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**DRILL REPORT**  
**NORTH ROCK PROPERTY**  
**2017**

Watten and Halkirk Townships  
Kenora Mines & Minerals Division  
Ontario

NTS 52C/11NE

for

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by

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December 01, 2017

Thunder Bay, Ontario

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## **Summary**

The North Rock Property comprises 59 unpatented mining claims, totaling 373 claim units covering approximately 5968 hectares in 2 separate blocks, recorded in good standing in the Kenora Mining Division of North-West Ontario. All claims are owned 100% by MetalCORP Limited (see Table 1 and Figure 2).

The purpose of this report is to summarize the exploration activity, based mainly on diamond drilling that was carried out in 2017 at the North Rock Property, located in Watten and Halkirk townships, approximately 27 km east-northeast of Fort Frances, Ontario (Figure 1: Property Location Map).

This diamond drill program was mainly intended at crossing previous mineralized bodies drilled in 2006 and 2007 known as Belacoma and East Zone. The first hole, NR17-070, failed at verifying a high grade anomaly of Cobalt in the Belacoma area with the best values intersected at both 0.15% copper and nickel. The next two holes were drilled on the same section. The second hole, NR17-071, was stopped half way due to strong upward deviation but finished later after the third hole, NR17-072 was finished. This one has been collared at a steeper dip for a better course through the targeted depth. Both holes crossed all lithologies, including the contact zone, returning modest values in palladium, platinum, gold and copper. The three holes totaled 843.7 meters for this phase I drill program.

The intervals sampled out the holes were sent to Activation Laboratories of Thunder Bay, resulting in 518 assay results for multi-elements in the Platinum Group and Base Metals Group. Pierre Gagné Contracting also of Thunder Bay provided the drill rig as well as all heavy equipment needed to proceed with the drill program.

The total amount spent for the 2017 Exploration Program is \$212,378.80, and total costs per meter at \$251.73.

## **Recommendations from Phase I Drilling**

Upon proper financing, the drill program should resume and complete in first instances the information at East Zone, and re-validate the Platinum high grade intersections from year 2006. Secondly, it should verify the extensions of a Palladium high grade intersection from hole NR07-062, which hole was the deepest hole drilled in the whole area and just under the old Noranda Shaft. In 1967, Noranda Exploration delineated a resource of 1.02 million tons at 1.2% Copper. This is highly recommended to emphasize more work in this area known as Beaver Pond.

## 1.0 Introduction

The North Rock property is located within the central portion of the Fort Frances-Mine Centre Greenstone Belt of the Wabigoon Sub province in north-western Ontario (see Figure 1). Starting preparing the drill program on June 01<sup>st</sup> but drilling at the very end of July until September 02<sup>nd</sup> of 2017, Metalcorp Ltd. (MTC) conducted a limited diamond-drilling program at the North Rock Property to verify former high grade anomalies at Belacoma, East Zone and Beaver Pond Zone (see Figure 4). A total of 3 holes were drilled for 843 meters, with 518 samples taken for assay analysis, including 22 QA/QC samples for control quality that were introduced sequentially in the sample stream.

A geologist and three men, the driller, the helper driller and material movement worker have been contracted to Metalcorp by Pierre Gagné Contacting, as well as a second geologist from Nordmin Engineering all of Thunder Bay. The first preparations for the drill program begun on June 01<sup>st</sup> until drill coring starts on July 31<sup>st</sup>, moving in all equipment on the property and set-up at the Belacoma area first. All costs associated with the drill program are outlined in ***Section 10: Total Costs of the 2017 North Rock Drill Program.***

The North Rock Property has excellent potential to host Cu-Ni-Pd-Pt dominant metals, such as precious-metal-bearing and massive sulphide deposits in the vicinity of the gabbro-mafic/ultramafic complex, as it is the case of the three main historical zones: Beaver Pond, Main South Zone, East Zone and more recently Belacoma but also amongst all groups or series of strong EM conductors that characterize the whole area, particularly along the gabbro contact.

Drill core samples consist of a maximum of 1.0 metre length of cut/sawed NQ core (2"-diameter). The drill core was processed at the MTC core facility in Thunder Bay, with the remaining core stacked and stored in a specific and safe location in Thunder Bay. All samples were bagged and tagged, and sent to the Activation Laboratory (Actlabs) in Thunder Bay for analyses.

Metalcorp's team consisted of two senior geologists, Mitch Dumoulin, P. Geo and John Corkery, a diamond driller, Marcel Smith, his assistant helper, George Gottwald then a field coordinator, Jerry Nichols. Metalcorp rented a cabin on the lake near the property to avoid having to go in town then save time and money all together.

## 2.0 Property, Location, and Access

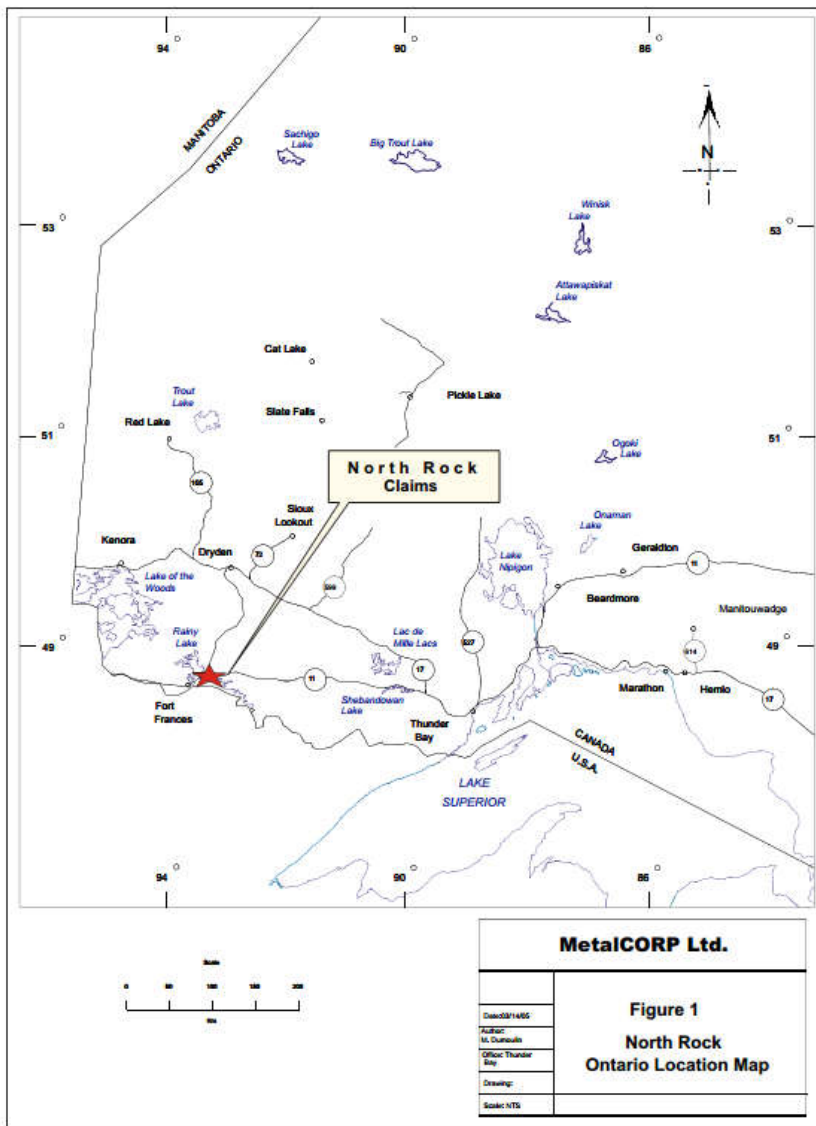
The North Rock Property (*see* Figure 1) is located in north-western Ontario, approximately 285 km west of the city of Thunder Bay, and 27 km northeast of the town of Fort Frances. The property was consolidated through staking and agreements, resulting in the amalgamation of two main blocks joined by a series of contiguous claims, referred to as the North Rock and the Cousineau claim blocks. It consists of 59 unpatented mining claims, totalling 373 units (5,968 hectares). The property is located within western Halkirk Township (G-3808) and eastern Watten Township (G-3840), Kenora Mining Division, north-western Ontario (*see* Figure 2). The claims are centred on Latitude 48°41'40"N, Longitude 93°05'00"W within NTS block 52C/11NE.

The property is easily accessed from Highway 11, east of Fort Frances, Ontario, and several forest access roads, a power-line access trail, and via boat from Grassy Portage Bay and Seine Bay off Rainy Lake. The eastern and north-eastern portions of the property are crossed by a power-line, the CNR rail line connecting Thunder Bay with Rainy River, and Highway 11. All claims are in good standing and are listed in Table 1.

### 3.0 Topography and Vegetation

Most of the property is heavily forested and exhibits gentle to moderate relief, with localized areas of select-cut logging. Elevation within the property varies between the elevation of Rainy Lake at ~1107 ft (337 m) and ~1300 ft (396 m) within the central portion of the property. Small- to medium-sized swamps and bogs are scattered throughout the property.

The amount of exposed outcrop is variable, but usually ranges from 10 to 15%, and up to 30% in the more rocky areas. Tree cover consists of mature stands of white pine, trembling aspen, white birch, white and black spruce, balsam, and locally red pine. The regions between outcrops are usually poorly drained and support a variable growth of black spruce, tamarack (larch), and tag alder. Rainy Lake occupies a small portion of the south-eastern claims.



**Figure 1: North Rock Property Ontario Location Map**

Township Area	Claim ID	Recording Date	Due Date	Work to Apply	# Units	Size (Ha)
HALKIRK	1178125	2001-Oct-02	2019-Oct-02	\$800	2	32
HALKIRK	1178889	1998-Feb-23	2022-Feb-23	\$800	2	32
HALKIRK	1199262	2002-Apr-30	2022-Apr-30	\$400	1	16
HALKIRK	1199263	2002-Dec-02	2019-Dec-02	\$1,200	3	48
HALKIRK	1199264	2002-Dec-02	2019-Dec-02	\$6,000	15	240
HALKIRK	1214877	2000-Jun-08	2021-Jun-08	\$800	2	32
HALKIRK	1214878	2000-Oct-27	2019-Oct-27	\$800	2	32
HALKIRK	1230786	1999-May-04	2022-May-04	\$1,600	4	64
HALKIRK	1237557	2000-Mar-13	2021-Mar-13	\$1,200	6	96
HALKIRK	1238152	2004-Dec-22	2019-Dec-22	\$2,400	6	96
HALKIRK	1238153	2004-Dec-22	2019-Dec-22	\$1,600	4	64
HALKIRK	1240295	2002-Jan-03	2020-Jan-03	\$1,200	6	96
HALKIRK	1245438	2003-May-06	2022-May-06	\$2,400	6	96
HALKIRK	1246517	2000-Nov-20	2022-Nov-20	\$800	2	32
HALKIRK	1246518	2000-Nov-20	2019-Nov-20	\$2,400	6	96
HALKIRK	1246845	2003-Dec-29	2020-Dec-29	\$6,000	15	240
HALKIRK	1247174	2001-Jun-27	2022-Jun-27	\$6,000	15	240
HALKIRK	1249435	2002-Jan-21	2020-Jan-21	\$3,200	8	128
HALKIRK	1249465	2002-Apr-30	2021-Apr-30	\$800	2	32
HALKIRK	1249466	2002-Dec-02	2019-Dec-02	\$6,000	15	240
HALKIRK	1249467	2002-Dec-18	2019-Dec-18	\$800	2	32
HALKIRK	1249498	2002-Jan-21	2024-Jan-21	\$400	1	16
HALKIRK	1249861	2001-Jan-26	2023-Jan-26	\$1,200	3	48
HALKIRK	3004335	2002-Dec-18	2019-Dec-18	\$3,200	8	128
HALKIRK	3004336	2003-May-12	2020-May-12	\$2,400	6	96
HALKIRK	3004337	2005-Nov-18	2020-Nov-18	\$3,200	8	128
HALKIRK	3005412	2004-Oct-28	2019-Oct-28	\$6,000	15	240
HALKIRK	3010796	2003-May-12	2019-May-12	\$3,600	9	144
HALKIRK	3010798	2005-Nov-18	2019-Nov-18	\$1,200	3	48
HALKIRK	3010799	2005-May-24	2021-May-24	\$800	2	32
HALKIRK	4201184	2006-Jun-05	2020-Jun-05	\$4,800	12	192
HALKIRK	4201186	2006-May-05	2022-May-05	\$6,000	15	240
HALKIRK	4202306	2007-May-22	2020-May-22	\$4,800	12	192
WATTEN	1237828	2004-Nov-03	2019-Nov-03	\$1,200	3	48
WATTEN	1237829	2004-Nov-03	2019-Nov-03	\$1,600	4	64
WATTEN	1237857	2004-Nov-03	2019-Nov-03	\$800	2	32
WATTEN	1237890	2004-Nov-03	2022-Nov-03	\$400	1	16
WATTEN	1238154	2004-Dec-22	2019-Dec-22	\$4,000	10	160
WATTEN	1238155	2004-Dec-22	2019-Dec-22	\$6,000	15	240
WATTEN	1238156	2004-Dec-22	2019-Dec-22	\$6,000	15	240
WATTEN	1238157	2004-Dec-22	2019-Dec-22	\$4,000	10	160
WATTEN	1238158	2004-Dec-22	2019-Dec-22	\$6,000	15	240
WATTEN	1238159	2004-Dec-22	2020-Dec-22	\$800	2	32
WATTEN	1238160	2004-Dec-22	2020-Dec-22	\$1,600	4	64
WATTEN	1238161	2004-Dec-22	2021-Dec-22	\$400	1	16
WATTEN	1238162	2004-Dec-22	2019-Dec-22	\$1,200	3	48
WATTEN	1238163	2004-Dec-22	2019-Dec-22	\$800	2	32
WATTEN	1238171	2005-Mar-03	2023-Mar-03	\$800	2	32
WATTEN	1238172	2005-Mar-03	2020-Mar-03	\$6,400	16	256
WATTEN	1238173	2005-Mar-03	2022-Mar-03	\$400	1	16
WATTEN	1245439	2003-May-06	2020-May-06	\$400	1	16
WATTEN	1246846	2003-Dec-29	2019-Dec-29	\$1,600	4	64
WATTEN	1246847	2003-Dec-29	2019-Dec-29	\$400	1	16
WATTEN	3005413	2004-Oct-28	2019-Oct-28	\$6,000	15	240
WATTEN	3010797	2003-May-12	2022-May-12	\$1,600	4	64
WATTEN	3016162	2006-Mar-10	2020-Mar-10	\$2,400	6	96
WATTEN	3016163	2006-Mar-10	2020-Mar-10	\$3,200	8	128
WATTEN	3016164	2006-Mar-10	2020-Mar-10	\$2,800	7	112
WATTEN	4286149	2017-Mar-31	2019-Mar-31	\$400	1	16
WATTEN	4286150	2017-Mar-31	2019-Mar-31	\$800	2	32
	<b>59 clms</b>			<b>Total</b>	<b>373</b>	<b>5968</b>

**Table 1: North Rock Property Claims Status.**

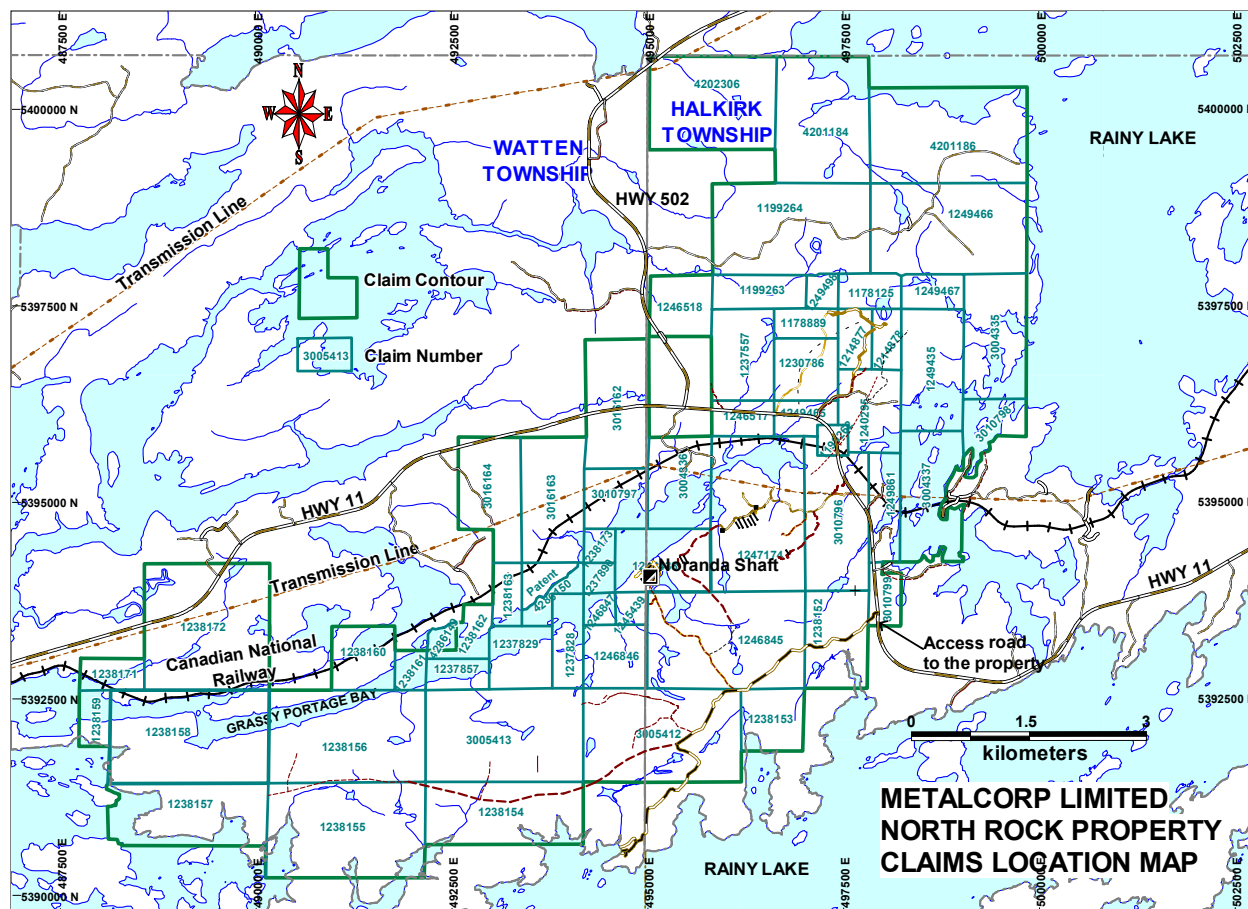


Figure 2: North Rock Claims Location Map (also in Appendix I at scale 1:50,000)

#### 4.0 Regional Geology

The North Rock Property is located within the central, Archean-age, Fort Frances-Mine Centre Greenstone Belt within the southernmost portion of the western Wabigoon Sub province (Blackburn et al. 1991) (*see* Figure 3). Poulsen (2000) describes the region as a fault-bound, structurally discordant wedge forming a boundary zone between the Wabigoon Sub province granite-greenstone terrane, to the north, and the Quetico Sub province met sedimentary terrane, to the south. Its north and south boundaries are defined by the Quetico Fault Zone (up to 1 km wide) and the Rainy Lake-Seine River Fault, respectively, and is generally considered to be part of the Wabigoon Sub province. The wedge stretches from the Ontario-Minnesota border in the west, to near Flanders (Calm Lake area), in the east, where the northeast-trending Rainy Lake-Seine River fault system merges with the east-west-trending Quetico Fault Zone. The unit descriptions below are primarily derived from Poulsen (2000), Wood (1980), and Harris (1974), and will be confined to the discordant, boundary zone wedge (The Boundary Zone).

Andesitic to basaltic metavolcanic rocks are common and are often intruded by numerous, possibly sub-volcanic, medium-grained gabbroic dykes and sills of highly variable thickness (<50 to locally >300 m). The flows are locally intercalated with ultramafic, intermediate, and

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felsic metavolcanic rocks, particularly in the Rice Bay and Shoal Lake areas. Narrow units of interflow clastic metasedimentary rocks, chert, and sulphidized oxide-facies iron formations are locally common.

Elongate, chloritized, dacitic to andesitic intermediate metavolcanic units, often intercalated with mafic and felsic metavolcanic rocks are observed in several areas: a narrow, north-eastward-trending band from Sandpoint Island, in Rainy Lake south of Swell Bay, to Mine Centre; several thicker units wrapping around the Rice Bay Dome; and several units in the Prospect Bay and eastern Swell Bay areas. The units often exhibit clastic textures, are locally amygdaloidal, and may be, in part, sub-aerial.

Rhyolitic to dacitic, felsic metavolcanic flows and pyroclastic rocks, intercalated with some intermediate and mafic metavolcanic rocks and often intruded by gabbroic dykes and sills, form a north-eastward-thickening unit beginning south of Swell Bay and continuing east of Mine Centre. Flows are common near Mine Centre with pyroclastic rocks more abundant as the unit thins to the southwest.

The Redgut Bay-Grassy Portage area is host to an unusual, moderately to strongly magnetic, probably extrusive, in part pyroclastic, tremolitic, ultramafic unit locally characterized by fine (up to 15 cm diameter), sub-rounded to angular clasts within a fine-grained, magnetite- and tremolite-rich, locally talc-rich matrix. The main portion of this northeast-trending unit is between 300 and 800 m in width and approximately 5.6 km in length. Whole rock litho geochemistry by Poulsen (2000) suggests that it has a komatiitic affinity. Narrow, usually <100 m thick, concordant units are often intercalated with the mafic metavolcanic and intrusive rocks surrounding the eastern Rice Bay Dome.

Two extensive units composed of feldspathic wacke and mudstone, rarely feldspathic arenite to quartz arenite (Couchiching meta-sediments), occur within the Boundary Zone. The least extensive partially encircles the Rice Bay Dome and is between 100 and 1200 m in thickness. The other forms a thick, extensive, arcuate band between 3.0 and 6.5 km in thickness, which extends eastward from the south-western shore of Rainy Lake, through Swell Bay, then arcs northeast-ward through Bear Passage and into Redgut Bay. This unit is regularly intruded by late, granitic to granodioritic stocks and plutons.

The coarse clastic rocks of the Seine Meta-sediments are extensively exposed in the Shoal Lake area and much less extensively exposed near Rice Bay. These rocks are characterized by coarse, heterolithic, clasts-supported conglomerate, interbedded conglomerate and arenite, arenite, and minor siltstone. Clast size decreases with stratigraphic height. Wood (1980) interprets these coarse clastic metasedimentary rocks as an alluvial fan merging into a braided fluvial terrane. North of Shoal Lake the basal conglomerates rest unconformably on coarse-grained tonalite and intermediate metavolcanic rocks. These rocks are locally intruded by quartz-feldspar porphyry sills or dykes.

Two large, systematically differentiated, sill-like, variably layered, melagabbroic to anorthositic mafic intrusions dominate the Boundary Zone. The largest is the Seine Bay-Bad Vermillion Intrusion, which is over 40 km in length and up to 5 km in width. It extends from Sandpoint Island on Rainy Lake, in the southwest, to the north-eastern corner of Bad Vermillion Lake, in

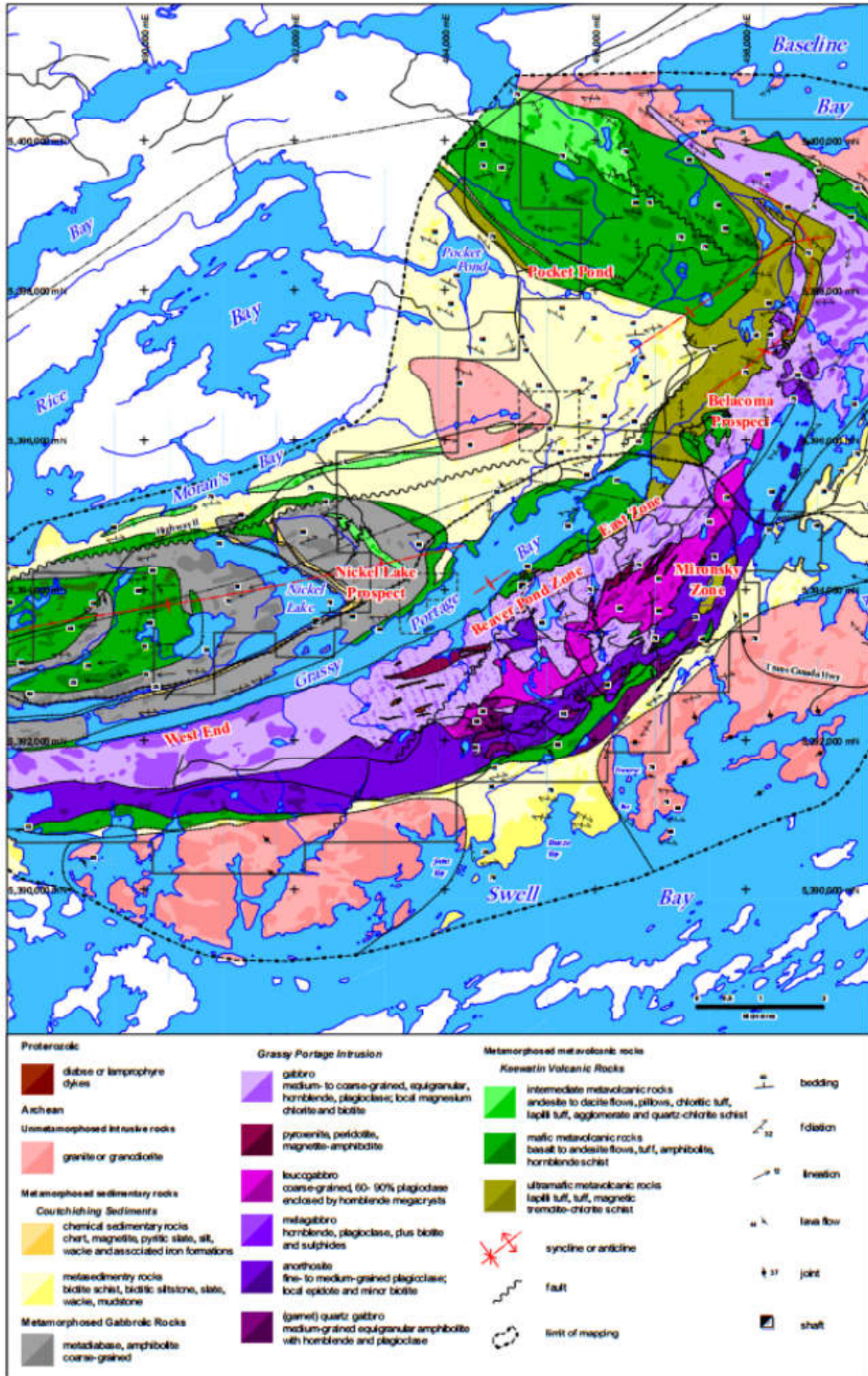
the northeast. Rhythmic modal layering is locally well exposed. The intrusion is often flanked, and locally intruded by, metamorphosed tonalitic to leuco tonalitic plutons. The base of the intrusion in the Bleak Bay-Little Grassy Bay area is truncated by the Rainy Lake-Seine River Fault. The smaller, arcuate, Grassy Portage Intrusion is approximately 21 km in length, up to 2.2 km in width, and extends from Commissioners Bay, in the west, to Baseline Bay, in the north. Diffuse modally graded layering and rare flame structures suggest that the Grassy Portage Intrusion is southward-facing, whereas internal differentiation and modal grading within the Seine Bay-Bad Vermillion Intrusion suggests that it is northward-facing.

