone 18 (NAD 83)	

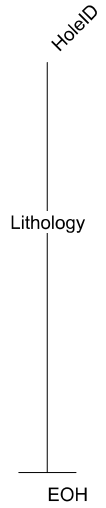
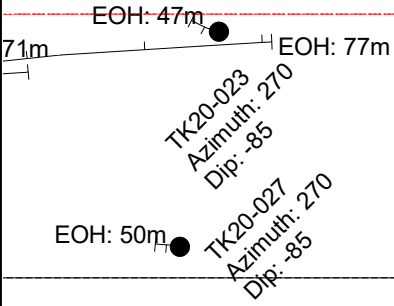




Date: 2021-02-22	Tyko 2020 Winter Drilling TK20-019, TK20-020 TK20-026
Author: A. Hughes	
Office:	
Drawing:	
Scale: 1:1000	
UTM Zone 16 (Nad 83)	



548180

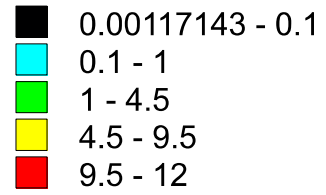


mm given at scale of 1:1000

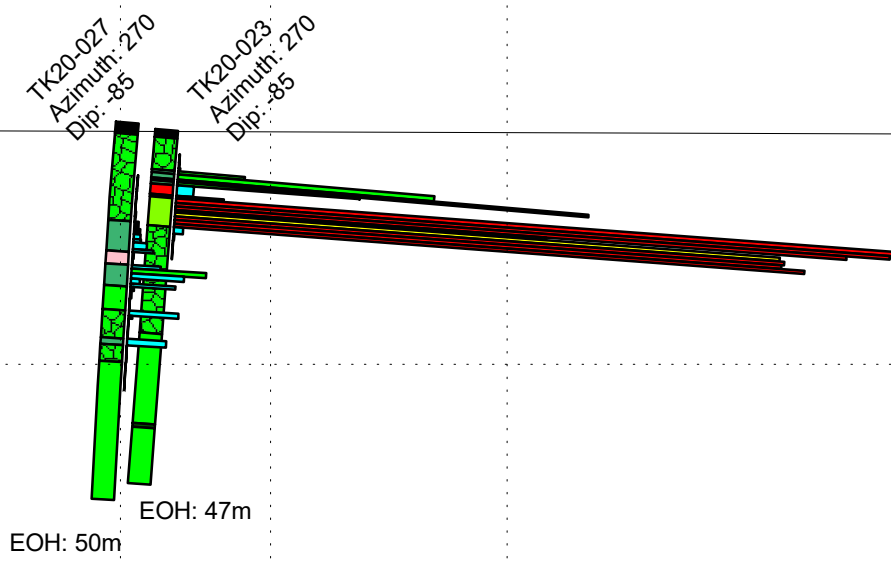
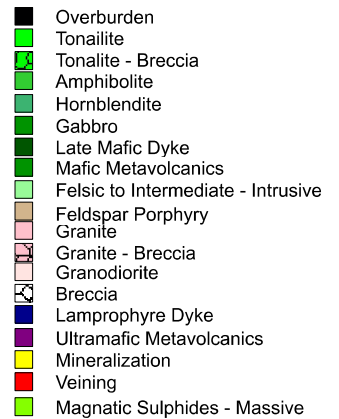
621,950mE 5,420,700mN 622,000mE 622,050mE

548180

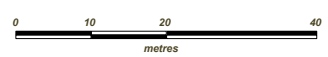
### Nickle Equavlent



### Lithology



Date: 2021-02-22	Tyko 2020 Winter Drilling TK20-025, TK20-027
Author: A. Hughes	
Office:	
Drawing:	
Scale: 1:1000	UTM Zone 18 (Nad 83)



621,950mE 5,420,700mN 622,000mE 622,050mE

566846



TK20-028  
Azimuth: 360  
Dip: -75

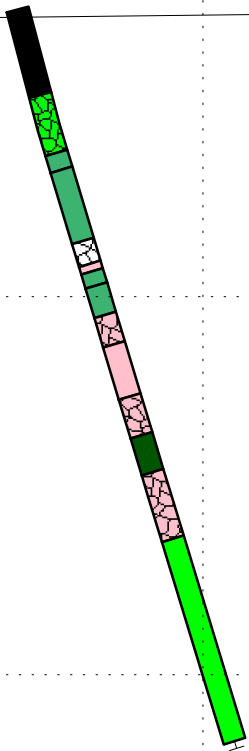
EOH: 102m



5,421,000mN 5,421,050mN 623,000mE 623,100mE

566846

TK20-028  
Azimuth: 360  
Dip: -75



EOH: 102m

5,421,000mN 5,421,050mN 623,000mE

HoleID

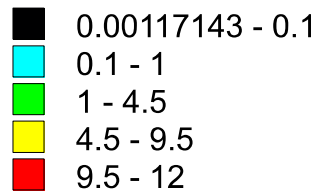
Lithology

Ni<sub>eq</sub>  
Histogram

EOH

mm given at scale of 1:1000

### Nickle Equavlent



### Lithology

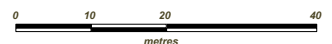
- Overburden
- Tonillite
- Tonillite - Breccia
- Amphibolite
- Hornblendite
- Gabbro
- Late Mafic Dyke
- Mafic Metavolcanics
- Felsic to Intermediate - Intrusive
- Feldspar Porphyry
- Granite
- Granite - Breccia
- Granodiorite
- Breccia
- Lamprophyre Dyke
- Ultramafic Metavolcanics
- Mineralization
- Veining
- Magnatic Sulphides - Massive



Date: 2021-02-22  
Author: A. Hughes  
Office:  
Drawing:

Tyko  
2020 Winter Drilling  
TK20-028

Scale: 1:1000 UTM Zone 16 (Nad 83)





Fladgate Exploration  
 278 Bay St.  
 Thunder Bay ON P7B 1R8  
 Canada

Report No.: A20-06662  
 Report Date: 15-Jul-20  
 Date Submitted: 25-Jun-20  
 Your Reference: Tyko Cu-Ni-PGE Project

ATTN: Neil Pettigrew (new)

## CERTIFICATE OF ANALYSIS

45 Soil samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1C-OES-Tbay	QOP PGE-OES (Fire Assay ICPOES)	2020-07-09 18:30:04
1E3-Tbay	QOP AquaGeo (Aqua Regia ICPOES)	2020-07-09 09:25:28
1F2-Tbay	QOP Total (Total Digestion ICPOES))	2020-07-10 21:59:45

REPORT      **A20-06662**

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Notes:

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

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Esemé , Ph.D.  
 Quality Control Coordinator

**ACTIVATION LABORATORIES LTD.**  
 1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6  
 TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613  
 E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Fladgate Exploration  
278 Bay St.  
Thunder Bay ON P7B 1R8  
Canada

Report No.: A20-06662  
Report Date: 15-Jul-20  
Date Submitted: 25-Jun-20  
Your Reference: Tyko Cu-Ni-PGE Project

ATTN: Neil Pettigrew (new)

CERTIFICATE OF ANALYSIS

45 Soil samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
4B (1-10)	QOP WRA (Major Elements Fusion ICPOES)	2020-07-10 07:43:26

REPORT A20-06662

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.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:



Emmanuel Esemé, Ph.D.  
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.  
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5  
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

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2		0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
1294501	< 2	< 5	< 5	< 0.2	< 0.5	16	132	< 1	17	4	17	0.84	< 2	< 10	35	< 0.5	< 2	1.32	4	20	1.14	< 10	< 1
1294502	< 2	< 5	< 5	< 0.2	< 0.5	59	133	< 1	29	4	20	0.87	< 2	< 10	35	< 0.5	< 2	0.43	4	21	1.22	< 10	< 1
1294503	< 2	< 5	< 5	< 0.2	< 0.5	91	1140	< 1	129	6	34	2.57	< 2	< 10	104	0.9	< 2	1.18	13	55	2.63	< 10	< 1
1294504	< 2	< 5	< 5	< 0.2	< 0.5	61	98	< 1	135	10	17	1.04	< 2	< 10	30	< 0.5	< 2	0.21	9	25	1.38	< 10	< 1
1294505	< 2	< 5	< 5	< 0.2	< 0.5	9	193	< 1	16	5	26	1.16	< 2	< 10	45	< 0.5	< 2	0.41	6	25	1.58	< 10	< 1
1294506	< 2	< 5	< 5	< 0.2	< 0.5	16	189	< 1	20	6	24	1.06	< 2	< 10	35	< 0.5	< 2	0.44	6	20	1.49	< 10	< 1
1294507	< 2	< 5	< 5	< 0.2	< 0.5	3	92	< 1	9	4	11	0.73	< 2	< 10	34	< 0.5	< 2	0.30	4	16	0.80	< 10	< 1
1294508	2	< 5	< 5	< 0.2	< 0.5	12	91	< 1	27	7	17	1.01	< 2	< 10	30	< 0.5	< 2	0.23	4	17	0.91	< 10	< 1
1294509	< 2	< 5	< 5	< 0.2	< 0.5	74	135	< 1	565	4	17	0.75	< 2	< 10	28	< 0.5	< 2	0.37	5	21	1.09	< 10	< 1
1294510	< 2	< 5	< 5	< 0.2	< 0.5	12	119	< 1	282	7	13	0.66	< 2	< 10	37	< 0.5	< 2	1.87	5	19	0.88	< 10	< 1
1294511	< 2	< 5	< 5	< 0.2	< 0.5	2	69	1	8	5	11	0.62	< 2	< 10	26	< 0.5	< 2	0.15	2	10	0.66	< 10	< 1
1294512	< 2	< 5	< 5	< 0.2	< 0.5	5	105	< 1	11	5	18	1.07	2	< 10	39	< 0.5	< 2	0.31	5	21	1.39	< 10	< 1
1294513	< 2	< 5	< 5	< 0.2	< 0.5	3	104	< 1	8	7	18	1.19	< 2	< 10	35	< 0.5	< 2	0.20	6	20	1.94	< 10	< 1
1294514	< 2	< 5	< 5	< 0.2	< 0.5	7	96	< 1	12	5	17	1.06	< 2	< 10	30	< 0.5	< 2	0.24	4	20	1.12	< 10	< 1
1294515	< 2	< 5	< 5	< 0.2	< 0.5	8	133	< 1	9	4	18	1.00	< 2	< 10	34	< 0.5	< 2	0.86	4	22	1.26	< 10	< 1
1294516	< 2	< 5	< 5	< 0.2	< 0.5	3	79	< 1	6	5	12	0.92	< 2	< 10	28	< 0.5	< 2	0.19	4	14	1.02	< 10	< 1
1294517	< 2	< 5	< 5	< 0.2	< 0.5	5	88	< 1	8	8	17	1.40	3	< 10	32	< 0.5	< 2	0.15	4	27	2.25	10	< 1
1294518	< 2	< 5	< 5	< 0.2	< 0.5	2	82	< 1	7	6	13	1.37	< 2	< 10	33	< 0.5	< 2	0.16	4	20	1.02	< 10	< 1
1294519	< 2	< 5	< 5	< 0.2	< 0.5	2	67	< 1	5	4	8	0.95	< 2	< 10	30	< 0.5	< 2	0.19	2	14	0.70	< 10	< 1
1294520	< 2	< 5	< 5	< 0.2	< 0.5	2	102	< 1	6	5	16	0.83	< 2	< 10	24	< 0.5	< 2	0.24	3	17	0.97	< 10	< 1
1294521	< 2	< 5	< 5	< 0.2	< 0.5	5	127	< 1	16	5	19	2.04	< 2	< 10	53	0.5	< 2	0.58	7	29	1.67	< 10	< 1
1294522	< 2	< 5	< 5	< 0.2	< 0.5	33	81	< 1	69	8	20	0.99	< 2	< 10	45	< 0.5	< 2	0.72	7	15	1.00	< 10	< 1
1294523	< 2	< 5	< 5	< 0.2	< 0.5	4	113	< 1	9	5	16	0.93	< 2	< 10	29	< 0.5	< 2	0.23	4	18	1.02	< 10	< 1
1294524	< 2	< 5	< 5	< 0.2	< 0.5	32	174	< 1	53	5	21	1.01	< 2	< 10	45	< 0.5	< 2	0.50	6	25	1.37	< 10	< 1
1294525	< 2	< 5	< 5	< 0.2	< 0.5	2	66	< 1	6	5	12	0.82	< 2	< 10	24	< 0.5	< 2	0.18	2	12	0.71	< 10	< 1
1294526	< 2	< 5	< 5	< 0.2	< 0.5	3	87	< 1	7	4	11	0.85	< 2	< 10	23	< 0.5	< 2	0.20	3	18	1.04	< 10	< 1
1294527	< 2	< 5	< 5	< 0.2	< 0.5	3	93	< 1	10	6	14	1.15	< 2	< 10	43	< 0.5	< 2	0.19	6	22	1.54	< 10	< 1
1294528	< 2	< 5	< 5	< 0.2	< 0.5	6	81	< 1	10	3	9	0.52	< 2	< 10	29	< 0.5	< 2	0.36	3	15	0.77	< 10	< 1
1294529	< 2	< 5	< 5	< 0.2	< 0.5	13	108	< 1	24	5	20	1.06	< 2	< 10	40	< 0.5	< 2	0.37	5	21	1.18	< 10	< 1
1294530	< 2	< 5	< 5	< 0.2	< 0.5	4	95	< 1	12	6	20	1.03	< 2	< 10	37	< 0.5	< 2	0.27	4	19	1.12	< 10	< 1
1294531	< 2	< 5	< 5	< 0.2	< 0.5	100	132	< 1	236	7	19	0.79	< 2	< 10	27	< 0.5	< 2	0.48	15	88	1.35	< 10	< 1
1294532	< 2	< 5	< 5	< 0.2	< 0.5	4	91	< 1	12	7	14	1.48	2	< 10	52	< 0.5	< 2	0.19	6	28	1.73	< 10	< 1
1294533	< 2	< 5	< 5	< 0.2	< 0.5	4	198	< 1	9	5	24	1.02	< 2	< 10	38	< 0.5	< 2	0.39	5	27	1.35	< 10	< 1
1294534	< 2	< 5	< 5	< 0.2	< 0.5	4	95	< 1	11	5	13	1.19	< 2	< 10	43	< 0.5	< 2	0.26	6	23	1.33	< 10	< 1
1294535	< 2	< 5	< 5	< 0.2	< 0.5	12	154	< 1	22	6	32	1.65	< 2	< 10	53	< 0.5	< 2	0.34	9	27	1.73	< 10	< 1
1294536	< 2	< 5	< 5	< 0.2	< 0.5	4	84	< 1	14	5	14	1.10	< 2	< 10	32	< 0.5	< 2	0.31	4	16	0.98	< 10	< 1
1294537	< 2	< 5	< 5	< 0.2	< 0.5	3	69	1	5	6	10	1.46	< 2	< 10	25	< 0.5	< 2	0.14	3	19	1.26	< 10	< 1
1294538	< 2	< 5	< 5	< 0.2	< 0.5	3	82	< 1	7	4	11	0.82	2	< 10	35	< 0.5	< 2	0.25	4	16	0.82	< 10	< 1
1294539	< 2	< 5	6	< 0.2	< 0.5	5	74	< 1	7	7	13	2.11	< 2	< 10	32	< 0.5	< 2	0.14	4	25	1.90	< 10	< 1
1294540	2	< 5	< 5	< 0.2	< 0.5	2	83	< 1	5	6	14	1.01	< 2	< 10	24	< 0.5	< 2	0.17	3	17	0.88	< 10	< 1
1294541	< 2	< 5	< 5	< 0.2	< 0.5	4	159	< 1	13	9	20	1.56	2	< 10	54	< 0.5	< 2	0.22	7	32	2.61	< 10	< 1
NP-TK-20-001	10	48	46																				
NP-TK-20-002	8	25	26																				
NP-TK-20-004	17	47	41																				
NP-TK-20-003	< 2	< 5	< 5																				

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Ag	Al	As	Ba	Be	
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.3	0.01	3	7	1	
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	
1294501	0.06	20	0.81	0.029	0.040	< 0.01	< 2	3	21	0.10	< 20	< 1	< 2	< 10	26	< 10	8	2						
1294502	0.06	21	0.32	0.029	0.044	< 0.01	< 2	3	20	0.10	< 20	< 1	< 2	< 10	28	< 10	7	2						
1294503	0.07	48	0.54	0.034	0.049	0.05	< 2	5	26	0.12	< 20	< 1	< 2	< 10	47	< 10	16	2						
1294504	0.04	12	0.26	0.023	0.012	< 0.01	< 2	2	15	0.11	< 20	3	< 2	< 10	32	< 10	3	3						
1294505	0.05	16	0.40	0.029	0.031	< 0.01	< 2	3	20	0.14	< 20	1	< 2	< 10	37	< 10	5	4						
1294506	0.05	18	0.38	0.029	0.044	< 0.01	< 2	3	21	0.13	< 20	2	< 2	< 10	35	< 10	6	5						
1294507	0.04	16	0.19	0.025	0.031	< 0.01	< 2	2	17	0.09	< 20	1	< 2	< 10	22	< 10	5	4						
1294508	0.05	14	0.21	0.023	0.011	0.01	< 2	2	16	0.11	< 20	2	< 2	< 10	26	< 10	4	5						
1294509	0.04	16	0.27	0.026	0.029	< 0.01	< 2	3	18	0.11	< 20	2	< 2	< 10	28	< 10	6	3						
1294510	0.06	19	1.05	0.028	0.052	< 0.01	< 2	3	23	0.08	< 20	2	< 2	< 10	21	< 10	9	3						
1294511	0.04	13	0.12	0.021	0.006	< 0.01	< 2	2	15	0.12	< 20	2	< 2	< 10	25	< 10	3	4						
1294512	0.06	13	0.25	0.028	0.037	< 0.01	< 2	2	19	0.12	< 20	2	< 2	< 10	36	< 10	5	4						
1294513	0.05	14	0.26	0.026	0.014	0.01	< 2	2	15	0.20	< 20	3	< 2	< 10	58	< 10	4	6						
1294514	0.05	14	0.24	0.023	0.022	< 0.01	< 2	2	16	0.11	< 20	3	< 2	< 10	31	< 10	4	6						
1294515	0.05	26	0.53	0.027	0.035	< 0.01	< 2	3	20	0.11	< 20	2	< 2	< 10	30	< 10	9	3						
1294516	0.03	12	0.17	0.023	0.008	< 0.01	< 2	2	14	0.12	< 20	1	< 2	< 10	31	< 10	3	4						
1294517	0.06	12	0.25	0.023	0.015	0.01	< 2	2	14	0.16	< 20	< 1	< 2	< 10	53	< 10	3	5						
1294518	0.05	15	0.19	0.024	0.012	0.01	< 2	2	14	0.12	< 20	< 1	< 2	< 10	31	< 10	4	3						
1294519	0.04	17	0.13	0.023	0.014	< 0.01	< 2	2	15	0.10	< 20	< 1	< 2	< 10	22	< 10	5	5						
1294520	0.04	13	0.23	0.024	0.022	< 0.01	< 2	2	16	0.12	< 20	2	< 2	< 10	29	< 10	4	5						
1294521	0.05	28	0.32	0.028	0.017	0.02	< 2	4	18	0.12	< 20	< 1	< 2	< 10	35	< 10	10	5						
1294522	0.05	14	0.37	0.029	0.017	0.01	< 2	2	17	0.11	< 20	2	< 2	< 10	28	< 10	4	4						
1294523	0.04	14	0.23	0.022	0.008	< 0.01	< 2	2	16	0.13	< 20	2	< 2	< 10	33	< 10	4	6						
1294524	0.07	21	0.31	0.028	0.030	0.01	< 2	3	19	0.12	< 20	3	< 2	< 10	31	< 10	7	1						
1294525	0.04	14	0.14	0.021	0.005	< 0.01	< 2	2	15	0.11	< 20	1	< 2	< 10	24	< 10	3	4						
1294526	0.04	14	0.20	0.023	0.012	< 0.01	< 2	2	15	0.12	< 20	2	< 2	< 10	32	< 10	4	4						
1294527	0.05	15	0.22	0.026	0.012	< 0.01	< 2	2	15	0.13	< 20	1	< 2	< 10	39	< 10	4	5						
1294528	0.04	16	0.16	0.026	0.055	< 0.01	< 2	2	18	0.08	< 20	3	< 2	< 10	20	< 10	6	3						
1294529	0.05	16	0.25	0.026	0.023	< 0.01	< 2	3	17	0.11	< 20	3	< 2	< 10	30	< 10	5	3						
1294530	0.05	11	0.24	0.025	0.013	< 0.01	< 2	2	16	0.13	< 20	2	< 2	< 10	33	< 10	4	5						
1294531	0.05	14	0.46	0.026	0.045	< 0.01	< 2	2	18	0.11	< 20	3	< 2	< 10	29	< 10	5	2						
1294532	0.05	10	0.21	0.025	0.026	0.02	< 2	2	13	0.12	< 20	< 1	< 2	< 10	40	< 10	3	4						
1294533	0.05	13	0.35	0.026	0.019	< 0.01	< 2	3	16	0.12	< 20	3	< 2	< 10	33	< 10	4	3						
1294534	0.05	15	0.22	0.027	0.028	< 0.01	< 2	3	16	0.10	< 20	1	< 2	< 10	30	< 10	5	7						
1294535	0.06	14	0.42	0.028	0.020	< 0.01	< 2	3	18	0.16	< 20	< 1	< 2	< 10	42	< 10	5	5						
1294536	0.05	14	0.21	0.026	0.011	< 0.01	< 2	2	18	0.11	< 20	< 1	< 2	< 10	29	< 10	4	4						
1294537	0.04	11	0.15	0.023	0.016	0.02	< 2	2	13	0.11	< 20	< 1	< 2	< 10	35	< 10	3	5						
1294538	0.04	14	0.18	0.027	0.025	< 0.01	< 2	2	15	0.10	< 20	1	< 2	< 10	23	< 10	5	5						
1294539	0.04	13	0.18	0.023	0.020	0.02	< 2	3	11	0.12	< 20	2	< 2	< 10	36	< 10	4	5						
1294540	0.04	14	0.19	0.023	0.007	< 0.01	< 2	2	14	0.14	< 20	2	< 2	< 10	32	< 10	3	4						
1294541	0.06	12	0.25	0.028	0.027	0.01	< 2	3	17	0.16	< 20	4	< 2	< 10	48	< 10	4	6						
NP-TK-20-001																			1.2	3.77	3	23	< 1	
NP-TK-20-002																			0.8	4.00	< 3	32	< 1	
NP-TK-20-004																			0.8	3.81	< 3	34	< 1	
NP-TK-20-003																								



Analyte Symbol	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3	5	0.01	4	1	2
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
1294501																							
1294502																							
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1294537																							
1294538																							
1294539																							
1294540																							
1294541																							
NP-TK-20-001	< 2	7.34	0.4	113	795	1460	8.64	8	< 1	0.15	7.93	17	1190	< 1	0.86	671	0.013	< 3	< 5	1.69	28	84	< 2
NP-TK-20-002	< 2	7.45	0.6	105	683	1200	8.78	9	< 1	0.17	8.02	18	1100	< 1	0.91	600	0.032	< 3	< 5	1.00	29	100	6
NP-TK-20-004	< 2	6.76	0.4	176	604	1890	10.2	7	< 1	0.19	7.51	18	1050	< 1	0.95	4080	0.017	< 3	< 5	2.80	27	128	10
NP-TK-20-003																							

Analyte Symbol	Ti	Tl	U	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Ba	Sr	Y
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm
Lower Limit	0.01	5	10	2	5	1	1	5	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	2	2	1
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP
1294501																							
1294502																							
1294503																							
1294504																							
1294505																							
1294506																							
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1294508																							
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1294510																							
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1294536																							
1294537																							
1294538																							
1294539																							
1294540																							
1294541																							
NP-TK-20-001	0.28	< 5	< 10	126	< 5	10	81	16															
NP-TK-20-002	0.33	< 5	< 10	141	< 5	10	84	16															
NP-TK-20-004	0.28	< 5	< 10	130	< 5	10	80	15															
NP-TK-20-003									50.90	7.11	11.70	0.171	15.15	11.81	1.08	0.12	0.760	0.07	0.82	99.67	32	106	10

Analyte Symbol	Sc	Zr	Be	V
Unit Symbol	ppm	ppm	ppm	ppm
Lower Limit	1	2	1	5
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP
1294501				
1294502				
1294503				
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1294533				
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1294535				
1294536				
1294537				
1294538				
1294539				
1294540				
1294541				
NP-TK-20-001				
NP-TK-20-002				
NP-TK-20-004				
NP-TK-20-003	30	32	< 1	168

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
SDC-1 Meas																							
SDC-1 Cert																							
GXR-6 Meas				0.4	< 0.5	72	1080	2	23	100	125	7.23	250	< 10	762	0.9	3	0.13	13	79	5.76	20	2
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	73	1070	1	23	100	125	7.21	234	< 10	761	0.9	4	0.13	12	80	5.90	20	2
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.4	< 0.5	73	1080	2	24	101	127	7.21	246	< 10	757	0.9	2	0.13	13	80	5.83	20	3
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
W-2a Meas																							
W-2a Cert																							
SY-4 Meas																							
SY-4 Cert																							
Oreas 72a (4 Acid Digest) Meas																							
Oreas 72a (4 Acid Digest) Cert																							
Oreas 72a (4 Acid Digest) Meas																							
Oreas 72a (4 Acid Digest) Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
OREAS 98 (4 Acid) Meas																							
OREAS 98 (4 Acid) Cert																							
OREAS 98 (4 Acid) Meas																							
OREAS 98 (4 Acid) Cert																							
DNC-1a Meas																							
DNC-1a Cert																							
PK2 Meas	4710	5840	4780																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4650	5700	4710																				
PK2 Cert	4785	5918	4749																				
OREAS 904 (4 ACID) Meas																							
OREAS 904 (4 ACID) Cert																							
SBC-1 Meas																							
SBC-1 Cert																							
OREAS 922 (AQUA REGIA) Meas				2.4	< 0.5	2250	787	< 1	34	62	258	2.95	4		86	0.8	8	0.42	19	46	5.18	< 10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922				0.9	< 0.5	2250	775	< 1	34	64	260	2.90	6		85	0.8	7	0.42	19	46	5.23	10	