The Boundary Zone is intruded by two types of granitoid bodies. An older metamorphosed, often broadly conformable, usually gneissic, often sill-like group of intrusions, historically referred to as Laurentian-type granitoids and a younger, compositionally different, rarely foliated, series of discrete stocks and plutons that have been historically referred to as the Algonian-type granitoids. The older Laurentian-type bodies are represented by the sill-like Mud Lake Trondhjemite, the Bad Vermillion Tonalite, and several smaller bodies spatially associated with the Seine Bay-Bad Vermillion Mafic Intrusion; the Rice Bay Dome, composed of granite and quartzo-feldspathic gneiss, in the Rice Bay area; and the pear-shaped, texturally heterogeneous, strongly gneissic Black Sturgeon Bay Intrusion, located north of the Rice Bay Dome. The relatively numerous, primarily granitic to granodioritic, Algonian-type intrusions vary greatly in size and shape and include, in roughly decreasing order of size, the granitic to granodioritic Ottertail Lake Intrusion; the granitic to granodioritic Rocky Islet Bay and Hopkins Bay intrusions located west of the Rice Bay Dome; and the Rest Island, Blind Bay, Bear Passage, and Baseline Bay intrusions that form a string of stocks and plutons intruding the southern band of Couchiching-type metasedimentary rocks.

Most Boundary Zone supracrustal rocks, mafic intrusive complexes, and subvolcanic mafic dykes and sills have attained upper greenschist-facies regional metamorphic grade with regions adjacent to internal granitoid stocks and plutons reaching lower- to locally mid-amphibolite grade. Lower amphibolite-grade contact metamorphism is also commonly observed adjacent to the two large mafic igneous complexes.

All rock-types discussed above are cross-cut by northwest-striking, ~2200 Ma, quartz diabase dykes of the Kenora-Fort Frances swarm (Osmani 1991). Biotitic lamprophyres are observed locally.

Poulsen (2000) has noted evidence for at least three, possibly progressive periods of deformation involving folding, shearing, and faulting. These structures record the transition from ductile to brittle deformation dominated by incremental shortening about a west-northwest oriented, sub-horizontal axis, which imparted a dominantly northeast-trending grain to the region.



**Figure 3: Regional Geology Map**

## 5.0 Exploration History and Government Surveys

There is a long history of base metals exploration within the North Rock area, with the earliest recorded work occurring in 1918, with possible, unrecorded work as early as 1902. Research suggests that there has been little exploration for the platinum group elements (PGE) and only minor interest in Au. Most of the exploration activity occurred between 1958 and 1978 and was sporadic before or since.

Previous exploration and government surveys in the vicinity of the North Rock Property, as researched from the Resident Geologist's Assessment Files, (Kenora Mining Division, Ontario Geological Survey), Kenora, and Ontario Geological Survey reports are summarized below. Many of the occurrences present within and nearby the property are also described below and are shown on Map 1 (*see* Back Pocket).

**1887:** The first geological mapping of the area was completed *A.C. Lawson*, of the Geological Survey of Canada, at a scale of 1"=2 miles.

**1902, 1918 to 1919, 1958:** A sulphide-rich iron formation (**Nickel Lake Prospect**) was discovered near the south shore of Nickel Lake during construction of the southern branch of the Canadian National Railway (CNR) in 1902. There were unconfirmed reports that an exploratory diamond drill hole was completed that same year by an unknown party. During 1918 and 1919 the *Nickel Lake Mining Company* brought the 7 claims to patent and sank a 75 ft (23 m) shaft, with a 35 ft (11 m) cross-cut, a short distance north of the tracks, <100 m west of present North Rock Property Claim K1238163. Mineralization consisted of massive pyrite and pyrrhotite, with minor chalcopyrite and sphalerite, within black shale directly adjacent to oxide-facies iron formation. Disseminated chalcopyrite and pyrrhotite were also noted within amphibolite adjacent to the iron formation; however, no assays are available. During 1958 *Cliffs of Canada Limited* completed a reconnaissance magnetic survey.

**1911:** *A.C. Lawson*, of the *Geological Survey of Canada*, remapped the area at a more detailed scale (1"-1 mile) and introduced some of the original Precambrian nomenclature of the area.

**1918:** Unknown parties excavated several pits and trenches on a sulphide-facies iron formation containing between 5 and 25% semi-massive, banded to bedded pyrite (**Wallace Occurrence**). The host iron formation unit is located approximately 2150 m south-southwest, and along strike from, the Nickel Lake Prospect and is presently contained within 2 patented claims a short distance north of the of the present North Rock claims. No analytical results are available.

**1918?:** Several pits and trenches were excavated by unknown parties, circa 1918, on the **Sims Station Occurrence**, which is located within the north-western portion of the present North Rock claims.

**1951:** *Brudon Enterprises* excavated at least 3 pits at uncertain locations east of Nickel Lake. These pits may have been completed on, or near, the **McTavish No 1 and 10 Trenches**.

**1958 to 1970:** During 1958 *Noranda Mines Limited* rehabilitated several of the trenches sunk circa 1918 on the **Sims Station Occurrence**, located near the western end of Grassy Portage Bay within the north-western portion of the present North Rock Property. That same year Noranda drilled 4 holes, totalling 282 ft (85.9 m), to test the occurrence and similar mineralization located along-strike to the west. Mineralization consisted of a well-mineralized unit of bedded clastic and chemical metasedimentary rocks, flanked by gabbro, containing up to 90% massive pyrite, bands of magnetite, and variable amounts of chalcopyrite. A massive sulphide sample taken by Harris (1974) contained **0.33% Cu** and one drill intersection from beneath the trenches contained

**0.60% Cu/5.0 ft (1.52 m).** A hole drilled 400 m to the southwest (**Sims South Occurrence**) intersected **0.20% Cu/7.0 m**. The southern shoreline of Grassy Portage Bay was geologically mapped in 1966 in an effort to determine the location of the basal contact of the Grassy Portage Intrusion. Two holes, totalling 846 ft (257.9 m), were drilled in 1967 near the southern shoreline of Grassy Portage Bay. No significant intersections were obtained from these holes. During 1969 and 1970 Noranda completed line cutting, ground magnetometer and JEM surveys, excavated a large pit, and drilled 6 holes, totalling 2385 ft (726.9 m), in the vicinity and to the west of the Sims Station Occurrence. This work was completed on disseminated to massive pyrite, pyrrhotite, and chalcopyrite occurring within an intercalated sequence of clastic metasedimentary rocks, mafic metavolcanic flows, and oxide- and sulphide-facies banded iron formation. A sample of sulphide-facies iron formation taken by Harris (1974) from a 30 m trench (**Smith's Point Occurrence**) contained **0.30% Cu**. One drill hole tested a sulphide iron formation 60 m south of the trench and intersected 2 zones grading **0.22% Cu/7.0 m and 0.22%/13.0 m**, respectively (**Smith's Point South Occurrence**).

**1958 to 1974, 1990:** The mineralization comprising the **Main South Cu Zone** was discovered in 1958 a short distance south of Grassy Portage Bay by L. Turcotte, a prospector working for **Noranda Mines Limited**. The resulting 60-claim property comprised what is now the north-eastern half of the North Rock Property. Between 1958 and 1970 Noranda flew an airborne magnetometer and EM survey and completed trenching, line cutting, geological mapping, ground magnetometer, JEM, and VLF-EM surveys, 16 diamond drill holes (1845 m) in 1959 and 1960, and 31 holes (3563 m) in 1966 and 1967. The 1959 drilling was primarily confined to the lenticular Main South Zone, with 2 holes on the **East Zone** (~875 m to the northeast), and intersected mineralization containing **1.5 to 4.5% Cu/2.0 to 20.0 m** over a strike length of approximately 400 ft (120 m). Much of the remaining drilling tested the **Beaver Pond Zone**, located 150 m to the southwest of the Main South Zone. This zone consisted of en echelon masses of Cu-rich, disseminated to net-textured chalcopyrite with subordinate pyrrhotite and localized disseminated molybdenite. The molybdenite occurs as intergrowths with chalcopyrite and pyrrhotite or as discrete grains within grey patches of hydrothermally altered gabbro. Grades vary from **<1% to >3% Cu/variable widths** over a strike length of ~400 m. **Seemar Mines Limited** optioned the 7 leases and 11 unpatented claims covering the Beaver Pond and Main South zones from Noranda in 1968. Seemar drilled 16 holes, totalling 7811 ft (2380.8 m), during 1969 and 1970. The claims were brought to lease in 1970 and a tonnage and grade estimate of **276,172 tons grading 2.00% Cu** was calculated, with a possible additional resource of **148,000 tons grading 0.99% Cu**. Seemar entered into an agreement with **North Rock Explorations Limited** in 1971 in order to finance continued exploration. North Rock drilled 17 infill holes during 1971 and 1972. This was followed in 1972 and 1973 by a limited underground development program comprising a 200 ft (61 m) shaft and 700 ft (213 m) of drifting on the 175 ft (53 m) level. The drift exposed **2 Cu-rich zones** that **averaged in excess of 3.00% Cu**. Work ceased in 1973 and the property was turned over to the new **Nor-Norock Mining Company Limited**, who commissioned an independent appraisal of the property (Bergman 1973). Tonnage and grade calculations, completed by Bergman include **1,020,458 tons grading 1.17% Cu** over a 400 m strike length and **265,230 tons grading 2.08% Cu** over a 300 m strike length. Both estimates were good to a depth of only 91 m. The host-rock for most of the observed mineralization within the Beaver Pond and Main South Zones was variably altered leuco gabbro (grey ore), gabbro, coarsely plagiophyric to glomero-plagiophyric gabbro, and melagabbro (black ore). The East Zone drilling intersected **0.233% Cu/70 m, including 0.425% Cu and 0.044% MoS<sub>2</sub>/20 m**. Nor-Norock completed a single, 251 ft (76.5 m) drill hole in 1974 south of the leases and intersected 50 ft (15.24 m) of disseminated pyrrhotite (no assays are available). Nor-Norock commissioned **J.E. Steers and Associates Inc.** to prepare an independent report on the property in 1990, which gave a positive

assessment of the potential of expanding the existing resource. No known exploration was completed on the leased claims after 1973 and they were allowed to lapse on June 1, 1999.

**1959:** *J. Galbraith* completed 4 diamond drill holes, totalling 282 ft (85.96 m), on the Sims Station Occurrence, located near the western end of Grassy Portage Bay. No assays are available.

**1959 to 1966:** *Noranda Exploration Company Limited* completed line-cutting, magnetometer and EM surveys, geological mapping, and 15 diamond drill holes, totalling 3566 ft (1086.9 m), on 3 options that partially overlapped the eastern boundary of the present North Rock Property and with the bulk of the claims within the adjacent Cousineau Property, also owned by MTC. The claim groups included the present Belacoma North, South, and West occurrences, the Redgut Bay Occurrence, and probably included the Hupchuk, Hupchuk-Grassy Portage Bay, and Belacoma Trax occurrences.

**1959 to 1967:** *PCE Explorations Limited* staked 36 claims in 1959 immediately west and southwest of the Noranda Grassy Portage Bay Property within the core of the present North Rock Property. PCE optioned the claims that same year to *Noranda Mines Limited* who completed line-cutting, geological mapping, ground Junior-EM (JEM) and magnetometer surveys, and 2 diamond drill holes (23 and 24), totalling 765 ft (233 m). A single hole (67-4) was drilled in 1967.

**1963 to 1970, 1973 to 1974:** A 30 claim property was staked in 1963 by *T. Daley and J.A. Galbraith*, immediately west of the Nickel Lake patents, to cover massive sulphide mineralization discovered during the construction of Highway 11. Between 1964 and 1970 the owners completed prospecting, trenching, and 35 diamond drill holes, totalling 4162 ft (1268.6 m). The *Galbraith-Daley Mining Company* was formed in 1970 to manage the property. Three zones of sulphide mineralization were discovered, only 2 of which have assays available. The original zone, the **Daley-Galbraith 1 Occurrence**, consisted of a 1 to 2 m thick lens of massive pyrite, pyrrhotite, and minor chalcopyrite within siliceous chemical metasedimentary rocks thought to represent sulphide-facies iron formation. An ODM surface sample (Harris 1974) contained only trace Cu and Ni. An 8 ft (2.43 m) core intersection from a hole drilled approximately 530 m along strike to the east contained **0.32% Cu and 0.21% Ni**. The **Daley-Galbraith 3 Occurrence**, located approximately 1000 m to the southeast of the #1 occurrence, contained abundant pyrrhotite and minor chalcopyrite within well-foliated to schistose gabbro that graded **0.42% Cu, 0.17% Ni, and 0.20% Zn**.

**1963 to 1968, 1980:** A 23 claim property east of Grassy Portage Bay was staked in 1963 by *M. Hupchuk and G. Armstrong*. The claims included a previously trenched Cu-Ni occurrence (**Hupchuk Occurrence**), located a short distance northeast of Highway 11, at the lower contact of the Grassy Portage Intrusion. All of the property is now included within the present Cousineau and North Rock properties and straddled the boundary between them. The owners completed prospecting and trenching in at least 3 separate areas. Chip samples of gabbro taken from the Hupchuk Occurrence trench by the ODM (Harris 1974) were described as similar to the 'black ore' of the Beaver Pond Deposit and contained **0.20% Cu and 0.13% Ni/90 ft (27.4 m)**. A portion of the claims were optioned in 1963 to *Phelps-Dodge Corporation of Canada, Limited* who completed geological mapping and 12 diamond drill holes. Two of the holes (H6 and H7), totalling 729 ft (222 m), tested the Hupchuk Occurrence. The company dropped the option late in 1963. The owners drilled a 228 ft (69.5 m) hole south of east end of Grassy Portage Bay in 1964. *Noranda Mines Limited* optioned the western part of the property in 1966 and drilled a 2 hole fence (N79 and N80) on what is now the **East Cu-Ni Zone** on the presently adjacent North Rock Property. During 1967 and 1968 the owners drilled 4 holes, totalling 1145.6 ft (349.2 m), on



various parts of the property. Two holes tested the eastern extension of the Hupchuk Occurrence; however, no assay results are available. The property may have been optioned to **Kerr Addison Mines Limited** in 1970 and to **Hudson Bay Exploration and Development Company, Limited** in 1972. Kerr completed a 170 ft (51.8 m) drill hole in 1970, in the vicinity of the Belacoma North Occurrence, and Hudson Bay completed line-cutting and an EM-17 survey in the same area in 1972. The owners completed 2 holes south of Highway 11 in 1980.

**1963 to 1979:** The **Mironsky Cu Zone** was discovered by **M. Hupchuk** in 1963 during the construction of Highway 11. The mineralized zone was staked by **A. Mironsky** shortly thereafter, and the 20 claims were quickly optioned to **Phelps-Dodge of Canada, Limited**. The claims would have been located immediately east of the present south-eastern North Rock Property boundary and may have partially overlapped it. Phelps Dodge completed line-cutting, geological mapping, ground magnetometer and Ronka EM, and 12 diamond drill holes, totalling 3754 ft (1144.2 m), that same year. Eight of the holes (A1 to A8), totalling 3030 ft (923.54 m), tested the Mironsky Zone and outlined a 250 m long, 10 m thick zone of disseminated chalcopyrite and pyrrhotite within a siliceous schist near the south-eastern (upper) contact of the Grassy Portage Intrusion. Drill hole B-3 intersected **1.23% Cu/11.0 m**. Harris (1974) estimated that the drilling outlined **~300,000 tons grading 0.80% Cu**. Phelps-Dodge dropped the option late in 1963. **Kerr Addison Mines Ltd.** optioned part of the property in 1975. They completed several trenches and 2 drill holes, totalling 629 ft (191.7 m), on the Mironsky Zone during 1975 and 1976. **M. Hupchuk and G. Armstrong** excavated several trenches, approximately 750 m southwest of the Mironsky Zone, in 1975 and a 359 ft (109.4 m) drill hole (92-78) in the same area in 1978. The property was optioned to **Belacoma Mines Limited** in 1978 that drilled 11 holes on the Mironsky Zone and then dropped the option. The owners drilled 4 more holes (91-78, 93-78 to 95-78), totalling 1600 ft (487.7 m), in the south-western portion of the property in 1979.

**1964:** The area was geologically mapped, at a scale of 1"=1 mile, by **J.C. Davies** of the **Ontario Department of Mines**.

**1965 to 1968, 1978, 1983:** A 21 claim property was staked north of Traverse Inlet of Swell Bay, Rainy Lake, in 1965 by **M. Hupchuk and G. Armstrong**. The property, located within the south-central portion of the present North Rock claims, was optioned in 1966 to **Cominco Ltd.** Cominco completed line-cutting and geological mapping that same year. Magnetometer, IP-EM, and resistivity surveys were completed in 1967. After the option agreement was allowed to expire in 1968 the owner's drilled 2 holes, totalling 1294 ft (394.4 m), to test one of the Cominco IP anomalies. The first hole intersected 30 ft (9.1 m) containing up to 10% pyrrhotite, chalcopyrite, and sphalerite (**Traverse Inlet Occurrence**) that graded **2.53% Zn and 0.11% Cu/10 ft (3.05 m)**. A 28 ft (8.53 m) interval in the second hole (drilled at 180° to the first) contained some pyrrhotite, chalcopyrite, and sphalerite. No further work was recorded until 1978 when the owners completed outcrop stripping and 4 diamond drill holes (91, 93 to 95). The property may have been optioned to **Corporation Falconbridge Copper** in 1983 when a 182 ft (55.5 m), drill hole (177-IT) was completed northeast of the Traverse Inlet Occurrence. Poulsen (2000) reports that a sample of oxide-rich material from the property (location uncertain) contained 33.5% FeO (total iron) and 2.50% TiO<sub>2</sub>.

**1966:** An airborne EM and magnetometer survey was completed over a large area by **Noranda Mines Limited**.

**1966 to 1968:** A small property was staked by *B. Weiss and W.J. Cooper* to the southeast of the MacTavish occurrences and included the historic trenches excavated by the East Burdon Group in 1951. The surface trenches were reported to contain up to 25% pyrite and pyrrhotite at the contact between fine-grained gabbro and chloritic metasedimentary rocks. The owners drilled a 103 ft (31.4 m) hole near the CNR tracks that contained disseminated pyrite, pyrrhotite, and chalcopyrite, but no analytical results are available (**Weiss-Cooper Occurrence**).

**1966 to 1969, 1983:** *M. Hupchuk and G. Armstrong* staked a group of 19 claims to the north and northwest of the Hupchuk Occurrence after discovering malachite staining in outcrop. The property included much of the northern half of the present Cousineau Property and part of the north-eastern portion of the present North Rock Property. The owners excavated several pits and trenches on the new occurrence (**Hupchuk-Grassy Portage Bay Occurrence**), drilled a 50 ft (15.2 m) hole, and exposed a northwest-trending, 10 ft (3 m) thick zone, over a strike-length of 100 ft (33.5 m). Observed mineralization consisted of disseminated pyrrhotite and chalcopyrite along the margins of a gabbro dyke/sill within an ultramafic pyroclastic unit. Four trenches were also excavated in the vicinity of the **Belcoma South Occurrence**, located 780 m to the northwest. The property was optioned in 1967 to *North 60 Explorers Limited* who completed line-cutting, magnetometer and IP-EM/resistivity surveys, and 5 diamond drill holes (H1 to H3), totalling 3139 ft (956.8 m). The drilling tested 2 of 3 IP anomalies, with the northernmost hole (H1) intersecting undisclosed amounts of disseminated pyrrhotite and chalcopyrite. No assay results are available. The owners completed a single drill hole, totalling 218 ft (66.4 m), north of the Hupchuk-Grassy Portage Bay Occurrence and a short distance north of Highway 11, in 1978. Two holes, totalling 588 ft (179 m), were completed on the Hupchuk-Grassy Portage Bay Occurrence in 1983. No assay results are available.

**1966 to 1969:** A 25 claim group owned by *Paramacque Mines Limited* was located west of, and partially overlapped, the western boundary of the present Cousineau Property, east of Nickel Lake, a short distance north of the North Rock Property. Paramacque completed line-cutting, geological mapping, ground magnetometer and EM surveys (McPhar 1000/5000), and six diamond drill holes, totalling 2012 ft (613.3 m) that tested 3 mineralized zones. Drilling of the southernmost zone (**Paramacque Zone**) intersected 2 intervals grading **1.39% Cu/2 ft (0.6 m) and 0.60% Cu/3.5 ft (1.1 m)**, respectively, within a lean iron formation containing considerable pyrrhotite and some chalcopyrite.

**1966 to 1969:** *Noranda Mines Limited* completed line-cutting, ground magnetometer and EM surveys, and drilled 2 holes, totalling 410 ft (125 m), on a property located west and northwest of the Daley-Galbraith occurrences (west and northwest of Nickel Lake). One hole, located a short distance north of Highway 11, intersected **0.55% Zn/2.7 m (Moosehorn Occurrence)** within black shale containing some sphalerite, pyrite, and pyrrhotite.

**1968 and 1969:** The Rainy Lake area was mapped at 1:15840 scale by *F.R. Harris* of the *Ontario Division of Mines*. Harris noted the presence of disseminated molybdenite and pyrite within a 300 ft (90 m) wide zone associated with the south-eastern contact of the Rice Bay Dome and adjacent migmatized biotite-quartz schist (**Highway 11 Occurrence**). The molybdenite occurred within quartz veins, along fractures, or disseminated throughout granitoid and metasedimentary host-rocks. No assays are available. The occurrence is within the western edge of the present Cousineau Property.



- Pre-1969:** At least 6 trenches and pits were excavated by *J. Levar* on 4 patented claims located a short distance northwest of the present north-western-most North Rock claims. Three trenches, located 400 m north of Highway 11, exposed locally massive to laminated pyrrhotite, pyrite and minor chalcopyrite within sulphide facies iron formation hosted by deformed pillowed mafic metavolcanic flows (**Kotnick North Occurrence**). A large trench exposed another sulphide facies iron formation, located 60 m south of Highway 11 that contained massive and disseminated pyrite, pyrrhotite, and some chalcopyrite (**Kotnick South Occurrence**). A sample taken by Harris (1974) from this trench assayed trace Cu and Ni.
- 1969:** A 19 claim property was staked, circa 1969, southwest of the Beaver Pond Zone by *G. Laberge* and included the original P.C.E. Property optioned by Noranda in 1958. Four trenches were excavated that same year near the shoreline of a bay approximately 700 m southwest of the Beaver Pond Zone shaft.
- 1971 to 1976:** A property, located immediately to the north of the Hupchuk and Hupchuk-Grassy Portage Bay occurrences, was acquired between 1971 and 1973 by *Belacoma Mines Limited*. Prospecting, several trenches, and 2 diamond drill holes, totalling 601 ft (183.2 m), were completed between 1971 and 1973. The property was optioned to the *Canadian Nickel Company Limited* (Canico) in September 1973. During 1973 and 1974 Canico completed line-cutting, geological mapping, ground magnetometer and EM surveys, and 3 diamond drill holes, totalling 986 ft (300.5 m). A 1974 drill hole completed on the **Belacoma North Occurrence** intersected **0.45% Cu and 0.12% Ni/0.55 m**. The option was dropped in 1974. During 1975 and 1976 Belacoma completed additional trenching and 8 drill holes. The work completed between 1971 and 1976 defined the locations of the **Belacoma North, South, and West occurrences**. Grab samples from the Belacoma West Occurrence contained **0.29% Cu, 1.23% Ni, and 0.17% Co** and a drill intersection from the same zone graded **0.22% Ni, 0.08% Cu/8.62 m**.
- 1972:** A property of unknown size was staked by *R.W. Cousineau* circa 1972. He excavated 3 trenches a short distance south of Highway 11, north of the Hupchuk-Grassy Portage Bay Occurrence. The property may have been optioned to *Hudson Bay Exploration and Development Company Ltd.* that same year who completed line-cutting and a Geonics EM-17 HLEM survey over one of the claims.
- 1972 and 1973, 1976 and 1977:** *K.J. and J.G. McTavish* staked a 12 claim property located to the east and northeast of Nickel Lake in 1972. They completed prospecting, excavated several pits and trenches, and then optioned the claims to *Noranda Mines Limited* in the spring of 1972. During 1972 and 1973 Noranda completed line-cutting, geological mapping, ground magnetic, VLF-EM, and HLEM surveys, and 2 diamond drill holes, totalling 635 ft (193.5 m). The drill logs were not submitted for assessment. The **McTavish Trench 1 Occurrence**, located midway between Highway 11 and Nickel Lake, exposed intercalated impure marble, pyrite- and pyrrhotite-bearing recrystallized chert, and pyritic shale containing sphalerite and minor chalcopyrite. Grab samples taken from this trench contained up to **4.0% Zn and 1.4% Cu** with chip samples containing **0.3% Zn and 0.12% Cu**. Diamond drilling beneath the trench intersected **0.22% Zn, 0.13% Cu/3.0 m and 0.14% Zn and 0.12% Cu/4.0 m**. The **McTavish Trench 10 Occurrence** located about 1220 m to the east-southeast of Trench 1 near the CNR tracks, exposed lean oxide-facies iron formation adjacent to a black siliceous rock containing moderate amounts of chalcopyrite, pyrrhotite, and magnetite. Noranda drilling to test Trench 10 intersected **0.18% Cu/5.6 m**. During 1976 and 1977 several trenches were excavated, geological mapping program was completed of the western portion of the property, and 4 holes, totalling 1475 ft (449.6 m), were drilled to test Trench 10. No assay results are available from this work.

- 1973:** A 39 claim property was staked west of Moosehorn Lake by *V. Borschneck*, circa 1973. He completed line-cutting and VLF-EM and magnetometer surveys.
- 1974:** Two shallow drill holes, totalling 640 ft (195 m), were drilled by *S.J. Duggan* southwest of the Beaver Pond Zone (location uncertain). No sulphide mineralization was noted in the drill logs and no assay values are available.
- 1976:** The area bound by Rice Bay, in the northwest, and Bear Passage, in the southeast, was mapped at reconnaissance and detailed scales by *K.H. Poulsen* (1980 and 1981). This work provided the basis of Poulsen's M.Sc. and Ph.D. theses and several *Ontario Geological Survey* publications.
- 1978:** A 19 claim group was staked by *R.W. Cousineau* to cover the Mironsky Zone. A single, 271 ft (82.6 m) drill hole (no available assays) was completed on the Mironsky Zone near Highway 11. There is no record of whether any further work was completed on the claims.
- 1979 and 1980:** The *Ontario Geological Survey* commissioned a Questor Surveys Limited airborne EM and magnetometer survey over the Atikokan-Mine Centre area that included the Grassy Portage Bay area.
- 1980 to 1984, 1990:** A group of 20 claims, located southwest and south of the Nor-Norock leases (Beaver Pond and Main South Zones), were staked by *Kalrock Developments Limited* in 1980. An interpretation of an OGS airborne survey was completed that same year. Line-cutting, ground magnetometer, MaxMin, and CEM surveys were completed in 1982. The EM surveys detected several strong conductors and in 1983 the company drilled 3 holes, totalling 866 ft (240 m). Minor amounts of unspecified sulphides were present within the drill holes; however, no assay results are available. By 1990 the property consisted of 36 claims and during that year *Kalrock Resources Limited* completed prospecting and AEM follow-up geophysics of selected areas using a Crone CEM instrument.
- 1986 to 1988:** A group of 16 claims was optioned from *L. Cousineau* by *Kidd Creek Mines Ltd.* This property straddled the western boundary of the present Cousineau Property. Kidd Creek drilled 2 holes, totalling 202.4 m, a short distance to the east of Highway 502. The target of this drilling is thought to be molybdenite mineralization near the margins of the Rice Bay Dome. During 1987 and 1988 Mr. Cousineau excavated 11 trenches on the property.
- 1993 to 1995:** A 6 claim property, located north of Moosehorn and Nickel Lakes, was staked in 1993 by *Phelps-Dodge of Canada Ltd.* Over the next 3 years the company completed line-cutting, geological mapping, litho geochemical sampling, ground HLEM and magnetometer surveys, and a Transient Domain EM (TEM) survey.
- 1998** The 23 claims, 111 units Cousineau Property was staked between 1998 and mid-2005 by *Louis and Ray Cousineau*. During that time they completed considerable prospecting, excavated in excess of 30 trenches on several soapstone occurrences and some of the historic Cu occurrences, and have discovered several previously unknown occurrences. Assays obtained from these trenches include **16,229 ppm Cu, 437 ppb Au, and 458 ppb Pd** from Pit 52; **1936 ppb Au, 99 ppm Ag, 3543 ppm Cu, 4188 ppm Pb, 246 ppb Pd, and 129 ppb Pt** from Pit 53; and **1692 ppb Au** from the Zone 19 trench. Several large samples taken from the Grassy Portage Ultramafic Pyroclastic sequence were sent for caustic fusion analysis to test its diamond-bearing potential. No diamonds of any size were recovered. The property was optioned to *MetalCORP Ltd.* on September 2, 2005. MetalCORP has since completed line-cutting, geological mapping, and

detailed prospecting over the central portion of the property.

- 1999, 2001:** Two blocks of claims comprising 6 claims (35 units) were staked by *J.E Bond II, A. Eveleigh, and J.G. Clark* to cover the Beaver Pond and Main South Zones. These claims straddled the present North Rock and Cousineau property boundaries. The property was optioned to *Northern Crown Mines Ltd.* who then completed a program of prospecting (61 samples) during May and June 2001. During this time the property and the Beaver Pond Zone rock dump were also sampled by Inco Ltd., Greenshield Resources, and North American Palladium. The best assays were obtained from the rock dump and graded up to **8.9% Cu, 0.87% Ni, 690 ppb Au, 0.05% Co, 1570 ppb Pt, and 590 ppb Pd.**
- 2001, 2003-2006:** A single, 15 unit claim, that included the East Cu Zone, was staked by *A.J. Eveleigh and J.E. Bond* in mid-2001. Five additional claims (27 units) were added to the property in 2003. Two prospecting programs were completed during 2003 and 2004. The property was optioned to *MetalCORP Ltd.* during October 2004. MetalCORP added another 11 claims (77 units) to the property late in 2004 to bring the total to 17 claims (119 units). During 2005 MTC completed an AeroTEM II helicopter-borne survey, a 14 holes, 3900 m, Phase 1 diamond drill program, line-cutting, detailed prospecting, and geological mapping. Phase II followed the year after 2006, and was carried out on East Zone with 21 more holes during winter, the extension of the grid and 15 trenches stripped and mapped during summer time. The number of claim units has been up-graded to 331 from 3 claims blocks staked in the Nickle Lake area.
- 2007:** Broad drilling all over the property summarizes that year with a total of 10,921 meters of core drilling at the Belacoma area, Nickle Lake, Noranda shaft Beaver Pond area, Mironski and west end of Grassy Portage bay for 33 holes drilled.
- 2008:** Metalcorp made a diamond discovery in an ultramafic pyroclastic unit, easily accessible just beside highway 11 in the middle of the property near Belacoma. Six micro diamonds were found while processed by Kennecott Canada at their mineral processing laboratory in Thunder Bay.

## **6.0 2017 Drill Program**

The drill program was contracted by Metalcorp Limited to Pierre Gagné Contracting Limited (PGCL) of Thunder Bay, Ontario. Mitch Dumoulin and John Corkery were the geologists responsible for the logistic of the drill program, while Pierre Gagné provided crew men, and equipment including the drill rig out his contracting company to perform the program. The drill program covered a period from June 01<sup>st</sup> to December 01<sup>st</sup>.

**Appendix VI**, at the end of this report, contains all the details and associated costs pertinent to the drill program, and explains the time frame of all activities. It provides series of worksheets representing the costs involved with details including the daily log sheets, material used during the drill program, all rentals needed to perform the drilling and the assay costs. The span of activity then started on June 01 by renting the REFLEX EZ-SHOT instrument to survey the course of the holes while coring down, and intermittently gather what was needed for the field season, renting a cabin for 3 to 4 workers and move in equipment and food, prepare and test the drill rig before mobilizing it by July 30<sup>th</sup> to the North Rock property, 25 kilometers east of Fort Frances.

Diamond drilling field activity started on July 31<sup>st</sup> with a crew of 2 diamond drillers, Marcel Smith and George Gottwald, and also a third man, Jerry Nichols, to support the drill crew by opening and maintaining the access trails for the drill site and water, as well as taking care of the logistics such as bringing the fuel needed for the diesel machines and equipment. Jerry was also responsible to keep the cabin viable for all workers on site, but also stripping little pieces of vegetation for the geologists to verify some old electro-magnetic (EM) anomalies near the drill sites. Drilling activity ran continuously until September 02<sup>nd</sup> when the diamond drillers secured the rig at that time for taking a 2 weeks break at home then coming back later. Three holes have been drilled during that period (NR17-070, NR17-071 and NR17-072). It was also time for Metalcorp to revise its budget and finances in regards of the drill program and make a decision accordingly.

The North Rock property includes a package of contiguous claims on which the 4 main areas to be investigated by this diamond drill program spread out (see figure 4, Location Map of the Drill Holes). These areas are shown on the map as Belacoma, East Zone, Main South Zone and Beaver Pond. The first hole, NR17-070, has been drilled at the Belacoma area on the north-east part of the property to verify a high grade Cobalt anomaly as well as the potential in palladium. Upon core logging the hole, this one was stopped at 328 meters, and a decision was made to pursue and move the program at East Zone across highway 11 to the middle of the property. The second hole, NR17-071, was targeting a high grade platinum anomaly of 12.20 grams per ton over 3.7 meters (M. Dumoulin, W. Carter, Jan. 08, 2008: Drilling Report, North Rock Property, 2006). The hole has been stopped at 117.6 meters by one of the geologists due to a strong deviation, and then re-set from the same set-up at a steeper dip that the hole can intersect the zone at a better angle. This new hole, NR17-072, intersected all the wanted lithologies and finished at 285 meters. From there, it was time for the diamond drillers to go home and take a break but a consensus was made to take a few more days and finish hole NR17-071 to its expected depth. The hole crossed all mineralized zones and was then stopped at 230 meters total depth. The 3 men wrapped up everything and put the drill rig in hibernation until they return later. It was on September 02<sup>nd</sup> with a total of 843.7 meters from 3 holes drilled to date.

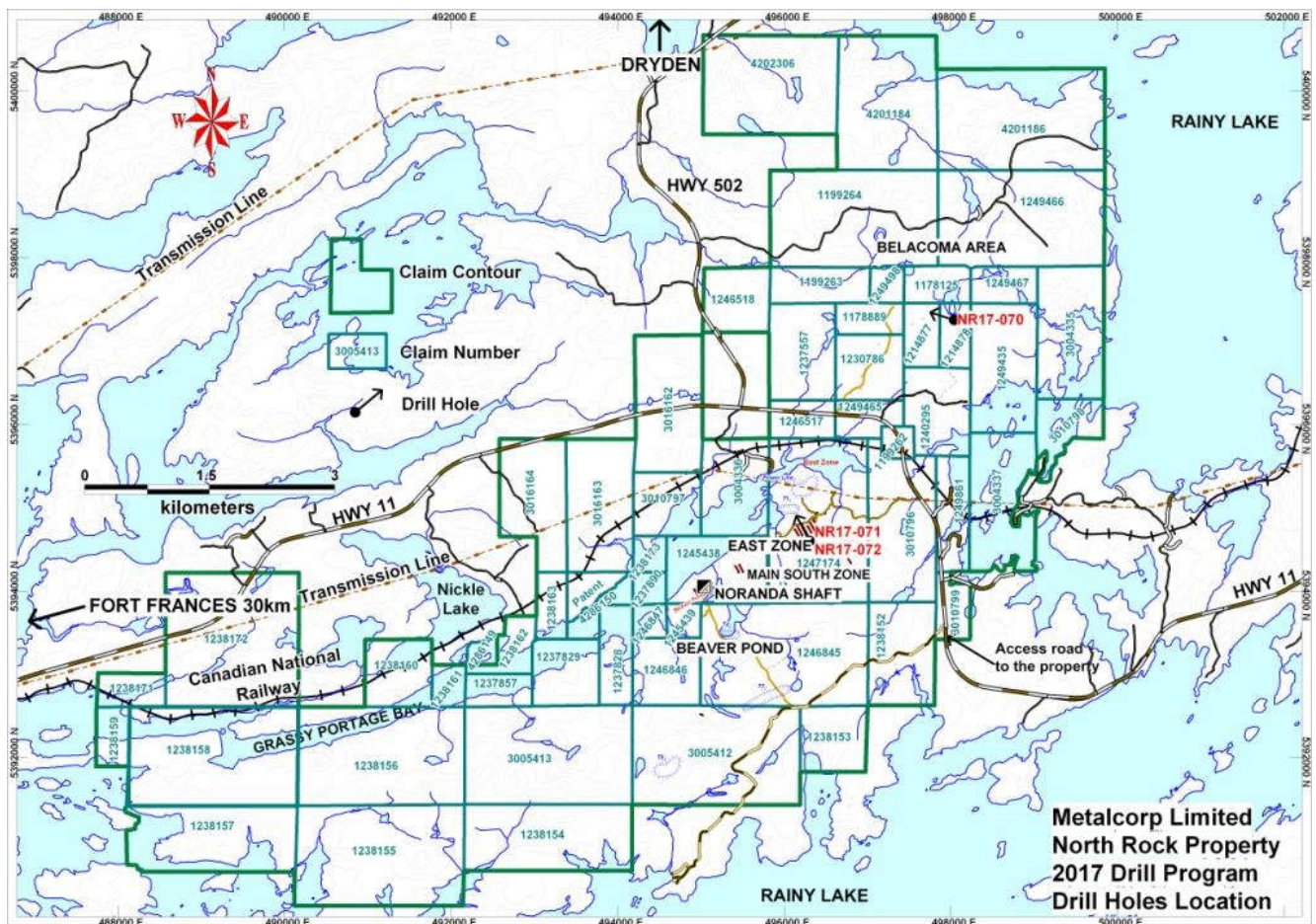
Due to a lack of financing from exploration flow through, a decision to terminate what is now called 2017 North Rock Drill Program Phase I has been taken by the end of September and all equipment has been demobilized by October 27<sup>th</sup>. The drill program then consists in 843.7 meters of drilled core from 3 holes. The core has been logged by the geologists making the sample intervals and tagging while a geo-technician was cutting and bagging the samples before sending to the laboratory of analyses for assaying. Drill core logging consisted of describing in detail the geology and geological structures in the core, to gain perspective and understanding of the main structural controls of the mineralization, including the nature of the mineralization with respect to the geology related to the different areas. Drill core logs were directly input into a formatted government Excel spreadsheet, which includes sections for lithology, assays, and down-hole surveys with a Reflex EZ-Shot instrument rented from that company in Porcupine.

All drill hole locations were spotted and re-checked on the casing after drilling by the project geologist using a Garmin GPSMap 60CX handheld GPS instrument to obtain UTM coordinates (NAD 83, Zone 15). The drill hole locations were imported in MapInfo/Discover GIS software from related exporter software. All the digital data was used to create maps and sections of the

drill holes (see Appendix II Drill Plan & Sections 2017 at the end of the report). Drill holes location, azimuth, dip and depth are listed in Table 2.

Drill core samples consist of a maximum of 1.0 metres length of split NQ core (2"-diameter). The drill core was sawed from selected intervals determined during logging at the MTC core facility in Thunder Bay, with the remaining core returned to an assigned location. A total of 518 samples were bagged and tagged, and sent to Activation Laboratory (Actlabs) in Thunder Bay for final assay analysis of 39 elements, including bases metals and precious metals.

The drill location plan is plot at scale 1:30,000 on paper format 17"x22", all the two each drill holes local plans and sections are plotted at scales of 1:1,000, 1:1,250 and 1:1,500 on paper format 11"x17" (see **Appendix II Drill Plans & Sections 2017**). All logs related to core logging and the corresponding list of assay results and certificates of analyses are available for consultation in **Appendices III, IV and V** at the end of this report.



**Figure 4: Location Map of the Drill Holes (also in Appendix II at scale 1:30,000)**

The following is the drill holes with their corresponding claims and drilled area:

Belacoma: NR17-070 – Claim 1214878

East Zone: NR17-071 and NR17-072 – Claim 1247174

**Metalcorp North Rock Property  
2017 Drill Program - Phase I  
Drill Holes Collar Location**

Hole ID	Easting	Northing	Elevation	Azimuth	Dip	Depth (m)
NR17-070	498041	5397256	364	288	-50	328
NR17-071	496305	5394600	350	330	-50	230
NR17-072	496305	5394600	350	330	-55	285

**Table 2: Drill Holes Location and Information**

## 7.0 Property Geology

The property geology is summarized from Harris (1974) and Poulsen (2000) and modified using observations made by the author from this drill program.

The North Rock Property is primarily underlain by the differentiated Grassy Portage Intrusion (GPI) with lesser amounts of the Grassy Portage ultramafic pyroclastic sequence (GUP); clastic metasedimentary rocks of the Couchiching Meta-sediments; granitoid rocks of the Bear Passage and Blind Bay plutons; sections of two formational, composite, chemical/clastic metasedimentary sequences; two narrow mafic metavolcanic units; and a few, possibly subvolcanic gabbro sills. All observed rock-types comprise the southern limb of a large-scale open, antiformal fold cored by the Rice Bay Dome located approximately 1.50 km north of the property (Figure 3). Most rock-types have been regionally metamorphosed to lower amphibolite-grade.

The south-western two-thirds of the *Grassy Portage Intrusion* underlie the core of the property (~75%). This large, sill-like, mafic complex intrudes all observed supracrustal rock-types, and is composed of a well-differentiated, locally layered, cumulate sequence of medium- to coarse-grained, melagabbro, gabbro and leuco gabbro; coarsely plagiophyric to glomero-plagiophyric gabbro to leuco gabbro; localized intervals of medium- to coarse-grained anorthosite; and a discontinuous, non-cumulate, ophitic-textured, melagabbroic border phase that is present along both the upper and lower contacts of the complex. The intrusion is structurally overturned and stratigraphically south-facing. Chalcopyrite-dominated mineralization is concentrated along both upper and lower contacts, with the greatest sulphide abundances observed near the base, or northern contact.



Narrow, discontinuous, bands of *mafic metavolcanic rocks*, up to 300 m thick, flank the northern and southern contacts of the Grassy Portage Intrusion. These rocks consist of amphibolitized, fine-grained, massive to pillowed flows, often recrystallized due to contact metamorphism, that locally exhibit narrow intervals of hyaloclastite and fine, interflow, clastic and chemical metasedimentary rocks.

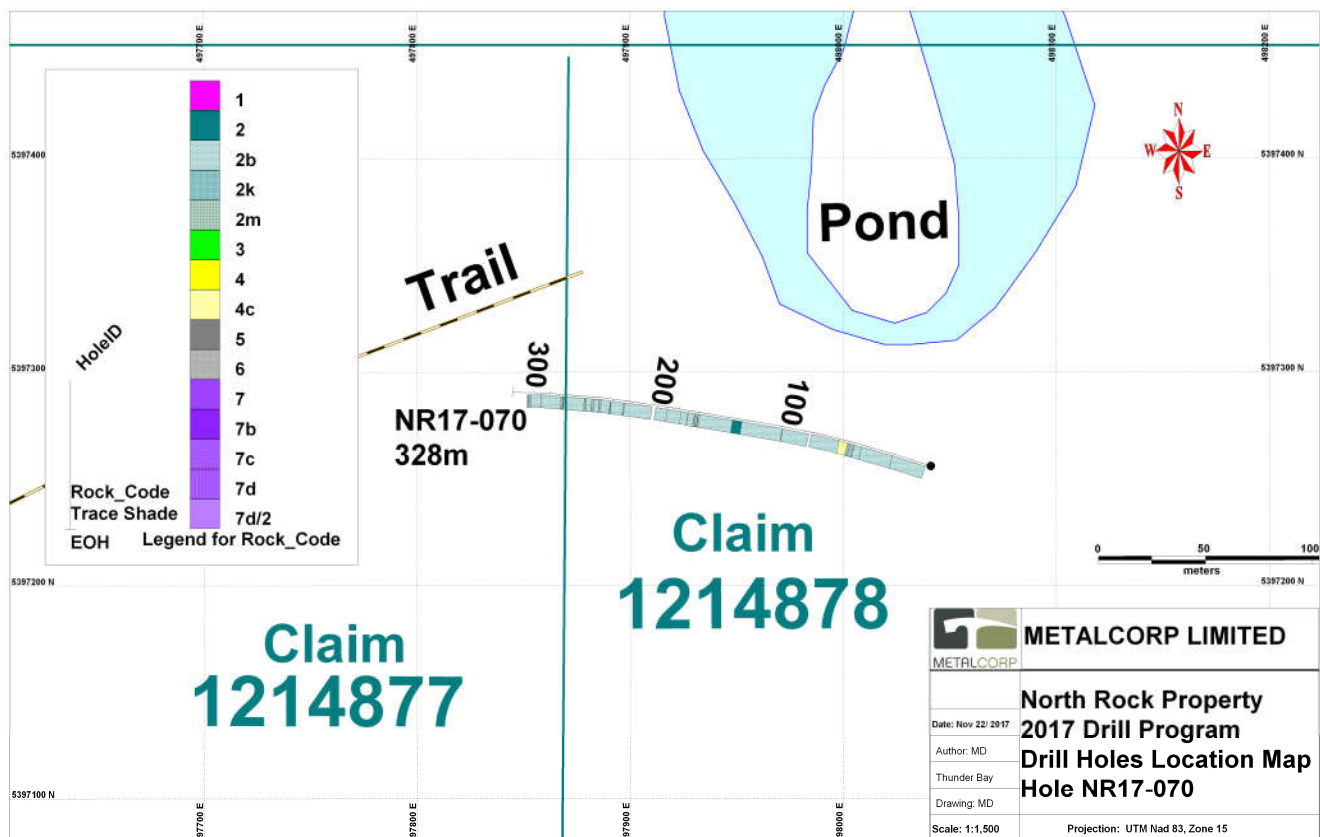
## **8.0 Mineralization**

Prior to the work by MetalCORP, the rocks underlying the property were known to host the historic Beaver Pond Cu Deposit (estimated to be 1,020,458 tons at 1.17% Cu), the Main South and East Cu zones, several Cu~Ni~Mo occurrences, and a Cu-Zn occurrence. The numerous base and precious metal-rich samples obtained from the known historic mineralized zones allowed MTC to better define the extent of the known surface mineralization. Previous drilling programs by Metalcorp in years 2005, 2006 and 2007 proved the lateral extensions and continuity of Beaver Pond Zone - Main South Zone as well as of East Zone, and the reliability to find lenses of mineralization along the basal contact of the layered gabbro.

The Drill Program of 2017, Phase I, aimed at testing the continuity of high grade intersections of Cobalt, Platinum, Palladium and Copper from those previous years of Metalcorp. Two major areas were tested, Belacoma, located on the east side of Highway 11 in the southern part of the Cousineau Block on the East side of highway 11, and East Zone in the central portion of the property. Originally, the plan was also to drill at Beaver Pond and Main South Zone but the drill program was stopped due to a lack of financing, hence called Phase I until returning later when the economics are more favourable.

### **Belacoma Zone**

Diamond drilling started at the Belacoma area on July 30<sup>th</sup>, with hole NR17-070 drilled 100 meters above a high grade Cobalt interval from year 2007. The main lithologies encountered in the hole consist mainly in mafic volcanics with inter-layers of mafic tuffs and amphibolitic material and sections of gabbro at the end of the hole. It contains several but scattered short intervals of mineralization such as pyrrhotite and associated chalcopyrite as local 1mm to 3cm irregular stringers or highly disseminated sulphides (see Drill Core Log NR17-070 in Appendix III). No more hole was drilled in this area as the lithologies expected and the prospect to reach the Cobalt structure has not been represented in the hole.