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
(AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 922 (AQUA REGIA) Meas				0.9	< 0.5	2290	778	< 1	34	60	259	2.94	8		83	0.8	7	0.42	19	45	5.17	10	
OREAS 922 (AQUA REGIA) Cert				0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62	
OREAS 923 (AQUA REGIA) Meas				1.7	< 0.5	4530	878	< 1	32	81	340	2.95	6		69	0.7	21	0.42	21	42	6.00	10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				2.0	< 0.5	4600	897	< 1	33	85	345	3.01	7		71	0.7	17	0.43	21	42	6.25	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
OREAS 923 (AQUA REGIA) Meas				1.7	< 0.5	4490	878	< 1	32	84	343	2.92	8		68	0.7	21	0.42	21	42	5.99	< 10	
OREAS 923 (AQUA REGIA) Cert				1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01	
Oreas 96 (Aqua Regia) Meas				11.2		> 10000				92	419						45		45				
Oreas 96 (Aqua Regia) Cert				11.50		39100.00				100	448						27.9		49.2				
CDN-PGMS-27 Meas	4920	1950	1270																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
CDN-PGMS-27 Meas	4600	1950	1240																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
OREAS 96 (4 Acid) Meas																							
OREAS 96 (4 Acid) Cert																							
OREAS 96 (4 Acid) Meas																							
OREAS 96 (4 Acid) Cert																							
OREAS 621 (4 Acid) Meas																							
OREAS 621 (4 Acid) Cert																							
OREAS 621 (4 Acid) Meas																							
OREAS 621 (4 Acid) Cert																							
Oreas 621 (Aqua Regia) Meas				69.8	290	3630	541	13	24	> 5000	> 10000	1.79	81			0.6	3	1.68	28	30	3.34	10	4
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Regia) Cert																							
Oreas 621 (Aqua Regia) Meas				70.8	289	3620	542	13	23	> 5000	> 10000	1.79	83			0.6	4	1.69	30	28	3.35	10	5
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
Oreas 621 (Aqua Regia) Meas				68.7	290	3590	540	13	24	> 5000	> 10000	1.77	79			0.6	< 2	1.68	30	31	3.31	10	4
Oreas 621 (Aqua Regia) Cert				68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93
OREAS 45f (Aqua Regia) Meas						362	171	< 1	234	10	27	7.42			145	1.1	4	0.07	36	348	14.6	30	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
OREAS 45f (Aqua Regia) Meas						361	172	< 1	231	13	27	7.36			145	1.1	3	0.07	37	349	14.6	20	< 1
OREAS 45f (Aqua Regia) Cert						336	150	1.19	192	12.4	22.2	4.81			158	0.980	0.170	0.0750	39.2	341	13.7	20.3	0.0310
1294501 Orig				< 0.2	< 0.5	16	130	< 1	16	4	16	0.82	< 2	< 10	34	< 0.5	< 2	1.30	4	20	1.12	< 10	< 1
1294501 Dup				< 0.2	< 0.5	16	134	< 1	17	4	17	0.85	< 2	< 10	37	< 0.5	< 2	1.34	4	21	1.16	< 10	< 1
1294511 Orig	< 2	< 5	< 5																				
1294511 Dup	< 2	< 5	< 5																				
1294514 Orig				< 0.2	< 0.5	7	98	< 1	12	5	17	1.06	< 2	< 10	31	< 0.5	< 2	0.24	4	21	1.12	< 10	< 1
1294514 Dup				< 0.2	< 0.5	7	95	< 1	12	5	17	1.06	< 2	< 10	29	< 0.5	< 2	0.24	4	20	1.12	< 10	< 1
1294521 Orig	< 2	< 5	< 5																				
1294521 Dup	< 2	< 5	< 5																				
1294528 Orig				< 0.2	< 0.5	6	80	< 1	10	3	10	0.52	< 2	< 10	29	< 0.5	< 2	0.36	3	15	0.78	< 10	< 1
1294528 Dup				< 0.2	< 0.5	5	82	< 1	10	3	9	0.52	< 2	< 10	28	< 0.5	< 2	0.37	3	15	0.76	< 10	< 1
1294532 Orig	< 2	< 5	< 5																				
1294532 Dup	< 2	< 5	< 5																				
NP-TK-20-003 Orig	< 2	< 5	< 5																				
NP-TK-20-003 Dup	< 2	< 5	< 5																				
Method Blank																							
Method Blank																							
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank																							
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Ag	Al	As	Ba	Be	
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.3	0.01	3	7	1	
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas																								
DNC-1 Cert																								
GBW 07113 Meas																								
GBW 07113 Cert																								
SDC-1 Meas																				8.06	< 3	512	3	
SDC-1 Cert																				8.34	0.220	630	3.00	
GXR-6 Meas	1.24	< 10	0.41	0.141	0.034	0.01	3	20	30		< 20	< 1	< 2	< 10	176	< 10	4	9						
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110						
GXR-6 Meas	1.22	< 10	0.40	0.134	0.034	0.01	5	20	30		< 20	< 1	< 2	< 10	172	< 10	5	7						
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110						
GXR-6 Meas	1.24	< 10	0.41	0.139	0.034	0.01	4	19	30		< 20	< 1	< 2	< 10	178	< 10	4	9						
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110						
W-2a Meas																								
W-2a Cert																								
SY-4 Meas																								
SY-4 Cert																								
Oreas 72a (4 Acid Digest) Meas																						8		
Oreas 72a (4 Acid Digest) Cert																						14.7		
Oreas 72a (4 Acid Digest) Meas																						5		
Oreas 72a (4 Acid Digest) Cert																						14.7		
BIR-1a Meas																								
BIR-1a Cert																								
OREAS 98 (4 Acid) Meas																				43.4				
OREAS 98 (4 Acid) Cert																				45.1				
OREAS 98 (4 Acid) Meas																				43.6				
OREAS 98 (4 Acid) Cert																				45.1				
DNC-1a Meas																							83	
DNC-1a Cert																							118	
PK2 Meas																								
PK2 Cert																								
PK2 Meas																								
PK2 Cert																								
OREAS 904 (4 ACID) Meas																				0.6	6.17	97	140	8
OREAS 904 (4 ACID) Cert																				0.551	6.30	98.0	194	7.86
SBC-1 Meas																						22	585	3
SBC-1 Cert																						25.7	788.0	3.20
OREAS 922 (AQUA REGIA) Meas	0.53	35	1.36	0.036	0.064	0.38	3	4	17		< 20		< 2	< 10	38	< 10	20	31						
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3						
OREAS 922	0.51	36	1.38	0.037	0.062	0.38	3	4	18		< 20		< 2	< 10	37	< 10	20	26						

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Ag	Al	As	Ba	Be
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.3	0.01	3	7	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
(AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3					
OREAS 922 (AQUA REGIA) Meas	0.51	35	1.38	0.037	0.063	0.38	< 2	4	17		< 20		< 2	< 10	37	< 10	20	28					
OREAS 922 (AQUA REGIA) Cert	0.376	32.5	1.33	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3					
OREAS 923 (AQUA REGIA) Meas	0.44	32	1.47		0.060	0.69	2	4	15		< 20		< 2	< 10	36	< 10	18	33					
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5					
OREAS 923 (AQUA REGIA) Meas	0.45	34	1.49		0.061	0.71	2	4	16		< 20		< 2	< 10	37	< 10	19	34					
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5					
OREAS 923 (AQUA REGIA) Meas	0.44	32	1.47		0.059	0.70	2	4	15		< 20		< 2	< 10	36	< 10	18	34					
OREAS 923 (AQUA REGIA) Cert	0.322	30.0	1.43		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5					
Oreas 96 (Aqua Regia) Meas						4.18	7																
Oreas 96 (Aqua Regia) Cert						4.38	4.53																
CDN-PGMS-27 Meas																							
CDN-PGMS-27 Cert																							
CDN-PGMS-27 Meas																							
CDN-PGMS-27 Cert																							
OREAS 96 (4 Acid) Meas																			11.4				
OREAS 96 (4 Acid) Cert																			11.5				
OREAS 96 (4 Acid) Meas																			11.5				
OREAS 96 (4 Acid) Cert																			11.5				
OREAS 621 (4 Acid) Meas																			68.5	6.48	62		2
OREAS 621 (4 Acid) Cert																			69.0	6.40	77.0		1.69
OREAS 621 (4 Acid) Meas																			68.1	6.34	65		2
OREAS 621 (4 Acid) Cert																			69.0	6.40	77.0		1.69
Oreas 621 (Aqua Regia) Meas	0.42	19	0.44	0.173	0.033	4.52	126	3	20		< 20		< 2	< 10	13	< 10	7	67					
Oreas 621 (Aqua Regia) Meas	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0					



Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Ag	Al	As	Ba	Be
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.3	0.01	3	7	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Regia) Cert																							
Oreas 621 (Aqua Regia) Meas	0.41	19	0.44	0.173	0.034	4.57	129	3	21		< 20		< 2	< 10	13	< 10	7	67					
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0					
Oreas 621 (Aqua Regia) Meas	0.40	19	0.44	0.175	0.033	4.75	124	2	20		< 20		< 2	< 10	13	< 10	7	66					
Oreas 621 (Aqua Regia) Cert	0.333	19.4	0.436	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0					
OREAS 45f (Aqua Regia) Meas	0.12	< 10	0.18	0.055	0.021	0.02		28	15	0.11	< 20		< 2	< 10	210		5	16					
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0					
OREAS 45f (Aqua Regia) Meas	0.12	< 10	0.18	0.053	0.021	0.02		28	16	0.11	< 20		< 2	< 10	212		5	17					
OREAS 45f (Aqua Regia) Cert	0.0820	10.7	0.152	0.0320	0.0220	0.0270		31.4	13.2	0.0970	7.67		0.120	1.09	217		6.74	30.0					
1294501 Orig	0.06	19	0.80	0.027	0.040	< 0.01	< 2	3	20	0.09	< 20	1	< 2	< 10	26	< 10	7	2					
1294501 Dup	0.06	21	0.82	0.030	0.040	< 0.01	< 2	3	21	0.10	< 20	< 1	< 2	< 10	27	< 10	8	2					
1294511 Orig																							
1294511 Dup																							
1294514 Orig	0.05	14	0.24	0.025	0.022	< 0.01	< 2	2	16	0.12	< 20	4	< 2	< 10	31	< 10	4	6					
1294514 Dup	0.05	13	0.24	0.022	0.022	< 0.01	< 2	2	16	0.11	< 20	2	< 2	< 10	31	< 10	4	6					
1294521 Orig																							
1294521 Dup																							
1294528 Orig	0.04	16	0.16	0.026	0.055	< 0.01	< 2	2	18	0.08	< 20	4	< 2	< 10	20	< 10	6	3					
1294528 Dup	0.04	15	0.16	0.026	0.055	< 0.01	< 2	2	18	0.08	< 20	2	< 2	< 10	20	< 10	6	3					
1294532 Orig																							
1294532 Dup																							
NP-TK-20-003 Orig																							
NP-TK-20-003 Dup																							
Method Blank																			< 0.3	< 0.01	< 3	< 7	< 1
Method Blank																			< 0.3	< 0.01	< 3	< 7	< 1
Method Blank	< 0.01	< 10	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1					
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1					
Method Blank	< 0.01	< 10	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1					
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1					
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.01	< 10	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1					

Analyte Symbol	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3	5	0.01	4	1	2
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
SDC-1 Meas		1.02		17	58	35	4.88	21	< 1	1.97	1.01	36	892		1.48	34	0.059	19	< 5		15	148	
SDC-1 Cert		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52	38.0	0.0690	25.00	0.54		17.00	180.00	
GXR-6 Meas																							
GXR-6 Cert																							
GXR-6 Meas																							
GXR-6 Cert																							
GXR-6 Meas																							
GXR-6 Cert																							
W-2a Meas																							
W-2a Cert																							
SY-4 Meas																							
SY-4 Cert																							
Oreas 72a (4 Acid Digest) Meas				150	210	304	9.50									6310				1.60			
Oreas 72a (4 Acid Digest) Cert				157	228	316	9.63									6930.000				1.74			
Oreas 72a (4 Acid Digest) Meas				159	185	324	9.88									6680				1.72			
Oreas 72a (4 Acid Digest) Cert				157	228	316	9.63									6930.000				1.74			
BIR-1a Meas																							
BIR-1a Cert																							
OREAS 98 (4 Acid) Meas	< 2			116		> 10000												305	< 5	17.0			
OREAS 98 (4 Acid) Cert	97.2			121		14800.0												345	20.1	15.5			
OREAS 98 (4 Acid) Meas	15			117		> 10000												300	< 5	16.6			
OREAS 98 (4 Acid) Cert	97.2			121		14800.0												345	20.1	15.5			
DNC-1a Meas		7.76		56	229	102	7.72	11				5			1.49	260		< 3	< 5		29	112	
DNC-1a Cert		8.21		57	270	100	6.97	15				5.2			1.40	247		6.3	0.96		31	144	
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
OREAS 904 (4 ACID) Meas	< 2	0.04		93	64	5920	6.73	15		1.56	0.56	17	454	2	0.04	43	0.104	6	< 5	0.06	12	24	
OREAS 904 (4 ACID) Cert	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2	
SBC-1 Meas	< 2		0.5	20	77	32		25				165		2		85		25	< 5		19	147	
SBC-1 Cert	0.70		0.40	22.7	109	31.0		27.0				163		2		83		35.0	1.01		20.0	178.0	
OREAS 922 (AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert																							
OREAS 922																							

Analyte Symbol	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3	5	0.01	4	1	2
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
(AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert																							
OREAS 922 (AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas																							
OREAS 923 (AQUA REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas																							
OREAS 923 (AQUA REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas																							
OREAS 923 (AQUA REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas																							
OREAS 923 (AQUA REGIA) Cert																							
Oreas 96 (Aqua Regia) Meas																							
Oreas 96 (Aqua Regia) Cert																							
CDN-PGMS-27 Meas																							
CDN-PGMS-27 Cert																							
CDN-PGMS-27 Meas																							
CDN-PGMS-27 Cert																							
OREAS 96 (4 Acid) Meas	< 2			48		> 10000												97	< 5	4.32			
OREAS 96 (4 Acid) Cert	26.3			49.9		39300												101	5.09	4.19			
OREAS 96 (4 Acid) Meas	< 2			48		> 10000												91	< 5	4.28			
OREAS 96 (4 Acid) Cert	26.3			49.9		39300												101	5.09	4.19			
OREAS 621 (4 Acid) Meas	2	2.00	284	30	37	3550	3.77	24		0.51	0.52	15	504	14	1.35	26	0.037	> 5000	12	4.61	6	62	
OREAS 621 (4 Acid) Cert	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31	26.2	0.0359	13600	139	4.48	6.24	91.0	
OREAS 621 (4 Acid) Meas	< 2	1.98	276	30	33	3530	3.73	23		0.96	0.51	15	504	13	1.31	25	0.037	> 5000	14	4.56	6	62	
OREAS 621 (4 Acid) Cert	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31	26.2	0.0359	13600	139	4.48	6.24	91.0	
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua																							

Analyte Symbol	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm
Lower Limit	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3	5	0.01	4	1	2
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Regia) Cert																							
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua Regia) Cert																							
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua Regia) Cert																							
OREAS 45f (Aqua Regia) Meas																							
OREAS 45f (Aqua Regia) Cert																							
OREAS 45f (Aqua Regia) Meas																							
OREAS 45f (Aqua Regia) Cert																							
1294501 Orig																							
1294501 Dup																							
1294511 Orig																							
1294511 Dup																							
1294514 Orig																							
1294514 Dup																							
1294521 Orig																							
1294521 Dup																							
1294528 Orig																							
1294528 Dup																							
1294532 Orig																							
1294532 Dup																							
NP-TK-20-003 Orig																							
NP-TK-20-003 Dup																							
Method Blank	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2
Method Blank	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

Analyte Symbol	Ti	Tl	U	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Total	Ba	Sr	Y	Sc
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm
Lower Limit	0.01	5	10	2	5	1	1	5	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	2	2	1	1
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-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
NIST 694 Meas									11.71	1.89	0.74	0.014	0.34	42.87	0.88	0.55	0.119	30.16					
NIST 694 Cert									11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					
DNC-1 Meas									46.79	18.51	9.89	0.147	10.01	11.46	1.92	0.22	0.485	0.08		106	145	16	31
DNC-1 Cert									47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070		118	144.0	18.0	31
GBW 07113 Meas									72.85	12.79	3.21	0.141	0.14	0.60	2.50	5.41	0.288	0.05		502	42	45	5
GBW 07113 Cert									72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500		506	43.0	43.0	5.00
SDC-1 Meas	0.24	< 5	< 10	59	< 5		111	45															
SDC-1 Cert	0.606	0.70	3.10	102.00	0.80		103.00	290.00															
GXR-6 Meas																							
GXR-6 Cert																							
GXR-6 Meas																							
GXR-6 Cert																							
GXR-6 Meas																							
GXR-6 Cert																							
W-2a Meas									52.14	15.23	10.84	0.167	6.19	11.09	2.22	0.61	1.093	0.13		177	194	19	35
W-2a Cert									52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.140		182	190	24.0	36.0
SY-4 Meas									50.00	20.70	6.24	0.107	0.50	8.12	7.07	1.69	0.290	0.13		352	1195	117	1
SY-4 Cert									49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131		340	1191	119	1.1
Oreas 72a (4 Acid Digest) Meas																							
Oreas 72a (4 Acid Digest) Cert																							
Oreas 72a (4 Acid Digest) Meas																							
Oreas 72a (4 Acid Digest) Cert																							
BIR-1a Meas									47.38	15.76	11.32	0.173	9.59	13.61	1.82	0.02	0.977	0.04		8	110	14	44
BIR-1a Cert									47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021		6	110	16	44
OREAS 98 (4 Acid) Meas							1330																
OREAS 98 (4 Acid) Cert							1360																
OREAS 98 (4 Acid) Meas							1320																
OREAS 98 (4 Acid) Cert							1360																
DNC-1a Meas	0.28			145		15	66	32															
DNC-1a Cert	0.29			148		18.0	70	38.0															
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
OREAS 904 (4 ACID) Meas		< 5	< 10	86	< 5	36	28	189															
OREAS 904 (4 ACID) Cert		0.520	8.43	76.0	2.12	31.5	26.3	171															
SBC-1 Meas	0.49	< 5	< 10	218	< 5	27	194	98															
SBC-1 Cert	0.51	0.89	5.76	220.0	1.60	36.5	186	134.0															
OREAS 922 (AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA)																							

Analyte Symbol	Ti	Tl	U	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Total	Ba	Sr	Y	Sc	
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm
Lower Limit	0.01	5	10	2	5	1	1	5	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	2	2	1	1
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-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
Cert																								
OREAS 922 (AQUA REGIA) Meas																								
OREAS 922 (AQUA REGIA) Cert																								
OREAS 922 (AQUA REGIA) Meas																								
OREAS 922 (AQUA REGIA) Cert																								
OREAS 923 (AQUA REGIA) Meas																								
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Oreas 96 (Aqua Regia) Meas																								
Oreas 96 (Aqua Regia) Cert																								
CDN-PGMS-27 Meas																								
CDN-PGMS-27 Cert																								
CDN-PGMS-27 Meas																								
CDN-PGMS-27 Cert																								
OREAS 96 (4 Acid) Meas								452																
OREAS 96 (4 Acid) Cert								457																
OREAS 96 (4 Acid) Meas								449																
OREAS 96 (4 Acid) Cert								457																
OREAS 621 (4 Acid) Meas	0.19	< 5	< 10	35	< 5	10	> 10000	146																
OREAS 621 (4 Acid) Cert	0.149	1.96	2.83	31.8	2.35	11.1	52200	168																
OREAS 621 (4 Acid) Meas	0.19	< 5	< 10	35	< 5	10	> 10000	144																
OREAS 621 (4 Acid) Meas	0.149	1.96	2.83	31.8	2.35	11.1	52200	168																

Analyte Symbol	Ti	Tl	U	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Total	Ba	Sr	Y	Sc
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm
Lower Limit	0.01	5	10	2	5	1	1	5	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	2	2	1	1
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-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
Acid) Cert																							
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua Regia) Cert																							
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua Regia) Cert																							
Oreas 621 (Aqua Regia) Meas																							
Oreas 621 (Aqua Regia) Cert																							
Oreas 621 (Aqua Regia) Meas																							
OREAS 45f (Aqua Regia) Meas																							
OREAS 45f (Aqua Regia) Cert																							
OREAS 45f (Aqua Regia) Meas																							
OREAS 45f (Aqua Regia) Cert																							
1294501 Orig																							
1294501 Dup																							
1294511 Orig																							
1294511 Dup																							
1294514 Orig																							
1294514 Dup																							
1294521 Orig																							
1294521 Dup																							
1294528 Orig																							
1294528 Dup																							
1294532 Orig																							
1294532 Dup																							
NP-TK-20-003 Orig									50.66	6.97	11.49	0.168	15.03	11.67	1.05	0.12	0.745	0.09	98.82	31	104	10	30
NP-TK-20-003 Dup									51.13	7.25	11.91	0.174	15.26	11.95	1.10	0.12	0.774	0.04	100.5	33	109	9	31
Method Blank	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5															
Method Blank	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5															
Method Blank																							
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Method Blank																							
Method Blank																							
Method Blank									< 0.01	< 0.01	0.01	0.003	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01		< 2	< 2	< 1	< 1
Method Blank																							

Analyte Symbol	Zr	Be	V
Unit Symbol	ppm	ppm	ppm
Lower Limit	2	1	5
Method Code	FUS-ICP	FUS-ICP	FUS-ICP
NIST 694 Meas			1667
NIST 694 Cert			1740
DNC-1 Meas	37		155
DNC-1 Cert	38		148
GBW 07113 Meas	411	4	< 5
GBW 07113 Cert	403	4.00	5.00
SDC-1 Meas			
SDC-1 Cert			
GXR-6 Meas			
GXR-6 Cert			
GXR-6 Meas			
GXR-6 Cert			
GXR-6 Meas			
GXR-6 Cert			
W-2a Meas	86	< 1	278
W-2a Cert	94.0	1.30	262
SY-4 Meas	524	3	9
SY-4 Cert	517	2.6	8.0
Oreas 72a (4 Acid Digest) Meas			
Oreas 72a (4 Acid Digest) Cert			
Oreas 72a (4 Acid Digest) Meas			
Oreas 72a (4 Acid Digest) Cert			
BIR-1a Meas	15	< 1	339
BIR-1a Cert	18	0.58	310
OREAS 98 (4 Acid) Meas			
OREAS 98 (4 Acid) Cert			
OREAS 98 (4 Acid) Meas			
OREAS 98 (4 Acid) Cert			
DNC-1a Meas			
DNC-1a Cert			
PK2 Meas			
PK2 Cert			
PK2 Meas			
PK2 Cert			
OREAS 904 (4 ACID) Meas			
OREAS 904 (4 ACID) Cert			
SBC-1 Meas			
SBC-1 Cert			
OREAS 922 (AQUA REGIA) Meas			
OREAS 922 (AQUA REGIA) Cert			



Analyte Symbol	Zr	Be	V
Unit Symbol	ppm	ppm	ppm
Lower Limit	2	1	5
Method Code	FUS-ICP	FUS-ICP	FUS-ICP
OREAS 922 (AQUA REGIA) Meas			
OREAS 922 (AQUA REGIA) Cert			
OREAS 922 (AQUA REGIA) Meas			
OREAS 922 (AQUA REGIA) Cert			
OREAS 923 (AQUA REGIA) Meas			
OREAS 923 (AQUA REGIA) Cert			
OREAS 923 (AQUA REGIA) Meas			
OREAS 923 (AQUA REGIA) Cert			
OREAS 923 (AQUA REGIA) Meas			
OREAS 923 (AQUA REGIA) Cert			
OREAS 923 (AQUA REGIA) Meas			
OREAS 923 (AQUA REGIA) Cert			
Oreas 96 (Aqua Regia) Meas			
Oreas 96 (Aqua Regia) Cert			
CDN-PGMS-27 Meas			
CDN-PGMS-27 Cert			
CDN-PGMS-27 Meas			
CDN-PGMS-27 Cert			
OREAS 96 (4 Acid) Meas			
OREAS 96 (4 Acid) Cert			
OREAS 96 (4 Acid) Meas			
OREAS 96 (4 Acid) Cert			
OREAS 621 (4 Acid) Meas			
OREAS 621 (4 Acid) Cert			
OREAS 621 (4 Acid) Meas			
OREAS 621 (4 Acid) Cert			
Oreas 621 (Aqua			

Analyte Symbol	Zr	Be	V
Unit Symbol	ppm	ppm	ppm
Lower Limit	2	1	5
Method Code	FUS-ICP	FUS-ICP	FUS-ICP
Regia) Meas			
Oreas 621 (Aqua Regia) Cert			
Oreas 621 (Aqua Regia) Meas			
Oreas 621 (Aqua Regia) Cert			
Oreas 621 (Aqua Regia) Meas			
Oreas 621 (Aqua Regia) Cert			
OREAS 45f (Aqua Regia) Meas			
OREAS 45f (Aqua Regia) Cert			
OREAS 45f (Aqua Regia) Meas			
OREAS 45f (Aqua Regia) Cert			
1294501 Orig			
1294501 Dup			
1294511 Orig			
1294511 Dup			
1294514 Orig			
1294514 Dup			
1294521 Orig			
1294521 Dup			
1294528 Orig			
1294528 Dup			
1294532 Orig			
1294532 Dup			
NP-TK-20-003 Orig	32	< 1	165
NP-TK-20-003 Dup	33	< 1	171
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank			
Method Blank	2	< 1	< 5
Method Blank			



Report No.: A20-16012  
 Report Date: 06-Jan-21  
 Date Submitted: 14-Dec-20  
 Your Reference:

Palladium One  
 101-278 Bay St  
 Thunder Bay Ontario  
 Canada

ATTN: Neil Pettigrew

## CERTIFICATE OF ANALYSIS

312 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1C-OES-Tbay	QOP PGE-OES (Fire Assay ICPOES)	2020-12-17 14:00:47
1F2-Tbay	QOP Total (Total Digestion ICPOES))	2020-12-18 23:33:38
8-4 Acid-Tbay Total Digestion	QOP Total Assay (Code 8-4 Acid Total Digestion Assays)	2021-01-04 15:29:51

REPORT      **A20-16012**

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 for accurate numbers.

CERTIFIED BY:

Elitsa Hrischeva, Ph.D.  
 Quality Control Coordinator

**ACTIVATION LABORATORIES LTD.**  
 1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6  
 TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613  
 E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com













## Results

## Activation Laboratories Ltd.

## Report: A20-16012

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
173021	< 2	< 5	< 5	< 0.3	7.95	< 3	333	< 1	< 2	2.06	< 0.3	6	60	14	1.91	21	< 1	1.38	0.62	27	297	< 1	3.77
173022	< 2	< 5	< 5	< 0.3	7.71	< 3	539	< 1	< 2	1.90	< 0.3	3	48	10	1.25	20	< 1	1.57	0.32	18	187	1	3.66
173023	< 2	< 5	< 5	< 0.3	7.59	< 3	435	< 1	< 2	1.98	< 0.3	4	43	3	1.51	21	< 1	1.44	0.41	22	225	< 1	3.63
173024	< 2	< 5	< 5	< 0.3	8.23	< 3	371	< 1	< 2	3.14	< 0.3	15	26	40	3.97	22	1	1.47	1.30	40	586	< 1	3.54
173025	< 2	< 5	< 5	< 0.3	7.66	< 3	424	< 1	< 2	1.97	< 0.3	3	36	7	1.27	19	< 1	1.40	0.35	20	190	1	3.62
173026	< 2	< 5	< 5	< 0.3	8.54	< 3	418	< 1	< 2	3.20	< 0.3	16	11	19	4.16	23	< 1	1.60	1.38	46	604	< 1	3.56
173027	< 2	< 5	< 5	< 0.3	7.51	< 3	463	< 1	< 2	1.90	< 0.3	4	23	7	1.63	20	< 1	1.26	0.41	23	225	2	3.49
173028	< 2	< 5	< 5	< 0.3	5.46	< 3	377	< 1	< 2	1.61	< 0.3	3	23	2	1.41	19	< 1	1.08	0.34	21	246	2	3.79
173029	< 2	< 5	< 5	0.3	8.09	< 3	548	< 1	< 2	2.45	< 0.3	11	60	126	3.16	22	< 1	1.31	1.07	48	396	< 1	3.57
173030	< 2	< 5	< 5	< 0.3	6.90	< 3	845	< 1	< 2	1.15	< 0.3	3	14	5	1.58	17	1	2.91	0.29	23	248	1	2.46
173031	< 2	< 5	< 5	< 0.3	7.65	< 3	411	< 1	< 2	1.99	< 0.3	9	26	82	2.29	19	1	1.19	0.96	36	289	< 1	3.57
173032	< 2	< 5	< 5	< 0.3	6.48	< 3	128	< 1	< 2	5.36	< 0.3	51	319	213	8.27	15	< 1	0.92	5.72	40	1050	< 1	2.05
173033	< 2	< 5	8	< 0.3	6.63	< 3	71	< 1	< 2	5.53	< 0.3	56	293	415	8.33	16	< 1	0.63	5.89	35	1050	< 1	2.26
173034	< 2	< 5	< 5	< 0.3	6.71	< 3	162	< 1	< 2	5.16	< 0.3	56	313	331	8.52	19	< 1	1.12	6.05	45	1170	< 1	2.10
173035	< 2	< 5	6	< 0.3	6.62	< 3	170	< 1	< 2	4.41	< 0.3	54	301	506	7.29	16	< 1	1.11	5.15	42	933	< 1	2.30
173036	< 2	9	12	0.4	5.04	< 3	147	< 1	< 2	4.32	< 0.3	79	539	907	9.48	14	< 1	1.48	7.77	51	1160	< 1	1.35
173037	< 2	14	20	0.6	4.30	< 3	144	< 1	3	2.92	< 0.3	95	798	1440	9.45	15	< 1	2.21	8.40	67	1160	< 1	0.86
173038	< 2	< 5	< 5	< 0.3	5.49	3	224	< 1	< 2	1.64	< 0.3	9	92	122	1.78	16	< 1	0.58	0.98	20	242	< 1	3.64
173039	< 2	< 5	< 5	< 0.3	6.81	< 3	188	< 1	< 2	1.66	< 0.3	2	29	51	1.04	16	< 1	0.33	0.27	12	118	1	3.70
173040	36	981	547	1.3	1.32	< 3	18	< 1	< 2	0.89	0.8	307	2650	4110	15.8	4	< 1	0.02	15.0	< 1	932	< 1	0.11
173041	2	19	27	0.8	4.33	3	343	< 1	2	3.12	< 0.3	106	882	2250	9.93	16	< 1	3.03	8.44	88	1280	< 1	0.50
173042	7	159	236	1.6	4.81	< 3	168	< 1	< 2	4.33	0.3	136	385	6190	11.2	14	< 1	1.22	6.27	39	1150	< 1	1.52
173043	5	99	159	0.8	7.05	< 3	264	< 1	2	3.35	< 0.3	210	230	1830	9.20	18	< 1	1.03	3.22	30	668	< 1	2.85
173044	< 2	15	19	0.4	8.50	< 3	437	< 1	< 2	3.22	0.3	34	44	602	4.81	22	< 1	1.10	1.62	32	566	< 1	3.69
173045	6	63	94	1.1	4.05	< 3	86	< 1	< 2	5.16	< 0.3	97	627	3890	10.8	11	< 1	1.54	7.78	41	1440	< 1	0.74
173046	< 2	< 5	7	< 0.3	7.65	3	489	< 1	< 2	1.83	< 0.3	6	66	791	1.67	19	< 1	1.06	0.35	20	165	2	3.86
173047	< 2	< 5	6	< 0.3	7.35	< 3	495	< 1	< 2	1.73	< 0.3	6	21	124	1.54	20	< 1	1.44	0.29	20	244	1	3.64
173048	< 2	< 5	< 5	< 0.3	7.16	< 3	480	< 1	< 2	1.67	< 0.3	2	19	19	1.30	19	< 1	1.39	0.25	18	186	< 1	3.54
173049	< 2	< 5	< 5	< 0.3	7.19	< 3	496	< 1	< 2	1.75	< 0.3	3	15	19	1.36	19	< 1	1.45	0.28	17	193	< 1	3.63
173050	< 2	< 5	< 5	< 0.3	7.59	< 3	497	< 1	< 2	1.77	< 0.3	3	33	20	1.38	19	< 1	1.42	0.29	17	190	< 1	3.64
173051	6	35	55	2.8	8.11	4	267	< 1	5	2.72	< 0.3	115	131	> 10000	5.93	18	< 1	1.13	1.46	24	451	< 1	2.95
173052	< 2	5	7	< 0.3	7.83	< 3	274	< 1	< 2	2.19	< 0.3	12	19	288	1.61	19	< 1	0.92	0.42	19	197	2	3.80
173053	< 2	< 5	< 5	< 0.3	7.68	< 3	291	< 1	< 2	2.01	< 0.3	4	19	17	1.50	20	< 1	1.05	0.35	18	203	< 1	3.78
173054	< 2	< 5	< 5	< 0.3	4.76	< 3	244	< 1	< 2	1.87	< 0.3	6	57	12	1.68	19	< 1	0.98	0.68	26	282	1	3.66
173055	< 2	< 5	< 5	0.6	7.45	< 3	282	< 1	< 2	2.02	< 0.3	5	35	21	1.69	20	< 1	1.04	0.52	24	231	1	3.71
173056	< 2	51	38	0.9	6.25	< 3	193	< 1	3	3.73	< 0.3	78	76	2550	6.93	20	< 1	1.06	1.76	22	731	< 1	3.06
173057	< 2	< 5	< 5	< 0.3	7.43	< 3	616	< 1	< 2	1.94	< 0.3	5	15	16	1.78	20	1	1.44	0.42	20	262	1	3.48
173058	< 2	< 5	< 5	< 0.3	8.23	< 3	535	1	< 2	3.50	< 0.3	15	35	24	4.42	23	< 1	1.49	1.63	40	687	< 1	3.49
173059	< 2	< 5	< 5	< 0.3	7.59	< 3	401	< 1	< 2	1.88	< 0.3	3	20	8	1.58	20	< 1	1.18	0.35	18	236	< 1	3.80
173060	< 2	< 5	< 5	< 0.3	7.17	< 3	803	< 1	< 2	1.22	< 0.3	3	19	5	1.73	18	< 1	2.65	0.31	23	244	< 1	2.56
173061	< 2	< 5	< 5	< 0.3	7.67	< 3	425	< 1	< 2	1.88	< 0.3	4	16	10	1.57	20	< 1	1.36	0.35	21	245	1	3.74
173062	< 2	< 5	< 5	< 0.3	7.65	< 3	440	< 1	< 2	1.81	< 0.3	3	18	5	1.51	21	1	1.28	0.33	19	232	1	3.71

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172001	7	0.040	5	< 5	0.03	< 4	372	< 2	0.14	< 5	< 10	39	< 5	4	50	43		
172002	5	0.022	8	< 5	0.02	< 4	329	< 2	0.09	< 5	< 10	22	< 5	2	39	39		
172003	4	0.019	7	< 5	< 0.01	< 4	337	< 2	0.07	< 5	< 10	18	< 5	2	39	37		
172004	23	0.045	5	< 5	0.02	7	322	< 2	0.09	< 5	< 10	21	< 5	8	82	24		
172005	7	0.040	6	< 5	0.02	< 4	298	3	0.15	< 5	< 10	42	< 5	3	48	50		
172006	33	0.025	7	< 5	0.03	< 4	353	3	0.11	< 5	< 10	25	< 5	2	42	39		
172007	24	0.027	8	< 5	0.02	< 4	385	< 2	0.10	< 5	< 10	24	< 5	2	40	41		
172014	46	0.021	8	< 5	0.03	< 4	381	4	0.09	< 5	< 10	21	< 5	1	33	33		
172015	17	0.026	6	< 5	0.02	< 4	361	< 2	0.11	< 5	< 10	24	< 5	3	39	41		
172016	14	0.023	8	< 5	0.02	< 4	369	< 2	0.09	< 5	< 10	20	< 5	2	39	42		
172017	11	0.030	9	< 5	0.01	< 4	426	< 2	0.10	< 5	< 10	26	< 5	3	39	41		
172018	84	0.477	< 3	< 5	0.01	27	427	2	0.45	< 5	< 10	224	< 5	23	130	28		
172019	14	0.059	10	< 5	0.02	5	365	< 2	0.15	< 5	< 10	42	< 5	7	63	39		
172020	3760	0.067	27	< 5	1.58	12	175	< 2	0.45	< 5	< 10	106	< 5	12	103	69		
172021	10	0.041	7	< 5	0.01	< 4	277	< 2	0.14	< 5	< 10	34	< 5	2	49	40		
172022	6	0.019	6	< 5	0.01	< 4	339	< 2	0.09	< 5	< 10	19	< 5	1	36	37		
172023	42	0.058	6	< 5	0.04	5	423	< 2	0.14	< 5	< 10	45	< 5	4	55	49		
172024	60	0.196	8	< 5	0.01	10	841	17	0.39	< 5	< 10	105	< 5	18	100	220		
172025	15	0.032	6	< 5	< 0.01	< 4	459	< 2	0.10	< 5	< 10	24	< 5	3	38	52		
172026	4	0.025	7	< 5	0.01	< 4	398	< 2	0.10	< 5	< 10	22	< 5	2	38	46		
172027	7	0.027	6	< 5	0.02	< 4	364	< 2	0.11	< 5	< 10	27	< 5	2	49	43		
172028	9	0.025	3	< 5	< 0.01	< 4	334	< 2	0.07	< 5	< 10	18	< 5	2	39	32		
172029	22	0.037	4	< 5	0.03	< 4	268	< 2	0.10	< 5	< 10	26	< 5	3	48	50		
172030	22	0.037	5	< 5	0.03	< 4	270	< 2	0.10	< 5	< 10	27	< 5	3	47	50		
172031	236	0.027	10	< 5	0.16	< 4	329	7	0.10	< 5	< 10	22	< 5	1	41	47		
172032	3510	0.027	11	< 5	2.35	< 4	341	< 2	0.10	< 5	< 10	22	< 5	2	41	44		
172042	3670	0.023	18	< 5	1.89	< 4	348	< 2	0.08	< 5	< 10	17	< 5	3	27	48		
172043	289	0.024	11	< 5	0.17	< 4	358	< 2	0.10	< 5	< 10	24	< 5	2	41	40		
172044	20	0.022	9	< 5	0.06	< 4	364	< 2	0.10	< 5	< 10	21	< 5	2	39	40		
172045	16	0.028	8	< 5	0.04	< 4	359	< 2	0.10	< 5	< 10	24	< 5	2	45	47		
172046	14	0.027	6	< 5	0.01	< 4	393	3	0.10	< 5	< 10	23	< 5	2	49	44		
172047	10	0.024	5	< 5	0.01	< 4	368	< 2	0.10	< 5	< 10	23	< 5	2	44	36		
172048	10	0.026	5	< 5	0.02	< 4	357	< 2	0.10	< 5	< 10	23	< 5	2	46	38		
172049	15	0.059	6	< 5	0.05	7	405	11	0.09	< 5	< 10	27	< 5	10	71	31		
172050	> 10000	0.011	14	< 5	6.52	9	5	< 2	0.08	< 5	< 10	76	< 5	3	72	13		1.74
172051	7	0.021	6	< 5	0.01	< 4	359	< 2	0.10	< 5	< 10	22	< 5	2	40	38		
172052	9	0.026	4	< 5	0.02	< 4	356	< 2	0.11	< 5	< 10	25	< 5	2	50	41		
172053	10	0.038	6	< 5	0.03	4	356	< 2	0.09	< 5	< 10	27	< 5	5	59	38		
172054	14	0.022	8	< 5	0.02	< 4	322	< 2	0.07	< 5	< 10	13	< 5	4	49	25		
172055	37	0.054	7	< 5	0.08	9	381	3	0.22	< 5	< 10	51	< 5	8	75	36		
172056	18	0.130	6	< 5	0.03	4	578	13	0.26	< 5	< 10	77	< 5	5	73	51		
172057	8	0.023	8	< 5	0.01	< 4	380	3	0.09	< 5	< 10	20	< 5	2	36	43		
172058	38	0.030	8	< 5	0.03	< 4	377	3	0.11	< 5	< 10	27	< 5	3	36	59		
172059	693	0.019	15	< 5	0.33	< 4	353	< 2	0.09	< 5	< 10	21	< 5	1	48	47		
172060	699	0.020	13	< 5	0.31	< 4	338	7	0.10	< 5	< 10	22	< 5	1	50	49		
172061	2150	0.052	120	< 5	0.85	< 4	345	< 2	0.13	< 5	< 10	27	< 5	2	250	49		
172062	3250	0.012	16	< 5	1.85	10	86	< 2	0.23	< 5	< 10	70	< 5	6	144	32		
172063	8200	0.015	4	< 5	3.60	13	20	3	0.27	< 5	< 10	100	< 5	7	137	28	1.17	
172064	> 10000	0.022	6	< 5	11.6	10	18	2	0.27	< 5	< 10	92	< 5	6	122	23	2.34	3.88

## Results

## Activation Laboratories Ltd.

## Report: A20-16012

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172065	> 10000	0.025	7	< 5	7.52	11	138	< 2	0.42	< 5	< 10	106	< 5	6	105	28	1.91	2.12
172066	271	0.022	4	< 5	0.14	< 4	291	< 2	0.09	< 5	< 10	22	< 5	1	35	35		
172067	2100	0.029	81	< 5	1.02	< 4	347	< 2	0.10	< 5	< 10	25	< 5	2	154	40		
172068	35	0.088	7	< 5	0.04	5	338	7	0.18	< 5	< 10	52	< 5	6	66	55		
172069	16	0.059	7	< 5	0.02	5	436	< 2	0.16	< 5	< 10	47	< 5	5	52	54		
172070	4	0.024	33	< 5	< 0.01	< 4	191	< 2	0.08	< 5	< 10	16	< 5	5	35	33		
172071	30	0.062	7	< 5	0.02	5	420	< 2	0.15	< 5	< 10	50	< 5	5	55	60		
172072	8	0.022	7	< 5	0.01	< 4	385	< 2	0.09	< 5	< 10	20	< 5	2	35	37		
172073	8	0.029	5	< 5	0.01	< 4	353	< 2	0.11	< 5	< 10	25	< 5	3	40	40		
172074	9	0.012	8	< 5	< 0.01	< 4	322	< 2	0.06	< 5	< 10	15	< 5	2	26	31		
172075	9	0.022	9	< 5	0.02	< 4	338	< 2	0.08	< 5	< 10	21	< 5	3	36	40		
172076	5	0.021	10	< 5	0.01	< 4	306	< 2	0.09	< 5	< 10	18	< 5	2	37	56		
172077	17	0.043	6	< 5	0.02	< 4	274	4	0.13	< 5	< 10	35	< 5	3	59	64		
172078	6	0.020	5	< 5	0.02	< 4	321	< 2	0.09	< 5	< 10	20	< 5	2	39	37		
172079	6	0.020	5	< 5	0.01	< 4	306	< 2	0.09	< 5	< 10	19	< 5	2	38	34		
172080	3770	0.062	22	< 5	1.58	12	176	5	0.25	< 5	< 10	84	< 5	12	94	64		
172081	12	0.149	4	< 5	0.04	8	619	< 2	0.22	< 5	< 10	80	< 5	12	83	84		
172082	6	0.025	5	< 5	0.02	< 4	353	< 2	0.10	< 5	< 10	22	< 5	3	42	36		
172083	5	0.026	8	< 5	< 0.01	< 4	389	< 2	0.08	< 5	< 10	20	< 5	3	41	37		
172084	8	0.050	7	< 5	0.01	< 4	402	< 2	0.11	< 5	< 10	29	< 5	5	42	50		
172085	15	0.073	5	< 5	0.06	7	397	12	0.15	< 5	< 10	49	< 5	8	74	54		
172086	442	0.031	3	< 5	0.12	18	171	< 2	0.25	< 5	< 10	109	< 5	7	80	22		
172087	948	0.022	< 3	< 5	0.34	20	53	< 2	0.33	< 5	< 10	144	< 5	8	105	28		
172088	16	0.069	6	< 5	0.08	7	411	9	0.11	< 5	< 10	46	< 5	9	73	60		
172089	24	0.052	8	< 5	0.11	5	418	< 2	0.16	< 5	< 10	54	< 5	6	57	60		
172090	23	0.054	6	< 5	0.11	5	417	< 2	0.20	< 5	< 10	60	< 5	6	60	76		
172091	1210	0.016	7	< 5	0.43	14	85	5	0.32	< 5	< 10	112	< 5	5	114	31		
172092	65	0.063	8	< 5	0.15	7	395	8	0.24	< 5	< 10	71	< 5	7	63	90		
172093	601	0.031	4	< 5	0.20	12	127	< 2	0.46	< 5	< 10	127	< 5	6	115	38		
172094	235	0.071	6	< 5	0.25	15	367	< 2	0.24	< 5	< 10	77	< 5	11	90	45		
172095	28	0.055	11	< 5	0.06	6	650	< 2	0.21	< 5	< 10	38	< 5	8	47	101		
172096	73	0.039	12	< 5	0.03	< 4	510	< 2	0.11	< 5	< 10	25	< 5	3	32	60		
172097	80	0.087	17	< 5	0.04	6	507	3	0.21	< 5	< 10	50	< 5	8	57	123		
172098	375	0.136	18	< 5	0.25	9	664	5	0.27	< 5	< 10	71	< 5	15	69	182		
172099	6920	0.018	19	< 5	3.28	18	26	< 2	0.14	< 5	< 10	81	< 5	6	158	18		
172100	10	0.053	40	< 5	0.01	< 4	171	3	0.17	< 5	< 10	24	< 5	9	55	53		
172101	> 10000	0.086	11	< 5	5.05	15	257	3	0.40	< 5	< 10	118	< 5	11	84	47		1.58
172102	> 10000	0.032	5	< 5	6.48	13	101	< 2	0.32	< 5	< 10	111	< 5	6	120	25	2.07	1.74
172103	1600	0.033	< 3	< 5	0.49	15	198	7	0.38	< 5	< 10	124	< 5	7	83	28		
172104	6260	0.046	6	< 5	2.73	16	115	5	0.32	< 5	< 10	123	< 5	6	105	22		
172105	4890	0.025	12	< 5	2.18	16	293	< 2	0.25	< 5	< 10	119	< 5	6	89	18		
172106	4670	0.027	8	< 5	1.95	16	195	10	0.23	5	< 10	110	< 5	5	107	16		
172107	309	0.032	10	< 5	0.16	4	454	< 2	0.14	< 5	< 10	48	< 5	4	43	51		
172108	4710	0.030	14	7	2.00	20	99	< 2	0.19	< 5	< 10	118	< 5	8	125	21		
172109	3990	0.021	5	< 5	1.41	18	47	6	0.26	< 5	< 10	120	< 5	7	110	21		
172110	> 10000	0.011	16	< 5	6.57	9	5	8	0.08	< 5	< 10	77	< 5	3	78	13		1.72
172111	143	0.004	12	< 5	0.08	< 4	387	4	0.06	< 5	< 10	12	< 5	2	16	150		
172112	1470	0.088	4	< 5	0.77	10	225	8	0.24	< 5	< 10	68	< 5	8	68	49		
172113	45	0.060	5	< 5	0.02	< 4	403	< 2	0.14	< 5	< 10	40	< 5	5	52	51		
172114	50	0.090	7	< 5	0.02	6	574	12	0.20	< 5	< 10	55	< 5	8	66	114		

## Results

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Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172115	4	0.020	4	< 5	0.02	< 4	352	2	0.09	< 5	< 10	20	< 5	2	40	31		
172116	6	0.022	6	< 5	0.02	< 4	335	< 2	0.09	< 5	< 10	23	< 5	1	48	32		
172117	210	0.040	9	< 5	0.12	< 4	385	8	0.15	< 5	< 10	43	< 5	4	54	44		
172118	519	0.026	8	< 5	0.27	< 4	368	3	0.10	< 5	< 10	23	< 5	3	39	44		
172119	9540	0.029	8	< 5	3.69	12	175	3	0.34	< 5	< 10	97	< 5	8	111	34		
172120	9780	0.028	5	< 5	3.80	13	183	< 2	0.36	< 5	< 10	98	< 5	8	116	35		
172121	877	0.040	11	< 5	0.34	< 4	413	8	0.13	< 5	< 10	33	< 5	3	43	84		
172122	241	0.022	9	< 5	0.16	< 4	374	< 2	0.09	< 5	< 10	21	< 5	2	37	43		
172123	17	0.038	8	< 5	0.04	4	410	< 2	0.13	< 5	< 10	35	< 5	4	51	45		
172124	55	0.198	8	< 5	0.02	15	623	4	0.28	< 5	< 10	121	< 5	15	106	60		
172125	10	0.045	8	< 5	0.03	< 4	414	< 2	0.16	< 5	< 10	45	< 5	5	53	47		
172126	6	0.021	9	< 5	0.01	< 4	336	< 2	0.09	< 5	< 10	21	< 5	2	37	40		
172127	10	0.029	9	< 5	0.02	< 4	353	< 2	0.11	< 5	< 10	27	< 5	3	43	46		
172128	8	0.017	8	< 5	0.01	< 4	348	< 2	0.08	< 5	< 10	17	< 5	1	32	31		
172129	7	0.026	6	< 5	0.01	< 4	349	< 2	0.10	< 5	< 10	25	< 5	3	47	39		
172130	5	0.042	34	< 5	0.01	< 4	162	< 2	0.12	< 5	< 10	19	< 5	8	48	44		
172131	7	0.022	4	< 5	< 0.01	< 4	360	< 2	0.09	< 5	< 10	21	< 5	2	46	37		
172132	7	0.026	5	< 5	0.01	< 4	345	< 2	0.10	< 5	< 10	24	< 5	2	51	41		
172133	95	0.024	5	< 5	0.05	< 4	333	< 2	0.10	< 5	< 10	27	< 5	3	50	40		
172134	1670	0.029	141	< 5	0.59	< 4	370	5	0.19	< 5	< 10	36	< 5	3	430	31		
172135	6370	0.035	4	< 5	4.03	17	203	2	0.40	< 5	< 10	131	< 5	11	103	26	1.88	
172136	> 10000	0.024	13	< 5	10.8	12	122	< 2	0.18	< 5	< 10	106	< 5	4	141	14	4.06	2.54
172137	> 10000	0.027	15	9	> 20.0	5	32	< 2	0.10	< 5	< 10	64	< 5	3	149	14	4.73	6.17
172138	1680	0.038	205	< 5	0.52	16	287	< 2	0.33	< 5	< 10	133	5	8	559	42		
172139	1140	0.022	< 3	< 5	0.38	17	174	11	0.36	< 5	< 10	133	< 5	6	89	19		
172140	3800	0.063	24	< 5	1.60	12	175	7	0.42	< 5	< 10	101	< 5	12	104	67		
172141	4040	0.045	9	< 5	1.64	20	122	10	0.29	< 5	< 10	132	< 5	11	107	29		
172142	210	0.053	8	< 5	0.33	4	397	6	0.20	< 5	< 10	51	7	6	60	57		
172143	12	0.040	7	< 5	0.03	< 4	382	< 2	0.13	< 5	< 10	33	< 5	3	55	36		
172144	12	0.026	8	< 5	0.06	< 4	380	< 2	0.10	< 5	< 10	22	< 5	2	41	44		
172145	9	0.026	5	< 5	0.02	< 4	401	5	0.10	< 5	< 10	23	< 5	2	40	40		
172146	20	0.067	7	< 5	0.01	4	422	< 2	0.13	< 5	< 10	48	< 5	3	49	33		
172147	8	0.026	4	< 5	0.02	< 4	354	< 2	0.11	< 5	< 10	29	< 5	3	42	44		
172148	6	0.020	6	< 5	< 0.01	< 4	360	4	0.09	< 5	< 10	20	< 5	2	43	38		
172149	12	0.026	5	< 5	< 0.01	< 4	370	< 2	0.10	< 5	< 10	22	< 5	2	45	39		
172150	10	0.026	5	< 5	< 0.01	< 4	365	< 2	0.10	< 5	< 10	22	< 5	2	44	39		
172151	67	0.025	5	< 5	0.03	< 4	352	< 2	0.10	< 5	< 10	24	< 5	2	46	32		
172152	2590	0.031	7	< 5	1.21	< 4	334	9	0.12	< 5	< 10	31	< 5	2	49	44		
172153	> 10000	0.027	12	< 5	> 20.0	< 4	99	< 2	0.12	< 5	< 10	59	< 5	4	55	31	1.24	4.29
172154	> 10000	0.022	10	< 5	> 20.0	8	66	< 2	0.14	< 5	< 10	91	< 5	3	92	17	3.36	3.40
172155	8640	0.024	10	< 5	3.93	< 4	303	< 2	0.11	< 5	< 10	24	< 5	2	24	45		
172156	2920	0.022	1510	< 5	1.28	< 4	336	< 2	0.10	< 5	< 10	21	< 5	2	2200	40		
172157	593	0.022	245	< 5	0.33	< 4	351	2	0.09	< 5	< 10	20	< 5	2	276	42		
172158	16	0.025	7	< 5	0.02	< 4	365	< 2	0.10	< 5	< 10	24	< 5	2	47	35		
172159	16	0.040	4	< 5	0.02	< 4	408	< 2	0.13	< 5	< 10	30	< 5	2	59	33		
172160	6	0.055	34	< 5	0.01	< 4	183	3	0.16	< 5	< 10	24	< 5	11	56	244		
172161	193	0.032	6	< 5	0.12	< 4	437	< 2	0.10	< 5	< 10	26	< 5	3	42	36		
172162	6	0.019	4	< 5	< 0.01	< 4	289	< 2	0.10	< 5	< 10	22	< 5	2	47	34		
172163	7	0.019	< 3	< 5	< 0.01	< 4	331	< 2	0.09	< 5	< 10	21	< 5	2	40	33		

## Results

## Activation Laboratories Ltd.

## Report: A20-16012

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172164	8	0.021	4	< 5	< 0.01	< 4	356	< 2	0.09	< 5	< 10	20	< 5	2	41	31		
172165	10	0.024	4	< 5	< 0.01	< 4	351	6	0.10	< 5	< 10	25	< 5	2	41	36		
172166	2130	0.048	9	< 5	1.37	4	383	5	0.19	< 5	< 10	52	< 5	4	59	41		
172167	> 10000	0.028	7	6	19.8	9	30	5	0.35	< 5	< 10	113	< 5	5	101	19	3.42	5.96
172168	> 10000	0.028	9	< 5	15.4	8	44	< 2	0.15	< 5	< 10	66	< 5	4	121	20	2.69	4.68
172169	> 10000	0.024	14	< 5	14.4	7	30	< 2	0.06	< 5	< 10	37	< 5	3	79	17	1.47	5.19
172170	> 10000	0.011	15	< 5	6.57	10	5	3	0.08	< 5	< 10	80	< 5	3	78	14		1.72
172171	> 10000	0.024	10	< 5	16.8	6	46	< 2	0.09	< 5	< 10	52	< 5	3	100	15	2.77	6.55
172172	> 10000	0.020	11	22	> 20.0	< 4	20	< 2	0.05	6	< 10	54	< 5	2	77	11	2.13	7.70
172173	> 10000	0.024	10	7	> 20.0	6	37	< 2	0.11	< 5	< 10	64	7	3	85	14	2.12	7.44
172174	> 10000	0.053	< 3	< 5	8.97	13	105	< 2	0.29	< 5	< 10	108	< 5	8	232	29	5.91	1.31
172175	515	0.068	10	< 5	0.26	5	404	5	0.19	< 5	< 10	47	< 5	6	59	59		
172176	48	0.081	6	< 5	0.05	8	413	2	0.10	< 5	< 10	46	< 5	11	85	42		
172177	18	0.030	7	< 5	0.02	< 4	377	< 2	0.12	< 5	< 10	27	< 5	3	44	35		
172178	23	0.067	6	< 5	0.03	5	474	< 2	0.16	< 5	< 10	47	< 5	6	57	55		
172179	14	0.064	6	< 5	0.03	5	400	15	0.14	< 5	< 10	43	< 5	6	69	54		
172180	14	0.063	7	< 5	0.03	5	393	12	0.18	< 5	< 10	55	< 5	6	68	56		
172181	40	0.096	4	< 5	0.02	19	353	< 2	0.22	< 5	< 10	67	< 5	8	117	66		
172182	12	0.032	5	< 5	0.01	< 4	331	< 2	0.12	< 5	< 10	29	< 5	2	48	41		
172183	72	0.011	7	< 5	0.04	< 4	360	< 2	0.07	< 5	< 10	14	< 5	2	29	60		
172184	189	0.024	18	< 5	0.09	< 4	371	< 2	0.12	< 5	< 10	26	< 5	2	83	42		
172185	5070	0.025	16	< 5	2.43	17	120	< 2	0.24	< 5	< 10	103	< 5	8	132	24		
172186	8810	0.025	4	< 5	9.74	7	99	< 2	0.21	< 5	< 10	68	< 5	6	158	32	6.60	
172187	4790	0.047	5	< 5	13.0	9	38	< 2	0.23	< 5	< 10	83	< 5	6	242	21	12.9	
172188	> 10000	0.030	12	< 5	6.69	15	38	< 2	0.36	< 5	< 10	104	< 5	7	120	26		2.25
172189	1430	0.002	13	< 5	0.76	< 4	280	< 2	0.02	< 5	< 10	6	< 5	2	17	24		
172190	32	0.095	37	< 5	0.02	5	178	6	0.26	< 5	< 10	35	< 5	13	77	82		
172191	4430	0.031	9	< 5	1.88	15	84	< 2	0.35	< 5	< 10	119	< 5	13	138	28		
172192	> 10000	0.023	10	11	> 20.0	< 4	1	< 2	0.01	< 5	< 10	42	6	2	50	12	2.22	9.87
172193	> 10000	0.022	13	12	> 20.0	< 4	2	< 2	< 0.01	< 5	< 10	53	< 5	2	16	13		10.3
172194	> 10000	0.024	12	6	> 20.0	< 4	8	< 2	0.05	< 5	< 10	49	6	2	39	14	1.84	9.20
172195	> 10000	0.022	7	6	16.3	10	33	< 2	0.17	< 5	< 10	86	< 5	4	100	17	2.65	4.34
172196	> 10000	0.032	12	< 5	> 20.0	6	30	< 2	0.09	< 5	< 10	64	< 5	3	129	13	6.70	6.17
172197	> 10000	0.028	12	< 5	> 20.0	6	16	< 2	0.10	< 5	< 10	61	6	3	88	13	4.54	7.13
172198	> 10000	0.025	20	7	> 20.0	6	23	< 2	0.10	< 5	< 10	64	< 5	4	47	14	1.79	8.26
172199	> 10000	0.024	9	5	> 20.0	< 4	19	< 2	0.07	< 5	< 10	44	< 5	3	52	13	2.32	8.27
172200	3770	0.066	28	< 5	1.59	12	175	5	0.34	< 5	< 10	104	< 5	12	93	71		
172201	1190	0.030	5	< 5	0.33	16	163	2	0.29	< 5	< 10	121	< 5	13	109	42		
172202	98	0.052	8	< 5	0.07	5	380	2	0.15	< 5	< 10	46	< 5	6	62	45		
172203	17	0.044	4	< 5	0.03	4	391	6	0.14	< 5	< 10	39	< 5	6	67	44		
172204	27	0.035	5	< 5	0.03	< 4	374	< 2	0.12	< 5	< 10	29	< 5	3	55	43		
172205	14	0.030	5	< 5	0.03	5	346	< 2	0.12	< 5	< 10	34	< 5	4	57	35		
172206	16	0.020	7	< 5	0.02	< 4	348	< 2	0.10	< 5	< 10	22	< 5	2	45	47		
172207	11	0.019	7	< 5	0.01	< 4	326	< 2	0.07	< 5	< 10	16	< 5	2	42	31		
172208	8	0.021	6	< 5	< 0.01	< 4	303	< 2	0.10	< 5	< 10	22	< 5	2	48	39		
172209	111	0.028	10	< 5	0.07	< 4	344	< 2	0.11	< 5	< 10	28	< 5	3	62	44		
172210	102	0.028	8	< 5	0.07	< 4	344	2	0.11	< 5	< 10	27	< 5	3	63	45		
172211	579	0.022	8	< 5	0.26	< 4	364	8	0.09	< 5	< 10	23	< 5	2	56	34		
172212	1710	0.218	11	< 5	0.63	10	752	2	0.34	< 5	< 10	117	< 5	17	101	108		
172213	> 10000	0.027	11	6	> 20.0	6	49	< 2	0.13	< 5	< 10	76	5	4	57	23		7.01