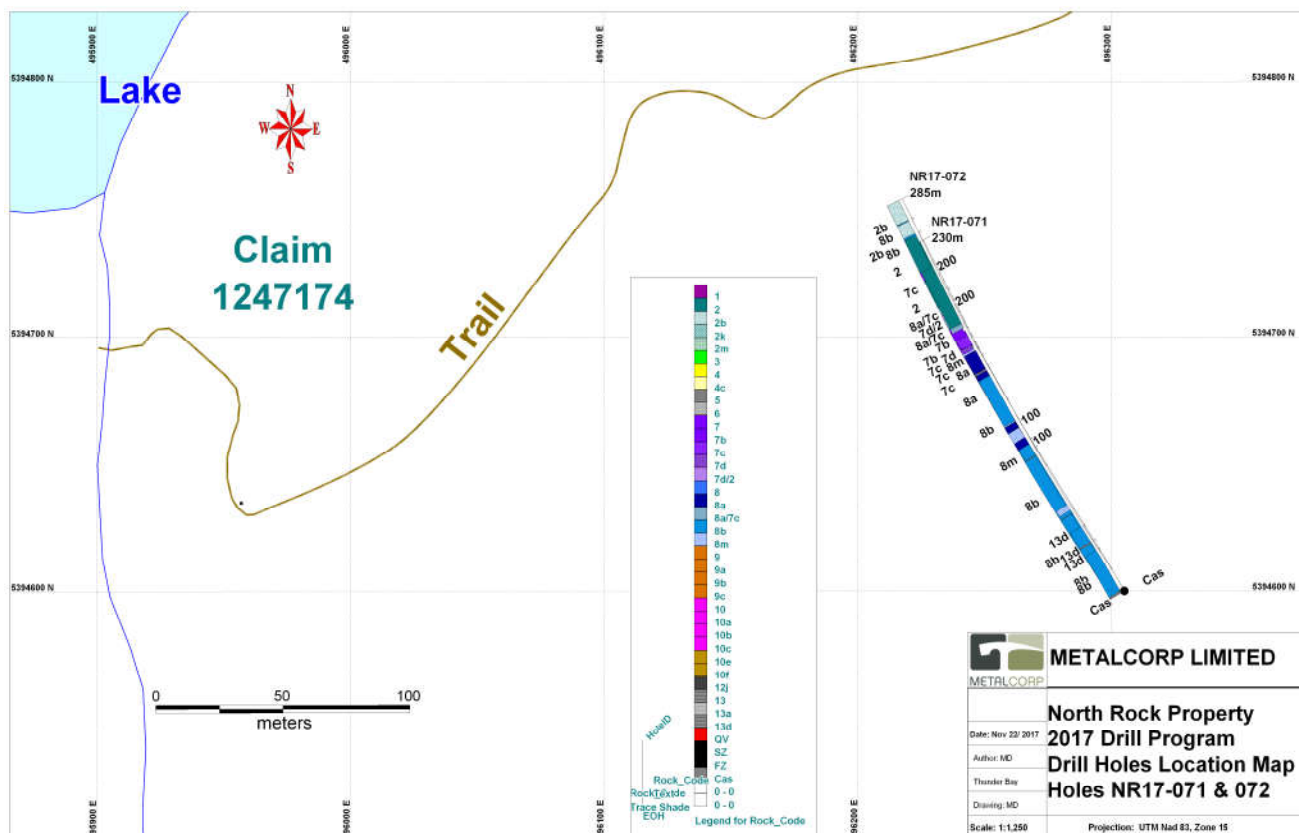


**Figure 5: Drill Hole NR17-070 Location Plan View (see plan at scale in Appendix II)**

### East Zone

The 2 holes NR17-071 and NR17-072 crossed all the lithologies that were expected. As explained in chapter 6, the first hole was stopped half way through because of its strong deviation but finished later after the second one. They started in the heart of the gabbro to reach the contact respectively at 167.7m and 179.9m and 25 meters up and down between the 2 holes with a difference of about 7 degrees between their dips. Both holes started to have significant mineralization in low to strong disseminated pyrrhotite and chalcopyrite, roughly 20 meters before the contact in the gabbro. After the contact to the north, series of ultramafic units sit at the base of the over-turned gabbro for about 50 meters in the first hole then 40 meters in the second one. These units consist in ultramafic intrusive rocks such as amphibolite, pyroxenites and also black melanocratic gabbro likely as dykes. Mineralization is sporadic and mostly pyrrhotite in the first hole but more frequent in the second hole with a stronger density of pyrrhotite and chalcopyrite occurring as strongly disseminated up to 5% sulphides with frequent 1-3cm massive stringers.



















**Figure 6: Drill Holes NR17-071 & 072 Location Plan View(see plan at scale in Appendix II)**

### Summary of the Holes

**NR17-070 Belacoma:** This hole is characterized by a dominance of mafic volcanic unit although frequently including narrow units of mafic tuff and locally intruded by melanocratic gabbro dykes, particularly towards the end of the hole for this one. The mineralization consists in small centimetric stringers of pyrrhotite mainly with occasional chalcopyrite with concentrations up to 15% sulphides within a one meter interval.

**NR17-071 East Zone:** This hole was drilled to the north-west from the hearth of the gabbro complex and is generally coarse grained quite pristine often porphyroblastic with local narrow intruding mafic dykes. It becomes mineralized around 145m with up to 10% pyrrhotite-chalcopyrite mostly as highly disseminated sulphides and blebby down the contact between the gabbro sill contact at 168m with the volcanic rocks to the north. From that point, a roughly 20 meters band of ultramafic rocks such as alternating dark pyroxenite-amphibolite-peridotite units also intruded by black melanocratic gabbro dykes lays down to 180m until it reaches the pillowed mafic volcanic rocks. Mineralization is strong between 145m and 165m as described above then becomes erratic although a good sequence between 176m and 180m with 1-3% sulphides. The mafic volcanic rocks are poorly if not even mineralized.

**NR17-072 East Zone:** This hole is a repeat of hole NR17-071 but at a steeper dip angle to correct the strong deviation of the first one. The coarse grained gabbro becomes mineralized at 159m down to 180m at the contact between the gabbro sill and the volcanic complex to the north. Mineralization is more scattered than the previous hole but more consistent and is found in fractures, highly disseminated pyrrhotite-chalcopryrite often wispy-blebby and also as massive centimetric stringers ranging 1-3% sulphides. From 180m, it re-crosses the same ultramafic units of pyroxenite-amphibolite-peridotite and black gabbro dykes for a longer run down to 241m before reaching the mafic volcanic rocks. Mineralization weakens at 195m but a good interval of 1-5% sulphides was re-crossed between 233.6m and 237.2m. Other than a nice massive 3cm vein of pyrrhothite-chalcopryrite at 262.6m, the mafic volcanic are basically not mineralized.

NORTH ROCK LITHOLOGICAL LEGEND	
	Cas Casing
	1 Ultramafic Metavolcanics
	2 Mafic Metavolcanics
	2b Pillowed Mafic Metavolcanics
	2k Mafic Flows Top Breccia
	2m Mafic Tuff
	3 Intermediate Metavolcanics
	4 Felsic Metavolcanics
	4c Felsic Tuff
	5 Chemical Metasediments
	6 Clastic Metasediments
	7 Ultramafic Intrusive Rock
	7b Peridotite
	7c Pyroxenite
	7d Amphibolite with very fine grained Pyroxenite
	7d/2 Amphibolite-Pyroxenite +/- Mafic Volcanics
	8 Mafic Intrusive Rock
	8a Melanocratic Gabbro
	8a/7c Black Gabbro & Pyroxenite mixed together
	8b Gabbro
	8m Porphyroblastic Gabbro (plagio phryic)
	9 Intermediate to Felsic Intrusive Dyke
	9a Quartz-Feldspar Porphyry Dyke
	9b Feldspar Porphyry Dyke
	9c Quartz Porphyry Dyke
	10 Felsic Intrusive Rock
	10a Granite
	10b Granodiorite
	10c Tonalite
	10e Diorite
	10f Quartz Diorite
	12j Lamprophyre Dyke
	13 Mafic Intrusive Dyke
	13a Diabase Dyke
	13d Mafic Dykes
	Quartz Vein
	Shear Zone
	Fault Zone

**Table 3: Lithological Legend of Rock Units at North Rock**

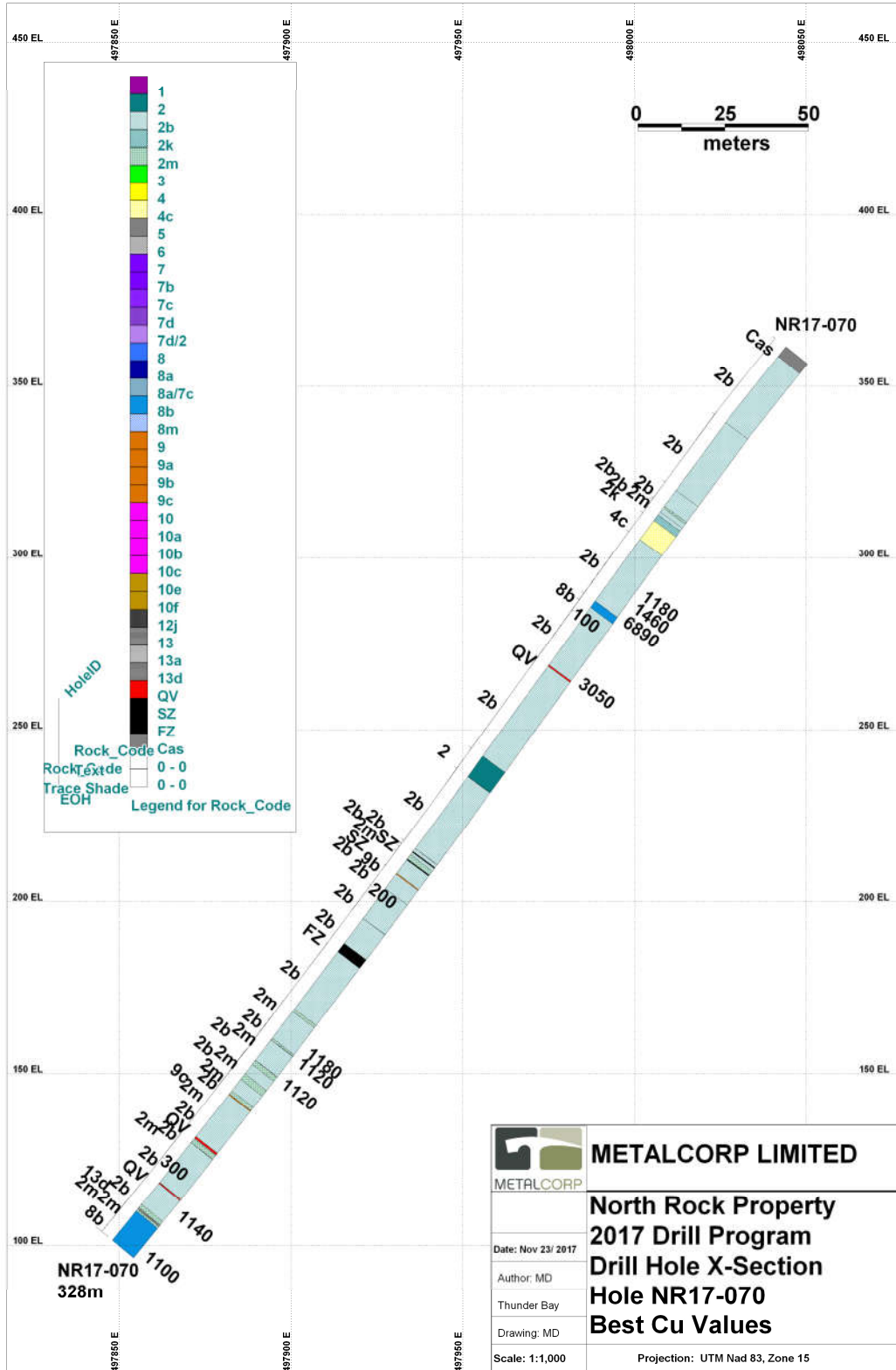
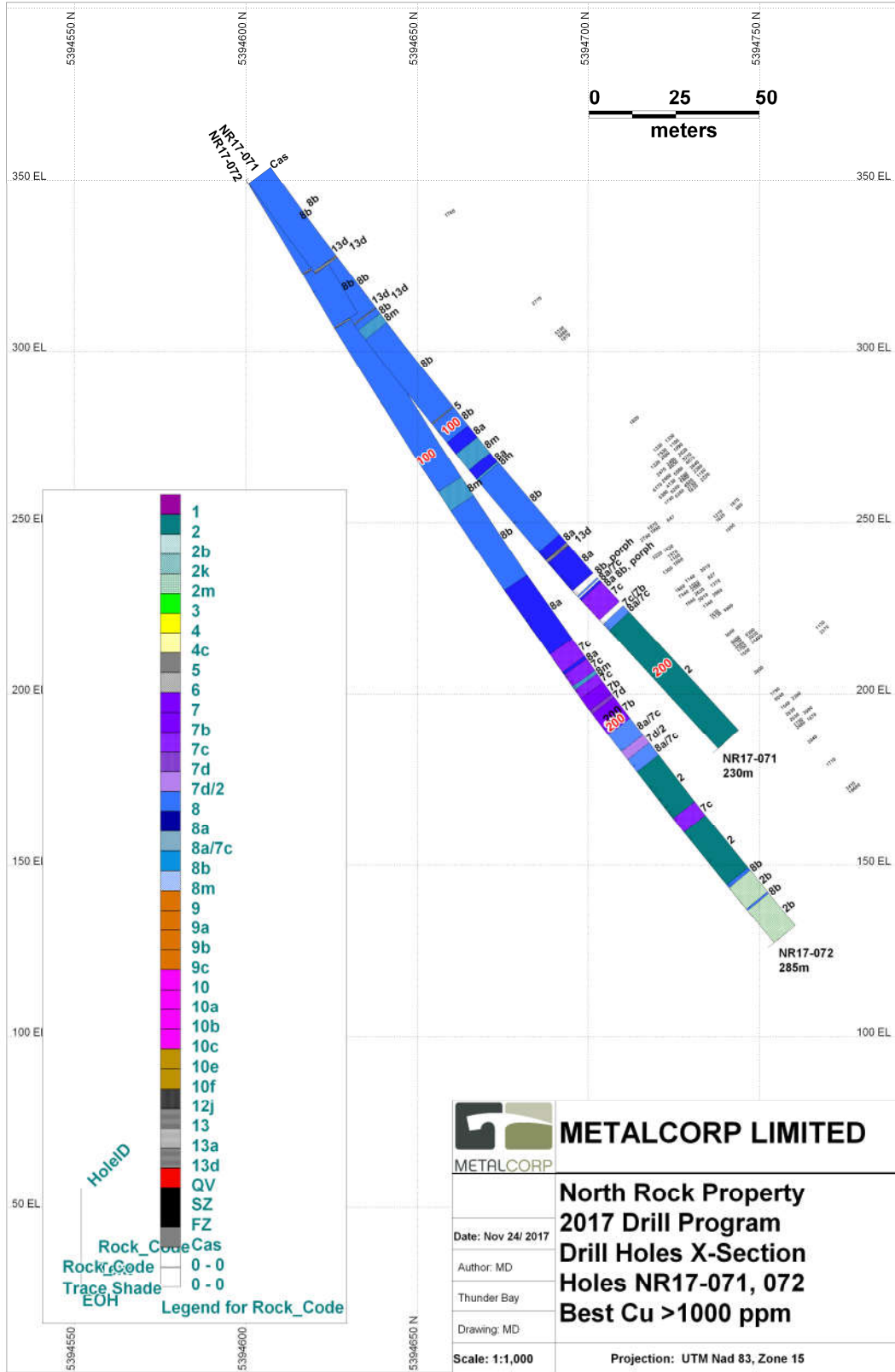


Figure 7: Drill Hole NR17-070 Cross-Section (see plan at scale in Appendix II)



**Figure 8: Drill Holes NR17-071 & 072 Cross-Section (see plan at scale in Appendix II)**

## Results

North Rock has been explored in the past for its copper (Cu) and nickel (Ni) potential and extensive work has been carried out in different periods of time to find new sources of mineralization or increase the potential of the known zones. The analysis of the ore left on surface (material they hauled to the surface from an old exploration drift) by Noranda in the early 1970's revealed the presence of Platinum Group Metals (PGM's). This has become a very important factor for exploration and this has been enhanced from the past exploration years, especially between 2005 and 2008 carried out by Metalcorp Limited (Phases I, II & III). These phases of drilling indicated the presence of the platinum group metals near the northern basal contact between the layered gabbro complex, and the sequences of mafic and ultramafic rocks to the north. These precious metals brought a new dimension in relation with exploration on the property by enhancing the value of the base metals, but also by increasing the number of new targets. While the known mineralization is found at the gabbro contact zone with the pillowed mafic volcanic sequences to the north, the gabbro carry these mineralized sulphides as a magmatic type of mineralization of Cu and Ni while the PGM's tend to be in the hanging wall of this structure. The PGM's occur in the immediate vicinity of the contact as irregular bands of blackish fine grained ultramafic mela gabbro-pyroxenite units squeezed between the gabbro domain and the pillowed mafic volcanic sequences.

The best concentrations of Cu and Ni are found in more specific areas, such as Beaver Pond Zone, Main South Zone and East Zone along the gabbro contact, and the PGM's can be anywhere from the contact in the gabbro through all stratigraphies to the north through the mafic-ultramafic rock assemblages, as well as in the black and talc-green highly magnetic komatiitic units typical to Belacoma area. Some of the best results of Copper (Cu), Palladium (Pd), Platinum (Pt) and Gold (Au) from the 3 holes drilled in 2017 are described below and summarized in Table 4.

### Belacoma Area

One hole has been drilled in this area focussed on re-produce a similar Cobalt intersection from previous drilling by Metalcorp in 2007. The hole was set at azimuth 288° dipping -50° (see figures 5 and 7 above) the same as the old hole but lithologically 100 meters above. The major portion of the hole was in mafic volcanic pillowed flows with frequent sections of mafic tuff. The mineralization mostly occurs near small intervals of shearing, veining and fracturing. It consists in disseminated, blebby, wispy and as 1-3cm stringers of pyrrhotite (po) mostly and rarely with chalcopyrite (cpy). The results returned quite low contrary to year 2007, with the best Cu values at 6890 ppm over 0.61m and 3050 ppm over 0.61m (see Log Descriptions and Assay sheet in Log NR17-070 in Appendix III). Nothing significant returned for Au, Pd and Pt.

## East Zone

Two holes have been drilled on the same collar location at the same azimuth 330° but different dips of -50° and -55°. The first hole, NR17-071 has been stopped short at 117.7m because of a strong up-dip deviation, but finished later after the next hole and a strategic decision at the time. The next hole, NR17-072, was drilled straight down with minimum deviation, then reaching a distance of about 25 meters down the target or gabbro contact zone between the 2 holes (see figures 6 and 8 above). The 2 holes were targeting the vicinity of a high grade intersection at 12.2 grams per tonne over 3.7m drilled by Metalcorp in 2006 and trying to reproduce it (Dumoulin, M. & Carter W., 2008).

The best result in hole NR17-071 is at 177.18m in serpentine altered pyroxenite bordering a high grade metamorphic peridotite, part of the characteristic narrow band of ultramafic rocks north of the gabbro contact. It returned 1.87 grams palladium per tonne over 0.5m, followed by a lower value of platinum at 0.36 gpt in the same 0.5m interval. However, the best results in hole NR17-072 were found in a narrow gabbro dyke intruding the mafic volcanic sequence to the north, matching a 3cm po-cpy vein/stringer at 262.65m typical of numerous stringers of this kind found in the volcanics to the north, and that can carry PGE's. The values that returned from the stringer are grading at 1.08 g/t palladium, 1.34 g/t gold and 1.96% copper on the same interval of 0.6m. Higher and before to this intersection in the hole, a very significant value of copper of 2.44% Cu over 0.5m returned from a po-cpy blebby mixture of fine grained pyroxenite and porphyroblastic black melano-gabbro (see Log Descriptions and Assay sheet in Logs NR17-071 and NR17-072 in Appendix III).

**The best intersections of the 2017 drill program are detailed in the tables below;**

Hole ID	From(m)	To (m)	Width (m)	Pd Value	Pt Value	Au Value	Cu Value
NR17-071	177.18	177.64	0.5	<b>1.87 gpt</b>	0.36 gpt	0.05 gpt	0.12%
NR17-071	177.64	178.12	0.5	0.43 gpt	0.76 gpt	0.01 gpt	0.16%
NR17-072	207.87	208.33	0.5	0.2 gpt	0.05 gpt	0.3 gpt	<b>2.44%</b>
NR17-072	262.65	263.26	0.6	0.07 gpt	<b>1.08 gpt</b>	<b>1.34 gpt</b>	<b>1.96%</b>

**Table 4: Table of Best Results for North Rock 2017 Diamond Drilling Program  
(The table of the complete list of results can be seen in Appendix IV)**

## 9.0 Deposit Models

The North Rock Property exhibits excellent potential to host hydrothermally modified Ni-Cu-dominant Cu-Ni-PGE massive sulphide deposits and/or PGE-dominant, low-sulphide, magmatic deposits. Naldrett (1999) states that: '*Magmatic sulphide deposits form as the result of segregation and concentration of droplets of liquid sulphide from mafic or ultramafic magma, and the partitioning of chalcophile elements into these from the silicate melt. Sulphide saturation of magma is not enough in itself to produce an ore deposit. The appropriate physical environment is required so that the liquid sulphide mixes with enough magma to become adequately enriched in chalcophile metals, and then is concentrated in a restricted locality so that the resulting concentration is of ore grade.*' Naldrett (1989) and Naldrett et al. (1990) subdivided magmatic sulphide deposits into Ni-Cu dominant (sulphide-rich) and PGE-dominant (sulphide-poor) groups that occur within a variety of tectonic settings (*see below*).

1. *Synvolcanic* (largely Archean): Mafic-ultramafic bodies within this class consist of distinct *komatiitic* and *tholeiitic* (*picritic* and *anorthositic*) classes. The komatiitic class is characteristically volcanic, is subdivided into Type 1 (komatiite peridotite-hosted) and Type 2 (komatiite dunite-hosted) deposits (Leshner 1989), and includes the Kambalda deposits (Western Australia) and several Greenstone Belt deposits, including the high-grade Dundonald, Alexo, and Langmuir deposits. The tholeiitic class consists of *picritic* and *anorthositic subclasses* which include the Pechenga (Russia) deposits and the Montcalm (Ontario) deposit, respectively. The mineralization contained within the Grassy Portage Intrusion may fit into the anorthositic subclass of the tholeiitic class.

2. *Rifted Plate Margins*: Bodies associated with rifted plate margins occur within 2 sub-classes: those associated with *continental crust* and those associated with *ophiolites*. Members of the continental crust association include the Fox River Sill of the Circum-Superior Rift Zone, the Thompson and Raglan Ni camps of the Circum-Ungava Belt, and the Penikat Intrusion of the Kemi-Koilismaa Belt. Ophiolites are not noted for their magmatic sulphide mineralization; however, one possible example is the Acoje Ni deposit in the Zimbales ophiolite, Philippines.

3. *Cratonic Areas*: Cratons can host *flood-basalt*-related intrusions, which include Noril'sk-Talnakh (Siberia), the Duluth Complex (Minnesota), and the Crystal Lake Gabbro (Ontario), or *large stratiform complexes* such as the Bushveld Complex (South Africa), the Stillwater Complex (Montana), the Lac des Iles Complex (Ontario), and the Great Dyke (Zimbabwe); and

4. *Orogenic*: Mafic-ultramafic bodies within this tectonic setting can be sub-divided into *synorogenic* and *late orogenic* subdivisions. The synorogenic variety includes the Moxie and Katahdin Intrusions (Maine) and the late orogenic variety includes the Alaskan-type intrusions of Alaska, British Columbia, and the Ural Mountains in Russia.

*Ni-Cu-dominant magmatic sulphide deposits* comprise large, rich concentrations of coarsely disseminated, net-textured, semi-massive to massive Ni-Cu sulphides that generally occur near or below the base of their host intrusions. These large, rich sulphide concentrations are not thought to be a normal consequence of magma emplacement, cooling, and crystallization. They appear to form as a consequence of a variety of types of crustal contamination, including the assimilation of crustal sulphur. These magmas require an external source of crustal sulphur before they can produce a massive sulphide deposit. Good examples of this group are the Noril'sk-Talnakh, Voiseys Bay, Eagle, Sudbury, Duluth Complex, and Kambalda deposits, all of

which have identifiable sources of crustal sulphur. The Noril'sk-Talnakh, Voisey's Bay, and Eagle deposits are also examples of conduit-related deposits, which tend to be richer in metals than many other examples of this group.

*PGE-dominant magmatic sulphide deposits* comprise low concentrations of disseminated, PGE-rich, Cu-Ni sulphides (generally <3% total sulphides) and primarily occur as stratabound and non-stratabound types. The stratabound, or *reef*-type is always associated with layered intrusions and is usually, but not always, associated with a mineralized rock layer exhibiting distinctive mineralogy or texture. The Merensky Reef of the Bushveld Complex and the J-M Reef of the Stillwater Complex are prime examples of reefs associated with distinctive rock units. Some deposits, such as the Lac des Iles and Marathon deposits, are discordant in nature and do not appear to be associated with any specific horizon, rock-type, or layering. An external crustal sulphur source is not required to produce these deposits.

Deposits of both groups are mafic magma-associated and require the following conditions to form economic concentrations (Naldrett and Scott 1992, Naldrett 1999):

1. Saturation and segregation of an immiscible sulphide liquid from the silicate melt;
2. Reaction of the sulphide liquid with a large volume of magma in order to concentrate the Cu, Ni, and PGE; and
3. Settling and concentration of the Cu-Ni-PGE-enriched, immiscible sulphide liquid into a restricted volume, in large enough concentrations to form an economic deposit. Ni-Cu-dominant deposits generally form nearly massive deposits that concentrate within or near the basal regions of an intrusion (Duluth Complex) or magma conduit (Noril'sk-Talnakh, Voisey's Bay, Eagle). Ni-dominant deposits of the Kambalda-type tend to form massive to net-textured deposits near or just below the base of thick, channelized komatiitic flows. PGE dominant deposits generally form relatively low-sulphide, disseminated deposits that often concentrate near or within a particular stratigraphic horizon of an intrusion (Merensky Reef, Bushveld Complex; J-M Reef, Stillwater Complex).

The formation of a PGE-dominant deposit does not generally require the addition of external sulphur to the magma; however, the addition of considerable amounts of crustal sulphur is essential to the formation of Ni-Cu-dominant deposits.

The sequence described above is not part of the normal fractionation history of mafic magmas and the formation of a deposit requires some sort of trigger to initiate sulphide saturation after ascent of magma through the crust. This trigger could constitute assimilation of crustal sulphides or silicates within the feeder system or the magma chamber; depressurization of the magma chamber, which lowers the solubility of sulphur within the magma; turbulent addition of primitive magma into a fractionating, more siliceous magma chamber which leads to turbulent convection, magma mixing, and sulphur saturation; or any combination of the three.

The complicating factor present within the North Rock area is that the observed mineralization has been affected/modified by one or more episodes of hydrothermal activity that may have resulted in considerable remobilization, particularly of Cu and the PGE, from an original massive deposit or deposits whose location is presently unknown/undiscovered.



## 10.0 Total Costs of the 2017 North Rock Drill Program

This program basically started June 1<sup>st</sup> with preparation work and field work until notably core drilling, beginning on July 31<sup>st</sup> and ending on September 02<sup>nd</sup>. However, the program in itself was terminated later on October 27<sup>th</sup> with demobilization of the equipment due to stoppage of the program following lack of financing. The period covered by the drill program ended up on December 01<sup>st</sup> with the end of the compilation and writing of the diamond drilling report, which report will be filed at the **MNDM Lands Office in Sudbury**. Five people were involved from a team of 2 geologists, a driller-foreman and his assistant, and a field support labour in charge of moving materials, maintain the access trails and help the geologists in the field. This drill program was carried out with in-house manpower and equipment provided by Pierre Gagné Contracting Limited, and rental of the drill rig operated by Marcel Smith, also the foreman-driller of the drill program.

The tables related to the costs have been built from the original copies of the daily logs (time sheets), the receipts gathered from all material needed to maintain the drill program including food, meals, gas and fuel for trucks and diesel machines (float truck, excavator, bulldozer, drill rig) then the cabin rental for the three main field workers and finally the Reflex tool needed for surveying the course of the hole while core drilling. Also and after description of the logged core, the 518 selected samples were sent to a laboratory for analyses. All these costs are linked to their respective invoices (**all scanned in Appendix VI**). The rentals are also a big part of the costs and were determined by the administration of the business in charge of carrying out the drill program, in this case Pierre Gagné Contracting Limited. This one established the rentals of his equipment by monthly, daily and hourly charges as detailed in the spreadsheets and invoices.

**All the receipts and invoices have been scanned and saved in Appendix VI at the end of this report, and correspond to the tables below.**

The following tables explain in details the distribution of the costs for the drill program;

<b>Final Costs of Drill Project June 01 to December 01, 2017</b>			
<b>Time &amp; Salaries</b>	<b>Material, Food &amp; Lodging</b>	<b>Rentals</b>	<b>Sampling costs</b>
<b>\$95,718.26</b>	<b>\$38,803.67</b>	<b>\$58,139.22</b>	<b>\$19,717.65</b>

<b>Drilling Phase 1</b>	<b>Meters Drilled</b>	<b>Total Costs of Drilling</b>	<b>Cost/m of Drilling</b>
	<b>843.7</b>	<b>\$212,378.80</b>	<b>\$251.73</b>

**Total costs account for -\$13,240.72 Discount for Rentals & -\$24,062.50 Discount in Salaries  
Also, demobilization of the drill was done at no charge off from other material & equipment**

**Table 5: North Rock 2017 Total Costs of the Diamond Drill Program**

Date	Name	Hole ID	Claim ID	Azimuth	Dip	From (ft)	To (ft)	Total (ft)	From (m)	To (m)	Total (m)	Comment
30-Jul-17	Marcel Smith	NR17-070	1214878	288	-50	0	0	0	0.0	0.0	0.0	Travel day
30-Jul-17	George Gottwald											
31-Jul-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Set up drill on drill site
31-Jul-17	George Gottwald											
1-Aug-17	Marcel Smith					0	16	16	0.0	4.9	4.9	Set at -50° start casing
1-Aug-17	George Gottwald											
2-Aug-17	Marcel Smith					16	96	80	4.9	29.3	24.4	Coring
2-Aug-17	George Gottwald											
3-Aug-17	Marcel Smith					96	176	80	29.3	53.6	24.4	Coring
3-Aug-17	George Gottwald											
4-Aug-17	Marcel Smith					176	326	150	53.6	99.4	45.7	Coring
4-Aug-17	George Gottwald											
5-Aug-17	Marcel Smith					326	406	80	99.4	123.7	24.4	Coring, protect environment
5-Aug-17	George Gottwald											
6-Aug-17	Marcel Smith					406	436	30	123.7	132.9	9.1	Coring in hard rock (slow)
6-Aug-17	George Gottwald											
7-Aug-17	Marcel Smith					436	486	50	132.9	148.1	15.2	Coring, do repairs
7-Aug-17	George Gottwald											
8-Aug-17	Marcel Smith					486	626	140	148.1	190.8	42.7	Coring good
8-Aug-17	George Gottwald											
9-Aug-17	Marcel Smith					626	716	90	190.8	218.2	27.4	Coring , blocky
9-Aug-17	George Gottwald											
10-Aug-17	Marcel Smith					716	836	120	218.2	254.8	36.6	Coring good + lost & retrieve
10-Aug-17	George Gottwald											
11-Aug-17	Marcel Smith					836	956	120	254.8	291.4	36.6	Coring good
11-Aug-17	George Gottwald											
12-Aug-17	Marcel Smith					956	1076	120	291.4	328.0	36.6	End of Hole, pull out rods
12-Aug-17	George Gottwald											
13-Aug-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Rods out, move next drill site
13-Aug-17	George Gottwald											
14-Aug-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Prep new site, move, set up
14-Aug-17	George Gottwald											
15-Aug-17	Marcel Smith	NR17-071	1247174	330	-50	0	66	66	0.0	20.1	20.1	Finish set up, do casing, drill
15-Aug-17	George Gottwald											
16-Aug-17	Marcel Smith					66	216	150	20.1	65.8	45.7	Good coring, strong deviation
16-Aug-17	George Gottwald											
17-Aug-17	Marcel Smith					216	326	110	65.8	99.4	33.5	Good coring, more deviation
17-Aug-17	George Gottwald											
18-Aug-17	Marcel Smith					326	386	60	99.4	117.7	18.3	Hole stopped by geologist
18-Aug-17	George Gottwald	NR17-072	1247174	330	-55	0	2	2	0.0	0.6	0.6	Re-collared new hole at -55°
19-Aug-17	Marcel Smith					2	96	94	0.6	29.3	28.7	Controlled drilling & deviation
19-Aug-17	George Gottwald											
20-Aug-17	Marcel Smith					96	216	120	29.3	65.8	36.6	Good coring
20-Aug-17	George Gottwald											
21-Aug-17	Marcel Smith					216	376	160	65.8	114.6	48.8	Good coring
21-Aug-17	George Gottwald											
22-Aug-17	Marcel Smith					376	476	100	114.6	145.1	30.5	Good coring, hard rock
22-Aug-17	George Gottwald											
23-Aug-17	Marcel Smith					476	576	100	145.1	175.6	30.5	Good coring
23-Aug-17	George Gottwald											
24-Aug-17	Marcel Smith					576	706	130	175.6	215.2	39.6	Good coring
24-Aug-17	George Gottwald											
25-Aug-17	Marcel Smith					706	796	90	215.2	242.6	27.4	Coring OK, minor problems
25-Aug-17	George Gottwald											
26-Aug-17	Marcel Smith					796	866	70	242.6	264.0	21.3	Problems with engine contols
26-Aug-17	George Gottwald											
27-Aug-17	Marcel Smith					866	936	70	264.0	285.3	21.3	Hole shut down, end of hole
27-Aug-17	George Gottwald											
28-Aug-17	Marcel Smith	NR17-071	1247174	330	-50	386	456	70	117.7	139.0	21.3	Re-enter NR17-071, flush hole
28-Aug-17	George Gottwald											Move back on old collar
29-Aug-17	Marcel Smith					456	576	120	139.0	175.6	36.6	Good coring, rods well greased
29-Aug-17	George Gottwald											
30-Aug-17	Marcel Smith					576	666	90	175.6	203.0	27.4	Good coring, rods well greased
30-Aug-17	George Gottwald											
31-Aug-17	Marcel Smith					666	756	90	203.0	230.4	27.4	Good coring
31-Aug-17	George Gottwald											
1-Sep-17	Marcel Smith					756	756	0	230.4	230.4	0.0	Hole shut down, pull rods out
1-Sep-17	George Gottwald											Tear down, hibernate drill rig
2-Sep-17	Marcel Smith											Finish packing, lock all supplies
2-Sep-17	George Gottwald											Get out property, back home
									Total (m)		843.7	

**Table 6: North Rock 2017 Diamond Drilling Production (Also in Appendix VI)**

MetalCorp Ltd.

490 Maureen Street, Thunder Bay, Ontario. P7B 6T2. Phone: (807) 683-8161; Fax: (807) 623-4221

Date	Name	Scope of Work	Hours	Salary Rate/hour	Salary Costs	Drilling (ft)	Drilling (m)	Invoices Dates
10-Jul-17	Mitch Dumoulin	Geologist traveling to North Rock with service man & spot + mark up drill trails	8	\$80.00	\$640.00			
10-Jul-17	Jerry Nichols	Service man assisting geologist above to spot + mark up drill trails	8	\$75.00	\$600.00			
11-Jul-17	Mitch Dumoulin	Spotting 2 creeks to cross and to instal bridges later as well as marking up trails	8	\$80.00	\$640.00			
11-Jul-17	Jerry Nichols	Service man assisting geologist in preparation for installing bridges along drilling trails	8	\$75.00	\$600.00			
25-Jul-17	Jerry Nichols	Take down the bulldozer from float truck & park it, set-up living quarters for workers	12	\$75.00	\$900.00			
25-Jul-17	Gary Grenier	Float truck driver driving to property to bring D6 bulldozer and come back home	11	\$75.00	\$825.00			
26-Jul-17	Marcel Smith	Drill runner traveling to the first drill site at North Rock to prepare for diamond drilling	8	\$75.00	\$600.00			
26-Jul-17	Mitch Dumoulin	Geologist in charge travelling with drill runner above to spot and prepare first drill site	8	\$80.00	\$640.00			
26-Jul-17	Gary Grenier	Float truck driver driving to property to bring Link Belt excavator and come back home	11.5	\$75.00	\$862.50			
26-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			
27-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			
28-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			Jul 10-Jul 29
29-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			\$9,907.50
30-Jul-17	Marcel Smith	Drill runner moving equipment on property to first drill set up NR17-070	11.5	\$50.00	\$575.00			
30-Jul-17	George Gottwald	Drill helper working on moving equipment with runner to first set up NR17-070	10.5	\$50.00	\$525.00			
30-Jul-17	Jerry Nichols	Service man helping drillers to move equipment making their way to first drill set up	11	\$75.00	\$825.00			
30-Jul-17	Gary Grenier	Float truck driver to bring Drill Rig & drill material to property and come back home	11	\$75.00	\$825.00			
31-Jul-17	Marcel Smith	Set up and start the drill on drill site, check material & parts, test hydraulics	13	\$50.00	\$650.00			
31-Jul-17	George Gottwald	Move and attach equipment to the drill, pumps, sloop with drill rods in place	11	\$50.00	\$550.00			
31-Jul-17	Jerry Nichols	Unload material, make trail to water pond to connect drill with water line	12	\$75.00	\$900.00			
31-Jul-17	Gary Grenier	Set up core shack that geologists can log drill core coming out from the property	5	\$75.00	\$375.00			
1-Aug-17	Marcel Smith	Set the tower at -50 degrees and start drilling casing	12	\$50.00	\$600.00	16	4.9	
1-Aug-17	George Gottwald	Get the drill rods and casings ready and install the water barrel,	11	\$50.00	\$550.00	NR17-070		
1-Aug-17	Jerry Nichols	Bring material for drilling to the drill site & build trail to hole #2 with Linkbelt excavator	11.5	\$75.00	\$862.50			
1-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
2-Aug-17	Marcel Smith	Drilling all day and check for maintenance	11	\$50.00	\$550.00	80	24.4	
2-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface	10	\$50.00	\$500.00			
2-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
3-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	11.5	\$50.00	\$575.00	80	24.4	
3-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	10.5	\$50.00	\$525.00			
3-Aug-17	Jerry Nichols	Open new trail with Linkbelt excavator to planned hole #1, dig trench for water draining	11	\$75.00	\$825.00			
4-Aug-17	Marcel Smith	Drilling all day and check for maintenance	12	\$50.00	\$600.00	150	45.7	
4-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	11	\$50.00	\$550.00			
4-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
5-Aug-17	Marcel Smith	Drilling all day and check for maintenance, install hay bales to control cuttings spreading	12	\$50.00	\$600.00	80	24.4	
5-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	11	\$50.00	\$550.00			
5-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
6-Aug-17	Marcel Smith	Drilling part of the day and repair D-Ring on cyclinder of motor	13	\$50.00	\$650.00	30	9.1	
6-Aug-17	George Gottwald	Keep helping normal tasks of drilling and assist runner at repairing the motor	11	\$50.00	\$550.00			
6-Aug-17	Jerry Nichols	Moving earth material and marking up trail to next point of interest	12	\$75.00	\$900.00			
6-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
7-Aug-17	Marcel Smith	Finish repairing the drill as above then start drilling steady	15	\$50.00	\$750.00	50	15.2	
7-Aug-17	George Gottwald	Help runner finish to repair motor then back to drilling with helper's normal tasks, test	10.5	\$50.00	\$525.00			
7-Aug-17	Jerry Nichols	Open road with excavator to next EM geophysics anomaly to check & verify in drill area	12	\$75.00	\$900.00			
8-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	140	42.7	
8-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
8-Aug-17	Jerry Nichols	Work on moving material over the EM geophysics anomaly same as day before	12	\$75.00	\$900.00			
9-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	12.5	\$50.00	\$625.00	90	27.4	
9-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface	11.5	\$50.00	\$575.00			
9-Aug-17	Jerry Nichols	Finishing up moving earth material over EM anomaly the same as days before	12	\$75.00	\$900.00			
9-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
10-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	13.5	\$50.00	\$675.00	120	36.6	
10-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	12.5	\$50.00	\$625.00			
10-Aug-17	Jerry Nichols	Move Link Belt excavator and bulldozer to go and build bridge with Gary at creek #1	12	\$75.00	\$900.00			
10-Aug-17	Gary Grenier	Drive to property with float truck then move excavator and D6 dozer to build creek bridge	12	\$75.00	\$900.00			
11-Aug-17	Marcel Smith	Drilling all day and check for maintenance	11.5	\$50.00	\$575.00	120	36.6	
11-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$50.00	\$575.00			
11-Aug-17	Jerry Nichols	Move with Link Belt excavator and build trail to hole #3 and make the set-up	12	\$75.00	\$900.00			
11-Aug-17	Gary Grenier	Running D6 tractor and prepare for moving equipment across highway & move to hole #3	12	\$75.00	\$900.00			
11-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
12-Aug-17	Marcel Smith	Drilling all day and until end of hole at 1076 feet, break rods & pull out to the sloop	11.5	\$50.00	\$575.00	120	36.6	
12-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & put the rods back in the sloop end of hole	10.5	\$50.00	\$525.00	EOH 1076'		
12-Aug-17	Jerry Nichols	Finish setting up area of hole #3 and mark up trail to next holes #4 & 5	12	\$75.00	\$900.00			Jul 30-Aug 12
12-Aug-17	Gary Grenier	Open new trail with D6 bulldozer to prepare for next following hole #4	12	\$75.00	\$900.00			\$35,147.50
13-Aug-17	Marcel Smith	Finish pulling out the rods and move the sloop off drill site & prep to move next site	13	\$50.00	\$650.00	Moving		
13-Aug-17	George Gottwald	Help breaking the rods and putting them all in the sloop, help moving equipment off	12	\$50.00	\$600.00	Moving		
14-Aug-17	Marcel Smith	Move all equipment out to the highway and then moving to next site NR17-071	12.5	\$50.00	\$625.00	Moving		
14-Aug-17	George Gottwald	Help runner to move all equipment out with D6 tractor at highway to next drill site	11.5	\$50.00	\$575.00	Moving		
14-Aug-17	Jerry Nichols	Build trail to hole #4 and make the drill pad	12	\$75.00	\$900.00			
14-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			

15-Aug-17	Marcel Smith	Finish set upping drill on new site, make trail for water line to pond, start drilling	13	\$50.00	\$650.00	66	20.1	
15-Aug-17	George Gottwald	Help driller connect the drill with water on new site then bring rods in for drilling	12	\$50.00	\$600.00	NR17-071		
15-Aug-17	Jerry Nichols	Build trail to hole #5 and go help set-upping the drill on its new site	12	\$75.00	\$900.00			
16-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	13.5	\$50.00	\$675.00	150	45.6	
16-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	12.5	\$50.00	\$625.00			
16-Aug-17	Jerry Nichols	Finish drill pad hole #5, make trail to water, finish helping at set-upping drill	12	\$75.00	\$900.00			
16-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
16-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
17-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	11	\$50.00	\$550.00	110	33.5	
17-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	10	\$50.00	\$500.00			
17-Aug-17	Jerry Nichols	Build trail to second creek/bridge then make trip back home to thunder bay	12	\$75.00	\$900.00			
18-Aug-17	Marcel Smith	Drilling but stopped hole at 386' then move to next dip on same drill set up	11	\$50.00	\$550.00	60	18.3	
18-Aug-17	George Gottwald	Helped pulling out the rods, and move on next dip after hole NR17-071 was stopped	11	\$50.00	\$550.00	stop 386'		
		Marcel drilled 2 feet of NR17-072	1	\$50.00	\$50.00	NR17-072	0.6	
18-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00			
19-Aug-17	Marcel Smith	Drill all day adding stabilizer for control drilling	12	\$50.00	\$600.00	95	29.0	
19-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
20-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	120	36.6	
20-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
21-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	160	48.7	
21-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
21-Aug-17	Jerry Nichols	Transport material to drillers and finish fixing the trail	12	\$75.00	\$900.00			
22-Aug-17	Marcel Smith	Drill all day, check controls as rock changes, do maintenance	12	\$50.00	\$600.00	100	30.5	
22-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
22-Aug-17	Jerry Nichols	Mark up trail to hole #3 and keep fixing access trail after last rain	12	\$50.00	\$600.00			
22-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00			
23-Aug-17	Marcel Smith	Drilled all day no problems	12	\$50.00	\$600.00	100	30.5	
23-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
23-Aug-17	Jerry Nichols	Work at fixing rollers on backhoe excavator machine	12	\$50.00	\$600.00			
24-Aug-17	Marcel Smith	Drilled all day no problems	12	\$50.00	\$600.00	130	39.6	
24-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
24-Aug-17	Jerry Nichols	Build trail towards planned hole #3 and make grooves on the side to drain water	12	\$50.00	\$600.00			
25-Aug-17	Marcel Smith	Minor problems with drill and water but finished drilling OK	12	\$50.00	\$600.00	90	27.4	
25-Aug-17	George Gottwald	Help stabilize little problems get water OK and keep helping on drilling, take test	11	\$50.00	\$550.00			
25-Aug-17	Jerry Nichols	Move earth material over outcrop and wash it	12	\$50.00	\$600.00			
25-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00			
26-Aug-17	Marcel Smith	Re-adjust same little problems re-setting pressure on rods and keep drilling	12	\$50.00	\$600.00	70	21.3	
26-Aug-17	George Gottwald	Help stabilize little problems get water OK and keep helping on drilling, take test	11	\$50.00	\$550.00			
26-Aug-17	Jerry Nichols	Clean and wash opened areas for the geologist to verify EM anomaly	12	\$50.00	\$600.00			
27-Aug-17	Marcel Smith	Finished drilling to 936 feet then start breaking the rods to pull them out the hole	12	\$50.00	\$600.00	70	21.3	
27-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, end of hole	11	\$50.00	\$550.00	Stop 936'		
27-Aug-17	Jerry Nichols	Keep building new trail to planned hole #3 and help drillers at drill site	12	\$50.00	\$600.00	NR17-071		
28-Aug-17	Marcel Smith	Re-collar NR17-071 hole and resume drilling from the bottom at 386'	12.5	\$50.00	\$625.00	70	21.3	
28-Aug-17	George Gottwald	Help moving head of drill to previous hole, re-collar to it and assist driller	11.5	\$50.00	\$575.00			
28-Aug-17	Jerry Nichols	Move earth material over a new spot and spend time at drill to help drillers	12	\$50.00	\$600.00			
29-Aug-17	Marcel Smith	Drilled all day no problems	12.5	\$50.00	\$625.00	120	36.6	
29-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$50.00	\$575.00			
29-Aug-17	Jerry Nichols	Wash new opened area for geologist to verify EM anomaly and help drillers	12	\$50.00	\$600.00			
30-Aug-17	Marcel Smith	Drilled all day no problems	12	\$75.00	\$900.00	90	27.4	
30-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$75.00	\$825.00			
30-Aug-17	Jerry Nichols	Fuel drill tank, check pump at water intake for drill rig and housekeeping around	13.5	\$75.00	\$1,012.50			
30-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00			
31-Aug-17	Marcel Smith	Drilled all day no problems	12.5	\$75.00	\$937.50	90	27.4	
31-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$75.00	\$862.50			
1-Sep-17	Marcel Smith	Hole shut down by geologist at 756', hibernate drill and pack up to prep for trip out	13	\$75.00	\$975.00	Stop 756'		
1-Sep-17	George Gottwald	Pull out rods, set up and pack all material to hibernate drill, pack up, prep to go out	11	\$75.00	\$825.00			
2-Sep-17	Marcel Smith	Finish securing drill rig, equipment and site, move out area and go home	7.5	\$75.00	\$562.50			Aug 13-Sep 02
2-Sep-17	George Gottwald	Finish securing drill rig, equipment and site, move out area and go home	7.5	\$75.00	\$562.50			\$41,192.50

5-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
6-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
7-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
11-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
12-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
13-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
14-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00			
15-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	4	\$75.00	\$300.00			
27-Oct-17	Mitch Dumoulin	Start gathering data in preparation for North Rock report	8		\$288.16			
30-Oct-17	Mitch Dumoulin	Continue on gathering data in preparation for North Rock report	4		\$288.16			
31-Oct-17	Mitch Dumoulin	Compilation work to gather information for North Rock report	4		\$252.14			
1-Nov-17	Mitch Dumoulin	Carry on compilation of data for North Rock report	4		\$216.12			
2-Nov-17	Mitch Dumoulin	Work on spreadsheets to compile receipts and invoices related to North Rock Drilling	7		\$252.14			
3-Nov-17	Mitch Dumoulin	Work on spreadsheets to compile receipts and invoices related to North Rock Drilling	7		\$252.14			
6-Nov-17	Mitch Dumoulin	North Rock drill report going through the invoices to fit with numbers (time, material,etc....)	8		\$288.16			
7-Nov-17	Mitch Dumoulin	North Rock drill report going through the invoices to fit with numbers (time, material,etc....)	6		\$216.12			
8-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	7		\$252.14			
9-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12			
10-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12			
13-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12			
14-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4		\$144.08			
15-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4		\$144.08			
16-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	3		\$108.06			
17-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4		\$144.08			
21-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	2		\$72.04			
22-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6		\$216.12			
23-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6		\$216.12			
24-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6		\$216.12			
27-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	5		\$180.10			
28-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	5		\$180.10			
29-Nov-17	Mitch Dumoulin	Make pagination of the report, fine tune all last details related to it, finish formatting	4		\$144.08			
30-Nov-17	Mitch Dumoulin	Make pagination of the report, fine tune all last details related to it, finish formatting	3		\$108.06			Oct05-Dec01
1-Dec-17	Mitch Dumoulin	Finish report and prepare to send it out to MNMD Lands Assessment Office in Sudbury	4		\$144.08			\$9,470.76
				<b>Total</b>	<b>\$95,718.26</b>	2768	843.7	<b>\$95,718.26</b>
						feet	meters	

Summary of Daily Logs / Jul 10-Dec 01					
Name	Position - Job	Rate/Hour	Total Hours	Total Salary	
Marcel Smith	Foreman-Driller	\$75.00	53	\$3,975.00	
Marcel Smith	Driller	\$50.00	380	\$19,000.00	
George Gottwall	Helper-Driller	\$75.00	41	\$3,075.00	
George Gottwall	Helper	\$50.00	344.5	\$17,225.00	
George Gottwall	Core Cutter	\$75.00	60	\$4,500.00	
Jerry Nichols	Third Man Field Support	\$75.00	315	\$23,625.00	
Jerry Nichols	Field Support	\$50.00	96	\$4,800.00	
Gary Grenier	Driver Float Truck and Heavy Equipment	\$75.00	74.5	\$5,587.50	
Mitch Dumoulin	Geologist/Field	\$80.00	64	\$5,120.00	
Mitch Dumoulin	Geologist/Office		129	\$4,970.76	
John Corkery	Geologist	\$80.00	48	\$3,840.00	
		<b>Total</b>		<b>\$95,718.26</b>	

**Table 7: North Rock 2017 Daily Logs-Reports Compilation (In Appendix VI with originals)**

**Note:** Some \$24,062.50 has been taken out the salaries totals and granted as **discount** over the salaries. The drillers were charged \$50/hour compare to normally \$75/hour during drilling because of lower performance. Also, the base salary established for the geologist for writing the report was \$36/hour compare to \$80/hour when working in the field.