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172214	> 10000	0.053	14	< 5	9.58	5	287	< 2	0.17	< 5	< 10	56	< 5	5	70	66	1.50	2.87
172215	556	0.033	10	< 5	0.30	< 4	358	< 2	0.12	< 5	< 10	27	< 5	3	37	54		
172216	25	0.024	8	< 5	0.04	< 4	397	< 2	0.10	< 5	< 10	23	< 5	2	40	46		
172217	93	0.071	8	< 5	0.08	< 4	463	< 2	0.20	< 5	< 10	36	< 5	10	56	130		
172218	8	0.071	9	< 5	0.04	< 4	452	2	0.17	< 5	< 10	32	< 5	7	61	122		
172219	13	0.037	8	< 5	0.03	< 4	337	< 2	0.15	< 5	< 10	43	< 5	3	50	53		
172220	5	0.055	33	< 5	0.01	< 4	161	< 2	0.17	< 5	< 10	25	< 5	11	53	66		
172221	8	0.020	6	< 5	< 0.01	< 4	355	< 2	0.08	< 5	< 10	20	< 5	2	37	33		
172222	7	0.022	5	< 5	0.01	< 4	353	< 2	0.08	< 5	< 10	19	< 5	2	43	30		
172223	7	0.021	4	< 5	0.01	< 4	346	< 2	0.09	< 5	< 10	20	< 5	2	41	31		
172224	9	0.021	7	< 5	0.02	< 4	334	< 2	0.09	< 5	< 10	21	< 5	2	51	33		
172225	71	0.063	4	< 5	0.03	6	388	13	0.17	< 5	< 10	47	< 5	7	75	66		
172226	249	0.074	7	< 5	0.15	6	364	5	0.21	< 5	< 10	58	< 5	8	84	85		
172227	> 10000	0.017	9	< 5	9.93	< 4	62	< 2	0.10	< 5	< 10	44	< 5	2	93	15	2.15	3.19
172228	> 10000	0.017	10	5	> 20.0	< 4	51	< 2	0.08	< 5	< 10	44	< 5	3	29	18	1.02	7.84
172229	> 10000	0.028	4	< 5	> 20.0	< 4	5	5	0.06	< 5	< 10	40	5	3	58	12	3.69	9.65
172230	> 10000	0.010	12	< 5	6.63	9	6	15	0.08	< 5	< 10	69	< 5	3	77	13		1.70
172231	> 10000	0.029	7	< 5	> 20.0	< 4	90	6	0.10	< 5	< 10	43	< 5	3	112	25	6.45	4.72
172232	> 10000	0.037	< 3	6	19.1	7	47	4	0.14	< 5	< 10	64	< 5	3	125	16	9.01	4.15
172233	8050	0.015	51	< 5	4.59	7	195	< 2	0.22	< 5	< 10	59	< 5	3	186	42	1.25	
172234	4850	0.022	4	< 5	1.81	14	100	2	0.28	< 5	< 10	108	< 5	7	118	25		
172235	1000	0.030	3	< 5	0.27	5	247	5	0.34	< 5	< 10	102	< 5	5	102	35		
172236	100	0.056	7	< 5	0.06	5	484	< 2	0.16	< 5	< 10	45	< 5	5	55	52		
172237	14	0.038	4	< 5	0.01	< 4	510	< 2	0.14	< 5	< 10	31	< 5	4	52	47		
172238	13	0.032	5	< 5	0.04	< 4	460	< 2	0.10	< 5	< 10	26	< 5	4	54	37		
172239	11	0.035	4	< 5	0.02	< 4	505	< 2	0.10	< 5	< 10	25	< 5	3	48	37		
172240	11	0.032	5	< 5	0.01	< 4	500	< 2	0.08	< 5	< 10	21	< 5	3	50	31		
172241	130	0.295	< 3	< 5	0.01	26	555	2	0.38	< 5	< 10	174	< 5	18	103	25		
172242	11	0.030	4	< 5	0.01	< 4	506	5	0.10	< 5	< 10	22	< 5	3	43	33		
172243	7	0.021	3	< 5	0.01	< 4	454	< 2	0.09	< 5	< 10	18	< 5	2	42	26		
172244	12	0.034	4	< 5	< 0.01	4	481	2	0.11	< 5	< 10	30	< 5	3	50	31		
172245	7	0.019	5	< 5	< 0.01	< 4	465	< 2	0.06	< 5	< 10	13	< 5	2	38	25		
172246	35	0.061	4	< 5	< 0.01	< 4	457	< 2	0.14	< 5	< 10	33	< 5	4	57	67		
172247	34	0.086	5	< 5	< 0.01	5	486	6	0.16	< 5	< 10	44	< 5	6	69	65		
172248	10	0.030	5	< 5	< 0.01	< 4	513	< 2	0.11	< 5	< 10	24	< 5	2	42	39		
172249	6	0.022	7	< 5	< 0.01	< 4	516	< 2	0.09	< 5	< 10	19	< 5	2	36	37		
172250	7	0.056	35	< 5	0.01	< 4	257	3	0.15	< 5	< 10	21	< 5	9	57	39		
173001	24	0.085	7	< 5	0.01	5	621	< 2	0.15	< 5	< 10	36	< 5	12	52	77		
173002	13	0.053	6	< 5	0.02	5	575	< 2	0.15	< 5	< 10	37	< 5	5	56	47		
173003	4030	0.041	32	< 5	1.91	15	288	< 2	0.42	< 5	< 10	109	< 5	9	141	43		
173004	1390	0.031	5	< 5	0.56	17	264	< 2	0.40	< 5	< 10	122	< 5	8	87	29		
173005	1470	0.031	5	< 5	0.66	12	287	4	0.31	< 5	< 10	94	< 5	7	82	33		
173006	4810	0.048	40	< 5	4.14	6	390	2	0.25	< 5	< 10	67	< 5	6	132	57	1.72	
173007	2290	0.021	7	< 5	0.79	17	38	< 2	0.24	< 5	< 10	107	< 5	7	126	26		
173008	3880	0.016	111	< 5	1.33	13	240	< 2	0.28	< 5	< 10	95	< 5	6	375	30		
173009	1270	0.048	< 3	< 5	0.38	10	286	4	0.27	< 5	< 10	87	< 5	8	93	50		
173010	3960	0.065	21	< 5	1.63	12	226	6	0.47	< 5	< 10	99	< 5	12	97	68		
173011	1260	0.039	3	< 5	0.34	11	309	9	0.26	< 5	< 10	79	< 5	7	98	42		
173012	5680	0.031	29	< 5	2.20	16	237	< 2	0.30	< 5	< 10	97	< 5	8	153	27		

## Results

## Activation Laboratories Ltd.

## Report: A20-16012

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
173013	138	0.078	5	< 5	0.14	< 4	596	< 2	0.15	< 5	< 10	34	< 5	5	47	93		
173014	100	0.029	5	< 5	0.06	< 4	531	< 2	0.10	< 5	< 10	23	< 5	2	38	47		
173015	6	0.020	5	< 5	0.02	< 4	452	< 2	0.08	< 5	< 10	16	< 5	2	34	28		
173016	125	0.065	4	< 5	0.07	6	495	4	0.11	< 5	< 10	35	< 5	7	82	42		
173017	13	0.085	6	< 5	0.04	8	506	8	0.09	< 5	< 10	29	< 5	10	83	35		
173018	9	0.023	5	< 5	0.01	< 4	416	< 2	0.09	< 5	< 10	20	< 5	2	39	35		
173019	326	0.023	14	< 5	0.14	< 4	468	< 2	0.10	< 5	< 10	21	< 5	4	45	48		
173020	308	0.023	17	< 5	0.12	< 4	473	< 2	0.10	< 5	< 10	20	< 5	4	52	50		
173021	9	0.043	7	< 5	0.01	< 4	548	< 2	0.13	< 5	< 10	30	< 5	4	52	53		
173022	8	0.020	5	< 5	0.01	< 4	472	< 2	0.08	< 5	< 10	17	< 5	2	39	32		
173023	9	0.024	5	< 5	< 0.01	< 4	448	< 2	0.07	< 5	< 10	16	< 5	3	43	27		
173024	12	0.070	4	< 5	0.02	7	477	< 2	0.11	< 5	< 10	35	< 5	10	76	40		
173025	5	0.020	6	< 5	< 0.01	< 4	466	< 2	0.06	< 5	< 10	13	< 5	2	37	23		
173026	12	0.076	4	< 5	0.01	8	512	< 2	0.14	< 5	< 10	39	< 5	10	77	41		
173027	7	0.023	6	< 5	0.01	< 4	460	< 2	0.10	< 5	< 10	22	< 5	2	43	32		
173028	5	0.022	7	< 5	< 0.01	< 4	426	< 2	0.10	< 5	< 10	21	< 5	1	39	35		
173029	54	0.079	8	< 5	0.08	5	529	< 2	0.25	< 5	< 10	52	< 5	6	64	101		
173030	5	0.029	35	< 5	< 0.01	< 4	217	< 2	0.11	< 5	< 10	18	< 5	5	43	72		
173031	62	0.020	9	< 5	0.03	< 4	534	5	0.06	< 5	< 10	13	< 5	2	47	27		
173032	453	0.029	< 3	< 5	0.22	19	222	< 2	0.13	< 5	< 10	55	< 5	7	87	12		
173033	686	0.023	< 3	< 5	0.36	18	252	9	0.35	< 5	< 10	117	< 5	7	84	24		
173034	823	0.019	< 3	< 5	0.30	17	247	11	0.38	< 5	< 10	116	< 5	7	102	22		
173035	846	0.023	< 3	< 5	0.40	14	347	5	0.39	< 5	< 10	106	< 5	6	79	28		
173036	1560	0.024	< 3	< 5	0.61	17	145	< 2	0.41	< 5	< 10	122	< 5	7	110	27		
173037	2360	0.019	104	< 5	0.85	14	84	< 2	0.30	< 5	< 10	99	< 5	6	305	26		
173038	133	0.009	28	< 5	0.09	< 4	424	< 2	0.09	< 5	< 10	23	< 5	1	54	44		
173039	34	0.006	10	< 5	0.02	< 4	435	< 2	0.04	< 5	< 10	9	< 5	1	12	36		
173040	> 10000	0.010	11	< 5	6.66	9	6	8	0.08	< 5	< 10	68	< 5	3	73	13		1.70
173041	3240	0.005	< 3	< 5	1.27	14	36	< 2	0.26	< 5	< 10	101	< 5	5	120	18		
173042	7900	0.027	< 3	< 5	3.26	15	169	< 2	0.23	< 5	< 10	89	< 5	7	115	34		
173043	6520	0.072	9	< 5	3.42	9	409	3	0.32	< 5	< 10	87	< 5	8	82	63		
173044	1000	0.088	3	< 5	0.45	9	588	< 2	0.29	< 5	< 10	70	< 5	10	71	83		
173045	4820	0.021	6	< 5	1.71	17	70	< 2	0.21	< 5	< 10	100	< 5	8	114	19		
173046	183	0.021	5	< 5	0.16	< 4	438	2	0.10	< 5	< 10	20	< 5	2	35	37		
173047	166	0.018	5	< 5	0.12	< 4	407	< 2	0.08	< 5	< 10	17	< 5	2	39	35		
173048	7	0.016	4	< 5	0.01	< 4	408	< 2	0.08	< 5	< 10	15	< 5	2	31	35		
173049	5	0.018	6	< 5	< 0.01	< 4	423	< 2	0.09	< 5	< 10	17	< 5	1	38	31		
173050	6	0.019	6	< 5	0.01	< 4	433	< 2	0.08	< 5	< 10	17	< 5	1	38	28		
173051	2190	0.054	7	< 5	2.76	6	540	6	0.14	< 5	< 10	42	< 5	6	66	41	1.20	
173052	417	0.020	4	< 5	0.20	< 4	546	< 2	0.09	< 5	< 10	18	< 5	2	32	32		
173053	15	0.021	4	< 5	0.01	< 4	486	< 2	0.09	< 5	< 10	19	< 5	2	33	34		
173054	14	0.037	5	< 5	0.01	< 4	452	< 2	0.11	< 5	< 10	31	< 5	2	40	34		
173055	16	0.032	4	< 5	0.03	< 4	500	< 2	0.10	< 5	< 10	24	< 5	3	40	30		
173056	4670	0.046	9	< 5	1.89	7	458	< 2	0.36	< 5	< 10	94	< 5	5	79	35		
173057	8	0.026	< 3	< 5	0.01	< 4	462	< 2	0.11	< 5	< 10	27	< 5	2	43	39		
173058	18	0.190	< 3	< 5	0.03	9	844	6	0.28	< 5	< 10	79	< 5	15	86	68		
173059	8	0.022	4	< 5	0.01	< 4	470	< 2	0.09	< 5	< 10	19	< 5	2	42	32		
173060	3	0.029	36	< 5	0.01	< 4	228	3	0.11	< 5	< 10	18	< 5	6	45	32		
173061	6	0.025	5	< 5	0.01	< 4	451	2	0.10	< 5	< 10	21	< 5	2	43	39		
173062	5	0.021	4	< 5	< 0.01	< 4	438	3	0.09	< 5	< 10	20	< 5	3	40	42		

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SDC-1 Meas					8.20	< 3	670	3		1.11		18	47	29	4.79	23	< 1	2.20	1.00	33	873		1.51
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.73	< 3	644	3		1.01		18	63	31	4.73	22	< 1	1.81	1.00	32	826		1.42
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.78	4	582	2		1.08		18	45	29	4.58	22	< 1	2.47	0.98	35	840		1.47
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					8.13	< 3	541	2		1.10		18	49	29	4.74	22	< 1	2.34	1.06	34	864		1.42
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.92	< 3	511	2		1.09		18	47	28	4.78	22	1	1.64	1.06	35	902		1.44
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					8.18	< 3	642	3		1.08		18	58	29	4.81	22	< 1	1.98	1.01	36	889		1.49
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.40	< 3	510	2		1.04		18	36	29	4.60	21	< 1	2.16	0.96	34	857		1.37
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.56	5	492	2		1.06		19	41	29	4.67	21	< 1	1.37	0.97	34	891		1.38
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					7.84	6	576	2		1.09		18	46	32	4.86	22	2	2.09	1.07	36	926		1.51
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GBW 07239 Control Meas																							
GBW 07239 Control Cert																							
GBW 07239 Control Meas																							
GBW 07239 Control Cert																							
Oreas 72a (4 Acid Digest) Meas						< 3						149	195	300	9.33								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						5						146	191	299	9.26								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						8						147	169	296	9.45								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						< 3						148	147	306	9.08								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						4						156	202	311	9.66								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						< 3						157	180	326	10.0								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						4						152	152	324	9.83								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						6						144	207	326	9.55								



Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63									
Oreas 72a (4 Acid Digest) Meas						6						140	171	314	9.57									
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63									
MP-1b Meas																								
MP-1b Cert																								
MP-1b Meas																								
MP-1b Cert																								
MP-1b Meas																								
MP-1b Cert																								
OREAS 98 (4 Acid) Meas				42.5					< 2			124		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				40.7					63			128		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				41.6					32			131		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				40.4					41			116		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				40.4					34			125		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				42.9					14			126		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				42.9					45			121		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
OREAS 98 (4 Acid) Meas				43.2					82			123		> 10000										
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0										
DNC-1a Meas							102			7.80		54	229	100	6.92	14					5			1.43
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40
DNC-1a Meas							100			7.36		53	219	95	6.80	14					4			1.35
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40
DNC-1a Meas							94			7.77		54	196	95	6.99	13					4			1.47
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40
DNC-1a Meas							81			7.48		52	165	96	6.70	13					4			1.35
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40
DNC-1a Meas							79			7.29		51	185	90	6.62	13					4			1.33
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40
DNC-1a Meas							98			7.65		55	185	99	7.27	14					5			1.43
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2			1.40

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
DNC-1a Meas							87			7.95		54	187	99	7.26	13					4		1.42
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2		1.40
DNC-1a Meas							87			7.37		51	201	97	7.01	15					5		1.42
DNC-1a Cert							118			8.21		57	270	100	6.97	15					5.2		1.40
PK2 Meas	4870	6020	4840																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4960	6090	5030																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4780	5750	4500																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4830	5880	4660																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4780	5930	4690																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4700	5930	4580																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4820	5920	4820																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4940	6010	4880																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4830	5980	4730																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4830	5950	4750																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4860	6000	4760																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4820	5960	4700																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4800	6020	4740																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4760	5880	4660																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4750	5910	4830																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4860	5940	4880																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	5020	6160	4780																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4830	6010	5030																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4880	5960	4820																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	4930	6000	4750																				
PK2 Cert	4785	5918	4749																				
CPB-2 Meas																							
CPB-2 Cert																							
CPB-2 Meas																							
CPB-2 Cert																							
CPB-2 Meas																							
CPB-2 Cert																							
CZN-4 Meas																							

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
CZN-4 Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
OREAS 904 (4 ACID) Meas				0.4	6.46	79	217	9	< 2	0.05		98	69	6170	6.73	18		3.52	0.57	15	420	< 1	0.04
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.4	6.61	95	219	9	< 2	0.05		98	62	6420	6.89	18		2.87	0.58	15	421	2	0.04
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.9	6.50	94	189	7	4	0.05		96	51	6120	6.67	17		2.90	0.57	16	423	2	0.03
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.5	6.51	87	177	7	4	0.05		98	51	6200	6.91	18		1.71	0.62	16	432	< 1	0.04
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.6	6.61	91	175	7	< 2	0.05		99	48	6230	6.99	17		2.31	0.63	17	472	2	0.04
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.5	6.35	102	188	9	9	0.05		98	53	6000	6.81	17		1.91	0.57	16	448	3	0.03
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.7	6.21	86	167	7	< 2	0.05		95	47	6640	6.77	17		2.62	0.57	15	456	2	0.03
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.6	6.27	90	166	7	< 2	0.05		95	49	6470	6.77	16		2.30	0.58	16	443	< 1	0.03
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
OREAS 904 (4 ACID) Meas				0.9	6.40	93	142	8	< 2	0.05		96	62	6570	6.94	18		1.67	0.63	17	448	2	0.04
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
SBC-1 Meas							18	761	3	< 2		0.5	23	96	32		28				154		1
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							23	668	3	3		0.4	23	98	30		27				149		2
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							24	636	2	< 2		0.5	22	85	30		27				161		2
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							23	653	2	< 2		0.3	22	81	28		27				159		2
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							25	537	2	< 2		< 0.3	22	101	30		27				157		1
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							21	800	3	4		0.4	24	92	30		28				167		2
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							22	652	2	3		0.4	23	80	31		26				162		1
SBC-1 Cert							25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163		2
SBC-1 Meas							15	649	2	3		0.5	23	78	32		26				160		2

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0					163		2
SBC-1 Meas						16	696	2	2		0.4	22	88	33		28					167		2
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0					163		2
PTC-1b Meas																							
PTC-1b Cert																							
PTC-1b Meas																							
PTC-1b Cert																							
CCU-1e Meas																							
CCU-1e Cert																							
CCU-1e Meas																							
CCU-1e Cert																							
CCU-1e Meas																							
CCU-1e Cert																							
OREAS 96 (4 Acid) Meas				11.2					< 2			52		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.1					17			51		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.3					19			52		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.3					5			50		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				10.7					37			51		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				10.9					27			52		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.3					7			52		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.7					36			50		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.3					33			50		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 923 (4 Acid) Meas				1.8	7.45	5	467	2	16	0.51	0.4	25	90	4500	6.60	20		2.72	1.74	30	974	< 1	0.33
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				1.9	7.44	3	464	2	15	0.50	0.6	23	91	4550	6.58	20		2.64	1.74	29	951	< 1	0.32
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
OREAS 923 (4 Acid) Meas				2.0	7.41	7	402	2	18	0.51	0.4	24	67	4320	6.39	19		2.45	1.70	31	965	< 1	0.32
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				2.2	7.24	6	365	2	13	0.51	0.4	23	64	4480	6.46	19		1.73	1.81	30	950	< 1	0.31
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				2.0	7.31	4	352	2	18	0.51	0.3	24	66	4420	6.55	20		1.83	1.83	31	971	< 1	0.31
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				1.8	7.22	3	439	2	19	0.49	< 0.3	24	77	4430	6.59	21		2.54	1.72	32	995	< 1	0.31
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				2.1	7.15	8	367	2	21	0.51	0.4	25	62	4610	6.65	20		1.80	1.74	32	1000	1	0.31
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 923 (4 Acid) Meas				1.9	7.19	13	397	2	18	0.51	< 0.3	23	80	4490	6.69	20		2.17	1.86	33	983	< 1	0.33
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 621 (4 Acid) Meas				72.8	6.70	72		2	< 2	2.19	304	33	44	3890	3.85	27		1.09	0.53	14	507	13	1.38
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				68.4	5.97	64		1	2	2.12	295	31	26	3670	3.66	25		1.98	0.50	13	500	14	1.31
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				72.8	6.47	64		1	4	2.15	292	31	45	3790	3.77	25		0.98	0.55	14	497	14	1.29
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				67.8	6.39	53		2	4	2.04	291	31	32	3560	3.66	26		1.25	0.50	14	503	14	1.26
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				67.6	6.29	66		2	7	2.10	297	32	33	3630	3.75	25		0.91	0.51	14	532	15	1.30
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				69.9	6.37	56		1	< 2	2.12	286	31	31	3750	3.80	25		2.06	0.53	14	530	13	1.26
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				72.7	6.45	57		1	< 2	2.17	288	31	38	3740	3.90	26		1.06	0.57	15	525	13	1.38
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				71.3	6.40	73		1	< 2	2.10	280	30	35	3730	3.77	26		2.12	0.55	14	494	12	1.32
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
Oreas 77b (4 Acid Digest) Meas				1.2	1.58	1290	51	< 1	5	2.64	2.3	1430	219	3240	27.0	13		0.35	2.37	16	595		0.38

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Oreas 77b (4 Acid Digest) Cert				1.62	1.94	2050	118	0.470	3.44	3.06	1.20	1550	280	3430	29.9	4.61		0.361	2.59	18.8	640		0.434
172016 Orig				< 0.3	7.52	< 3	458	< 1	< 2	1.78	< 0.3	3	18	115	1.55	20	< 1	1.52	0.31	20	233	1	3.39
172016 Dup				< 0.3	7.60	3	462	< 1	< 2	1.79	< 0.3	4	19	113	1.58	20	< 1	1.37	0.31	21	230	3	3.41
172017 Orig	< 2	< 5	< 5																				
172017 Dup	< 2	< 5	< 5																				
172027 Orig	< 2	< 5	< 5																				
172027 Dup	< 2	< 5	< 5																				
172030 Orig				0.3	7.29	< 3	521	< 1	< 2	1.63	< 0.3	5	17	8	2.12	18	< 1	2.12	0.88	50	297	2	3.34
172030 Dup				0.5	7.09	< 3	511	< 1	< 2	1.61	< 0.3	5	14	8	2.09	18	< 1	1.83	0.87	50	287	1	3.28
172047 Orig	< 2	< 5	< 5																				
172047 Dup	< 2	< 5	< 5																				
172051 Orig	< 2	< 5	< 5	< 0.3	7.47	< 3	472	< 1	< 2	1.81	< 0.3	3	13	11	1.44	20	< 1	1.62	0.32	20	222	< 1	3.39
172051 Split PREP DUP	< 2	< 5	< 5	0.9	6.88	< 3	416	< 1	< 2	1.61	< 0.3	3	10	9	1.27	17	< 1	1.45	0.29	17	196	< 1	2.98
172059 Orig	24	29	46																				
172059 Dup	21	27	42																				
172062 Orig				1.5	3.72	3	147	< 1	< 2	3.18	0.5	166	568	5360	9.18	12	< 1	2.19	7.92	45	991	< 1	0.78
172062 Dup				1.4	3.76	< 3	148	< 1	< 2	3.16	0.4	165	550	5280	9.22	11	< 1	2.20	7.92	46	995	< 1	0.78
172069 Orig	< 2	< 5	< 5																				
172069 Dup	< 2	< 5	< 5																				
172079 Orig	< 2	< 5	< 5																				
172079 Dup	< 2	< 5	< 5																				
172081 Orig				< 0.3	8.13	< 3	538	< 1	< 2	3.17	< 0.3	16	16	32	4.40	21	< 1	1.44	1.30	34	702	1	3.30
172081 Dup				0.5	8.23	< 3	543	< 1	< 2	3.17	< 0.3	15	15	31	4.40	21	< 1	1.46	1.31	35	706	< 1	3.31
172086 Orig	< 2	< 5	< 5																				
172086 Dup	< 2	< 5	< 5																				
172098 Orig	< 2	< 5	< 5																				
172098 Dup	< 2	< 5	< 5																				
172101 Orig	4	200	155	1.5	4.71	< 3	198	< 1	< 2	4.10	0.3	270	289	4170	13.3	11	< 1	1.06	6.22	47	1060	< 1	1.26
172101 Split PREP DUP	5	182	156	1.5	4.97	< 3	202	< 1	< 2	4.21	< 0.3	250	288	4190	13.2	12	< 1	1.09	6.30	48	1060	< 1	1.36
172102 Orig																							
172102 Dup																							
172103 Orig				0.5	5.57	< 3	129	< 1	< 2	4.66	< 0.3	68	474	484	7.83	15	< 1	0.88	6.58	52	1030	< 1	1.97
172103 Dup				< 0.3	5.88	< 3	129	< 1	< 2	4.67	0.5	69	483	487	7.87	16	< 1	0.92	6.69	53	1030	< 1	1.91
172107 Orig	< 2	< 5	5																				
172107 Dup	< 2	< 5	6																				
172117 Orig				0.7	8.12	< 3	449	< 1	< 2	2.41	< 0.3	9	16	558	2.43	21	< 1	1.36	0.63	28	341	1	3.58
172117 Dup				0.7	8.06	< 3	451	< 1	< 2	2.42	< 0.3	9	17	558	2.44	21	< 1	1.38	0.64	28	329	< 1	3.57
172129 Orig				< 0.3	7.27	< 3	414	< 1	< 2	1.92	< 0.3	5	11	12	1.67	20	< 1	1.43	0.37	23	241	< 1	3.44
172129 Dup				< 0.3	7.76	< 3	425	< 1	< 2	1.97	< 0.3	5	9	11	1.71	20	< 1	1.44	0.38	24	255	2	3.51
172131 Orig	5	< 5	< 5																				
172131 Dup	< 2	< 5	< 5																				
172141 Orig	< 2	36	73																				
172141 Dup	2	36	77																				
172143 Orig				< 0.3	7.71	< 3	245	< 1	< 2	2.12	< 0.3	6	31	15	2.02	21	< 1	1.22	0.55	39	275	1	3.56
172143 Dup				< 0.3	7.86	< 3	245	< 1	< 2	2.12	< 0.3	6	30	17	2.05	21	< 1	1.22	0.55	38	280	< 1	3.56
172146 Orig	< 2	< 5	< 5																				
172146 Dup	< 2	< 5	< 5																				
172151 Orig	4	< 5	< 5	< 0.3	7.70	4	343	< 1	< 2	1.91	< 0.3	5	42	122	1.52	20	< 1	1.23	0.41	29	189	< 1	3.45
172151 Split	2	< 5	5	< 0.3	7.60	< 3	345	< 1	< 2	1.92	< 0.3	5	39	122	1.54	20	< 1	1.25	0.41	30	194	1	3.45