Date	2012 F-150 Truck	2014 F-350 Truck	2009 GMC 1500 Truck	Suzuki ATV	Honda ATV	16 feet boat	12 feet boat	160 Linkbelt Excavator	D6 Bulldozer	Drill Rig	Beam Float Truck	Load King Float Truck	Sea Container
25-Jul-17		\$2,225.00				\$1,800.00	\$1,200.00		\$10,500.00		\$2,475.00		
26-Jul-17	\$1,700.00	Monthly				Monthly	Monthly	\$5,500.00	Monthly		Hourly	\$2,012.50	\$150.00
27-Jul-17	Monthly							Monthly				Hourly	Monthly
28-Jul-17													
29-Jul-17													
30-Jul-17			\$1,700.00	\$1,550.00	\$1,550.00					\$15,000.00		\$1,925.00	
31-Jul-17			Monthly	Monthly	Monthly					Monthly		Hourly	
1-Aug-17													
2-Aug-17													
3-Aug-17													
4-Aug-17													
5-Aug-17													
6-Aug-17													
7-Aug-17													
8-Aug-17													
9-Aug-17													
10-Aug-17													
11-Aug-17												\$1,400.00	
12-Aug-17												Hourly	
13-Aug-17													
14-Aug-17													
15-Aug-17													
16-Aug-17													
17-Aug-17													
18-Aug-17													
19-Aug-17													
20-Aug-17													
21-Aug-17													
22-Aug-17													
23-Aug-17													
24-Aug-17													
25-Aug-17	Daily	Daily											Daily
26-Aug-17	\$56.67	\$74.17											\$5.00
27-Aug-17	\$56.67	\$74.17											\$5.00
28-Aug-17	\$56.67	\$74.17								Daily			\$5.00
29-Aug-17	\$56.67	\$74.17		Daily	Daily					\$50.00			\$5.00
30-Aug-17	\$56.67	\$74.17	\$56.67		\$103.33					\$550.00			\$5.00
31-Aug-17	\$56.67	\$74.17	\$56.67		\$103.33					\$575.00			\$5.00
1-Sep-17	\$56.67	\$74.17	\$56.67		\$103.33					\$550.00			\$5.00
2-Sep-17	\$56.67	\$74.17	\$56.67		\$103.33					\$900.00			\$5.00
<b>Total Blue</b>	\$1,700.00	\$2,225.00	\$1,700.00	\$1,550.00	\$1,550.00	\$1,800.00	\$1,200.00	\$5,500.00	\$10,500.00	\$15,000.00	\$2,475.00	\$5,337.50	\$150.00
<b>Total Orange</b>	\$453.36	\$593.36	\$226.68		\$413.32					\$2,225.00			\$40.00
<b>Total Both</b>	\$2,153.36	\$2,818.36	\$1,926.68	\$1,550.00	\$1,963.32	\$1,800.00	\$1,200.00	\$5,500.00	\$10,500.00	\$17,225.00	\$2,475.00	\$5,337.50	\$190.00
	<b>Monthly</b>	<b>Total Rentals Blue</b>	<b>\$50,687.50</b>										
	<b>Daily</b>	<b>Total Rentals Orange</b>	<b>\$3,951.72</b>										
27-Oct-17	<b>Demobilization</b>	<b>All of the above</b>	<b>\$3,500.00</b>										
		<b>Grand Total</b>	<b>\$58,139.22</b>										

	Summary of Rentals	Rate/Month	Rate/Day	Rate/Hour	Total Months	Total Days	Total Hours	Total Rental
2012 F-150 Truck	Geology truck	\$1,700.00	\$56.67		1	8		\$2,153.36
2014 F-350 Truck	Field truck for Jerry	\$2,225.00	\$74.17		1	8		\$2,818.36
2009 GMC 1500 Truck	Diamond drillers truck	\$1,700.00	\$56.67		1	4		\$1,926.68
Suzuki ATV	4x4 quad to move men & material	\$1,550.00	\$103.33		1			\$1,550.00
Honda ATV	4x4 quad to move men & material	\$1,550.00	\$103.33		1	4		\$1,963.32
16 feet boat	transport to cabin with material	\$1,800.00			1			\$1,800.00
12 feet boat	transport men to cabin	\$1,200.00			1			\$1,200.00
160 Linkbelt Excavator	Back Hoe to open trails, strip vegetation	\$5,500.00			1			\$5,500.00
D6 Bulldozer	D6 to refine access trails, make set-ups	\$10,500.00			1			\$10,500.00
Drill Rig	Machine to drill core down holes	\$15,000.00		\$50.00	1		44.5	\$17,225.00
Beam Float Truck	Transport heavy machines, material			\$225.00			11	\$2,475.00
Load King Float Truck	Transport heavy machines, material			\$175.00			30.5	\$5,337.50
Sea Container	Box to lock important equipment	\$150.00	\$5.00		1	\$8.00		\$190.00
Demobilization	Withdrawal of all the equipment above	\$3,500.00						\$3,500.00
	<b>Total</b>							<b>\$58,139.22</b>

**Table 8: North Rock 2017 Rentals by Month, Days and Hours (in Appendix VI + Originals)**

**Note:** Some \$13240.72 of **discount** must be taken in consideration from the total costs above. Depending of what type of equipment or machinery, rentals were charged monthly, daily or per hour. All the hours worked on any machinery correspond to the hours represented in the daily logs, particularly the float trucks. Pick-up truck, boats and drill rigs were stationary or parked at the workplace so that makes it daily rates. The big machines such as the backhoe and bulldozer were used as needed then a monthly rate.

Date	Gas	Gas Total	Field Material	Total Field	Food	Total Food	Cabin Rental	Reflex Tool
1-Jun-17			Flag tape	\$18.00				
1-Jun-17			Bug Dope	\$28.48				
22-Jun-17								\$2,459.40
10-Jul-17	Trip to Fort Frances	\$292.57	Tick removers	\$44.95				
10-Jul-17	Prepare for drill program	\$78.41	Insects repellent	\$244.20	Grocery	\$325.30		
11-Jul-17					Supper	\$21.06	\$3,500.00	
11-Jun-17	Filled in Fort Frances	\$74.87	Fast food	\$26.03	add-ups	\$24.05		
11-Jul-17					Grocery	\$51.77		
12-Jul-17					Breakfast	\$13.98		
24-Jul-17	Trip to Fort Frances	\$110.16						
25-Jul-17	Trip to Fort Frances	\$89.80	Drill Core boxes	\$2,375.00	Grocery	\$107.28		
25-Jul-17			Emergency kit	\$281.76	Lunch	\$16.07		
25-Jul-17			Parts to prep drill	\$1,717.31				
25-Jul-17			Parts to prep drill	\$77.15				
25-Jul-17			Tools/safety - drill	\$21.72				
28-Jul-17	Trip back home	\$83.67						
30-Jul-17					Lunch	\$23.73		
30-Jul-17	Filled Diesel machines	\$353.04					\$3,500.00	
31-Jul-17					Grocery	\$370.45		
31-Jul-17					Lunch	\$36.85		
1-Aug-17	Geology truck T-Bay	\$92.70						
1-Aug-17	Filled in Fort Frances	\$101.70						
2-Aug-17	Filled in Thunder Bay	\$105.54						
2-Aug-17	Filled Diesel machines	\$262.57			Lunch	\$16.21		
3-Aug-17	Filled in Fort Frances	\$79.65						
4-Aug-17	45 gal. gas drum to drill	\$75.00			Grocery	\$159.92		
4-Aug-17	Filled in Thunder Bay	\$131.26						
6-Aug-17			Parts for drill rig	\$58.52				
6-Aug-17	Geology truck T-Bay	\$89.93						
7-Aug-17	Filled Diesel machines	\$306.33	Maxed out @ 350l.					
7-Aug-17	Filled Diesel machines	\$306.33	Second shot					
7-Aug-17	Filled Diesel machines	\$306.33	Third final shot					
7-Aug-17	Filled in Fort Frances	\$74.23						
9-Aug-17	Geology truck T-Bay	\$89.66						
9-Aug-17	Gas & oil for trucks	\$153.58	Reaming Shell parts	\$77.88				
10-Aug-17	Filled Diesel machines	\$355.76	Rice sample bags	\$97.25	Grocery	\$512.28	\$3,500.00	
11-Aug-17	Geology truck T-Bay	\$100.42						
14-Aug-17	Flat bed truck T-Bay	\$528.38			Grocery	\$344.60		
14-Aug-17	Filled Diesel machines	\$682.61			Lunch	\$10.81		
14-Aug-17	Geology truck T-Bay	\$98.30						
17-Aug-17	Filled in Thunder Bay	\$29.55	Reaming Shell	\$1,030.85				
18-Aug-17	Diesel Conditioner	\$230.75						
20-Aug-17	Geology truck T-Bay	\$178.47						
21-Aug-17	Filled in Thunder Bay	\$169.64	Core lifter springs	\$136.77				
22-Aug-17	Filled in Fort Frances	\$92.28			Snacks	\$76.06		
23-Aug-17	Filled in Thunder Bay	\$91.47	Casing 2 feet&cap	\$244.61				
24-Aug-17	Filled Drill rig tank	\$485.47						
26-Aug-17	Filled Drill rig tank	\$359.79			Lunch	\$26.57		
28-Aug-17	Filled in Thunder Bay	\$136.20						
30-Aug-17	Filled in Fort Frances	\$177.15			Grocery	\$280.99		
30-Aug-17					Lunch	\$37.36		
31-Aug-17								\$2,283.60
1-Sep-17	Filled in Fort Frances	\$33.04			Grocery	\$60.32		
5-Sep-17			Full gear drill parts	\$5,876.66				
7-Sep-17								\$456.72
8-Sep-17			Expense Report	\$714.84				
29-Sep-17			Air liquid fill up	\$163.50				
3-Oct-17	Filled in Thunder Bay	\$116.73						
4-Oct-17	Makabi Inn Motel	\$122.00						
4-Oct-17					Lunch AW	\$11.25		
5-Oct-17	Geology truck Ft Frances	\$96.22						
	<b>Total Categories</b>	<b>\$7,341.56</b>		<b>\$13,235.48</b>		<b>\$2,526.91</b>	<b>\$10,500.00</b>	<b>\$5,199.72</b>
			<b>Grand Total</b>	<b>\$38,803.67</b>				



	<b>Summary of Material, food and Lodging</b>	<b>Total</b>
Gas	3 trucks, floats, dozer, excavator, drill rig	\$7,341.56
Food	Groceries, lunches & suppers in town	\$2,526.91
Cabin Rental	Lodging 3 men up to 4 at times	\$10,500.00
Field Material	All parts/packages needed for drilling	\$13,235.48
Reflex Ez-shot	Survey instrument rental for drill hole	\$5,199.72
	<b>Total</b>	<b>\$38,803.67</b>

**Table 9: North Rock 2017 Costs of Materials, Food & Lodging (in Appendix VI + originals)**

<b>Summary of Assaying Core Samples</b>			
<b>Invoice #</b>	<b>Analyses for Platinum &amp; Copper Suites</b>	<b>No. of Samples</b>	<b>Total</b>
A17-09754	Crush, pulverized, analyse 39 elements	113	\$4,308.85
A17-09754B	Crush, pulverized, analyse 39 elements	1	\$14.00
A17-10037	Crush, pulverized, analyse 39 elements	117	\$4,453.65
A17-10201	Crush, pulverized, analyse 39 elements	48	\$1,827.60
A17-10199	Crush, pulverized, analyse 39 elements	101	\$3,861.45
A17-10517	Crush, pulverized, analyse 39 elements	138	\$5,252.10
	<b>Total</b>	<b>518</b>	<b>\$19,717.65</b>

Prep of samples (Code RX1): \$9.00 per sample (see invoices)

Platinum Package (Code 1C-OES): \$14.00 per sample (see invoices)

Copper Package (Method ICP-OES Code 1F2): \$15.00 per sample (see invoices)

Disposal of samples: \$0.45 per sample

**Table 10: North Rock 2017 Costs of Drill Core Sample Assay Results  
(Invoices from Actlabs in Thunder Bay in Appendix VI)**

At the moment where the drill program has been stopped, 843.7 meters of drill coring were carried out for total drill costs of **\$212,378.80**. These costs are reflected from 518 assay samples that were cut from drill core and sent for assay analyses at the Actlabs facilities in Thunder Bay to be processed for a total assay cost of \$19,717.65, and all the costs charged by Pierre Gagné Contracting Limited with in-house salaries (\$95,718.26), rentals (\$58,139.22) and material used including gas, housing and food (\$38,803.67) for a total in-house total of \$192,661.15. All costs are available for review or due diligence in MetalCORP Limited's books at the Thunder Bay office, at 490Maureen Street, in Thunder Bay, Ontario (see **Appendix VI: Tables of Total Costs, Invoices, Daily Logs and all Receipts**).



## 11.0 Conclusions

Due to limited budget and difficulty to raise financing for the project then causing delays in proceeding to the diamond drill program, a decision was taken to perform the work with Pierre Gagné Contracting Limited, which was ready with drill equipment, heavy diesel machinery and man power here in Thunder Bay to start drilling on the North Rock property some 30 kilometers east of Fort Frances. Two geologists shared the supervision of work in the field, supported by two drillers and a support labour to sustain the work.

The drilling period spanned between July 31<sup>st</sup> and September 02<sup>nd</sup> with 843.7 meters of drilled core. Drilling was carried out modestly due to the constraints of time and personnel, and only during day shift for roughly 12 hours a day all included. It resulted then in only three holes; the first hole NR17-070 was drilled at Belacoma area and it proved that this is too marginal to keep drilling this area with a limited budget. The drill rig has then been moved to the East Zone to replicate an old platinum high grade intersection from the first hole NR17-071, which hole showed a strong up-dip deviation and that was stopped in a first instance but completed later. The best values that came out stand at 1.87 g/t Pd over 0.5m and 0.76 g/t Pt over 0.5m. The next hole NR17-072 was drilled at a steeper dip in the hope at getting a better angle to cross the high grade structure. The values also returned quite marginally with 1.08 g/t Pt, 1.34 g/t Au and 1.96% Cu over a length of 0.6m. Another value of copper came out at 2.44% Cu higher in the hole.

Three holes represent very little information but the results were definitely disappointing for Metalcorp in identifying and verifying old high grade structures from past drilling years. Furthermore, due to the lack of financing, the drilling planned to complete at East Zone, Main South Zone and Beaver Pond had to be postponed to another time when more financing will become available to return on the property and complete the information on the next planned targets. Because of all that, the 2017 drill program has been called Phase I.

## 12.0 Recommendations

In spite of low or marginal results from the two holes at East Zone, carry on diamond drilling the planned targets at North Rock remains a priority and should resume as soon as proper financing is granted to complete the work. The 2006 intersect of 12.2 g/t Pt over 3.7m (46.0 g/t-0.6m) still needs to be verified/validated at East Zone, but also the planned targets at Main South Zone and Beaver Pond where for this one, 14.6 g/t Pd – 2.3% Cu – 0.59% Ni over 0.6m interval was intersected from the deepest hole drilled on the property, thus opening the potential for minerals at depth and not only laterally.

Suggested targets:

1. Step out 200 meters east of holes NR17-071 and 072 to re-intersect the platinum structure at East Zone
2. Drill the Main South Zone target under the old 2006 trenching work.
3. Return to Beaver Pond and test Cu and PGM's at depth some 100 meters off hole NR07-062, which contains the deep value of 14.6 g/t Pd at proper angle to have a better cut of the contact zone for the copper values.

Whatever budget to be granted, this is very important to focus on the best historical values and explore in these vicinities to validate these still recent values (2006-2007), and regain the interest of the investors in this high potential copper and platinum group elements property.

### 13.0 Certificate of Qualification

I, **Mitch Dumoulin**, of 507 McMaster St., Thunder Bay, Ontario, do hereby certify that:

1. I hold a *Bachelor of Science Degree in Geology (1981)* from Université du Quebec a Chicoutimi, Chicoutimi, Quebec;
2. I am a member of the Association of Professional Geoscientists of Ontario (P.Ge. Registration #0304).
3. I have practiced my profession in Ontario and Quebec since 1981 and have been employed directly by several large mining and exploration companies and the Ministère de l'Énergie et des Ressources de Quebec;
4. I am presently an employee for Pierre Gagné Contracting Limited based in Thunder Bay, Ontario and contracted to MetalCORP Ltd. as Senior Geologist and Project Manager for the company;
5. I have supervised numerous projects similar to that represented by the North Rock Project, also a 'Qualified Person' in the context of National Instrument 43-101, and have been contracted as such by MetalCORP Ltd. I consider this report to be accurate in all respects;
6. Permission is granted to MetalCORP Ltd. to use this report in a prospectus or other financial offering.

Dated December 01, 2017 in Thunder Bay, Ontario.



Mitch Dumoulin, P.Ge

## **14.0 References**

**Campbell Ian, 1999:** Report to Evaluate and Recommend an Exploration Program on the North Rock Property.

**Dumoulin M. & Carter W., 2008:** Assessment Work Report, Drilling Report, North Rock Property 2006, Watten and Halkirk Townships, Metalcorp Limited

**Harris, F.R., 1974:** MNM Report #115, Ontario Division of Mines

**Leshner C.M., 1989:** Komatiite-Associated Nickel sulphides Deposits; Reviews in Economic Geology, V. 4, pp. 45-101

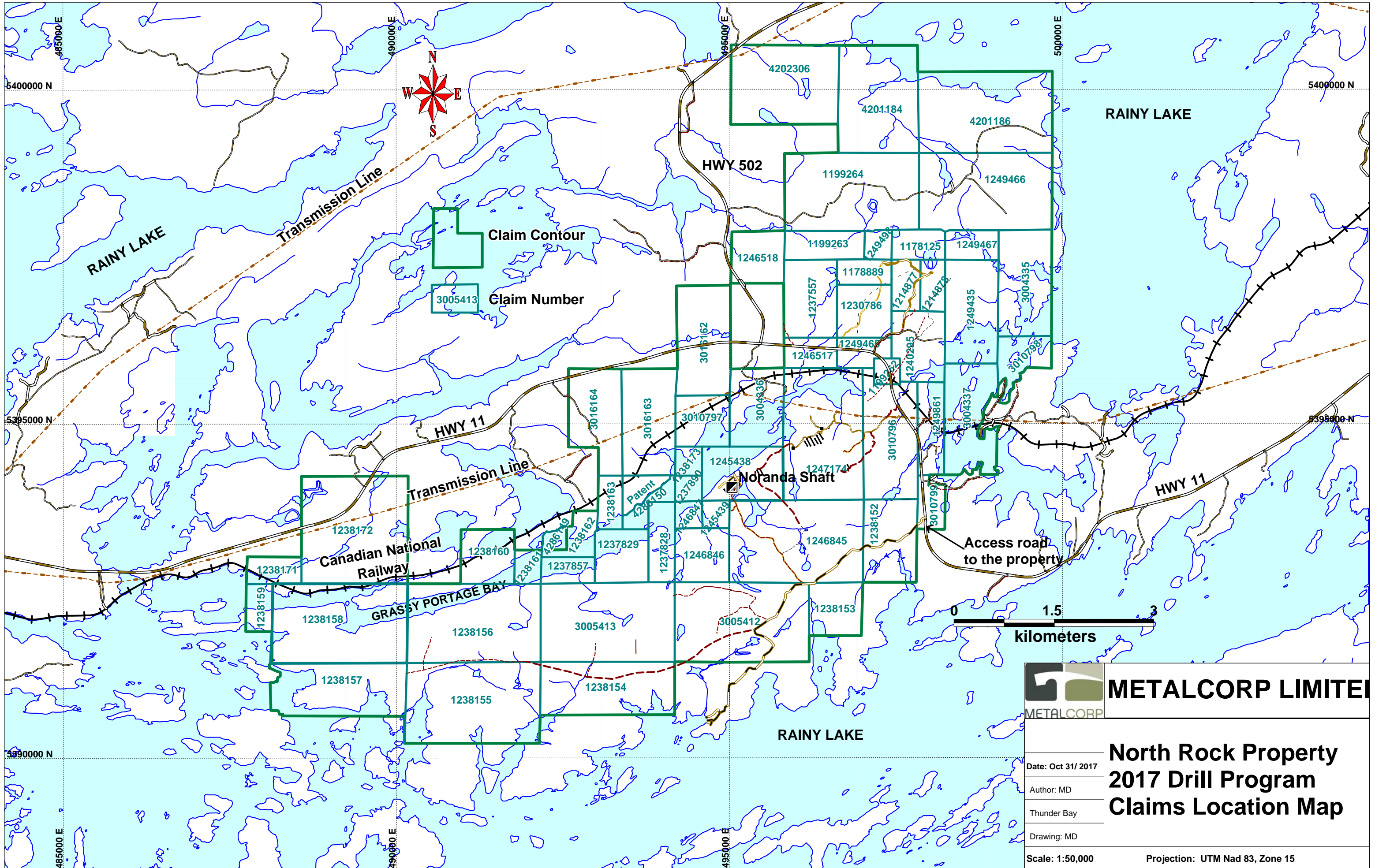
**Naldrett A.J., 1989 & 1990:** Magmatic Sulfide Deposits; Geology, Geochemistry and Exploration


**Naldrett A.J., 1999:** World Class Ni-Cu-PGE Deposits; Key Factors in their Genesis

**Poulsen, K.H., 2000:** Metallogeny of the Mine Centre – Fort Francis Area, OGS Report #266

**Steers, J.E., 1990:** Preliminary Exploration Report of North Rock Property

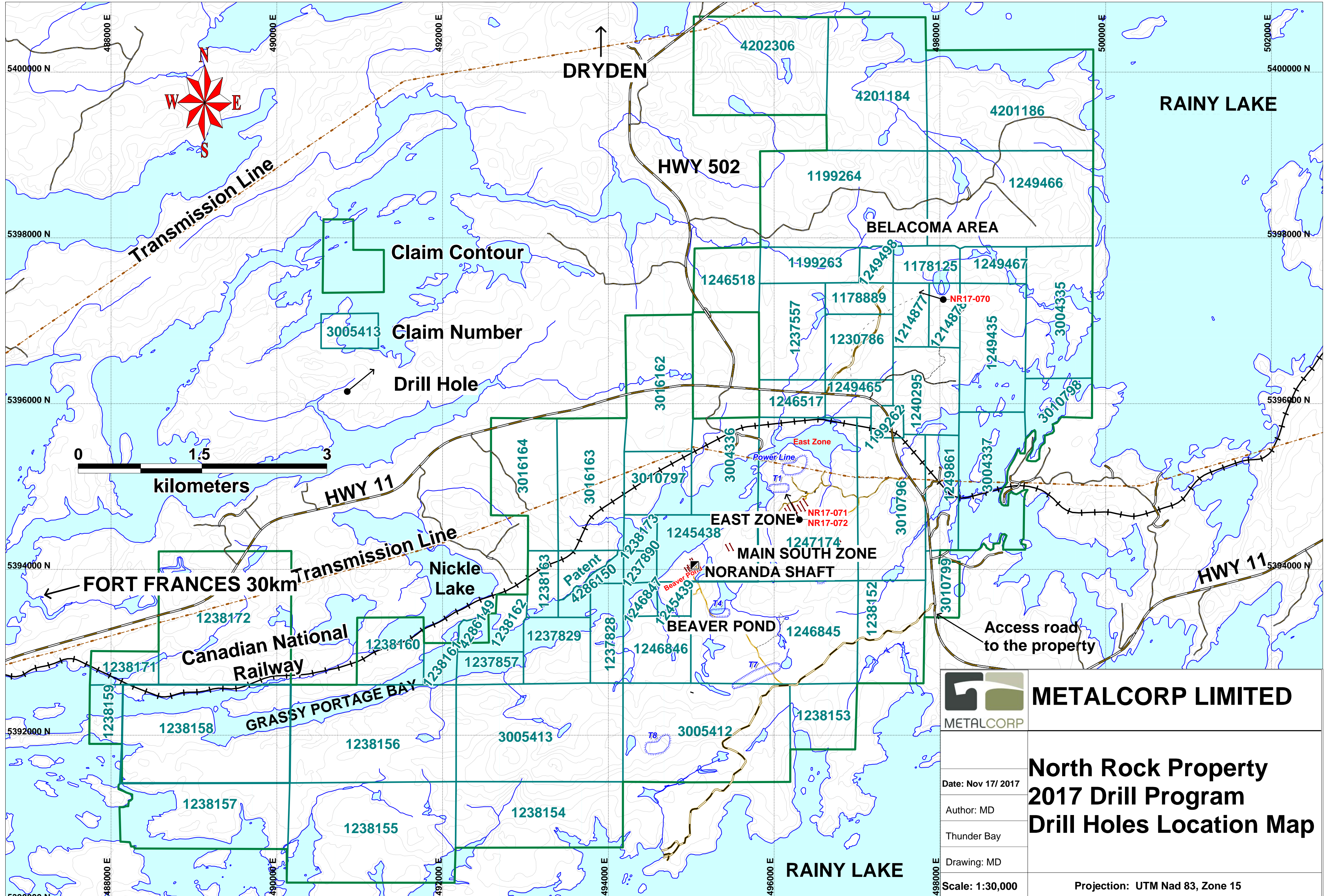
**Appendix I**  
**Claims Location Map**  
**And**  
**List of North Rock Claims 2017**




 <b>METALCORP LIMITED</b>	
<b>North Rock Property 2017 Drill Program Claims Location Map</b>	
Date: Oct 31/ 2017	Author: MD
Thunder Bay	Drawing: MD
Scale: 1:50,000	Projection: UTM Nad 83, Zone 15

**Appendix II**  
**Drill Plan**  
**And**  
**Sections**  
**2017**





 **METALCORP LIMITED**  
 METALCORP

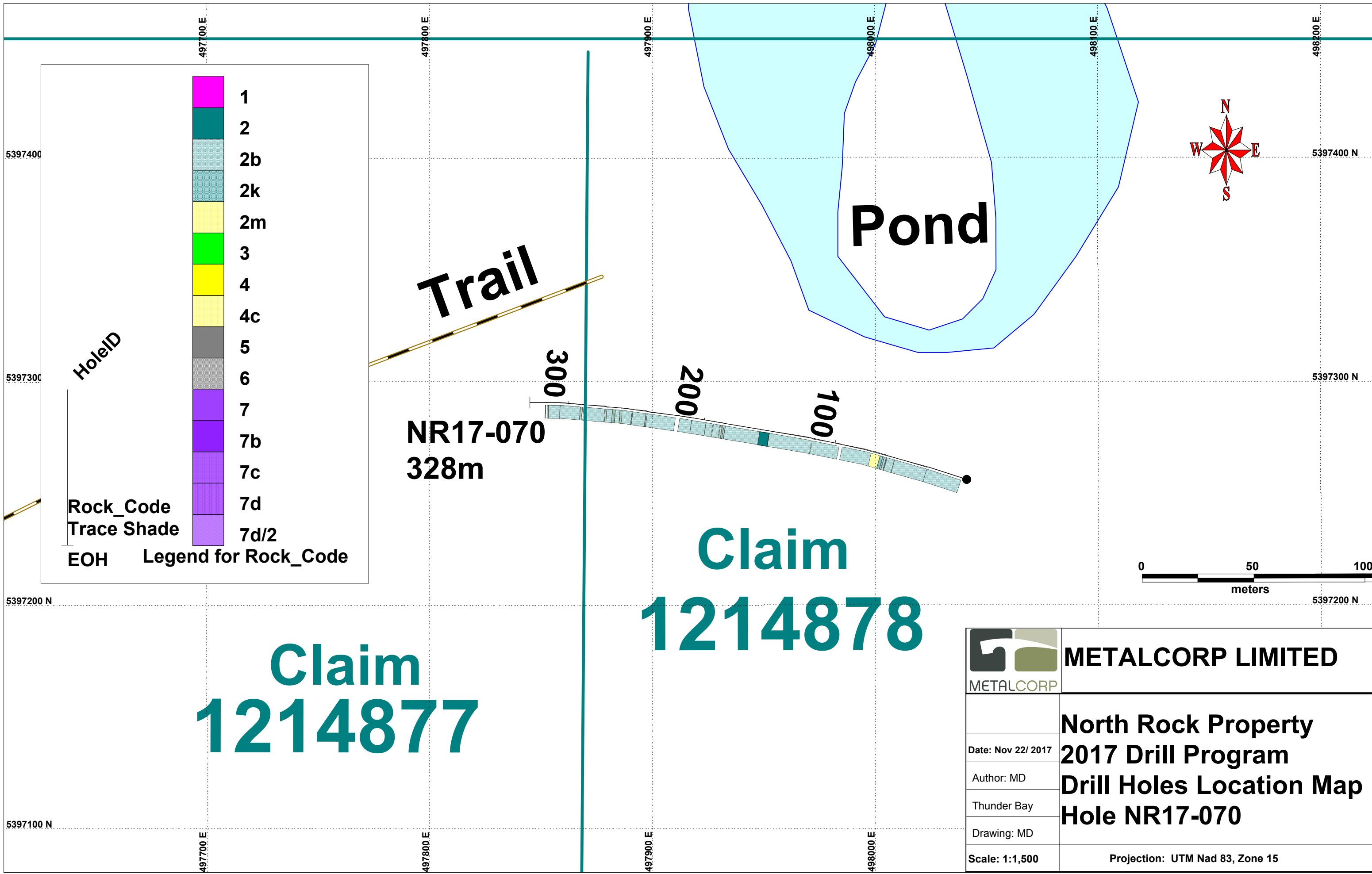
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**North Rock Property  
 2017 Drill Program  
 Drill Holes Location Map**

---

Date: Nov 17/ 2017  
 Author: MD  
 Thunder Bay  
 Drawing: MD  
 Scale: 1:30,000  
 Projection: UTM Nad 83, Zone 15





**Legend for Rock\_Code**

1
2
2b
2k
2m
3
4
4c
5
6
7
7b
7c
7d
7d/2

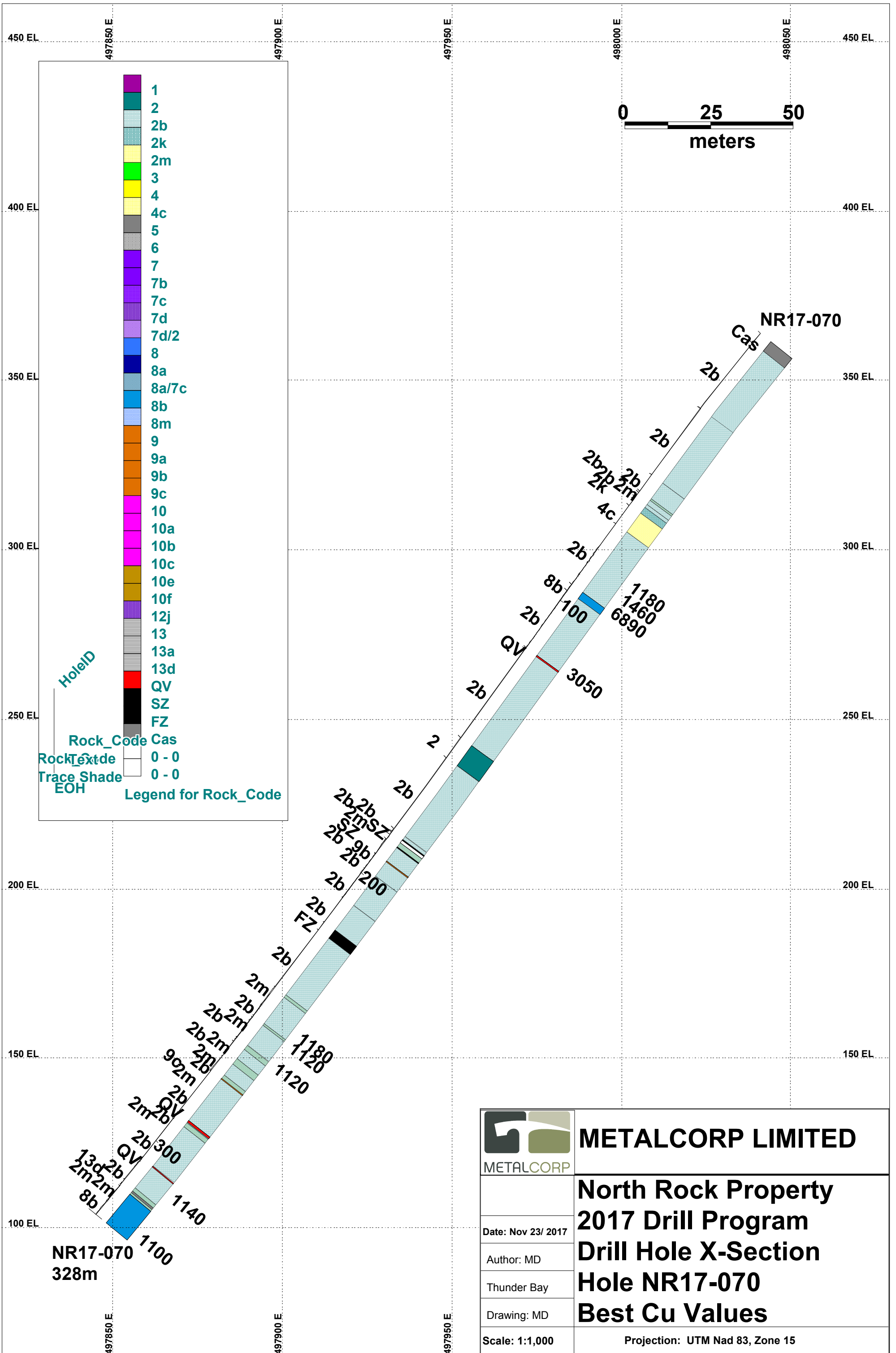
Rock\_Code  
Trace Shade  
EOH

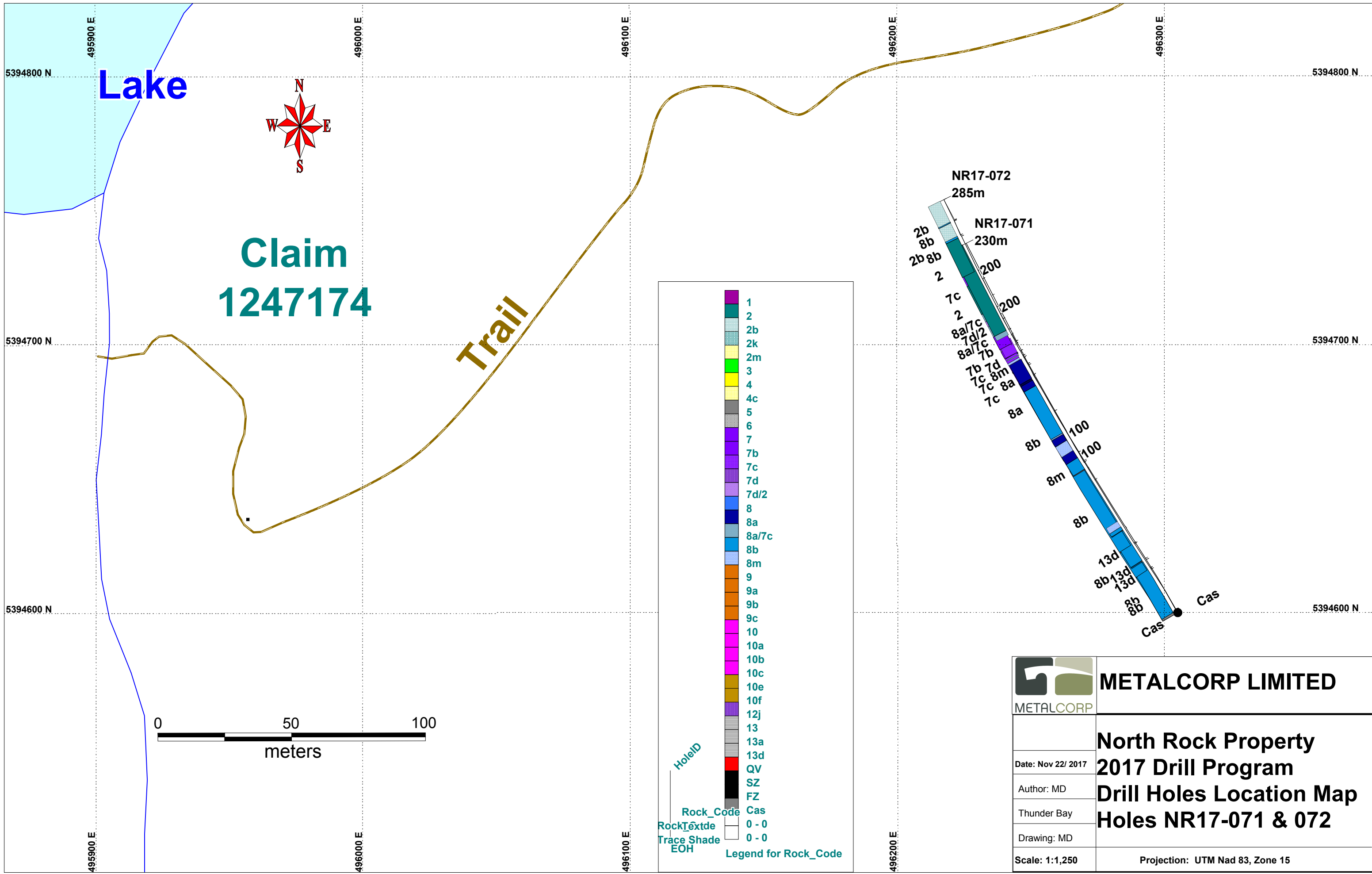
**Claim  
1214877**

**NR17-070  
328m**

**Claim  
1214878**

	<b>METALCORP LIMITED</b>
Date: Nov 22/ 2017	<b>North Rock Property 2017 Drill Program Drill Holes Location Map Hole NR17-070</b>
Author: MD	
Thunder Bay	
Drawing: MD	
Scale: 1:1,500	Projection: UTM Nad 83, Zone 15





Lake

Claim  
1247174

Trail

NR17-072  
285m

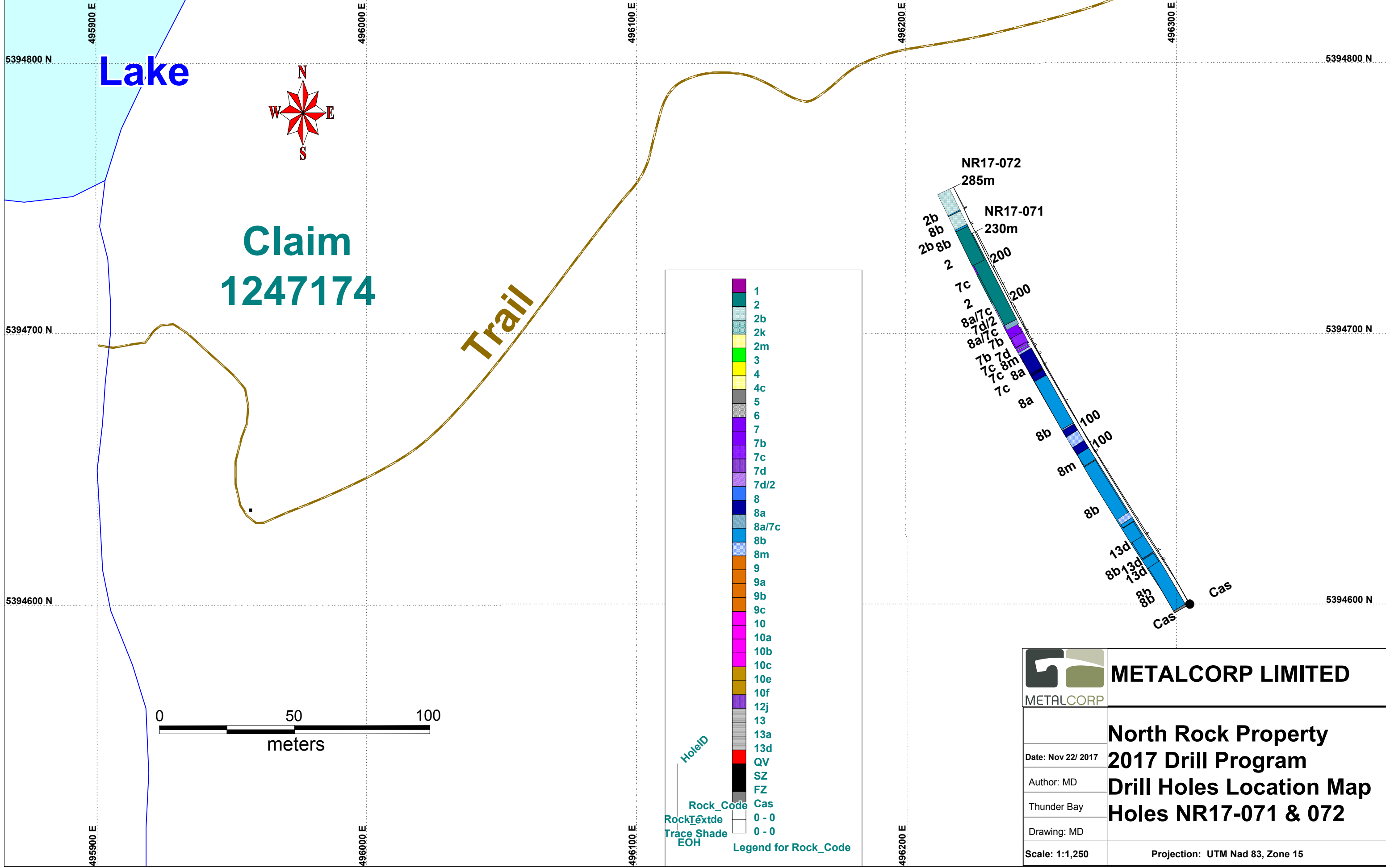
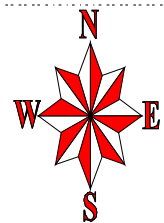
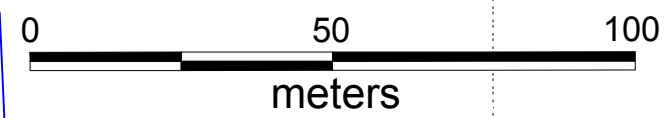
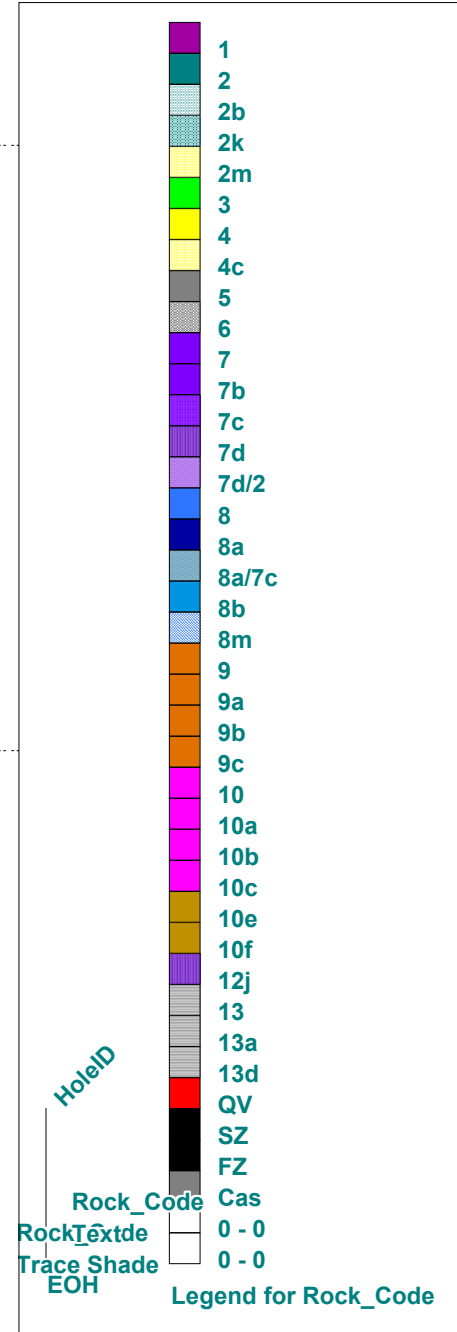
NR17-071  
230m

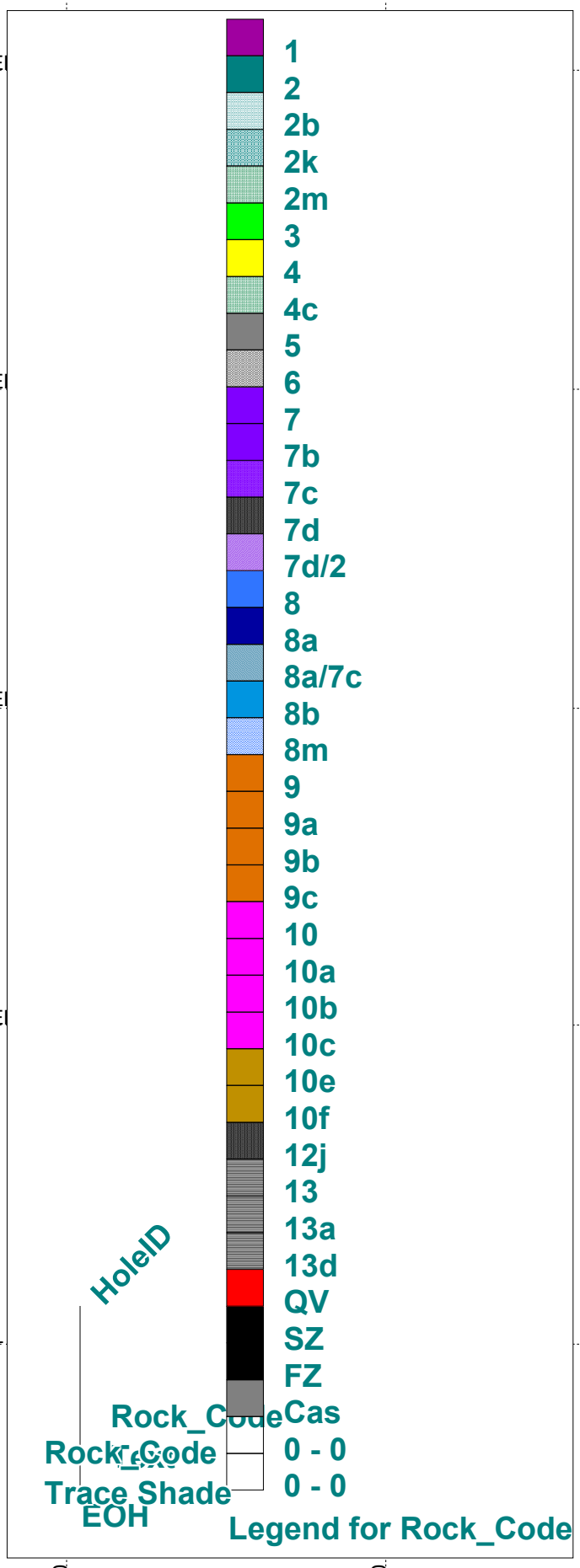
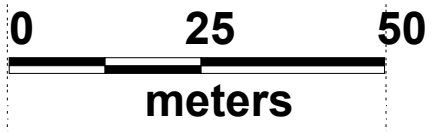
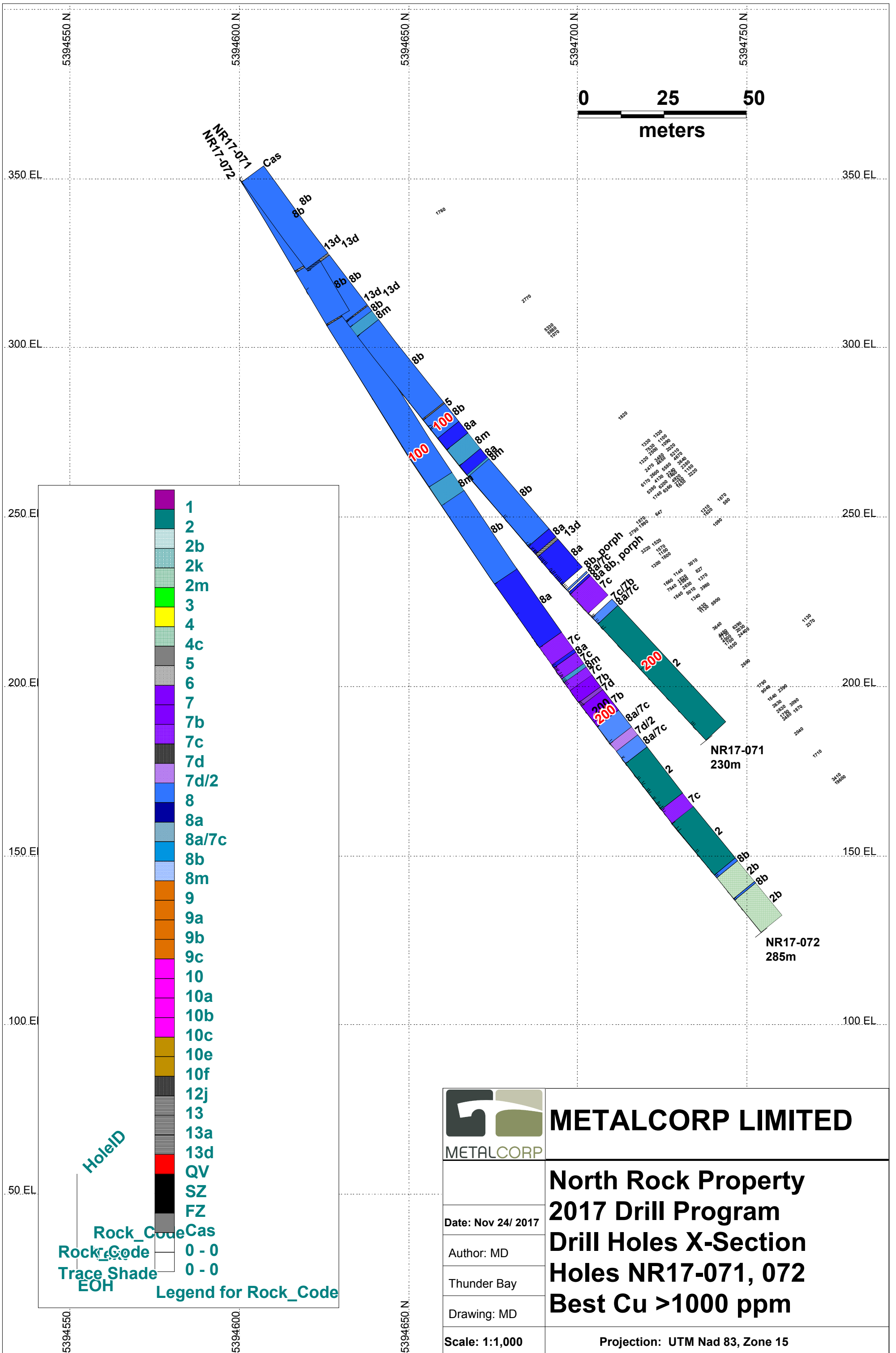
 METALCORP LIMITED

**North Rock Property  
2017 Drill Program  
Drill Holes Location Map  
Holes NR17-071 & 072**

Date: Nov 22/ 2017  
Author: MD  
Thunder Bay  
Drawing: MD  
Scale: 1:1,250

Projection: UTM Nad 83, Zone 15





 <b>METALCORP LIMITED</b>	
<b>North Rock Property 2017 Drill Program Drill Holes X-Section Holes NR17-071, 072 Best Cu &gt;1000 ppm</b>	
Date: Nov 24/ 2017 Author: MD Thunder Bay Drawing: MD	Scale: 1:1,000 Projection: UTM Nad 83, Zone 15