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
PREP DUP																							
172157 Orig	< 2	15	19																				
172157 Dup	< 2	14	18																				
172167 Orig				6.3	1.71	< 3	41	< 1	< 2	2.11	< 0.3	971	161	> 10000	31.6	4	< 1	0.42	2.26	16	559	2	0.35
172167 Dup				6.4	1.70	< 3	43	< 1	< 2	1.71	< 0.3	974	155	> 10000	31.5	4	< 1	0.40	2.26	16	566	2	0.35
172169 Orig	7	528	494																				
172169 Dup	9	523	499																				
172170 Orig																							
172170 Dup																							
172181 Orig	< 2	< 5	< 5	< 0.3	8.17	< 3	428	< 1	< 2	2.33	< 0.3	14	42	17	3.81	25	< 1	1.63	1.17	59	554	< 1	3.36
172181 Dup	< 2	< 5	< 5	< 0.3	8.27	< 3	433	< 1	< 2	2.33	< 0.3	14	41	16	3.83	25	< 1	1.65	1.17	60	543	< 1	3.41
172184 Orig	< 2	< 5	< 5																				
172184 Dup	< 2	< 5	< 5																				
172189 Orig	< 2	21	25																				
172189 Dup	< 2	20	19																				
172201 Orig	< 2	10	20	< 0.3	6.31	< 3	240	< 1	< 2	4.32	0.4	53	416	219	7.37	19	< 1	1.75	4.48	51	1010	< 1	1.92
172201 Split	< 2	6	10	< 0.3	6.55	4	261	< 1	< 2	4.11	< 0.3	56	439	272	7.40	19	< 1	1.82	4.24	52	929	< 1	2.09
PREP DUP																							
172202 Orig	< 2	< 5	< 5																				
172202 Dup	< 2	< 5	< 5																				
172204 Orig				< 0.3	7.87	< 3	221	< 1	< 2	2.06	< 0.3	6	39	17	1.83	21	< 1	1.15	0.49	29	283	< 1	3.64
172204 Dup				< 0.3	7.75	4	218	< 1	< 2	2.03	< 0.3	6	30	18	1.81	21	< 1	1.12	0.48	29	287	< 1	3.61
172212 Orig	< 2	34	34																				
172212 Dup	2	35	33																				
172222 Orig	< 2	< 5	< 5																				
172222 Dup	< 2	< 5	< 5																				
172223 Orig				< 0.3	7.46	< 3	419	< 1	< 2	1.80	< 0.3	3	26	11	1.25	19	< 1	1.31	0.30	19	198	< 1	3.32
172223 Dup				< 0.3	7.78	< 3	440	< 1	< 2	1.88	< 0.3	3	25	12	1.30	20	< 1	1.42	0.32	21	209	2	3.47
172233 Orig																							
172233 Dup																							
172241 Orig	< 2	< 5	5																				
172241 Dup	< 2	< 5	7																				
172246 Orig				< 0.3	5.28	< 3	653	< 1	< 2	1.67	< 0.3	6	60	11	1.69	20	1	1.36	0.88	35	335	< 1	3.20
172246 Dup				< 0.3	7.25	< 3	662	< 1	< 2	2.01	< 0.3	7	76	6	1.87	21	< 1	1.44	0.94	36	336	< 1	3.22
173001 Orig	< 2	< 5	< 5	< 0.3	7.47	3	> 1000	1	< 2	2.17	< 0.3	7	88	8	2.06	20	< 1	2.29	1.05	31	383	< 1	3.03
173001 Split	< 2	< 5	< 5	< 0.3	7.42	4	> 1000	1	< 2	2.23	< 0.3	8	77	9	2.14	20	< 1	2.15	1.13	32	403	< 1	3.03
PREP DUP																							
173009 Orig				0.6	6.36	< 3	271	< 1	< 2	3.79	0.3	54	415	610	6.13	18	< 1	1.34	4.77	48	891	4	2.13
173009 Dup				0.6	6.38	< 3	273	< 1	< 2	3.81	< 0.3	53	399	609	6.15	19	< 1	1.38	4.81	48	894	2	2.13
173011 Orig	< 2	21	28																				
173011 Dup	< 2	21	26																				
173021 Orig				< 0.3	8.00	< 3	335	< 1	< 2	2.06	< 0.3	6	67	14	1.91	21	< 1	1.38	0.62	27	298	2	3.79
173021 Dup				< 0.3	7.91	< 3	332	< 1	< 2	2.05	< 0.3	6	53	14	1.90	21	< 1	1.39	0.62	28	297	< 1	3.76
173024 Orig	< 2	< 5	< 5																				
173024 Dup	< 2	< 5	< 5																				
173034 Orig	< 2	< 5	5																				
173034 Dup	< 2	< 5	< 5																				
173035 Orig				< 0.3	6.58	4	170	< 1	< 2	4.42	< 0.3	55	278	507	7.33	16	< 1	1.11	5.17	42	926	< 1	2.30
173035 Dup				< 0.3	6.65	< 3	170	< 1	< 2	4.41	0.3	54	324	506	7.26	15	< 1	1.11	5.13	41	940	< 1	2.30
173044 Orig	< 2	15	19																				
173044 Dup	< 2	14	20																				
173051 Orig	6	35	55	2.8	8.11	4	267	< 1	5	2.72	< 0.3	115	131	> 10000	5.93	18	< 1	1.13	1.46	24	451	< 1	2.95





Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
SDC-1 Meas	35	0.053	24	< 5		16	182		0.12	< 5	< 10	43	< 5		107	33		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	32	0.055	23	< 5		14	171		0.22	< 5	< 10	61	< 5		99	47		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	36	0.060	23	< 5		15	127		0.06	< 5	< 10	29	< 5		107	29		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	38	0.061	22	< 5		15	132		0.06	< 5	< 10	28	< 5		102	25		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	36	0.064	21	< 5		15	130		0.27	< 5	< 10	66	< 5		103	50		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	34	0.053	24	5		15	181		0.15	< 5	< 10	43	< 5		103	23		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	34	0.056	24	< 5		14	121		0.06	< 5	< 10	34	< 5		101	26		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	35	0.060	23	< 5		14	126		0.18	< 5	< 10	58	< 5		104	42		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
SDC-1 Meas	37	0.056	23	< 5		15	163		0.10	< 5	< 10	43	< 5		104	28		
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00		
GBW 07239 Control Meas																	0.005	0.004
GBW 07239 Control Cert																	0.00486	0.00209
GBW 07239 Control Meas																	0.005	0.004
GBW 07239 Control Cert																	0.00486	0.00209
Oreas 72a (4 Acid Digest) Meas	6530				1.61													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6100				1.59													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6140				1.62													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6320				1.58													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6320				1.63													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6340				1.67													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													
Oreas 72a (4 Acid Digest) Meas	6190				1.63													
Oreas 72a (4 Acid Digest) Cert	6930.0 00				1.74													

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
Oreas 72a (4 Acid Digest) Meas	6270				1.62													
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74													
Oreas 72a (4 Acid Digest) Meas	6090				1.57													
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74													
MP-1b Meas																	3.14	
MP-1b Cert																	3.07	
MP-1b Meas																	3.07	
MP-1b Cert																	3.07	
MP-1b Meas																	3.03	
MP-1b Cert																	3.07	
OREAS 98 (4 Acid) Meas			329	< 5	16.3										1340			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			302	< 5	15.2										1310			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			319	7	16.2										1330			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			283	6	14.0										1230			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			314	31	15.3										1310			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			300	5	14.8										1300			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			291	7	15.3										1270			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
OREAS 98 (4 Acid) Meas			295	10	15.2										1280			
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360			
DNC-1a Meas	256		< 3	5		29	133		0.28			140		14	61	34		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	242		< 3	< 5		28	128		0.26			134		14	57	34		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	246		5	< 5		29	102		0.23			145		15	60	37		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	245		< 3	< 5		28	96		0.22			127		14	57	32		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	238		< 3	< 5		26	94		0.22			125		13	57	31		

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	245		< 3	< 5		28	132		0.29			133		13	61	33		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	241		4	< 5		29	101		0.24			152		15	58	35		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
DNC-1a Meas	237		< 3	< 5		28	121		0.23			130		15	55	34		
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0		
PK2 Meas																		
PK2 Cert																		
PK2 Meas																		
PK2 Cert																		
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PK2 Meas																		
PK2 Cert																		
CPB-2 Meas																	0.122	
CPB-2 Cert																	0.1213	
CPB-2 Meas																	0.121	

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
CPB-2 Cert																	0.1213	
CPB-2 Meas																	0.121	
CPB-2 Cert																	0.1213	
CZN-4 Meas																	0.406	
CZN-4 Cert																	0.403	
CZN-4 Meas																	0.407	
CZN-4 Cert																	0.403	
CZN-4 Meas																	0.420	
CZN-4 Cert																	0.403	
OREAS 904 (4 ACID) Meas	48	0.088	18	< 5	0.06	12	30			< 5	< 10	61	< 5	33	30	26		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	47	0.090	15	< 5	0.06	12	30			5	< 10	75	< 5	34	27	21		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	46	0.108	7	< 5	0.06	11	22			< 5	< 10	84	< 5	32	28	122		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	50	0.104	9	< 5	0.06	11	22			< 5	< 10	69	< 5	33	27	46		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	48	0.107	9	< 5	0.06	11	22			< 5	< 10	81	< 5	33	28	51		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	45	0.091	14	< 5	0.06	12	30			< 5	< 10	83	< 5	33	27	71		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	43	0.098	9	< 5	0.06	11	21			< 5	< 10	78	< 5	31	28	68		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	46	0.098	8	< 5	0.06	11	21			< 5	< 10	80	< 5	31	28	50		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
OREAS 904 (4 ACID) Meas	46	0.108	6	< 5	0.06	11	27			< 5	< 10	81	< 5	32	28	157		
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171		
SBC-1 Meas	90		33	< 5		20	185		0.51	< 5	< 10	216		6	29	201	116	
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0		1.60	36.5	186	134.0	
SBC-1 Meas	86		40	19		18	178		0.51	< 5	< 10	215		< 5	27	188	116	
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0		1.60	36.5	186	134.0	
SBC-1 Meas	82		34	< 5		18	133		0.41	< 5	< 10	217		5	31	192	123	
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0		1.60	36.5	186	134.0	
SBC-1 Meas	89		28	5		20	134		0.42	< 5	< 10	203		5	31	180	114	
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0		1.60	36.5	186	134.0	
SBC-1 Meas	87		31	< 5		18	130		0.40	< 5	< 10	201		< 5	30	198	108	

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0		
SBC-1 Meas	84		29	< 5		18	181		0.53	< 5	< 10	214	< 5	27	185	115		
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0		
SBC-1 Meas	82		29	< 5		19	128		0.41	< 5	< 10	224	< 5	30	180	116		
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0		
SBC-1 Meas	81		26	< 5		18	126		0.41	< 5	< 10	222	< 5	29	183	114		
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0		
SBC-1 Meas	86		28	< 5		18	160		0.42	< 5	< 10	204	< 5	30	183	115		
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0		
PTC-1b Meas																	7.50	10.7
PTC-1b Cert																	7.97	11.29
PTC-1b Meas																	8.05	
PTC-1b Cert																	7.97	
CCU-1e Meas																	22.5	
CCU-1e Cert																	22.9	
CCU-1e Meas																	22.9	
CCU-1e Cert																	22.9	
CCU-1e Meas																	23.5	
CCU-1e Cert																	22.9	
OREAS 96 (4 Acid) Meas			100	< 5	4.39										455			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			94	< 5	4.14										450			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			95	< 5	4.25										458			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			85	6	3.96										428			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			93	< 5	4.09										429			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			97	< 5	4.24										442			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			92	< 5	4.10										440			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			87	< 5	4.21										440			
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457			
OREAS 96 (4 Acid) Meas			85	< 5	4.13										430			
OREAS 96 (4			101	5.09	4.19										457			

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
Acid) Cert																		
OREAS 923 (4 Acid) Meas	42	0.064	84	< 5	0.72	13	45		0.44	< 5	< 10	96	6	25	356	135		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	37	0.063	88	< 5	0.69	13	45		0.43	< 5	< 10	97	7	26	353	138		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	38	0.071	84	< 5	0.70	13	33		0.34	< 5	< 10	96	7	25	364	135		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	40	0.070	76	< 5	0.68	12	33		0.35	< 5	< 10	89	8	25	334	122		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	39	0.071	81	< 5	0.68	13	32		0.35	< 5	< 10	90	8	25	354	124		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	36	0.063	82	< 5	0.72	13	43		0.43	< 5	< 10	93	< 5	25	342	136		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	38	0.070	78	12	0.68	13	32		0.34	< 5	< 10	99	6	25	349	128		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 923 (4 Acid) Meas	42	0.069	84	< 5	0.71	13	40		0.35	< 5	< 10	91	10	26	359	127		
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116		
OREAS 621 (4 Acid) Meas	31	0.037	> 5000	16	4.82	7	78		0.20	< 5	< 10	35	< 5	12	> 10000	180		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	27	0.040	> 5000	13	4.52	5	52		0.16	< 5	< 10	34	< 5	10	> 10000	164		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	31	0.041	> 5000	20	4.53	7	54		0.16	< 5	< 10	33	8	12	> 10000	161		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	27	0.036	> 5000	14	4.53	6	71		0.20	< 5	< 10	32	< 5	11	> 10000	168		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	28	0.036	> 5000	10	4.53	6	78		0.20	< 5	< 10	34	< 5	11	> 10000	168		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	28	0.040	> 5000	14	4.49	6	56		0.16	< 5	< 10	36	< 5	12	> 10000	166		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	5	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
OREAS 621 (4 Acid) Meas	33	0.040	> 5000	19	4.71	6	69		0.16	< 5	< 10	33	< 5	12	> 10000	168		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
OREAS 621 (4 Acid) Meas	27	0.038	> 5000	15	4.54	6	64		0.16	< 5	< 10	32	6	12	> 10000	164		
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168		
Oreas 77b (4 Acid Digest) Meas	> 10000		66	19		< 4	31	13	0.06	< 5	< 10	32	6	9	177	38		
Oreas 77b (4 Acid Digest) Cert	113000		61.0	9.100		3.51	34.4	1.35	0.0640	1.37	1.71	33.6	3.07	6.55	205	37.9		
172016 Orig	14	0.023	8	< 5	0.02	< 4	369	< 2	0.09	< 5	< 10	21	< 5	2	40	42		
172016 Dup	14	0.022	8	< 5	0.02	< 4	370	< 2	0.08	< 5	< 10	20	< 5	2	38	41		
172017 Orig																		
172017 Dup																		
172027 Orig																		
172027 Dup																		
172030 Orig	22	0.038	6	< 5	0.03	< 4	271	< 2	0.10	< 5	< 10	28	< 5	3	48	50		
172030 Dup	22	0.036	5	< 5	0.03	< 4	268	< 2	0.10	< 5	< 10	26	< 5	3	46	50		
172047 Orig																		
172047 Dup																		
172051 Orig	7	0.021	6	< 5	0.01	< 4	359	< 2	0.10	< 5	< 10	22	< 5	2	40	38		
172051 Split PREP DUP	8	0.019	4	< 5	0.01	< 4	321	< 2	0.09	< 5	< 10	20	< 5	2	36	35		
172059 Orig																		
172059 Dup																		
172062 Orig	3260	0.011	15	< 5	1.84	10	87	< 2	0.23	< 5	< 10	70	< 5	6	150	32		
172062 Dup	3250	0.012	16	< 5	1.86	10	85	< 2	0.24	< 5	< 10	71	< 5	6	139	32		
172069 Orig																		
172069 Dup																		
172079 Orig																		
172079 Dup																		
172081 Orig	11	0.148	4	< 5	0.04	8	615	< 2	0.21	< 5	< 10	78	< 5	12	84	79		
172081 Dup	13	0.150	4	< 5	0.04	8	623	10	0.23	< 5	< 10	82	< 5	12	82	89		
172086 Orig																		
172086 Dup																		
172098 Orig																		
172098 Dup																		
172101 Orig	> 10000	0.086	11	< 5	5.05	15	257	3	0.40	< 5	< 10	118	< 5	11	84	47		1.58
172101 Split PREP DUP	> 10000	0.094	10	< 5	4.80	15	282	4	0.39	< 5	< 10	117	< 5	11	90	50		1.48
172102 Orig																	2.05	1.73
172102 Dup																	2.09	1.74
172103 Orig	1610	0.033	< 3	< 5	0.49	14	197	6	0.38	< 5	< 10	125	< 5	7	80	28		
172103 Dup	1600	0.033	< 3	< 5	0.49	16	198	8	0.38	< 5	< 10	124	< 5	7	85	27		
172107 Orig																		
172107 Dup																		
172117 Orig	207	0.041	8	< 5	0.12	4	385	10	0.16	< 5	< 10	44	< 5	4	53	47		
172117 Dup	213	0.040	9	< 5	0.11	< 4	385	5	0.14	< 5	< 10	41	< 5	4	55	41		
172129 Orig	8	0.025	5	< 5	0.01	< 4	342	3	0.09	< 5	< 10	22	< 5	3	45	34		
172129 Dup	6	0.028	6	< 5	0.02	< 4	357	< 2	0.11	< 5	< 10	27	< 5	3	49	43		



Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
172131 Orig																		
172131 Dup																		
172141 Orig																		
172141 Dup																		
172143 Orig	10	0.039	7	< 5	0.03	< 4	380	< 2	0.11	< 5	< 10	30	< 5	3	54	32		
172143 Dup	13	0.040	6	< 5	0.03	< 4	384	< 2	0.15	< 5	< 10	37	< 5	3	56	39		
172146 Orig																		
172146 Dup																		
172151 Orig	67	0.025	5	< 5	0.03	< 4	352	< 2	0.10	< 5	< 10	24	< 5	2	46	32		
172151 Split PREP DUP	65	0.023	7	< 5	0.03	< 4	348	3	0.09	< 5	< 10	21	< 5	2	48	33		
172157 Orig																		
172157 Dup																		
172167 Orig	> 10000	0.028	7	5	20.0	9	32	5	0.35	< 5	< 10	112	< 5	5	101	20		
172167 Dup	> 10000	0.028	8	6	19.6	9	28	5	0.36	< 5	< 10	113	< 5	5	102	19		
172169 Orig																		
172169 Dup																		
172170 Orig																		1.70
172170 Dup																		1.73
172181 Orig	40	0.098	4	< 5	0.02	19	351	11	0.25	< 5	< 10	74	< 5	8	118	69		
172181 Dup	41	0.094	5	< 5	0.01	19	355	< 2	0.19	< 5	< 10	59	< 5	8	116	63		
172184 Orig																		
172184 Dup																		
172189 Orig																		
172189 Dup																		
172201 Orig	1190	0.030	5	< 5	0.33	16	163	2	0.29	< 5	< 10	121	< 5	13	109	42		
172201 Split PREP DUP	1640	0.034	4	< 5	0.48	15	184	7	0.30	< 5	< 10	117	< 5	13	107	45		
172202 Orig																		
172202 Dup																		
172204 Orig	29	0.034	5	< 5	0.03	< 4	376	3	0.11	< 5	< 10	28	< 5	3	55	42		
172204 Dup	25	0.036	5	< 5	0.03	< 4	373	< 2	0.12	< 5	< 10	31	< 5	3	55	44		
172212 Orig																		
172212 Dup																		
172222 Orig																		
172222 Dup																		
172223 Orig	7	0.020	4	< 5	0.01	< 4	338	< 2	0.09	< 5	< 10	19	< 5	2	39	29		
172223 Dup	8	0.021	5	< 5	0.01	< 4	354	< 2	0.09	< 5	< 10	21	< 5	2	42	32		
172233 Orig																		1.26
172233 Dup																		1.24
172241 Orig																		
172241 Dup																		
172246 Orig	36	0.060	5	< 5	< 0.01	< 4	428	< 2	0.14	< 5	< 10	32	< 5	3	56	65		
172246 Dup	34	0.061	4	< 5	< 0.01	< 4	485	< 2	0.14	< 5	< 10	33	< 5	4	58	69		
173001 Orig	24	0.085	7	< 5	0.01	5	621	< 2	0.15	< 5	< 10	36	< 5	12	52	77		
173001 Split PREP DUP	27	0.090	7	< 5	0.01	5	618	< 2	0.15	< 5	< 10	38	< 5	12	55	81		
173009 Orig	1270	0.048	< 3	< 5	0.38	10	288	4	0.27	< 5	< 10	88	< 5	8	87	49		
173009 Dup	1280	0.048	< 3	< 5	0.38	10	285	4	0.27	< 5	< 10	86	< 5	8	99	51		
173011 Orig																		



Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Ni
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	0.001	0.003
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	4Acid ICPOE S	4Acid ICPOE S
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																	< 0.001	
Method Blank																	< 0.001	
Method Blank																	0.004	< 0.003
Method Blank																	< 0.001	< 0.003



Report No.: A20-16012-Final2  
Report Date: 08-Feb-21  
Date Submitted: 14-Dec-20  
Your Reference:

Palladium One  
101-278 Bay St  
Thunder Bay Ontario  
Canada

ATTN: Neil Pettigrew

### CERTIFICATE OF ANALYSIS

312 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
4F-S	Infrared	2021-02-03 21:20:05

REPORT **A20-16012-Final2**

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Notes:

CERTIFIED BY:

Emmanuel Esemé , Ph.D.  
Quality Control Coordinator

**ACTIVATION LABORATORIES LTD.**  
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5  
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

Analyte Symbol	Total S
Unit Symbol	%
Lower Limit	0.01
Method Code	CS
172137	24.1
172153	23.2
172154	23.8
172172	32.2
172173	25.8
172192	35.5
172193	34.7
172194	32.9
172196	25.4
172197	27.0
172198	26.3
172199	27.8
172213	24.2
172228	26.8
172229	31.4
172231	28.1

Analyte Symbol	Total S
Unit Symbol	%
Lower Limit	0.01
Method Code	CS
BaSO4 Meas	13.7
BaSO4 Cert	14.0
BaSO4 Meas	14.1
BaSO4 Cert	14.0
BaSO4 Meas	14.0
BaSO4 Cert	14.0
BaSO4 Meas	14.0
BaSO4 Cert	14.0
BaSO4 Meas	14.1
BaSO4 Cert	14.0
SGR-1b Meas	1.53
SGR-1b Cert	1.53
SGR-1b Meas	1.51
SGR-1b Cert	1.53
SGR-1b Meas	1.51
SGR-1b Cert	1.53
SGR-1b Meas	1.51
SGR-1b Cert	1.53
SGR-1b Meas	1.51
SGR-1b Cert	1.53
OREAS 98 (S by LECO) Meas	16.1
OREAS 98 (S by LECO) Cert	16.0
OREAS 98 (S by LECO) Meas	16.1
OREAS 98 (S by LECO) Cert	16.0
GS311-4 Meas	0.56
GS311-4 Cert	0.54
GS311-4 Meas	0.54
GS311-4 Cert	0.54
GS311-4 Meas	0.55
GS311-4 Cert	0.54
GS311-4 Meas	0.53
GS311-4 Cert	0.54
GS316-3 Meas	0.35
GS316-3 Cert	0.340
GS316-3 Meas	0.34
GS316-3 Cert	0.340
GS316-3 Meas	0.35
GS316-3 Cert	0.340
GS316-3 Meas	0.32
GS316-3 Cert	0.340
172192 Orig	35.3
172192 Dup	35.7
172197 Orig	27.3
172197 Dup	26.7



Report No.: A20-16012-Rush2  
Report Date: 22-Dec-20  
Date Submitted: 14-Dec-20  
Your Reference:

Palladium One  
101-278 Bay St  
Thunder Bay Ontario  
Canada

ATTN: Neil Pettigrew

### CERTIFICATE OF ANALYSIS

312 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
8-4 Acid-Tbay Total Digestion	QOP Total Assay (Code 8-4 Acid Total Digestion Assays)	2020-12-17 13:09:46

REPORT **A20-16012-Rush2**

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Notes:

CERTIFIED BY:

Emmanuel Esemé , Ph.D.  
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.  
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6  
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Ni	Cu
Unit Symbol	%	%
Lower Limit	0.003	0.001
Method Code	4Acid ICPOE S	4Acid ICPOE S
172008	1.20	3.13
172009	1.41	1.04
172010	< 0.003	
172011	8.33	1.15
172012	5.96	0.488
172013	0.016	
172033	4.40	3.01
172034	8.20	3.08
172035	7.02	2.76
172036	7.18	6.45
172037	6.53	5.04
172038	7.88	5.46
172039	8.18	2.16
172040	0.006	
172041	4.98	1.30



Analyte Symbol	Ni	Cu
Unit Symbol	%	%
Lower Limit	0.003	0.001
Method Code	4Acid ICPOE S	4Acid ICPOE S
MP-1b Meas		3.07
MP-1b Cert		3.07
CPB-2 Meas		0.121
CPB-2 Cert		0.1213
CZN-4 Meas		0.405
CZN-4 Cert		0.403
PTC-1b Meas	10.9	8.04
PTC-1b Cert	11.29	7.97
CCU-1e Meas		22.6
CCU-1e Cert		22.9
Oreas 77b (4 Acid Digest) Meas	11.3	0.331
Oreas 77b (4 Acid Digest) Cert	11.3	0.343
Method Blank	< 0.003	
Method Blank		< 0.001



Report No.: A20-16012-Rush  
 Report Date: 18-Dec-20  
 Date Submitted: 14-Dec-20  
 Your Reference:

Palladium One  
 101-278 Bay St  
 Thunder Bay Ontario  
 Canada

ATTN: Neil Pettigrew

## CERTIFICATE OF ANALYSIS

312 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1C-OES-Tbay	QOP PGE-OES (Fire Assay ICPOES)	2020-12-16 16:06:48
1F2-Tbay	QOP Total (Total Digestion ICPOES))	2020-12-17 12:46:56

REPORT      **A20-16012-Rush**

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Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Esemé , Ph.D.  
 Quality Control Coordinator

**ACTIVATION LABORATORIES LTD.**  
 1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6  
 TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613  
 E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

## Results

## Activation Laboratories Ltd.

## Report: A20-16012

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm
Lower Limit	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
172008	6.0	4.41	< 3	97	< 1	10	3.87	0.9	159	357	> 10000	13.0	13	< 1	0.99	4.47	25	1070	9	1.28	> 10000	0.055	13
172009	1.8	2.21	< 3	37	< 1	< 2	2.53	0.6	191	911	9150	14.8	6	< 1	0.96	8.09	20	2540	< 1	0.23	> 10000	0.009	< 3
172010	< 0.3	7.54	< 3	721	< 1	< 2	1.31	< 0.3	4	13	51	1.55	19	< 1	2.34	0.31	23	237	2	2.63	29	0.027	33
172011	2.7	1.12	< 3	24	< 1	2	0.88	1.0	1150	155	9670	31.6	< 1	4	0.29	1.33	9	373	2	0.25	> 10000	0.011	14
172012	1.5	2.60	< 3	33	< 1	< 2	1.40	0.9	509	149	4360	26.6	2	6	0.68	1.75	17	403	2	0.73	> 10000	0.015	< 3
172013	< 0.3	7.88	< 3	361	< 1	< 2	2.26	< 0.3	11	20	58	2.32	25	< 1	1.25	0.76	42	277	3	3.69	196	0.053	9
172033	6.1	3.10	< 3	73	< 1	2	2.16	0.8	629	194	> 10000	24.7	3	4	0.96	2.79	29	686	< 1	0.68	> 10000	0.017	17
172034	6.0	1.02	< 3	< 7	< 1	< 2	0.88	1.1	1010	220	> 10000	32.3	< 1	3	0.06	1.72	10	915	< 1	0.26	> 10000	0.016	5
172035	5.0	0.93	< 3	< 7	< 1	< 2	0.88	0.7	696	159	> 10000	25.5	< 1	4	0.04	1.81	10	1050	< 1	0.30	> 10000	0.015	6
172036	10.7	0.57	< 3	< 7	< 1	< 2	0.46	1.4	1110	141	> 10000	32.6	< 1	3	0.03	1.10	7	653	< 1	0.11	> 10000	0.020	21
172037	9.7	1.13	3	30	< 1	4	0.66	12.7	873	108	> 10000	28.7	< 1	3	0.36	1.06	16	290	1	0.24	> 10000	0.018	3100
172038	9.6	0.64	< 3	7	< 1	< 2	0.84	1.1	764	172	> 10000	32.0	< 1	4	0.05	1.14	8	587	5	0.12	> 10000	0.020	159
172039	6.0	0.37	< 3	< 7	< 1	10	0.39	1.6	1730	82	> 10000	34.2	< 1	4	0.07	0.39	5	167	8	0.08	> 10000	0.012	321
172040	0.8	7.02	< 3	780	< 1	< 2	1.27	< 0.3	6	15	66	2.00	20	< 1	3.36	0.35	21	288	2	2.36	113	0.067	33
172041	4.2	2.95	< 3	36	< 1	5	1.49	1.1	551	84	> 10000	24.1	5	5	1.09	1.55	20	395	4	0.63	> 10000	0.012	297

Analyte Symbol	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Au	Pd	Pt
Unit Symbol	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb
Lower Limit	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	2	5	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FA-ICP	FA-ICP	FA-ICP
172008	< 5	6.24	14	210	< 2	0.33	< 5	< 10	93	< 5	9	197	30	20	596	311
172009	< 5	5.07	12	18	< 2	0.17	< 5	< 10	60	< 5	4	126	14	7	303	208
172010	< 5	0.02	< 4	266	< 2	0.10	< 5	< 10	15	< 5	7	45	24	< 2	< 5	< 5
172011	19	> 20.0	< 4	31	< 2	0.06	< 5	20	44	< 5	3	54	11	15	747	656
172012	9	16.1	5	92	< 2	0.12	< 5	< 10	46	< 5	5	44	19	6	343	256
172013	< 5	0.08	5	597	6	0.15	< 5	< 10	38	< 5	5	54	49	< 2	< 5	< 5
172033	10	17.3	8	70	< 2	0.20	< 5	< 10	69	< 5	4	129	17	47	556	773
172034	13	> 20.0	< 4	23	< 2	0.08	< 5	10	60	< 5	3	81	10	35	877	584
172035	11	19.9	< 4	30	< 2	0.06	< 5	< 10	43	< 5	3	88	10	18	546	522
172036	10	> 20.0	< 4	7	< 2	0.05	< 5	10	48	< 5	2	175	10	44	693	1010
172037	< 5	> 20.0	< 4	18	< 2	0.06	< 5	10	39	13	3	7790	11	37	508	914
172038	< 5	> 20.0	< 4	11	< 2	0.07	< 5	10	56	< 5	3	417	11	19	859	904
172039	15	> 20.0	< 4	8	< 2	0.03	8	20	48	< 5	2	432	9	21	1030	1540
172040	< 5	0.06	< 4	221	6	0.19	< 5	< 10	23	< 5	10	58	273	< 2	< 5	< 5
172041	11	18.1	5	97	< 2	0.17	< 5	< 10	54	< 5	3	560	16	9	339	368

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni	P	Pb
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	%	ppm
Lower Limit	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1	0.001	3
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SDC-1 Meas		7.92	< 3	541	2		1.10		18	40	35	4.58	23	< 1	2.56	1.00	36	885		1.45	36	0.053	22
SDC-1 Cert		8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52	38.0	0.0690	25.00
Oreas 72a (4 Acid Digest) Meas			< 3						144	181	312	8.93									6580		
Oreas 72a (4 Acid Digest) Cert			14.7						157	228	316	9.63									6930.000		
OREAS 98 (4 Acid) Meas	43.2					45			114		> 10000												308
OREAS 98 (4 Acid) Cert	45.1					97.2			121		14800.0												345
DNC-1a Meas				81			7.19		53	170	98	6.51	16				5			1.32	244		9
DNC-1a Cert				118			8.21		57	270	100	6.97	15				5.2			1.40	247		6.3
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
OREAS 904 (4 ACID) Meas	0.7	6.13	97	164	7	5	0.05		91	48	6040	6.30	15		1.66	0.55	16	423	4	0.03	47	0.097	17
OREAS 904 (4 ACID) Cert	0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340	40.1	0.0980	10.6
OREAS 96 (4 Acid) Meas	11.4					12			51		> 10000												90
OREAS 96 (4 Acid) Cert	11.5					26.3			49.9		39300												101
OREAS 923 (4 Acid) Meas	1.8	6.99	4	355	2	8	0.49	0.3	24	69	4320	6.09	22		2.43	1.67	31	965	1	0.29	40	0.062	72
OREAS 923 (4 Acid) Cert	1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324	35.8	0.0630	83.0
OREAS 621 (4 Acid) Meas	69.5	6.39	68		1	7	2.00	287	31	33	3580	3.59	24		1.69	0.49	14	503	14	1.22	27	0.035	> 5000
OREAS 621 (4 Acid) Cert	69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31	26.2	0.0359	13600
172011 Orig																							
172011 Dup																							
172034 Orig	5.9	1.01	< 3	< 7	< 1	< 2	0.85	1.2	1000	219	> 10000	32.0	< 1	4	0.06	1.70	9	901	< 1	0.26	> 10000	0.016	6
172034 Dup	6.0	1.03	< 3	< 7	< 1	< 2	0.91	1.0	1020	221	> 10000	32.6	< 1	2	0.06	1.73	10	928	< 1	0.27	> 10000	0.016	4
172037 Orig																							
172037 Dup																							
Method Blank	< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01	< 1	< 0.001	< 3
Method Blank																							
Method Blank																							

Analyte Symbol	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Au	Pd	Pt
Unit Symbol	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb
Lower Limit	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5	2	5	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FA-ICP	FA-ICP	FA-ICP
SDC-1 Meas	< 5		14	164		0.08	< 5	< 10	32	< 5		112	24			
SDC-1 Cert	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00			
Oreas 72a (4 Acid Digest) Meas		1.66														
Oreas 72a (4 Acid Digest) Cert		1.74														
OREAS 98 (4 Acid) Meas	7	15.6										1350				
OREAS 98 (4 Acid) Cert	20.1	15.5										1360				
DNC-1a Meas	12		26	119		0.22			114		15	63	29			
DNC-1a Cert	0.96		31	144		0.29			148		18.0	70	38.0			
PK2 Meas														4830	5960	4860
PK2 Cert														4785	5918	4749
PK2 Meas														4910	6080	4880
PK2 Cert														4785	5918	4749
PK2 Meas														4840	5930	4810
PK2 Cert														4785	5918	4749
PK2 Meas														4830	5900	4760
PK2 Cert														4785	5918	4749
OREAS 904 (4 ACID) Meas	< 5	0.06	10	26			< 5	< 10	66	< 5	34	25	152			
OREAS 904 (4 ACID) Cert	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171			
OREAS 96 (4 Acid) Meas	< 5	4.24										465				
OREAS 96 (4 Acid) Cert	5.09	4.19										457				
OREAS 923 (4 Acid) Meas	< 5	0.66	12	39		0.32	< 5	< 10	77	< 5	27	358	112			
OREAS 923 (4 Acid) Cert	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116			
OREAS 621 (4 Acid) Meas	14	4.44	6	67		0.15	< 5	< 10	28	< 5	13	> 10000	148			
OREAS 621 (4 Acid) Cert	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168			
172011 Orig														17	810	716
172011 Dup														12	683	596
172034 Orig	12	> 20.0	< 4	22	< 2	0.08	< 5	10	59	< 5	3	81	10			
172034 Dup	15	> 20.0	< 4	23	< 2	0.08	< 5	10	60	< 5	3	82	10			
172037 Orig														37	508	927
172037 Dup														38	509	901
Method Blank	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5			
Method Blank														< 2	< 5	< 5
Method Blank														< 2	< 5	< 5



Report No.: A20-16378
Report Date: 08-Jan-21
Date Submitted: 21-Dec-20
Your Reference:

Palladium One
101-278 Bay St
Thunder Bay Ontario
Canada

ATTN: Neil Pettigrew

CERTIFICATE OF ANALYSIS

12 Rock samples were submitted for analysis.

Table with 3 columns: Analytical package requested, Test Name, and Testing Date. Rows include 1C-OES-Tbay, 1F2-Tbay, QOP PGE-OES (Fire Assay ICPOES), and QOP Total (Total Digestion ICPOES).

REPORT A20-16378

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 for accurate numbers.

CERTIFIED BY:

[Handwritten signature]

Elitsa Hrischeva, Ph.D.
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A20-16378

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
173063	< 2	< 5	< 5	< 0.3	5.97	< 3	378	< 1	3	4.64	0.3	50	555	5	6.83	21	< 1	2.01	7.07	57	975	< 1	1.47
173064	< 2	< 5	< 5	0.5	7.00	< 3	509	1	< 2	3.31	< 0.3	37	341	2	5.49	24	< 1	1.95	5.00	43	691	< 1	2.52
173065	< 2	< 5	< 5	< 0.3	6.41	4	617	1	< 2	2.94	< 0.3	47	444	5	5.64	22	3	2.01	6.90	64	804	< 1	1.88
173066	< 2	< 5	< 5	< 0.3	4.54	< 3	417	< 1	< 2	2.09	< 0.3	73	788	25	6.25	15	< 1	1.89	11.1	79	1020	< 1	0.82
173067	< 2	< 5	< 5	< 0.3	1.25	< 3	25	< 1	< 2	1.52	0.7	116	1370	68	7.53	4	< 1	0.29	17.4	7	999	< 1	0.07
173068	< 2	< 5	< 5	< 0.3	2.48	< 3	127	< 1	< 2	2.36	< 0.3	92	1090	67	6.49	9	< 1	1.89	14.5	38	1040	< 1	0.12
173069	< 2	< 5	< 5	0.4	7.53	< 3	866	< 1	< 2	2.20	< 0.3	20	173	8	2.45	20	< 1	1.54	2.85	24	430	< 1	3.51
173070	67	619	292	2.1	6.33	< 3	168	< 1	< 2	4.07	< 0.3	108	170	4360	14.1	13	2	0.53	3.85	14	1340	< 1	1.60
173071	< 2	< 5	< 5	0.4	6.96	< 3	391	1	2	4.93	0.3	47	358	1	8.16	29	3	1.94	5.77	54	1170	< 1	1.78
173072	3	< 5	< 5	0.5	9.38	< 3	273	1	3	4.78	< 0.3	21	26	4	5.40	23	< 1	1.28	2.04	21	863	< 1	3.89
173073	< 2	< 5	< 5	< 0.3	4.64	< 3	233	< 1	< 2	3.98	< 0.3	53	727	6	4.57	15	< 1	1.80	8.58	44	922	3	1.46
173074	< 2	< 5	< 5	0.3	7.86	< 3	383	< 1	< 2	1.87	< 0.3	7	16	8	1.90	20	< 1	1.32	0.64	11	302	< 1	3.79



Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
173063	617	0.008	3	< 5	0.01	13	163	< 2	0.18	< 5	< 10	83	< 5	9	213	34
173064	431	0.004	12	< 5	0.01	9	236	< 2	0.18	< 5	10	68	< 5	9	169	52
173065	567	0.054	8	< 5	0.03	10	210	< 2	0.23	< 5	< 10	83	< 5	10	128	71
173066	988	0.122	3	< 5	0.07	12	168	3	0.18	< 5	< 10	76	< 5	10	108	73
173067	1760	0.011	< 3	< 5	0.38	8	22	< 2	0.10	< 5	< 10	60	< 5	2	91	13
173068	1440	0.019	< 3	< 5	0.35	8	26	< 2	0.11	< 5	< 10	61	< 5	4	87	20
173069	225	0.025	11	< 5	0.03	< 4	488	< 2	0.15	< 5	< 10	38	< 5	4	60	80
173070	3730	0.064	18	< 5	1.62	11	240	< 2	0.29	< 5	10	82	< 5	11	94	62
173071	382	0.058	21	< 5	0.01	19	269	< 2	0.20	< 5	10	89	< 5	14	241	68
173072	23	0.107	5	< 5	0.02	14	677	< 2	0.23	< 5	10	66	< 5	11	86	47
173073	824	0.011	6	< 5	0.02	8	157	< 2	0.15	< 5	< 10	60	< 5	6	92	35
173074	9	0.038	5	< 5	0.02	5	463	< 2	0.15	< 5	< 10	33	< 5	3	54	40

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SDC-1 Meas					8.18	< 3	549	3		1.07		18	57	30	4.90	23	3	2.14	1.05	35	877		1.53
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
Oreas 72a (4 Acid Digest) Meas						9						150	187	315	9.11								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						7						155	172	348	9.64								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
OREAS 98 (4 Acid) Meas				41.8					64			127		> 10000									
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0									
OREAS 98 (4 Acid) Meas				41.8					86			123		> 10000									
OREAS 98 (4 Acid) Cert				45.1					97.2			121		14800 0.0									
DNC-1a Meas							83			7.22		55	162	101	6.97	13				5			1.45
DNC-1a Cert							118			8.21		57	270	100	6.97	15				5.2			1.40
PK2 Meas	5030	6230	5000																				
PK2 Cert	4785	5918	4749																				
PK2 Meas	5080	6370	5050																				
PK2 Cert	4785	5918	4749																				
OREAS 904 (4 ACID) Meas				0.6	6.22	97	140	8	13	0.05		95	63	6100	6.52	17		2.05	0.58	15	448	2	0.03
OREAS 904 (4 ACID) Cert				0.551	6.30	98.0	194	7.86	4.05	0.0460		83.0	54.0	6120	6.68	16.7		3.31	0.556	16.7	410	2.12	0.0340
SBC-1 Meas						15	668	3	4		0.3	22	81	30		26					157		2
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0					163		2
OREAS 96 (4 Acid) Meas				10.9					< 2			51		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 96 (4 Acid) Meas				11.3					3			53		> 10000									
OREAS 96 (4 Acid) Cert				11.5					26.3			49.9		39300									
OREAS 923 (4 Acid) Meas				1.9	7.12	5	333	2	18	0.49	< 0.3	24	74	4350	6.37	20		1.49	1.76	30	982	< 1	0.33
OREAS 923 (4 Acid) Cert				1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	23.1	71.0	4230	6.43	20.3		2.51	1.69	31.4	950	0.930	0.324
OREAS 621 (4 Acid) Meas				68.2	6.02	63		1	5	2.03	275	30	28	3610	3.65	24		1.67	0.51	13	511	12	1.29
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
OREAS 621 (4 Acid) Meas				70.1	6.03	73		1	4	2.07	284	30	34	3670	3.81	25		1.86	0.52	14	529	12	1.35
OREAS 621 (4 Acid) Cert				69.0	6.40	77.0		1.69	3.93	1.97	284	29.3	37.1	3630	3.70	24.6		2.20	0.507	14.2	532	13.6	1.31
173073 Orig	< 2	< 5	< 5																				
173073 Dup	< 2	< 5	< 5																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1	1	< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SDC-1 Meas	35	0.064	20	< 5		15	184		0.14	< 5	< 10	46	< 5		104	32
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
Oreas 72a (4 Acid Digest) Meas	6060				1.62											
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74											
Oreas 72a (4 Acid Digest) Meas	6290				1.68											
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74											
OREAS 98 (4 Acid) Meas			302	6	15.9										1270	
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360	
OREAS 98 (4 Acid) Meas			304	< 5	15.9										1260	
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360	
DNC-1a Meas	235		< 3	< 5		27	133		0.22			123		13	58	31
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
OREAS 904 (4 ACID) Meas	43	0.103	8	< 5	0.06	11	30			< 5	< 10	78	< 5	30	26	45
OREAS 904 (4 ACID) Cert	40.1	0.0980	10.6	1.48	0.0630	11.2	27.2			0.520	8.43	76.0	2.12	31.5	26.3	171
SBC-1 Meas	81		29	< 5		18	182		0.40	< 5	< 10	196	< 5	27	183	106
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
OREAS 96 (4 Acid) Meas			92	< 5	4.12										430	
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457	
OREAS 96 (4 Acid) Meas			94	< 5	4.22										437	
OREAS 96 (4 Acid) Cert			101	5.09	4.19										457	
OREAS 923 (4 Acid) Meas	37	0.070	85	< 5	0.69	12	45		0.35	< 5	< 10	88	7	24	350	122
OREAS 923 (4 Acid) Cert	35.8	0.0630	83.0	1.29	0.691	13.1	43.0		0.405	0.860	3.06	91.0	4.85	26.4	345	116
OREAS 621 (4 Acid) Meas	27	0.039	> 5000	16	4.40	5	73		0.15	< 5	< 10	31	7	10	> 10000	152
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168
OREAS 621 (4 Acid) Meas	27	0.040	> 5000	16	4.58	6	73		0.16	< 5	< 10	32	5	10	> 10000	152
OREAS 621 (4 Acid) Cert	26.2	0.0359	13600	139	4.48	6.24	91.0		0.149	1.96	2.83	31.8	2.35	11.1	52200	168
173073 Orig																
173073 Dup																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																
Method Blank																

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5

**Statement of Costs - 2020 Tyko Drill Program**

HoleID	Easting	Northing	Depth (m)	Azimuth	Dip	m	Claim 1	m	Claim 2
TK20-015	621890.00	5420758	77	68.8587	-45	77	548180		
TK20-016	621890.00	5420758	77	68.8587	-75	77	548180		
TK20-017	621891.00	5420781	89	68.8587	-75	89	548180		
TK20-018	621860.00	5420790	77	68.8587	-75	77	548180		
TK20-019	621910.00	5420715	77	68.8587	-50	77	548180		
TK20-020	621945.00	5420670	50	68.8587	-75	50	548180		
TK20-021	621850.00	5420765	80	68.8587	-75	80	548180		
TK20-022	621870.00	5420750	62	68.8587	-80	62	548180		
TK20-023	621949.00	5420729	47	268.8587	-85	47	548180		
TK20-024	621730.00	5420834	202	68.8587	-75	55	548180	147	548188
TK20-025	621902.00	5420738	62	68.8587	-75	62	548180		
TK20-026	621886.00	5420706	71	68.8587	-75	71	548180		
TK20-027	621950.00	5420700	50	268.8587	-85	50	548180		
TK20-028	622984.00	5420975	102	358.8587	-75	102	566846		

Claim	Township	Title Type	Due Date	Work Required	Claim Holder	total m drilled	% drilling	\$	282,852
548180	Shabotik	Single Cell Mining Claim	14-Apr-2021	\$400	Tyko	874	0.78	\$	220,136
548188	Shabotik	Single Cell Mining Claim	14-Apr-2021	\$400	Tyko	147	0.13	\$	37,025
566846	Welsh	Single Cell Mining Claim	17-Dec-2021	\$400	Tyko	102	0.09	\$	25,691
<b>TOTAL</b>						<b>1123</b>	<b>1</b>	<b>\$</b>	<b>282,852</b>

**Hole ID:** TK20-015      **Datum/Projection:** Nad 83 (Zone 16)  
**Project:** Tkyo      **UTM North:** 5420758  
**Claim/Patent #** 548180      **UTM East:** 621890  
**Township:** Shabotik      **Dip:** -45  
    **Azimuth:** 68.8587

**Start Date:** 2020-11-28      **Drill Company:** M3  
**End Date:** 2020-12-01      **Core Size:** NQ  
**EOH Depth (m):** 77      **Storage Location:** Conmee  
**Drill Comments:**

**Main Lithology**

**Hole ID:** TK20-015  
**Date Logged:** 20-12-02  
**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	4.25	Overburden (Unsubdivided)	15	OB
4.25	16	Foliated; Tonalite	FOL; 10aa	Well foliated Tonalite. Trace Py associated with contacts of minor 10AC units
16	16.75	Gabbro (unsubdivided)	9d	mgr. dark grey larger block
16.75	18.27	Granite breccia; Equigranular	10acx; EQUI	Mix of foliated 10AA and non foliated 10AC units with 2 minor mafic bands (blocks?)
18.27	26.47	Tonalite; Foliated	10aa; FOL	Mgr. to CGR light to med grey with strong foliation. Non magnetic
26.47	30.04	Tonalite breccia; Foliated	10aax; FOL	MG to CG and med grey with strong foliation. Inclusions of 10AC and mafic fragments. LC is sharp and distinct at about 75 deg TCA

30.04	30.54	Mineralized hornblendite	7hm	Fgr dark green grey with strong chlorite and biotite alteration. 5-8% fgr blebby to net textured Py and Pn and Cpy, Very soft and variably moderate to strongly magnetic based on % of sulfides.
30.54	32.35	Mineralization	15a	Well mineralized Semi massive to massive Sulfides. Sulfides make up 40-80% of rock with mostly Po Py/(30-40%) and lesser Cpy (5-10%) and Pn(5%). Cpy appears to be stringer and bands within the more massive or blebby Po/Py/Pn.
32.35	37.72	Tonalite breccia; Foliated	10aax; FOL	Tonalite Bx, 10% brecciated strongly altered mafic to ultra mafic fragments. 1-2% fgr diss and stringer Py, Weak localized magnetics.
37.72	38.2	Amphibolite	7c	Dark green grey with 1-2% fgr stringer Py
38.2	44.2	Tonalite breccia	10aax	Tonalite with 20% blocks, consisting mostly of mafic fragments. Trace Py with blocks and along edges of blocks. Mod to strong foliation at 70 deg TCA.
44.2	57.7	Tonalite; Foliated	10aa; FOL	Cgr, med to light whitish grey. occasional mafic fragments constitute less then 10% of rock. No significant sulfides. Mod foliation at 65 to 75 deg TCA.
57.7	61.6	Granite; Equigranular	10ac; EQUI	Cgr light pinkish grey with inclusions of tonalite and granodiorite, making up less then 15% of rock. Non magnetic. Trace Py associate with contacts and within 1 diorite/granodiorite block.
61.6	63.57	Felsic to Intermediate Intrusive Rocks (Unsubdivided)	10	Breccia zone of 10AAx 10AC and a finer grained 10AB. No major sulfides. Non magnetic.



63.57	69.05	Tonalite; Foliated	10aa; FOL	Cgr light grey with mod foliation at 70-80 deg tca. Minor inclusions of 10AB. Non magnetic
69.05	69.9	Feldspar porphyry; Porphyritic	10e; PORPH	Mgr med grey with distinct feldspar porphyries up to 5 mm in dia. Notable stringer/ vein associated Py with cpy near LC. Non magnetic except on stringers.
69.9	77	Tonalite; Foliated	10aa; FOL	Cgr light grey with no major sulfides, except from 69.9 to 70.1 where there are stringers associated with UC. Non magnetic, moderate foliation at 60-65 deg TCA.

### Structure

Hole ID: TK20-015

Date Logged: 20-12-02

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
6	6.1	Foliated 70°	FOL	Mod Fo	70
19	19.1	Foliated 42°	FOL	FO of Tonalite within Tonalite Bx	42
27	27.2	Foliated 60°	FOL	Fo of Tonalite	60
30.04	30.05	Lower Contact 60°	LC	LC of Tonalite Bx with Hornblendite.	60
32.35	32.36	Lower Contact 64°	LC	LC, 10AAX below. Irregular contact	64
43.7	43.75	Foliated 70°	FOL	General folaiton	70
49.75	49.8	Foliated 70°	FOL	Gen Fo	70
55.7	55.75	Foliated 65°	FOL	gen FO	65

**Mineralization****Hole ID: TK20-015****Date Logged: 20-12-02****Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
69.75	69.9	Pyrite 3%; Pyrrhotite 2%	Py03; Po02	Stringers associated with LC.
69.9	71.2	Chalcopyrite 0.5%; Pyrite 1%; Pyrrhotite 1%	Cp00.5; Py01; Po01	stringers associated with contact

**Sample Log****Hole ID: TK20-015****Date Logged: 20-12-02****Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
23	24.5	172001
24.5	25.5	172002
25.5	26.47	172003
26.47	27.4	172004
27.4	28.15	172005
28.15	29	172006
29	30.04	172007
30.04	30.54	172008
30.54	31.35	172009
30.54	31.35	172010
31.35	31.9	172011
31.9	32.35	172012
32.35	32.7	172013
32.7	34	172014
34	35.3	172015
35.3	36.6	172016
36.6	37.72	172017
37.72	38.2	172018

38.2	39	172019
38.2	39	172020
39	40	172021
67	68	172022
68	69.05	172023
69.05	69.9	172024
69.9	70.25	172025
70.25	71.5	172026
71.5	73	172027

**Hole ID:** TK20-016  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420758  
**UTM East:** 621890  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 30-Nov-20  
**End Date:** 01-Dec-20  
**EOH Depth (m):** 77  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

**Main Lithology**

**Hole ID: TK20-016**

**Date Logged: 20-12-02**

**Geologist(s): K. Pederson**

From (m)	To (m)	Lithology	Code	Description
26	27.44	Granite	10ac	Cgr pink non foliated non magnetic
27.44	29.04	Tonalite breccia; Foliated	10aax; FOL	Mgr to Cgr, med grey to pink and dark blue grey. Unit is a mix 10AA,10AC and Mafic fragments. 3% sulfides (Pn, Po, Py and Cpy) as distinct bands and or stringers associated with the mafic/ultramafic bands/clasts. Unit is variably foliated at 60-80 deg TCA. Magnetic in/near sulfides.
29.04	29.8	Mineralization	15a	Stringer to semi massive Py, Po, Pn (2-3%) and Cpy (2-5%) within a very soft and altered ultramafic. Strongly foliated at about 45-50 deg TCA.
29.8	32.8	Foliated; Mineralization	FOL; 15a	Massive sulfides. 30-40% Py, 20%Po, 5-15%Pn and 10%Cpy. Mod fol locally at 50-55 deg tca. Strongly magnetic.

32.8	43.1	Tonalite breccia; Foliated	10aax; FOL	Mgr, Med to loc dark grey with 15% inclusions of mafic/UM fragments. Common stringers of Py, Po and Cpy in the first 1m of unit. Weak localized magnetics associated with mafic fragments and sulfides.
43.1	77	Tonalite; Foliated	10aa; FOL	Cgr Light grey with common inclusions of granite to granodiorite which show less foliation. Non mineralized and non magnetic. Localized Potassic alteration associated with veins and pegmatitic dikelets as at 65.5 and 74m. Foliation is weak and localized at 75-80 deg TCA.

### Structure

Hole ID: TK20-016

Date Logged: 20-12-02

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
17.8	17.9	Foliated 75°	FOL	General weak to mod fol for unit.	75
47.7	47.75	Foliated 80°	FOL	Fol generally 75-90 deg tca. Weak localized	80
75.3	77	Foliated 80°	FOL	General FO	80

### Mineralization

Hole ID: TK20-016

Date Logged: 20-12-02

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
28.4	29.04	Pyrite 3%; Pyrrhotite 3%; Chalcopyrite 1%; Pentlandite 0.1%	Py03; Po03; Cp01; Pt00.1	Stringers and diss sulfides in the breccia above the massive sulfides, Sulfides increase as you go down the hole.

29.04	29.8	Pentlandite 1%; Pyrite 15%; Pyrrhotite 15%; Chalcopyrite 3%	Pt01; Py15; Po15; Cp03	Stringer to semi masive and loc massive sulfides
29.8	32.8	Chalcopyrite 5%; Pyrite 40%; Pyrrhotite 40%; Pentlandite 4%	Cp05; Py40; Po40; Pt04	Massive sulfides,
32.8	33.5	Pyrite 1%; Pyrrhotite 2%; Chalcopyrite 0.5%	Py01; Po02; Cp00.5	Stringers of Sulfides into the Bx zone.

**Sample Log**

**Hole ID: TK20-016**

**Date Logged: 20-12-02**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
24.5	26	172028
26	27.44	172029
26	27.44	172030
27.44	28.45	172031
28.45	29.04	172032
29.04	29.8	172033
29.8	30.3	172034
30.3	30.8	172035
30.8	31.2	172036
31.2	31.7	172037
31.7	32.15	172038
32.15	32.5	172039
32.15	32.5	172040
32.5	32.8	172041
32.8	33.15	172042
33.15	34	172043
34	35	172044
35	36	172045

**Hole ID:** TK20-017  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420781  
**UTM East:** 621891  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 01-Dec-20  
**End Date:** 02-Dec-20  
**EOH Depth (m):** 89  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-017

**Date Logged:** 20-12-03

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.88	Overburden (Unsubdivided)	15	OB casing to 1.5m
0.88	18.45	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with weak Fo near 75-85 deg TCA. Occasional mafic fragments and felsic diklets making up to 10% of core over 3m locally. Non magnetic. Tace Py associate with small veins and larger fragments.
18.45	28.6	Tonalite breccia; Foliated	10aax; FOL	Cgr light grey with common mafic and ultramafic fragments making up 20-40% of core over 3m runs. Weakly foliated at 75-90 deg tca. 1-2% fgr stingers and block associated Py and Po between 18.45 -22, increasing to 2-3% from 22-23m, associated with blocks, increasing down hole and in association with the concentration of blocks. Lower 30cm contains up to 10% sulfides, that appear to be remobilized.
28.6	31.13	Mineralization; Foliated	15a; FOL	fgr blue grey serpentine and chloritic groundmass with stringer to massive sulfide(Po, Py, Cpy and Pn)s. Unit appears to be foliated at 60 deg TCA. There is a Py rich Qz vein running 60 deg tca from 30.50-30.65. Locally has blocks of Tonalite as at 29.85-29.00.

31.13	34.05	Tonalite breccia; Foliated	10aax; FOL	Mgr to Cgr, light to medium grey with Common mafic and Um fragments making up 25-30% of core. Tonalite shows weak foliation at 80 deg TCA. 2-4% sulfides from 21.12-33.5 as fgr stringers in Tonalite, and as diss and blebs within the fragments. Weak magnetics, associated with sulfides and fragments within the Bx.
34.05	53	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with moderate FO at 80 deg TCA. Non magnetic, non mineralized, Minor granodiorite/granite intrusions and rare mafic fragments make are less then 60 cm and make up less then 10% of rock over 3m. Notable pink K alt around granitic intrusion near 36m. Notable seds looking block near 47m, is weakly magnetic.
53	60	Tonalite breccia; Foliated	10aax; FOL	Cgr med grey with common inclusions of mafic clasts. Fragments compose roughly 20% of core. Increase in hornblende within the Tonalite and increased in fgr Po and lesser Py in these areas. Probably 1-2% fgr Py Po, and weak localized magnetics. Occasionally clasts are close together and make up 3-5% sulfides over 1m as between 56 and 57m. Weak irregular foliation at 65-80 deg TCA.
60	89	Tonalite; Foliated	10aa; FOL	Mgr. medium grey with occasional mafic fragments and small granitic dikes. Weak localized magnetics associated with fgr dis Po near and in the mafic bands. Weak foliation is variable at 65-80 deg TCA. Minor increase in Po and mafic fragments below 85m to EOH.

### Structure

Hole ID: TK20-017

Date Logged: 20-12-03

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
13.4	13.45	Foliated 75°	FOL	Weak to locally mod FO.	75



**Mineralization****Hole ID: TK20-017****Date Logged: 20-12-03****Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
19	27.5	Pyrite 1%; Pyrrhotite 1%; Chalcopyrite 0.5%	Py01; Po01; Cp00.5	Stringer, locally
27.5	28.6	Chalcopyrite 1%; Pyrite 2%; Pyrrhotite 3%	Cp01; Py02; Po03	Stringers increasing in width and frequency down hole
28.6	28.9	Pyrrhotite 40%; Pyrite 35%	Po40; Py35	Band of MS
28.9	29	Pyrite 3%	Py03	Dead block
29	30.3	Pyrite 15%; Pyrrhotite 25%	Py15; Po25	Stringers and band of semi massive sulfides in a Bt chl, serpt rich matrix.
30.3	30.66	Chalcopyrite 3%; Pyrite 15%	Cp03; Py15	Stringers and bands associated with a 16cm wide qz vein.
30.66	31.13	Pyrrhotite 20%; Pyrite 15%; Pyrite	Po20; Py15; Py	Stringers and semi massive bands in a Bt, Chl Serpt rich groundmass.
31.13	33.5	Pyrite 2%; Pyrrhotite 1%	Py02; Po01	Stringers associated with UC and fragments within the Bx zone. Sulfides notably decrease below 33.5m.
56	57	Pyrrhotite 2%; Pyrite 1%	Po02; Py01	Diss along foliation with hornblend

**Sample Log****Hole ID: TK20-017****Date Logged: 20-12-03****Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
15.05	16.5	172046
16.5	17.5	172047
17.5	18.45	172048
18.45	19	172049
18.45	19	172050

19	20	172051
20	21.08	172052
21.08	21.95	172053
21.95	22.7	172054
22.7	23.8	172055
23.8	24.85	172056
24.85	26	172057
26	27.3	172058
27.3	28.1	172059
27.3	28.1	172060
28.1	28.6	172061
28.6	29	172062
29	29.85	172063
29.85	30.5	172064
30.5	31.13	172065
31.13	31.7	172066
31.7	32.3	172067
32.3	32.95	172068
32.95	33.6	172069
32.95	33.6	172070
33.6	34.08	172071
34.08	35	172072
35	36.5	172073
53	54	172074
54	55	172075
55	56	172076
56	56.77	172077
56.77	57.8	172078
57.8	59	172079
57.8	59	172080
59	60	172081

60

61

172082

**Hole ID:** TK20-018  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420790  
**UTM East:** 621860  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 02-Dec-20  
**End Date:** 03-Dec-20  
**EOH Depth (m):** 77  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-018

**Date Logged:** 20-12-06

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.75	Overburden (Unsubdivided)	15	OB. Casing to 1.5m
0.75	3.13	Equigranular; Granodiorite	EQUI; 10ab	CGR Pinkish grey and lacks FO of Tonalite below. Contact is noted by veins and colour change. Non mineralized, non foliated and non magnetic.
3.13	21.5	Tonalite breccia; Foliated	10aax; FOL	Cgr, light grey to white with common inclusions of mafic material, dikes and small granitic dikes. Fragments and dikes consist of 20-25% or the rock and locally up to 40% over 1-2m. No major sulfides associated with the blocks. Blocks appear more silicate rich then normal. Non magnetic, no mineralized and weak to mod foliation locally at 75-80 deg TCA
21.5	30.7	Tonalite; Foliated	10aa; FOL	Cgr light grey with mod FO at 75 deg tca. Unit is notably lacking the dikes, and fragments of unit above. No major sulfides, non magnetic.
30.7	31.1	Granite	10ac	Cgr light pink. Non foliated non magnetic non mineralized.

31.1	36.61	Tonalite breccia; Foliated	10aax; FOL	Cgr light to medium grey with common mafic fragments up to 20 cm and common 3-15cm wide Vcg pegmatitic veins/dikes. Trace to 1% fgr stringer Py and Cpy in lower 30 cm, otherwise trace Py associated with blocks. Mod Fo runs 65-70 deg TCA
36.61	37.6	Mineralization	15a	fgr dark grey black with strong chl, bt and talc alteration near UC and LC. Semi massive to massive sulfides from 36.72-37.35m. Taken as 1 sample as upper and lower sections would have been too small to sample separately, Mod Fol runs 75 deg TCA. Notably well altered and moderately magnetic.
37.6	40.54	Tonalite breccia; Foliated	10aax; FOL	Cgr medium to light grey with common inclusions of UM a Mafic fragments. Fragments look recrystallized and often lack foliation. Trace to 1% fgr stringer sulfides from 38-38.6m associated with mafic bands/ inclusions. Moderate foliation locally 65-75 deg tca. Unit is locally weakly magnetic.
40.54	62.1	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with notable decrease in abundance of inclusions. Inclusions make up 10% of rock and consist mostly of mafic fragments and small felsic pegmatitic veins/diklets. Notable foliation changes between 42-44m where it goes from 65 at 42 to 45 near 43,5 then back to 70 near 44.5m. Unit could be described as Bx locally as near 48-53m; however, it lacks any significant sulfides.
62.1	77	Granite	10ac	Cgr pink and grey. Unit lacks foliation of Tonalites and has increased pinkish K spar. Unit has significant inclusions of more tonalitic composition and locally has weak to mod FO at 75-80 deg TCA. Non mineralized and non magnetic. Rare 5-15 cm mafic dikes as near 77m.

### Structure

Hole ID: TK20-018

Date Logged: 20-12-06

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
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61.5	61.55	Foliated 75°	FOL	General	75
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**Mineralization**

**Hole ID: TK20-018**

**Date Logged: 20-12-06**

**Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
36.1	36.61	Pyrite 1%; Chalcopyrite 0.5%	Py01; Cpy01	Trace to 1% fgr stringer Py and Cpy in lower 30 cm
36.61	37.6	Pentlandite 7%; Pyrite 15%; Pyrrhotite 10%; Chalcopyrite 15%	Pt07; Py15; Po10; Cp15	Semi massive to massive sulfides from 36.72-37.35m. Taken as 1 sample as upper and lower sections would have been too small to sample seperatly.
37.6	39	Pyrite 1%; Chalcopyrite 0.5%	Py01; Cpy01	Diss and block associated

**Sample Log**

**Hole ID: TK20-018**

**Date Logged: 20-12-06**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
33	34.1	172115
34.1	35.15	172116
35.15	36.2	172117
36.2	36.61	172118
36.61	37.6	172119
36.61	37.6	172120
37.6	38	172121
38	38.9	172122
38.9	39.61	172123
39.61	40.54	172124
40.54	41.22	172125
41.22	42	172126

42	43	172127
43	44	172128
44	45.5	172130
44	45.5	172129

**Hole ID:** TK20-019  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420715  
**UTM East:** 621910  
**Dip:** -50  
**Azimuth:** 68.8587

**Start Date:** 02-Dec-20  
**End Date:** 03-Dec-20  
**EOH Depth (m):** 77  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-019

**Date Logged:** 20-12-07

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	1.5	Overburden (Unsubdivided)	15	OB casing to 1.5m
1.5	9.1	Granite breccia	10acx	Cgr pinkish grey with common inclusions of Tonalite and mafic intrusive. Non magnetic and non mineralized.
9.1	14.28	Tonalite breccia	10aax	Cgr light grey to locally pinkish grey with common inclusions of small granite veinlets and mafic dikes. Unit noted by colour change and weak foliation at 55-65 deg tca. Trace sulfides as fgr stringer and associated with mafic.
14.28	25.06	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with common dikelets of pegmatitic material up to 15cm wide. Non mineralized, non magnetic and weak to locally moderate foliation running 60 deg tca. Notable change in FO from 14.28-16 and 21 to 23m where in both places it appears to flip. LC denoted by colour change, increase in inclusions and a localized loss of apparent FO.



25.06	28.65	Tonalite breccia; Foliated	10aax; FOL	Tonalitic to granitic breccia. Cgr pink grey to white grey with common inclusions of granitic blocks, and mafic. Could be called granitic breccia due to prevalence of granitic components. Weak to moderate FO within the tonalites at 65-75 deg TCA. Strong association of magnetics to massive sulfides. Stringers appear to be only weak to moderate magnetic while massive is strongly magnetic.
28.65	32.35	Mineralization	15a	Dark green grey to brassy. Fgr to mgr, well mineralized to massive sulfide. In areas of lesser sulfide mineralization as at the top of the unit ground mass is fgr with strong chi and bt alteration. 15-20% fgr stringer and diss Sulfides from 28.65-29.05 with notable inclusions of felsic material to 29.05, 29.05-30.35 is semi massive to massive sulfide of Py (30%), Po (35%) and Cpy (5%), from 36.35-end of unit is well mineralized stringers to semi massive sulfides of about 5-10% Py, 5-10% Po and 3-5% Cpy. Unit shows a weak foliation locally at 45-50 deg tca, most notable in areas with banding of the sulfides.
32.35	33.34	Tonalite breccia; Foliated	10aax; FOL	Cgr light grey with common inclusions of mafic fragments making up to 15% of core. Trace to 1% stringer sulfides decreasing down hole, and associated with fragments. Weak to mod FO at 65-70 deg TCA. UC is noted by a larger Qz vein laying under the mineralized zone. LC is noted by decrease in frequency and abundance of fragments/mafic dikes.
33.34	51.2	Tonalite; Foliated	10aa; FOL	Cgr light grey with moderate foliation at 70 deg TCA. Non mineralized and only weakly magnetic locally associated with vein associated stringers of sulfides as at 50.3m.
51.2	52.23	Late Mafic Dyke (Unsubdivided)	14d	fgr to mgr dark green grey. 2 late mafic dikes with minor Tonalite between the 2. Sharp contacts at 45-50 deg tca.
52.23	72	Tonalite; Foliated	10aa; FOL	Same as unit above the small mafic dikes. Notable minor Granitic bands from 63.77-64.35 and from 71.18 to EOH. Hole ended at 72m due to block error by drillers at 38m and burnt bit ( drillers thought they were at 77 but were at 71.

**Mineralization****Hole ID: TK20-019****Date Logged: 20-12-07****Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
25.06	28.65	Pyrite 3%; Pyrrhotite 1%	Py03; Po01	Associated with blocks
				well mineralized to massive sulfide. 15-20% fgr stringer and diss Sulfides from 28.65-29.05 with notable inclusions of felsic material to 29.05, 29.05-30.35 is semi massive to massive sulfide of Py(20%),Po(15%) Pt (7%)and Cpy(15%), from 36.35-end of unit is well mineralized stringers to semi massive sulfides of about 5-10% Py,5- 10% Po and 3-5% Cpy. Unit shows a weak foliation locally at 45-50 deg TCa, most notable in areas with banding of the sulfides.
28.65	32.35	Pentlandite 7%; Pyrite 20%; Pyrrhotite 15%; Chalcopyrite 15%	Pt07; Py20; Po15; Cp15	
32.35	33.34	Chalcopyrite 1%; Pyrite 1%	Cp01; Py1	stringers and diss along FO

**Sample Log****Hole ID: TK20-019****Date Logged: 20-12-07****Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
25.06	26.5	172131
26.5	27.6	172132
27.6	28	172133
28	28.65	172134
28.65	29.03	172135
29.03	29.52	172136
29.52	30.35	172137
30.35	31	172138
31	31.75	172140

31	31.75	172139
31.75	32.35	172141
32.35	32.92	172142
32.92	33.34	172143
33.34	34	172144
34	35.5	172145
35.5	37	172146

<b>Hole ID:</b>	TK20-020	<b>Datum/Projection:</b>	Nad 83 (Zone 16)
<b>Project:</b>	Tyko	<b>UTM North:</b>	5420670
<b>Claim/Patent #</b>	548180	<b>UTM East:</b>	621945
<b>Township:</b>	Shabotik	<b>Dip:</b>	-75
		<b>Azimuth:</b>	68.8587
<b>Start Date:</b>	03-Dec-20	<b>Drill Company:</b>	M3
<b>End Date:</b>	04-Dec-20	<b>Core Size:</b>	NQ
<b>EOH Depth (m):</b>	50	<b>Storage Location:</b>	Conmee
<b>Drill Comments:</b>			

### Main Lithology

Hole ID: TK20-020

Date Logged: 20-12-05

Geologist(s): K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.68	Overburden (Unsubdivided)	15	OB casing to 1.5m
0.68	23.5	Tonalite; Foliated	10aa; FOL	Cgr med grey with occasional mafic and felsic dikes, less than 50 cm. Common bands of darker matrix as near 12.75m Weak localized magnetics associated with fragments. Non mineralized. Larger VCG granitic/pegmatitic dike near 21.6-21.85m.
23.5	24.58	Tonalite breccia; Foliated	10aax; FOL	Same as above but with 15% fragments, slightly darker and trace Py stringer near 24m. Mod FO at 80 deg TCA.
24.58	25.04	Late Mafic Dyke (Unsubdivided); Equigranular	14d; EQUI	Dark grey fgr non foliated with weak to mod magnetics. 1-2% fgr diss and vein ass Py. LC noted by veins, Grainsize change and abundance of carbonate.

25.04	25.65	Lamprophyre Dyke (unsubdivided); Equigranular	14c; EQUI	Mgr dark grey to black with sharp UC and LC. Common mgr to cgr carbonate. non foliated, non magnetic
25.65	26.25	Ultramafic Metavolcanic Rocks (Unsubdivided); Foliated	1; FOL	60 cm block of UM within the mafic intrusive, next to Lamp dike. Unit is weakly foliated at 50-55 deg tca, with 2-3% diss to blebby Po and Py. LC is sharp and distinct, running against FO.
26.25	27.66	Late Mafic Dyke (Unsubdivided); Equigranular	14d; EQUI	Late Mafic dike. Non foliated, non to locally very weakly magnetic. Trace to 1% fgr diss and vein ass Py. LC is at 27.44, but included minor 10AA in lower 16 cm to avoid diluting lower sample.
27.66	28	Foliated; Mineralization	FOL; 15a	Fgr Black, semi massive to massive sulfides over 0.4m, weathered and very dark. Very dense, soft and weakly magnetic
28	29.4	Ultramafic Metavolcanic Rocks (Unsubdivided); Foliated	1; FOL	fgr dark green grey with strong chl, amp alter. Minor inclusion of 10AA near 29.10m. 3-5% fgr Diss Py Po as discrete stringers and blebs. Weak Fo 75-85 deg TCA. Weak localized magnetics.
29.4	32.08	Tonalite breccia	10aax	Fgr to Cgr med to dark grey with common mafic/ultramafic fragments making up to 40% of rock. This area appears to be strongly influenced by the upper and lower ultramafic units., containing common inclusions and variably foliation. 3% fgr stringer and block associated Py and Po. Weak magnetics associated with the UM blocks.

32.08	38.72	Ultramafic Metavolcanic Rocks (Unsubdivided)	1	Fgr dark blue grey with strong Chl, Bt and Talc alteration. overall, 5-10% fgr blebby, stringer and locally net textured sulfides. Areas of very very soft Rock are completely Talc and chl as at 37.25 seem to be weathered and devoid of sulfides. Minor inclusions and veins as at 34.10-34.2 and 36.97 to 37.20m.
38.72	46.05	Tonalite breccia; Foliated	10aax; FOL	Cgr med grey with common inclusions of UM and M fragments and dikes making up to 35-40% or rock (abundance decreasing between 41m) and 44m). Trace to locally 2% Fgr block and stringer Py and lesser Po and possible Cpy. Weak Fo at 75% tca. Small lamp dikes from 44-44.75 and is fgr, strongly altered and carbonate rich, it runs against FO and has broken UC and LC.
46.05	50	Tonalite; Foliated	10aa; FOL	Cgr light grey with minor incl of mafic fragments. Mod Fo at 75-80 deg TCA.

### Structure

Hole ID: TK20-020

Date Logged: 20-12-05

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
10.8	10.9	Folded 75°	FOLD	General weak to mod Fo	75

### Mineralization

Hole ID: TK20-020

Date Logged: 20-12-05

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
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27.66	28	Pentlandite 15%; Pyrite 20%; Pyrrhotite 15%; Chalcopyrite 10%	Pt15; Py20; Po15; Cp10	
28	29.4	Pyrite 3%; Pyrrhotite 1%	Py03; Po01	fgr dark green grey with strong chl, amp alter. Minor inclusion of 10AA near 29.10m. 3-5% fgr Diss Py Po as discrete stringers and blebs. Weak Fo 75-85 deg TCA. Weak localized magnetics.

**Sample Log**

**Hole ID: TK20-020**

**Date Logged: 20-12-05**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
22.5	23.5	172083
23.5	24.58	172084
24.58	25.04	172085
25.04	25.65	172086
25.65	26.25	172087
26.25	26.9	172088
26.9	27.6	172090
26.9	27.6	172089
27.6	28	172091
28	28.3	172092
28.3	28.77	172093
28.77	29.4	172094
29.4	29.8	172095
29.8	30.5	172096
30.5	31.5	172097
31.5	32.08	172098
32.08	32.85	172100
32.08	32.85	172099
32.85	33.55	172101

33.55	34.1	172102
34.1	35	172103
35	35.5	172104
35.5	36	172105
36	36.8	172106
36.8	37.21	172107
37.21	38	172108
38	38.72	172109
38	38.72	172110
38.72	39.2	172111
39.2	39.8	172112
39.8	41	172113
41	42.5	172114



**Hole ID:** TK20-021  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420765  
**UTM East:** 621850  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 04-Dec-20  
**End Date:** 04-Dec-20  
**EOH Depth (m):** 80  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-021

**Date Logged:** 20-12-07

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.64	Overburden (Unsubdivided)	15	OB casing to 1.5m
0.64	8.36	Tonalite; Foliated	10aa; FOL	Cgr light grey with rare minor mafic bands. Weak to mod FO at 70 deg TCA
8.36	14.55	Tonalite breccia; Foliated	10aax; FOL	Cgr light to med grey. Same as unit above but with 20-30% mafic dikes, clast and minor vcgr granitic diklets. Weak localized magnetics associated with the mafics. Unit is non mineralized. Weak to moderate localized Foliation at 70 deg TCA.
14.55	34.58	Granite breccia	10acx	Cgr to vcgr pinkish grey with up to 25% inclusions of mafic dikes, blocks and tonalite. Tonalite blocks show irregular FO. No major sulfides, weak magnetics associated with some mafic blocks. Notable pink red alteration in lower 2-3m of core.

34.58	47.76	Tonalite; Foliated	10aa; FOL	Cgr light grey to grey with moderate pervasive FO at 65-70 deg tca. Occasional mafic blocks and felsic dikes make up about 10% of unit (could locally be called 10AAX over units less than 2m. Trace block associated Py from 34.58-46m, from 46-47.55 there is maybe 1% sulfides as fgr stringers. Lower 15cm contains 5-10% stringer sulfides, but has notable felsic matrix, which is grading into a darker grey. LC is not well defined and masked by sulfide mineralization, and broken core.
47.76	48.95	Mineralization	15a	Dark grey/black to brassy, Ground mass is strongly altered and there are clear Qz nodules as at 48.15 and 48.35. Clear non mineralized fragment near 48.25. Unit is Stringer to semi massive Py (10-15%) Po (15-20%) and 2-3% Cpy from 47.76- 48.25, then becomes Semi massive to massive with 20-25% Py, 20% Po, 5-10% Pn and 10% Cpy from 48.25-48.95 (slight decrease in sulfides below 48.8 and increase in Chl and Bt)
48.95	80	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with mod FO at 65 deg TCA. Trace to 2% locally as fgr stringers. Sulfides most evident in upper 2.5m in notably darker bands, with increased Hb and Bt. VCG pegmatitic dikes become more abundant and lager from 58m-66m, along with minor late mafic dikes. Locally could be called a 10aax as between 59-62.5 where mafic blocks make up to 20% of core by length.

### Structure

Hole ID: TK20-021

Date Logged: 20-12-07

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
4.5	4.6	Foliated 70°	FOL	Gen FO	70
14.2	14.25	Foliated 70°	FOL	General	70
51.6	51.65	Foliated 65°	FOL	Gen FO	65

55.75	57.5	Foliated 45°	FOL	Change in Fo over 2m, returns to General FO below this point	45
58	58.1	Foliated 65°	FOL	General FO	65

### Mineralization

Hole ID: TK20-021

Date Logged: 20-12-07

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
47	47.76	Pyrite 3%; Pyrrhotite 1%	Py03; Po01	Associated with blocks
47.76	48.95	Pentlandite 10%; Pyrite 25%; Pyrrhotite 15%; Chalcopyrite 15%	Pt10; Py25; Po15; Cp10	semi massive to massive Sulfides avg
48.95	51	Pyrite 1%; Pyrrhotite 1%	Py01; Po01	Stringers and FO associated

### Sample Log

Hole ID: TK20-021

Date Logged: 20-12-07

Geologist(s): K. Pederson

From (m)	To (m)	Sample ID
43.8	44.88	172147
44.88	45.77	172148
45.77	46.75	172150
45.77	46.75	172149
46.75	47.35	172151
47.35	47.76	172152
47.76	48.25	172153
48.25	48.96	172154
48.96	49.6	172155
49.6	50.25	172156

50.25	51	172157
51	52	172158
52	52.5	172160
52	52.5	172159
52.5	54	172161

**Hole ID:** TK20-022  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420750  
**UTM East:** 621870  
**Dip:** -80  
**Azimuth:** 68.8587

**Start Date:** 04-Dec-20  
**End Date:** 05-Dec-20  
**EOH Depth (m):** 62  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

**Main Lithology**

**Hole ID:** TK20-022

**Date Logged:** 20-12-08

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.87	Overburden (Unsubdivided)	15	OB casing to 1.5m
0.87	9.53	Granite breccia	10acx	Cgr light pinkish to whiteish grey. Includes 30% mafic fragments/dikes, and common inclusions of the tonalite. No major sulfides, generally not magnetic except for blocks as near 2.5m, and 3.5-4m and at 7m, Blocks are generally more magnetic towards the inside of the mafics, and less magnetic towards their margins. LC is denoted by colour change and prevalence of FO.
9.53	15.47	Tonalite breccia; Foliated	10aax; FOL	Cgr light grey with moderate FO at 65-75 deg TCA. Common inclusions of variably magnetic blocks. Non mineralized. Blocks make up 20% of core overall.
15.47	25.83	Tonalite; Foliated	10aa; FOL	Cgr light grey with a notable decrease in abundance of mafic blocks. Magnetic mafic blocks are still evident but make up less then 15% of rock. Moderate FO at 60-65 deg tca as at 20m. Non mineralized except for trace to 1% Py locally associated with blocks and veins.

25.83	26.75	Felsic Dyke (Unsubdivided); Equigranular	14a; EQUI	Late felsic dike, non foliated equigranular sharp contacts.
26.75	34	Tonalite; Foliated	10aa; FOL	Cgr light to med grey SAA
34	46.79	Tonalite breccia; Foliated	10aax; FOL	Cgr med to light grey with moderate FO at 70 deg TCA. Common inclusions locally of mafic blocks and minor pegmatitic veins/dikes. Blocks make up 15-20% of core length locally but are locally absent over 3 m. Trace to 1% Py associated stringer and blocks of mafics/UM from 34-54, 45-46.79 2-3% fgr stringer Py Po Cpy increase as you approach LC. LC is broken core. Weak magnetics associated with blocks and stringers.
46.79	50.98	Mineralization	15a	Very dark grey to black groundmass, and brassy to bronzy sulfides. Very well mineralized massive to locally semi massive sulfides. Sulfides are typically 75% or more of rock. Where ground mass is evident it is dark grey black with strong chlorite near margins and less so towards the middle of the unit (Cooked?). 10-15% Po 25% Py 5-10% Pn and 5-10% Cpy overall. Sulfides do not show the flowing/foliated texture they had in other holes, and have more pristine looking inclusions of UM material as near 79m and 49.48.5-48.65m. Lower 30cm is very chlorite rich and very soft/broken core (faulted?).
50.98	56	Tonalite breccia; Foliated	10aax; FOL	Cgr to med grey with common inclusions of mafic dikes and blocks. 1-3% fgr stringer sulfides in upper 65 cm, going to trace to 1% below that. Mafic dikes and blocks make up to 15-20% of rock by length. Weak magnetics associated with mafic and stringers of sulfides. weak variable foliation at 55-70 deg tca.

**Structure**

**Hole ID: TK20-022**

**Date Logged: 20-12-08**

**Geologist(s): K. Pederson**

From (m)	To (m)	Title	Summary	Description	Angle
12.9	13	Foliated 70°	FOL	General FO	70
19.8	19.9	Foliated 65°	FOL	General	65

### Mineralization

**Hole ID: TK20-022**

**Date Logged: 20-12-08**

**Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
45	46.79	Chalcopyrite 1%; Pyrite 1%; Pyrrhotite 1%	Cp01Py01; Po01	Diss and stringers at LC
46.79	50.98	Chalcopyrite 10%; Pyrite 25%; Pyrrhotite 15%; Pentlandite 10%	Cp10; Py25; Po15; Pt10	Massive Sulfides
50.98	51.6	Chalcopyrite 1%; Pyrite 1%; Pyrrhotite 1%	Cp01; Py01; Po01	Stringers associated with UC

### Sample Log

**Hole ID: TK20-022**

**Date Logged: 20-12-08**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
41	42.55	172162
42.55	44	172163
44	45	172164
45	46.2	172165
46.2	46.79	172166
46.79	47.23	172167
47.23	48	172168
48	48.53	172170

48	48.53	172169
48.53	49.2	172171
49.2	50.07	172172
50.07	50.59	172173
50.59	50.98	172174
50.98	51.61	172175
51.61	52.18	172176
52.18	53	172177
53	54.4	172178
54.4	56	172180
54.4	56	172179



<b>Hole ID:</b>	TK20-023	<b>Datum/Projection:</b>	Nad 83 (Zone 16)
<b>Project:</b>	Tyko	<b>UTM North:</b>	5420729
<b>Claim/Patent #</b>	548180	<b>UTM East:</b>	621949
<b>Township:</b>	Shabotik	<b>Dip:</b>	-85
		<b>Azimuth:</b>	268.8587
<b>Start Date:</b>	05-Dec-20	<b>Drill Company:</b>	M3
<b>End Date:</b>	05-Dec-20	<b>Core Size:</b>	NQ
<b>EOH Depth (m):</b>	47	<b>Storage Location:</b>	Conmee
<b>Drill Comments:</b>			

### Main Lithology

Hole ID: TK20-023

Date Logged: 20-12-08

Geologist(s): K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	1	Overburden (Unsubdivided)	15	OB casing to 1.5m
1	5.3	Foliated; Tonalite breccia	FOL; 10aax	Cgr light to med grey with weak to mod FO at 45-60 deg TCA. Common inclusions of mafic and UM making up to 15% of the rock. Common sub m granitic inclusions as at 3m. There is also a Qz vein running along core axis from 4.8-5.0m. with 2-4% sulfides associated with vein from 4m to 5.3m.
5.3	5.71	Hornblendite	8a	Dark blue grey with weak FO at 45 deg TCA. 3-5% fgr stringer to diss along FO sulfides. Weakly magnetic in areas of increase sulfides.
5.71	6.4	Hornblendite Breccia; Veins (Unsubdivided); Mineralization	8ac; 12; 15a	Well mineralized Hornblendite blitzed by a Qz/Qz carb veins. Well mineralized with 5-10% fgr Py and Po. Moderately

					magnetic and veins running 40-45 deg TCA.
6.4	6.75	Mineralization		15a	Massive sulfides associated with vein near LC. 40% Py 30% Po 5% Pn and 5-10% Cpy. LC is noted by small vein and drop in sulfides.
6.75	7.21	Mineralized hornblendite		7hm	Fgr dark blue grey with 10% diss to stringer sulfides from 6.75-7.10 m, Massive Py Po from 7.1-7.21m. Possible fault zone as all fracture faces have gauge.
7.21	8.58	Veins (Unsubdivided)		12	Bold white qz vein with 2-3% Py inside the min envelope. May rep vein seen at the base of min in other holes.
8.58	8.92	Magnetic; Mineralized hornblendite		MAG; 7hm	fgr dark blue black with 10% fgr diss Py Po and possible Cpy as blebs or stingers along FO. Mod FO at 40-45 deg TCA.
8.92	12.75	Massive magmatic sulphide; Magnetic		8d; MAG	Brassy, fgr to cgr with 80-90% sulfides composed of Py Po Pn Cpy and possible Millerite at 10m. This unit is strongly magnetic and lacks the flow textures seen in sulfides above. LC is denoted by a Bx zone with veins. Notable barren zone 10.47-10.65m.
12.75	27	Tonalite breccia; Foliated		10aax; FOL	Cgr light to med grey with common inclusions of UM and mafic blocks (more UM in upper 2m). Weakly magnetic locally, associated with the blocks. 2-3% sulfides in upper 1m associate with stringers and blocks. Moderate FO at 40-50 deg TCA. Common 3-45cm wide mafic dikes, and rarer pink Vcg pegmatitic intrusions.

27	39	Tonalite	10aa	Cgr light grey with rare cm scale mafic dikes, or blocks, non mineralized and moderate foliation at 40-45 deg tca. Common pegmatitic granitic dikes up to 30 cm as at 32.5 and 35m, 37.2m and 37.34m. occasional mafic dikes up to 30cm. Weak magnetics associated with smaller mafic blocks
39	39.53	Late Mafic Dyke (Unsubdivided)	14d	LMD sharp UC and LC at 50 and 60 deg tca.
39.53	47	Tonalite	10aa	Same as above the minor mafic dike.

### Structure

Hole ID: TK20-023

Date Logged: 20-12-08

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
6.75	7.1	Fault; Fault 45°	FLT; FLT	Fault area	45

### Mineralization

Hole ID: TK20-023

Date Logged: 20-12-08

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
4	5.3	Chalcopyrite 2%; Pyrite 2%	Cp02; Py02	Contact associated stringers
5.3	5.71	Chalcopyrite 3%; Pyrite 2%; Pyrrhotite 2%	Cp03; Py02; Po02	Stringers and diss along FO
5.71	6.4	Chalcopyrite 2%; Pyrite 5%; Pyrrhotite 5%	Cp02; Py05; Po05	UM and vein associated

6.4	6.75	Chalcopyrite 8%; Pyrite 40%; Pyrrhotite 30%; Pentlandite 10%	Cp08; Py40; Po30; Pt08	Massive Sulfides
6.75	7.21	Chalcopyrite 2%; Pyrite 4%; Pyrrhotite 4%; Pentlandite 2%	Cp02; Py04; Po04; Pt02	Faulted and remobilized
7.21	8.58	Pyrite 3%	Py03	Vn associated
8.58	8.92	Chalcopyrite 2%; Pyrite 5%; Pyrrhotite 5%; Pentlandite 2%	Cp02; Py05; Po05; Pt02	Mineralized UM stringers and diss along FO
8.92	12.75	Chalcopyrite 15%; Pyrite 20%; Pyrrhotite 30%; Pentlandite 15%	Cp15; Py20; Po30; Pt15	Massive Sulfides

**Sample Log**

**Hole ID: TK20-023**

**Date Logged: 20-12-08**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
3	3.1	172181
3.1	4.1	172182
4.1	4.9	172183
4.9	5.3	172184
5.3	5.71	172185
5.71	6.4	172186
6.4	6.75	172187
6.75	7.21	172188
7.21	8.58	172189
7.21	8.58	172190
8.58	8.92	172191
8.92	9.53	172192
9.53	10	172193
10	10.47	172194
10.47	10.8	172195
10.8	11.3	172196

11.3	11.8	172197
11.8	12.3	172198
12.3	12.75	172199
12.3	12.75	172200
12.75	13.61	172201
13.61	14.5	172202
14.5	15.6	172203
15.6	17	172204

**Hole ID:** TK20-024  
**Project:** Tyko  
**Claim/Patent #** 548180, 548188  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420834  
**UTM East:** 621730  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 05-Dec-20  
**End Date:** 08-Dec-20  
**EOH Depth (m):** 202  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-024

**Date Logged:** 20-12-09

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	1	Overburden (Unsubdivided)	15	OB casing to 1.5m
1	5.8	Tonalite; Tonalite breccia; Foliated	10aa; 10aax; FOL	Cgr light grey to grey. Locally foliated at 60 deg tca. Includes 10-15% mafic blocks and dikes, as well as 15-20% granitic sections. Non mineralized and weak magnetics associated with the mafic dikes and inclusions.
5.8	6.95	Granite	10ac	Cgr pink granite to granodiorite. Lacks foliation of unit above.

6.95	19.15	Granite breccia	10acx	Cgr whiteish to pinkish grey. Common inclusions of mafics (10-15%) tonalite (15-20%) as well as clear late mafic dikes. Possible block of seds material near 14.5m, which is very silicified. Weak magnetics associated with the (typically) smaller blocks as at 17.75m, Unit locally shows a foliation within the tonalites at 40-60 deg tca (irregular). Non mineralized and non magnetic except as described above.
19.15	34.48	Tonalite	10aa	Cgr light grey, with rare inclusions of mafics as a 25m. Moderate foliation at 65-75 deg tca, but is irregular near blocks. Non mineralized and not magnetic except near mafic inclusions and dikes.
34.48	38.45	Granite; Equigranular	10ac; EQUI	Cgr pinkish grey equigranular. Lacks the strong potassic alteration seen with other later felsic intrusives. Sharp UC and LCA at 80 and 45 deg tca respectively. Not foliated
38.45	40.75	Granite breccia; Equigranular	10acx; EQUI	Mix of tonalite and small granitic dikes. Sitting between 2 larger granitic dikes.

40.75	42.66	Granite; Equigranular	10ac; EQUI	SAA
42.66	46.75	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with 2 small mafic blocks making up 5-10% of core. Non mineralized, non foliated and moderate FO at 70-75 deg TCA.
46.75	49.42	Late Mafic Dyke (Unsubdivided); Equigranular	14d; EQUI	Dark grey to black late mafic dike Sharp UC and LC at 45-50 deg tca, running against general FO. Non mineralized and weakly to moderately magnetic. LAMP?
49.42	61.95	Tonalite	10aa	Cgr light to med grey with minor inclusions of mafics and rare granitic dikes less than 30cm. Moderate pervasive FO at 75 deg TCA, except near 51- 54m where it appears, we have drilled a fold as the FO flips then returns to normal. Non mineralized and only weak magnetics associated with the mafic fragments/dikes.
61.95	70	Tonalite breccia; Foliated	10aax; FOL	Cgr, light grey with common inclusions of mafic dikes and blocks. Moderate FO at 65-70 deg TCA, non mineralized and weakly magnetic locally, associated with blocks of mafics.



70	71.02	Hornblendite	8a	fgr to mgr Dark blue grey mafic. weakly magnetic, non mineralized and sharp contacts at 80 deg tca. recrystallized hornblende.
71.02	79.45	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with rare inclusions of mafic blocks. Moderate to stronger pervasive FO at 60-65 deg TCA. Non mineralized and non magnetic except for near blocks. LC is along FO and noted by increase in bands of blocky mafics.
79.45	82	Tonalite breccia; Foliated	10aax; FOL	Same as above but with a noticeable increase in % of mafic bands. Mafic bands make up to 20% of core and are notably smaller in width then in other sections. Blocks appear to be typically less then 15cm along core axis.
82	103.7	Tonalite breccia; Foliated	10aax; FOL	Background is same as unit above however the blocks have become less numerous but larger. Mafics make up 20% of rock but are notably larger in the 20-50cm range. LC has a notable loss of fragments below 103.70m.

103.7	107	Tonalite	10aa	cgr light grey to pinkish grey. foliated with strong reddish staining. Trace to 1% stringer sulfides associated with mafic bands. Lacks the blocks of unit above but seems to have a darker colour and more mafic bands and strings (coming from unit below?) Weak localized magnetics and weak foliation at 65 deg TCA.
107	109	Tonalite breccia; Mineralization	10aax; 15a	Cgr light to med grey with 30-40% inclusions of UM clasts. 3-5% Py Po stringer in tonalite and blebs and stingers in mafics, locally concentrated around the blocks. Moderate magnetics, and variable foliation at 50-65 deg TCA.
109	109.58	Mineralization; Foliated	15a; FOL	Fgr, dark black/bronzy massive Po. 70-80% fgr magnetic sulfides, 5% Py, 70-75%Po, some Cpy. Unit is very dark and looks remobilized.
109.58	109.94	Fault zone (gouge, lost core); Hornblendite Breccia; Mineralization	11c; 8ac; 15a	Fault zone at base of massive sulfides Not this unit is veined, brecciated hornblendite with 10-15% fgr Po as fgr bands and vein

					associated. LC is noted by loss of veining and more competent rock.
109.94	111.5	Tonalite; Foliated		10aa; FOL	Cgr light grey to white with 1-2% fgr stringer sulfides, more abundant near UC. Mod to strong FO at 70deg TCA. LC is sharp at 45 deg TCA.
111.5	114.35	Granite		10ac	Cgr pinkish grey. non mineralized and not magnetic.
114.35	125.26	Tonalite; Tonalite breccia; Foliated		10aa; 10aax; FOL	Cgr white to light grey with mod FO at 65 deg TCA. Common mafic blocks of irregular shape make up 5-10% of core from UC to 120m, blocks are variably magnetic otherwise non magnetic and non mineralized.
125.26	125.85	Granite		10ac	Cgr Pinkish grey, equigranular non foliated, non magnetic and non mineralized.
125.85	126.53	Tonalite breccia; Foliated		10aax; FOL	Light grey Tonalite to tonalite Bx, inclusions of mafics, qz veins and small granitic dikelets. Mod Fo at 79 deg TCA,
126.53	127.7	Mafic Metavolcanic Rocks (Unsubdivided)		2	Dark blue grey altered mafic block. Non mineralized and weakly magnetic.

127.7	160.78	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with mod FO at 65-70 deg tca. Occasional mafic blocks make up less then 10% of core. Non mineralized and non magnetic. Rare 20-50 cm cgr granitic dikes as at 143.8 and 157.75. Note that FO appears to bend around 10-AC dike at 157.75 and contacts on the minor unit run opposite directions. Tonalite has deformed around the granitic rock (this may help explains other random foliations observed in other holes.) Occasional vcgr pegmatitic dikes become evident below 154.5m and are typically 5-20 cm in length.
160.78	163.85	Granodiorite; Equigranular	10ab; EQUI	Cgr light to med grey with no apparent foliation or mineralization and not magnetic. Lacks the pink k spar of the granites above.

163.85	194	Tonalite breccia; Foliated	10aax; FOL	<p>Cgr to mgr light grey with distinct blue mafic bands making up 30-40% of the core. Common 5-15cm qz veins are rare pegmatitic dikelets. Strong pink/red potassic alteration from 169-173m, reacts very strongly to HCl (Strongest alteration from 171-173m). Blocks are randomly oriented and are variably magnetic. Trace Po locally as fgr diss within the blocks. Qz veins are notably devoid of sulfides. Note there are several larger non mineralized blocks of Mafic/UM as between 179-180m. These larger blocks are weakly magnetic. Strong veining from 181-185, in area of increase prevalence of blocks. veins make up 25% of rock in this area and blocks make up 30%.</p>
194	200	Tonalite; Foliated	10aa; FOL	<p>Cgr white with minor bands of mafics, this rock is strongly foliated at 45-50 deg TCA. Non mineralized, non magnetic. Rock has more gneissic banding then block textures observed up hole and elsewhere.</p>

**Mineralization****Hole ID: TK20-024****Date Logged: 20-12-09****Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
107	109	Chalcopyrite 1%; Pyrite 2%; Pyrrhotite 3%	Cp01; Py02; Po03	Stringers and diss along FO associated with contact
109	109.58	Chalcopyrite 5%; Pyrite 5%; Pyrrhotite 70%	Cp05; Py5; Po70	Massive Sulfides
109.58	109.94	Chalcopyrite 1%; Pyrite 3%; Pyrrhotite 10%; Pentlandite 4%	Cp01; Py03; Po10; Pt0`4	Faulted and remobilized
109.94	111.5	Pyrite 1%; Pyrrhotite 1%	Py01; Po01	Stringers and FC near UC

**Sample Log****Hole ID: TK20-024****Date Logged: 20-12-09****Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
103	103.7	172205
103.7	104.5	172206
104.5	106	172207
106	107	172208
107	197.72	172210
107	107.72	172209
107.72	108.4	172211
108.4	109	172212
109	109.58	172213
109.58	109.94	172214
109.94	110.5	172215
110.5	111.5	172216
111.5	113	172217

113	114.35	172218
114.35	115.4	172220
114.35	115.4	172219

**Hole ID:** TK20-025  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420738  
**UTM East:** 621902  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 08-Dec-20  
**End Date:** 08-Dec-20  
**EOH Depth (m):** 62  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-025

**Date Logged:** 20-12-11

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	0.98	Overburden (Unsubdivided)	15	OB
0.98	2.3	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with weak FO at 70-75 deg TC. Includes a minor mafic dike. Non mineralized and non magnetic.
2.3	4.56	Tonalite breccia; Foliated	10aax; FOL	Cgr grey to light grey, 3-4 large blocks of felsic to mafic composition making up over 550% of rock. Non mineralized and Non magnetic except for first block near 2.3m. Block near 3m looks more like a dike with sharp parallel contacts at 40-45 deg tca.



4.56	23.34	Tonalite; Foliated	10aa; FOL	Cgr light grey to locally light pinkish grey with weak to moderate FO at 60-65 deg TCA. Rare inclusions of mafics make up less than 10% of rock by length. Rare pink pegmatitic veins give the pink colour locally. Non magnetic and non mineralized.
23.34	26.9	Tonalite breccia; Foliated	10aax; FOL	Cgr light grey with 15% mafic and seds fragments. Moderate Fo at 65 deg TCA. Non mineralized and non magnetic. Notable increase in dark Hb bands. LC noted by loss of fragments.
26.9	35.4	Tonalite; Foliated	10aa; FOL	Cgr light to med grey with rare inclusions of Mafic clasts. Non mineralized and non magnetic. Mod FO at 65-70 deg TCA. LC noted by increase in % sulfides and blocks.
35.4	36.59	Tonalite breccia; Foliated	10aax; FOL	Cgr to mgr light grey to blue grey. Tonalite Bx to Hornblendite Bx where Um blocks become more prominent towards LC. Tonalite shows a weak FO at 70-75 deg TCA. 3% fgr stringer and block associated sulfides (Py Po Cpy), increase towards LC.

36.59	38.78	Mineralization; Massive magmatic sulphide	15a; 8d	<p>Mineralized zone of massive to locally semi massive sulfides. Notable qz vein from 36.7-36.9 is late and bold. 65-100% sulfide Common radiating circular masses within the sulfide are probably pentlandite and notably less magnetic than surrounding sulfides. (see near 37-37.4m), Unit is 60-80% Po and Py with and 5% Cpy and these circular Pentlandite eyes making up another 10-15% (locally up to 20%). Notably Pn eyes are less magnetic than background sulfides and Cpy appears more evident in the sulfides that show remobilization as above the vein at 36.7 and below 38.5m LC is noted by the vein and the fault below it.</p>
38.78	39.2	Veins (Unsubdivided); Fault zone (gouge, lost core); Mineralization	12; 11c; 15a	<p>This 50cm section is 30cm of vein above dark grey/black altered massive sulfides Faulted/ gouge materia from 39.08-39.2m. This unit represents the fault at the base of the massive sulfides as observed in other holes. LC is noted by loss of sulfides and decrease in veining. Sulfides are weathered to a dark black and are moderately to strongly magnetic,</p>

39.2	40.48	Mineralized hornblendite; Mineralized hornblendite	7hm; 7hm	Fgr to mgr dark blue grey with 3% fgr diss bleb and vein associated Py and Po, Unit is variably veined and end at the bottom of box 9.
40.48	51.26	Tonalite breccia; Foliated	10aax; FOL	Cgr light grey with several mafic and Um blocks with weak mineralization. Tonalite is weak to moderately foliated at 56-75 deg TCA. 1% overall Py Po with up to 3-4% within blocks. Weak magnetics associated with blocks and darker bands (melted blocks?). LC is denoted by decrease in abundance of blocks/mafic fragments.
51.26	62	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with rare mafic fragments and occasional pink Vcgr pegmatitic dikes/veins below 59m to EOH. Weak to mod Fo at 60-65 deg tca. Non mineralized and non magnetic.

### Mineralization

Hole ID: TK20-025

Date Logged: 20-12-11

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
36.59	38.78	Chalcopyrite 10%; Pyrite 15%; Pyrrhotite 20%; Pentlandite 15%	Cp10; Py15; Po20; Pt15	Massive Sulfides with a notable bold vein
38.78	39.2	Chalcopyrite 1%; Pyrite 2%; Pyrrhotite 1%	Cp01; Py02; Po1	Vein
39.2	40.48	Chalcopyrite 0.5%; Pyrite 1%; Pyrrhotite 1%	Cp0.5; Py01; Po01	blebs and diss

40.48	42	Pyrite 1%; Pyrrhotite 1%	Py01; Po01	Contact associated stringers
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**Sample Log**

**Hole ID: TK20-025**

**Date Logged: 20-12-11**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
30.5	32	172221
32	33.4	172222
33.4	34.4	172223
34.4	35.4	172224
35.4	36	172225
36	36.59	172226
36.59	36.9	172227
36.9	37.2	172228
37.2	37.8	172229
37.2	37.8	172230
37.8	38.27	172231
38.27	38.78	172232
38.78	39.2	172233
39.2	39.77	172234
39.77	40.48	172235
40.48	41.4	172236
41.4	42.35	172237
42.35	43.3	172238
43.3	44.17	172239
43.3	44.17	172240
44.17	44.75	172241
44.75	46	172242
46	47.5	172243

**Hole ID:** TK20-026  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420706  
**UTM East:** 621886  
**Dip:** -75  
**Azimuth:** 68.8587

**Start Date:** 08-Dec-20  
**End Date:** 09-Dec-20  
**EOH Depth (m):** 62  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-026

**Date Logged:** 20-12-12

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
1.14	19.61	Tonalite breccia	10aax	Cgr light grey to pinkish grey with common mafic and seds blocks up to 80cm, making up 15-20% of core by length. Minor 10small granitic dikes and mafics that look more dike like then blocky. Non mineralized, non magnetic and weak to locally moderate FO at 765 deg TCA as at 18.75m.
19.61	21	Granite	10ac	Cgr pinkish grey, equigranular. Non mineralized, no foliated and non magnetic. Unit contains 15cm mafic dike at base.
21	27.5	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with moderate FO at 65 deg TCA. Non magnetic, non mineralized and includes minor granitic pegmatitic dikes up to 30 cm long as at 22.55 and 25.3m. Rare mafic dikes or small blocks makeup up to 10% of core locally and show weak magnetics along margins.

27.5	49.47	Tonalite breccia; Granite breccia; Foliated	10aax; 10acx; FOL	Cgr light grey to pinkish grey. Tonalite makes up 50-60% of rock by length, granites 10-15% and mafic blocks and qz veins 20-25%. Common Small granitic dikes up to 2m, and mafic blocks and dikes make up 25% of rock. Variably non magnetic to weakly magnetic associated with the edges of some of the mafic blocks. Trace to 1% sulfides associated with the blocks.
49.47	56.53	Mineralized hornblendite	7hm	Dark blue grey with 5-10% fgr diss and vein associated sulfide. Locally up to 15-20% near veins. Unit is weakly to locally moderately magnetic. Notable increase in sulfides from 56 to end of unit. Note that there is clear movement along fractures below 54m
56.53	69.22	Foliated; Tonalite breccia	FOL; 10aax	Cgr med grey tonalite with significant granite and mafic blocks. Could go granite bx with tonalite or tonalite bx with granite. Trace to 2% localized sulfides as stringers and diss associated with the mafic and UM blocks to 60m. Weak FO is irregular at 50-75 deg TCA. Non to locally weakly magnetic and non mineralized except as noted above. LC is a lamp running at 20 deg TCA.
69.22	70	Lamprophyre Dyke (unsubdivided)	14c	fgr dark grey with strong gauge from 69.7 to end of unit. End of unit is in gauge and broken core and 70m mark is used as an estimate.
70	71	Granite	10ac	Cgr light pinkish grey, equigranular, non foliated non mineralized and non magnetic except at UC

**Structure**

**Hole ID: TK20-026**

**Date Logged: 20-12-12**

**Geologist(s): K. Pederson**

From (m)	To (m)	Title	Summary	Description	Angle
54	56.53	Fault Gouge	FLTG	Fault guage along fractures , adn increased veing.	
69.1	70.16	Fault Gouge	FLTG	Fault gauge filled with strongly magnetic mafic material	

### Mineralization

Hole ID: TK20-026

Date Logged: 20-12-12

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
27.5	49.47	Pyrite 1%; Pyrrhotite 1%	Py01; Po01	block and contact associated
49.47	56.53	Chalcopyrite 1%; Pyrite 2%; Pyrrhotite 3%	Cp01; Py02; Po3	stringer, blebs and vein associated
56.53	69.22	Chalcopyrite 0.5%; Pyrite 1%; Pyrrhotite 1%	Cp0.5; Py01; Po01	Contact and block associated

### Sample Log

Hole ID: TK20-026

Date Logged: 20-12-12

Geologist(s): K. Pederson

From (m)	To (m)	Sample ID
41	42.5	172244
42.5	44.1	172245
44.1	44.8	172246
44.8	45.8	172247
45.8	46.81	172248
46.81	47.6	172249
46.81	47.6	172250

47.6	48.55	173001
48.55	49.47	173002
49.47	50.47	173003
50.47	51.37	173004
51.37	52.68	173005
52.68	53.32	173006
53.32	54.38	173007
54.38	54.8	173008
54.8	55.58	173009
54.8	55.58	173010
55.58	56.1	173011
56.1	56.53	173012
56.53	57	173013
57	58	173014
58	58.35	173015
58.35	59	173016
59	59.43	173017
59.43	60.45	173018
60.45	62	173020
60.45	62	173019
62	63.43	173021



**Hole ID:** TK20-027  
**Project:** Tyko  
**Claim/Patent #** 548180  
**Township:** Shabotik

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420700  
**UTM East:** 621950  
**Dip:** -85  
**Azimuth:** 268.8587

**Start Date:** 10-Dec-20  
**End Date:** 10-Dec-20  
**EOH Depth (m):** 50  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-027

**Date Logged:** 20-12-12

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	1.5	Overburden (Unsubdivided)	15	OB casing to 1.5m
1.5	13.03	Tonalite breccia	10aax	Cgr light grey to pinkish grey Tonalite Bx to Granitic bx. 15-20% mafic and UM blocks, and 20% non to weakly foliated granitic intrusions. Blocks are variably magnetic and contain up to 2% diss and contact associated sulfides. Moderate FO locally within the tonalite is 60-70 deg TCA.
13.03	17.08	Mineralized hornblendite	7hm	Dark blue grey with 5% fgr diss and stringer sulfides, locally up to 10% over 20cm in area with more stringers and veins.
17.08	18.79	Granite	10ac	Vcgr whitish pink granite. Notably vcgr and non mineralized.
18.79	21.68	Mineralized hornblendite	7hm	Same as above. slightly more sulfides, maybe 10% overall.

21.68	24.85	Tonalite; Foliated	10aa; FOL	Cgr light grey with mod FO at 70 deg TCA. Non mineralized, non magnetic.
24.85	28.6	Tonalite breccia; Mineralization; Foliated	10aax; 15a; FOL	Sane as above but with blocks of UM material containing 5% stringer and 15% block associated semi massive sulfides. Unit is denoted by sulfides and blocks, otherwise same as above and below.
28.6	29.45	Hornblendite	8a	fgr to mgr dark blue grey with 3-5% fgr diss Py and Po in bands along a weak FO at 50-5 deg TCA. Weakly magnetic locally.
29.45	31.72	Tonalite breccia	10aax	Cgr light grey with 20% mineralized UM blocks. Tonalite is rather dead but UM blocks contain 3-5% fgr diss to stringer Po and Py. Blocks are weakly magnetic. Tonalite shows a moderate FO at about 60 deg TCA.
31.72	50	Tonalite; Foliated	10aa; FOL	Cgr white to light grey with rare inclusions of UM material less than 20 cm as at 40m, and small granitic dikes as near 44m. Non mineralized and non magnetic. Unit is well foliated at 45-60 deg TCA.

### Structure

Hole ID: TK20-027

Date Logged: 20-12-12

Geologist(s): K. Pederson

From (m)	To (m)	Title	Summary	Description	Angle
20.5	21.68	Fault Gouge	FLTG	Increased sulfides in areas with fault gouge and slip plains on core. Gauge is prominent from 20.5-20.6 and 21.6-21.68.	

### Mineralization

Hole ID: TK20-027

Date Logged: 20-12-12

Geologist(s): K. Pederson

From (m)	To (m)	Title	Code	Description
13.03	17.08	Chalcopyrite 5%; Pyrite 40%; Pyrrhotite 40%; Pentlandite 4%	Cp02; Py04; Po05	Diss and stringers
18.79	21.68	Chalcopyrite 5%; Pyrite 40%; Pyrrhotite 40%; Pentlandite 4%	Cp02; Py05; Po05	Diss and stringers
28.6	29.45	Pyrite 2%; Pyrrhotite 3%	Py02; Po03	Associated with the blocks

**Sample Log**

Hole ID: TK20-027

Date Logged: 20-12-12

Geologist(s): K. Pederson

From (m)	To (m)	Sample ID
6.85	7.18	173022
7.18	8.65	173023
8.65	9	173024
9	9.65	173025
10	10.3	173026
10.3	11.2	173027
11.2	11.7	173028
11.7	12.3	173029
11.7	12.3	173030
12.3	13.03	173031
13.03	14	173032
14	14.7	173033
14.7	15.35	173034
15.35	15.8	173035
15.8	16.7	173036

16.7	17.08	173037
17.08	18	173038
18	18.79	173039
18	18.79	173040
18.79	19.25	173041
19.25	19.9	173042
19.9	20.6	173043
20.6	21.28	173044
21.28	21.68	173045
21.68	22.2	173046
22.2	23.2	173047
23.2	24.2	173048
24.2	24.85	173049
24.2	24.85	173050
24.85	25.51	173051
25.51	25.9	173052
25.9	26.9	173053
26.9	28	173054
28	28.58	173055
28.58	29.45	173056
29.45	30.67	173057
30.67	31.72	173058
31.72	32.7	173059
31.72	32.7	173060
32.7	34.2	173061
34.2	35.7	173062

**Hole ID:** TK20-028  
**Project:** Tyko  
**Claim/Patent #** 566846  
**Township:** Welsh

**Datum/Projection:** Nad 83 (Zone 16)  
**UTM North:** 5420700  
**UTM East:** 621950  
**Dip:** -75  
**Azimuth:** 268.8587

**Start Date:** 11-Dec-20  
**End Date:** 14-Dec-20  
**EOH Depth (m):** 102  
**Drill Comments:**

**Drill Company:** M3  
**Core Size:** NQ  
**Storage Location:** Conmee

### Main Lithology

**Hole ID:** TK20-028

**Date Logged:** 20-12-15

**Geologist(s):** K. Pederson

From (m)	To (m)	Lithology	Code	Description
0	11.7	Overburden (Unsubdivided)	15	OB
11.7	19.68	Tonalite breccia; Foliated	10aax; FOL	Cgr light to med grey with common inclusions of mafic and UM blocks making up to 35% of core near Lower contact. Unit is non magnetic except for mafic blocks where are weakly magnetic, non mineralized with weak to moderate localized foliation at 55-60 degrees TCA.
19.68	22	Hornblendite Breccia	8ac	dark grey to blue grey with significant veining and inclusions of odd biotite rich bands (seds?). 1-2% fgr diss and vein associated sulfides.
22	31.85	Biotite-rich Hornblendite (>10%)	8ab	fgr to mgr blue grey to dark blue grey with significant Bt. Unit contains variable 2% sulfides. Weakly veined, no carbonate. Relic gabbroic textures 228-29m.

31.85	35	Fault zone (gouge, lost core)	11c	Fault zone significant lost core and a mix of hornblendite, mafic intrusive and felsic dike material. Broken core, slip plains at 40 deg tca and gauge abundant near 35m at 55-60 deg TCA.
35	36.04	Granite	10ac	Cgr to vcgr light pink granitic intrusion. Non foliated and no mineralized.
36.04	38	Biotite-rich Hornblendite (>10%)	8ab	Dark grey fgr biotite hornblendite. 2% fgr diss Py and Po to 38m. Unit is very soapy and contains significant silvery fibrous minerals (serpentine?)
38	42.06	Hornblendite	8a	Dark blue grey fgr to mgr with strong pervasive silica. Weak banding and strongly magnetic. Barren of sulfides. Much more competent than other blocks and may be due to pervasive silica.
42.06	46.13	Granite breccia	10acx	Cgr light pink to pink. Mafic and UM blocks make up 30% of rock by length. Granite is nonfloated, non mineralized and non magnetic. Blocks at 44-46 contain up to 5% sulfides as fgr diss and vein associated. LC is denoted by drop of fragments.
46.13	53.35	Granite	10ac	Cgr non foliated nonmineralized pink granite.
53.35	58.68	Granite breccia	10acx	Same as unit above but includes up to 20% blocks of mafic material. no mineralized, weakly magnetic and non foliated.
58.68	63.8	Late Mafic Dyke (Unsubdivided); Amphibolite	14d; 7c	fgr blue grey late mafic dike with weak carbonate alter. Could be a large rafted block as the unit above and below are more gratic Bx then granites, and to contacts are veined. Unit is mafic vs ultra mafic.
63.8	73	Granite breccia	10acx	cgr light grey to pinkish grey. Mafic and UM components make up 10-15% pf core and inclusions of foliated Tonalite are common. Non mineralized and non magnetic. Drillers dopped box 14 and lost the core from 70.60 to 71.30m

73	101	Tonalite; Granodiorite	10aa; 10ab	Cgr white to light grey with common bands of granite to granodiorite, rare vcgr dikes and pegmatitic veins and rare mafic blocks. Non mineralized, non magnetic and moderate foliation at 70-80 degrees TCA. Common qz veins.
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**Mineralization**

**Hole ID: TK20-028**

**Date Logged: 20-12-15**

**Geologist(s): K. Pederson**

From (m)	To (m)	Title	Code	Description
19.68	22	Pyrrhotite 1%; Pyrite 2%	Po01; Py02	Diss
22	31.85	Pyrite 2%; Pyrrhotite 1%	Py02; Po01	diss and vein associated
36.04	38	Chalcopyrite 0.5%; Pyrite 2%; Pyrrhotite 2%	Cp0.5; Py02; Po02	Diss and blebs

**Sample Log**

**Hole ID: TK20-028**

**Date Logged: 20-12-15**

**Geologist(s): K. Pederson**

From (m)	To (m)	Sample ID
19.68	21	173063
21	22	173064
22	23.5	173065
23.5	25	173066
25	25.5	173067
25.5	27	173068
42.08	42.6	173070
42.08	42.6	173069
42.6	43.25	173071
43.25	44.85	173072

44.85	46.13	173073
46.13	47	173074