**Appendix III**

**Drill Core Logs**

**2017**

THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-070					
DATE STARTED	CORE SIZE	Page 1	COORDINATE E	COLLAR ELEVATION	COMMENTS:	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
31-Jul-17	N.Q.		498041	364			285.9	-52.6	176 feet	274.7	-51.9
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		281.4	-53.5	326 feet	270.7	-50.6	1076 feet
			5397256	288		279.7	-53.7	476 feet			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		279.5	-52.9	626 feet			
jc/md	Thunder Bay		North Rock/Belacoma	-50		278.2	-52.5	776 feet			
FOOTAGE FROM	FOOTAGE TO	Rock Code	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
0	12	Cas	Casing			877502	260.5	263	166	< 5	< 5
12	95	2b	amphibolite-fine grained. Apparent flow and pillow structures suggest meta-basalt. Frequent white veining (calsite + silicate-plag?).			877503	263	266	47	< 5	< 5
			Up indicators.			877504	266	269	304	< 5	< 5
95	176	2b, py	Pyrite-marcacite veins on fracture planes starting at 95 feet. Still looking like flows, pillows, and coarser-grained flows.			877505	269	272	186	< 5	< 5
176	195	2b	pillows/flows minor pyrite/marcacite on fractures. Jointing between 30-50 degrees CA with 35 degrees dominant.			Blank			3	< 5	< 5
195	197	2m	Tuff. Good contacts top and bottom. Looks like a small flow in the middle. 35 degrees CA.			877506	272	273.5	1180	< 5	< 5
197	202	2b	amphibolite. Flows as above.			877507	273.5	276	159	< 5	< 5
202	205.5	2b, fault	fault zone. Still looks like flows and pillows. Upper contact is 35, lower contact is 50 degrees CA.			877508	276	278	155	< 5	< 5
205.5	212.5	2k	amphibolite. Pillows and flows. 50 degrees CA. From 211 to 212.5 fragmented flow with quartz segregations. Up indicator at top of unit.			877509	278	280	51	< 5	< 5
212.5	235.5	4c	Tuff. Lagre fragments of biotite-rich clasts in a fine grained matrix. The tuff is felsic as it cuts glass, or at least has a quartz component.			877510	280	282	1460	7	< 5
			Ragged lower cntact. Upper contact is 35 degrees CA.			877511	282	285	26	< 5	< 5
235.5	308.6	2b	amphibolite. Flows and pillows. Quartz-carb veins. Minor pyrite, pyrrhotite, chalcocopyrite along fractures.			877512	285	288	25	< 5	< 5
			vein with pyrrhotite-chalcocopyrite mineralisation at 263.8 to 264.5 and 281.6 to 282.2 and 296 to 298'. Patches of pyrrhotite throughout.			877513	288	291	39	< 5	< 5
308.6	316.2	8b	Gabbro? Sharp lower contact, gradational upper contact. May just be a single, thick flow. Lower contact at 50 degree CA.			877514	291	294	341	< 5	< 5
						877515	294	296	84	< 5	< 5
						877516	296	298	6890	< 5	< 5
						877517	298	301	60	< 5	< 5
						877518	301	303	225	20	6
						877519	303	306	41	< 5	< 5
						877520	306	309	134	< 5	< 5
						877521	309	312	56	< 5	< 5
						877522	312	315	36	< 5	< 5
						877523	315	317	62	< 5	< 5
						877524	317	319	13	< 5	< 5
						877525	319	322	89	< 5	< 5
						877526	322	325	70	< 5	< 5
						877527	325	327	144	< 5	< 5
						877528	327	330	53	< 5	< 5
						877529	330	333	275	< 5	< 5
						877530	333	335	110	< 5	< 5
						Standard			1320	5320	409



THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-070						
DATE STARTED	CORE SIZE	Page 2	COORDINATE E	COLLAR ELEVATION	COMMENTS:	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	
31-Jul-17	N.Q.		498041	364			285.9	-52.6	176 feet	274.7	-51.9	926 feet
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR			281.4	-53.5	326 feet	270.7	-50.6	1076 feet
			5397256	288			279.7	-53.7	476 feet			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		279.5	-52.9	626 feet				
jc/md	Thunder Bay		North Rock/Belacoma	-50		278.2	-52.5	776 feet				
FOOTAGE FROM	FOOTAGE TO	Rock Code	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd	
316.2	384.5	2b, po	Amphibolite. Mafic flows and pillows. Contacts are between 35 and 55 degrees CA.			877531	335	337	197	6	5	
			Pyrrhotite veins 1-2cm at 326, 336, and 343.8 feet.			877532	337	340	62	< 5	< 5	
			trace pyrrhotite along fractures and disseminated 344.5 to 358 feet			877533	340	343	65	< 5	< 5	
			358 semi-massive pyrrhotite vein 15cm 20 degrees CA			877534	343	346	126	< 5	< 5	
			370.5 stringer pyrrhotite and chalcopyrite 15cm oblique			877535	346	349	492	< 5	< 5	
			371.5 semi-massive pyrrhotite 30cm 40 degrees CA			877536	349	352	157	< 5	< 5	
			373.5 semi-massive pyrrhotite vein 5cm 40 degrees CA			877537	352	355	237	< 5	< 5	
384.5	386	QV	quartz vein trace pyrrhotite			877538	355	358	252	< 5	< 5	
386	493	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Jointing and veining contacts have changed to 50 degrees CA.			877539	358	360	213	6	< 5	
			446 to 468 feet, trace pyrrhotite disseminated and along fractures.			877540	360	363	67	< 5	< 5	
			493 2cm massive pyrrhotite vein 50 degrees CA			877541	363	366	73	< 5	< 5	
493	517	2	Massive flow. Relict mineral grains possibly. Could be mistaken as a gabbro.			877542	366	369	109	< 5	< 5	
517	602.5	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Thicker flows have relict plagioclase grains. Could be mistaken as gabbro.			877543	369	371	3050	< 5	< 5	
			526 3cm massive pyrrhotite vein. 526-527.5 pyrrhotite veinlets. 535.5 2cm pyrrhotite vein. 545.5-546.5 pyrrhotite veinlets.			877544	371	373	645	13	< 5	
			555.5-557.5 pyrrhotite veinlets.			877545	373	375	34	7	< 5	
			559.25 2cm pyrrhotite vein. 586.2 1cm pyrrhotite vein.			877546	375	378	51	< 5	< 5	
602.5	606	2b	Amphibolite. Meta-mafic volcanic flows and pillows.			877547	378	381	92	< 5	< 5	
606	607	SZ	annealed shear zone. 50 degrees CA. Biotite-rich.			877548	381	384	95	< 5	< 5	
607	610	2b	Amphibolite. Meta-mafic volcanic flows and pillows			877549	384	386	394	< 5	< 5	
						877550	386	388	261	< 5	< 5	
						877551	603	606	40	< 5	< 5	
						877552	606	609	142	< 5	< 5	
						877553	609	612	203	< 5	< 5	
						877554	612	615	66	< 5	< 5	
						877555	615	617	435	7	6	
						Blank			4	< 5	< 5	
						877556	617	619	10	< 5	< 5	
						877557	619	622	51	5	5	
						877558	622	625	36	6	6	
						877559	625	628	241	5	< 5	
						877560	628	631	75	< 5	< 5	

THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-070					
DATE STARTED	CORE SIZE	Page 3	COORDINATE E	COLLAR ELEVATION	COMMENTS:	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
31-Jul-17	N.Q.		498041	364		285.9	-52.6	176 feet	274.7	-51.9	926 feet
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		281.4	-53.5	326 feet	270.7	-50.6	1076 feet
			5397256	288		279.7	-53.7	476 feet			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR	279.5	-52.9	626 feet				
jc/md	Thunder Bay		North Rock/Belacoma	-50	278.2	-52.5	776 feet				
FOOTAGE FROM	FOOTAGE TO	Rock Code	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
610	615	2m	Tuff w/ quartz. Small serpentine shears at 50 degrees CA.			877561	631	633	63	< 5	< 5
615	616	SZ	shear serpentine. 50 degrees CA.			877562	633	636	74	< 5	< 5
616	632.2	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Trace pyrrhotite.			877563	636	639	3	< 5	< 5
632.2	633.2	9b	Feldspar Porphyry dike			877564	639	642	102	< 5	< 5
633.2	650.5	2b	Amphibolite. Meta-mafic volcanic flows and pillows. More massive flows.			877565	642	645	117	< 5	6
650.5	686	2b, qz,po,cpy	Quartz stringer zone. Relict pillows and flows. Quartz veins and quartz flooded throughout. Good sulphides pyrrhotite, chalcocopyrite, and pyrite.			877566	645	648	43	< 5	< 5
686	716	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Quartz-calcite veins at 50 degrees CA.			877567	648	650	114	< 5	< 5
716	726	FZ	fault zone. Still looks like flows and pillows. Upper contact is 50 degrees CA.			877568	650	651.5	131	5	6
726	795	2b	Amphibolite. Meta-mafic volcanic flows and pillows. 2cm pyrrhotite vein at 773.5.			877569	651.5	653.5	172	< 5	< 5
795	798	2m	Tuff. Biotite-rich.			877570	653.5	655	219	< 5	< 5
798	830	2b, po,cpy	Amphibolite. Meta-mafic volcanic flows and pillows. Chalcocopyrite, pyrrhotite throughout.			877571	655	657	353	< 5	< 5
830	832	2m	Tuff. Biotite-rich.			877572	657	660	254	7	< 5
832	856.5	2b, po,cpy	Amphibolite. Meta-mafic volcanic flows and pillows. Chalcocopyrite, pyrrhotite throughout.			877573	660	663	196	< 5	< 5
856.5	861.5	2m	Tuff. Biotite-rich. Large fragments.			877574	663	666	89	< 5	< 5
861.5	872.8	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Lineations and fractures at 50 degrees CA.			877575	666	669	170	< 5	< 5
872.8	879.5	2m	Tuff. Biotite-rich. Cuts glass.			877576	669	672	311	< 5	< 5
879.5	893	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Lineations at 40 and 50 degrees CA. 2cm pyrrhotite vein at 893.			877577	672	674	400	< 5	< 5
893	897	2m	Tuff. Biotite-rich. Cuts glass.			877578	674	676	616	< 5	< 5
897	898	9c	Quartz porphyry dike.			877579	676	678	488	< 5	< 5
898	949	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Numerous quartz-calcite veinlets. Trace pyrrhotite and pyrite throughout.			877580	678	680	61	< 5	< 5
			1cm pyrrhotite veins at 900, 901, and 904 feet.			Standard			1340	5410	444
949	951	QV	Quartz vein 45 degrees CA.			877581	680	682	101	< 5	< 5
951	951.8	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Numerous quartz-calcite veinlets. Trace pyrrhotite and pyrite throughout.			877582	682	683.5	86	< 5	< 5
951.8	956.5	2m	Tuff. Biotite-augite. Cuts glass.			877583	683.5	685	118	< 5	< 5
956.5	1005	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Quartz-calcite veins at 50 degrees CA. Trace pyrrhotite on fractures.			877584	685	687	145	< 5	7
1005	1006	QV	Quartz vein 45 degrees CA.			877585	803	806	19	< 5	< 5
					877586	806	809	9	< 5	< 5	
					877587	809	812	90	< 5	< 5	
					877588	812	815	127	< 5	< 5	
					877589	815	817	117	< 5	< 5	
					877590	817	819	1180	< 5	< 5	

THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-070						
DATE STARTED	CORE SIZE	Page 4	COORDINATE E	COLLAR ELEVATION	COMMENTS:	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	
31-Jul-17	N.Q.		498041	364			285.9	-52.6	176 feet	274.7	-51.9	926 feet
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR			281.4	-53.5	326 feet	270.7	-50.6	1076 feet
			5397256	288			279.7	-53.7	476 feet			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		279.5	-52.9	626 feet				
jc/md	Thunder Bay		North Rock/Belacoma	-50		278.2	-52.5	776 feet				
FOOTAGE FROM	FOOTAGE TO	Rock Code	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd	
1006	1032	2b	Amphibolite. Meta-mafic volcanic flows and pillows. Numerous quartz-calcite veinlets. Trace pyrrhotite and pyrite throughout. Lineations 45 degrees CA.			877591	819	822	135	< 5	< 5	
			1006-1010 semi to massive sulphides pyrrhotite and chalcopyrite. <b>SAMPLE.</b>			877592	822	824	1120	< 5	< 5	
						877593	824	826	29	< 5	5	
1032	1036	2m	Tuff. No biotite.			877594	826	829	19	< 5	< 5	
1036	1038	13d	Mafic Dike.			877595	829	832	47	< 5	< 5	
1038	1040	2m	Tuff. No biotite.			877596	832	834	91	< 5	< 5	
1040	1076	8b	Gabbro. Very coarse grained. Sulphides throughout. Must <b>SAMPLE.</b>			877597	834	836	335	< 5	6	
						877598	836	838	504	< 5	< 5	
	EOH					877599	838	840	266	< 5	< 5	
						877600	840	842	272	< 5	< 5	
						877601	842	845	80	6	7	
						877602	845	847	52	6	7	
						877603	847	849	1120	< 5	6	
						877604	849	851	161	< 5	6	
						877605	851	853	235	< 5	< 5	
						Blank			4	< 5	< 5	
						877606	853	855	168	< 5	< 5	
						877607	855	857	296	< 5	< 5	
						877608	857	859	45	< 5	< 5	
						877609	1003	1005	31	< 5	< 5	
						877610	1005	1007	640	7	< 5	
						877611	1007	1009	1140	108	< 5	
						877612	1009	1011	10	< 5	7	
						877613	1011	1013	190	< 5	7	
						877614	1013	1015	79	< 5	6	
						877615	1015	1016.5	2	< 5	9	
						877616	1036	1038	280	32	27	
						877617	1038	1040	136	26	44	
						877618	1040	1043	334	61	41	
						877619	1043	1046	243	61	27	
						877620	1046	1049	380	69	33	

DATE STARTED	CORE SIZE	Page 5	COORDINATE E	COLLAR ELEVATION	COMMENTS:	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	
31-Jul-17	N.Q.		498041	364			285.9	-52.6	176 feet	274.7	-51.9	926 feet
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR			281.4	-53.5	326 feet	270.7	-50.6	1076 feet
			5397256	288			279.7	-53.7	476 feet			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		279.5	-52.9	626 feet				
jc/md	Thunder Bay		North Rock/Belacoma	-50		278.2	-52.5	776 feet				
FOOTAGE FROM	FOOTAGE TO	Rock Code	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd	
						877621	1049	1051	397	51	35	
						877622	1051	1053	511	121	77	
						877623	1053	1055	397	181	93	
						877624	1055	1057	595	80	53	
						877625	1057	1059	1100	140	29	
						877626	1059	1061	420	108	52	
						877627	1061	1063	462	57	23	
						877628	1063	1066	145	31	24	
						877629	1066	1068	48	6	26	
						877630	1068	1070	181	8	21	
						Standard			1290	5240	448	
						877631	1070	1072	197	12	47	
						877632	1072	1074	194	57	28	
						877633	1074	1076	136	20	25	
								EOH				

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 1	496305	350	stopped at 396 feet at first, and finished later after hole NR17-072 to get more information	327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR	on this set up and re-cut old hole NR06-020 previously drilled in 2006	327.7	-48	156	333.8	-41.7	756
1-Sep-17	6-Sep-17		5394600	330		328	-46.8	306			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.6	-45.4	456			
M.D.	Thunder Bay		North Rock	-50							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
0	4.4	Cas	Casing through overburden			877848	204.5	206.6	141	7	< 5
						877849	206.6	208.1	180	7	< 5
4.4	115.8	8b	Gabbro massive and generally coarse grained mafic intrusive rock. The gabbro is generally the same as equigranular but locally presents some magmatic differentiation with different pulse and granulometry that varies. It also tends to light porphyroblastic textures with bigger crystals of plagioclases. Rare centimetric veins of carb-qz-carb or mafic dykes locally occur.			877850			3	< 5	< 5
						877851	208.1	210.1	147	6	< 5
						877852	279	281	82	< 5	< 5
			18.6-34.5 Net contact of differentiated gabbro, darker and finer grained....gabbro dyke in gabbro? Contacts at 57 & 50 deg CA			877853	281	282.6	2770	< 5	< 5
			110.3 1-2cm mafic dyke, smooth textured with aphanitic mafic material, 16 deg CA			877854	282.6	284.7	74	< 5	< 5
						877855	319.3	321.3	215	< 5	< 5
115.8	118.8	13d	Mafic dyke. Narrow dark grey-green and very fine grained mafic intrusive rock. The plagioclases are seeable but are masked by the mafic minerals notably from a strong biotitic alteration. No structures. Upper and lower contacts at 61 & 45 deg CA.			877856	321.3	323.3	5330	6	< 5
						877857	323.3	325.3	5880	16	< 5
						877858	325.3	327.1	1070	7	< 5
118.8	183.6	8b	Back in same Gabbro as before the dyke, with constant coarse and equigranular granulometry. Local centimetric quartz & qz-carb veinlets occur at low angles 30-40 deg CA. It regularly shows small sections with larger grains with a porphyroblastic tendency. Centimetric shearing is also observed but rarely occurring.			877859	327.1	329.1	261	< 5	< 5
						877860	442.1	444.5	53	7	6
						877861	444.5	446	1820	12	< 5
						877862	446	449	60	7	14
183.6	184.9	13d	Mafic dyke, grey massive intrusive rock, aphanitic texture with a few millimeters stringers of quartz-carbonate. Upper and lower contacts at 75 and 47 deg CA.			877863	449	452	72	< 5	8
						877864	452	455	85	85	53
						877865	455	458	247	12	28
184.9	191.4	8b	Gabbro as above before the dyke. Massive, medium to coarse grained and equigranular.			877866	458	461	152	< 5	< 5
						877867	461	463	309	< 5	< 5
191.4	203.4	8b, porph	Gabbro with a different magmatic pulse including a porphyroblastic texture and melanocratic section with coarse mafic crystals of amphiboles. The plagioclase are particularly big. Upper and lower contacts of that pulse at 34 and 51 deg CA.			877868	463	465	475	< 5	< 5
						877869	465	467	190	< 5	< 5
						877870	467	470	127	< 5	< 5
203.4	313	8b	Massive Gabbro, medium to coarse grained, equigranular with local centimetric veinlets or stringers of chert and quartz-carbonate including local very narrow shearing in the gabbro associated with veining or local rare mineralization.			877871	470	473	134	< 5	< 5
						877872	473	475	102	< 5	< 5
			206.6-208.1 3cm quartz-carbonate vein at 25 deg CA including 2 big blebs of po			877873	475	477	750	39	6
			235.4-235.9 15cm sheared section with a 1cm quartz veinlet at 45 deg CA			877874	477	479	549	15	16
			281-282.6 1cm po stringer included in 1-2cm sheared walls at 25 deg CA.			877875			1310	4980	424
						877876	479	481	399	29	26
						877877	481	483	1330	45	18
						877878	483	484.5	1330	39	29

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 2	496305	350	stopped at 396 feet at first, and finished later after hole NR17-072 to get more information	327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR	on this set up and re-cut old hole NR06-020 previously drilled in 2006	327.7	-48	156	333.8	-41.7	756
1-Sep-17	6-Sep-17		5394600	330		328	-46.8	306			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.6	-45.4	456			
M.D.	Thunder Bay		North Rock	-50							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
313	314.5		Non magnetic chemical sediments, weakly banded at 25 deg CA, composed of highly chloritic mafic material with strong biotite alteration and that includes 15% brownish 2-9mm crystals of garnets along banding. Upper and lower contacts at 30 & 31 deg CA.			877879	484.5	486	692	< 5	19
						877880	486	488	956	28	23
						877881	488	489.3	7530	207	29
314.5	338.4	8b	Back in normal Gabbro, massive, medium grained and equigranular textured this one with local low angle po stringer running along core.			877882	489.3	491	1100	34	36
			321.5-325.3 po +/- cpy 1-3mm stringer at 0-15 deg CA along core plaquing natural fracturing in the rock			877883	491	492.6	1090	104	44
			326.8 1-5mm stringer of po at 16 deg CA.			877884	492.6	494	2500	314	58
						877885	494	495.4	1320	126	46
338.4	353.6	8a	Melanocratic massive Gabbro, fine grained pyroxenitic although including 1-2% large porphyroblasts of plagioclases, biotite alteration dark green. A few rare disseminated grains of po occur. Lower contact at 65 deg CA.			877886	495.4	497.2	193	19	6
			343.2 1-5cm sheared patch with blebby py +/- garnets may be a patch of sediments			877887	497.2	499	120	6	6
						877888	499	500.8	2020	78	24
						877889	500.8	502.6	2470	91	25
353.6	375	8b, porph	Porphyroblastic Gabbro with large crystals, cumulus texture almost leucocratic from the amount of plagioclases, all massive. Lower contact at 45 eg CA and is irregular.			877890	502.6	504.5	3480	95	20
			371.5-372.9 Massive melanocratic gabbro			877891	504.5	506	4650	127	26
						877892	506	508	2600	202	29
						877893	508	510	5210	242	36
375	387.1	8a	Melanocratic massive Gabbro, fine grained in general but also with frequent large crystals of amphibole also masked plagioclase of which you can see the cleavage but that is blackened by the mafic minerals. Net lower contact at 60 deg CA.			877894	510	511.8	4670	99	38
						877895	511.8	513.6	6170	194	45
						877896	513.6	515.2	5580	245	86
387.1	389.4	8b, porph	Small interval of massive porphyroblastic Gabbro, large crystals mainly from the plagioclases in a cumulus texture. Local traces of po in mafic minerals near upper contact at 387.2 ft. Lower contact at 75 deg CA.			877897	515.2	517	4130	171	50
						877898	517	519	3640	278	61
						877899	519	521	5390	291	54
389.4	484.5	8b	Massive medium-coarse grained Gabbro, somewhat equigranular with local variations in the shape of the crystals. A stripe of mafic material runs along core at 411-412.6 ft and contrains some disseminated po becoming more important in quantity approaching the lower contact in a gabbro that becomes gradually darker. Lower contact at 45 deg CA.			877900			8	< 5	< 5
			476.0-484.5 Significant mineralization in po-cpy is ending this gabbro unit up to > 5% metals			877901	521	523	3240	264	102
						877902	523	525	1460	21	36
						877903	525	527.1	2380	91	66
						877904	527.1	529	2220	429	104
						877905	529	531	4920	225	75
						877906	531	533	6200	234	75
						877907	533	535	1150	125	74
						877908	535	537	1740	64	118
						877909	537	539	6360	106	36

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 3	496305	350	stopped at 396 feet at first, and finished later after hole NR17-072 to get more information	327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR	on this set up and re-cut old hole NR06-020 previously drilled in 2006	327.7	-48	156	333.8	-41.7	756
1-Sep-17	6-Sep-17		5394600	330		328	-46.8	306			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.6	-45.4	456			
M.D.	Thunder Bay		North Rock	-50							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
484.5	495.4	8a	Mineralized Gabbro, massive and melanocratic, equigranular and particularly mineralized in po and cpy as highly disseminated and blebby po and more specks like cpy locally as veinlets or stringers along fractures like a nice one at 488.6' that look spectacular because cut near surface of the core. Mineralized up to 20%. Lower contact at 50 deg CA.			877910	539	541	2750	199	44
						877911	541	542.5	1630	58	77
						877912	542.5	544	119	23	45
						877913	544	545.8	19	59	38
495.4	499	13d	Mafic dyke, massive mafic intrusive, very fine grained composed of amphiboles with strong local biotite alteration on some fractures. There is weak mineralization in po at upper contact. Lower contact at 50 deg CA.			877914	545.8	547.6	16	59	42
						877915	547.6	550	15	26	41
						877916	550	552	13	21	86
499	537	8a	Mineralized Gabbro, massive, dark melanocratic, granulometry is variable from medium to coarse grained with also local sections that are very dark green pyroxenitic and another section at 506.6-508.0 which looks pegmatitic with large angular amphiboles and plagioclases. This whole unit is loaded up with highly disseminated and blebby po up to 20%/1 foot sections and lesser specks of cpy also found as narrow millimetric veins or stringers in fractures.			877917	552	554	42	42	34
						877918	554	556	51	19	38
						877919	556	558	35	46	22
						877920	558	560	102	218	62
						877921	560	562	22	43	117
537	544	8b, porph	Massive porphyroblastic Gabbro, coarse grained with overgrowth of plagioclases other than that quite equigranular along the unit. This is mineralized up to 5% disseminated and blebs of po-cpy. Lower contact at 55 deg CA.			877922	562	564	11	47	73
						877923	564	566	78	69	63
						877924	566	568	9	25	33
544	545.8	8a/7c	Very dark green massive melanocratic and pyroxenitic Gabbro, coarse crystals of amphiboles and pyroxenes. There is only traces of po-cpy mineralization. Lower contact at 60 deg CA.			877925	Standard		1210	5060	426
						877926	568	570	48	34	32
						877927	570	572	76	45	46
545.8	547.6	8b, porph	Back in massive porphyroblastic Gabbro, coarse grained with large plagioclases but with only traces of po-cpy mineralization. Lower contact at 68 deg CA.			877928	572	574	257	47	22
						877929	574	575.7	627	144	49
						877930	575.7	577.2	630	84	15
547.6	550	8a	Contact Zone at 550'. Massive melanocratic Gabbro, medium grained, equigranular, local little pods with biotite with only traces of po-cpy seen of fracture plane. Lower contact/contact zone at 43 deg CA.			877931	577.2	578.5	171	261	15
						877932	578.5	579.9	248	13	10
						877933	579.9	581.3	843	92	12
						877934	581.3	582.8	1210	1870	357
						877935	582.8	584.4	1620	434	760
						877936	584.4	586	212	45	176
						877937	586	587.6	42	< 5	380
						877938	587.6	589.2	649	580	157
						877939	589.2	590.5	554	201	209
						877940	590.5	591.7	545	380	163



METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was stopped at 396 feet at first, and finished later after hole NR17-072 to get more information on this set up and re-cut old hole NR06-020 previously drilled in 2006	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 4	496305	350		327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		327.7	-48	156	333.8	-41.7	756
1-Sep-17	6-Sep-17		5394600	330		328	-46.8	306			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR	330.6	-45.4	456				
M.D.	Thunder Bay		North Rock	-50							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
550	577.2	7c	Amphibolite/Pyroxenite mafic intrusive rock, groundmass has it fine to medium to coarse grained masked by very fine grained black biotitic alteration but with large sections composed of large amphiboles and pyroxene crystals. This is all dark melanocratic with some degree of chlorite-actinolite alterations on top of the biotite. There is py-po mineralization found on fresh choncooidal fracturing as blebs and more particularly nearing lower contact, this one at 55 deg CA.			877941	591.7	593.1	569	358	77
						877942	593.1	595	363	80	90
						877943	595	597	720	102	119
						877944	597	599	1090	100	83
						877945	599	601	216	11	< 5
577.2	582.8	7c/7b	Pyroxenite-Peridotite massive ultramafic intrusive rock, very fine grained with 5% 2-4mm semi-rounded brown phenocrysts (olivine?). Medium to dark green with strong actinolite alteration turning into serpentine. Mineralization wise, it starts pretty dry at upper contact but mineralization in po mostly stringers picks up in the last 3 feet with 2-3% of it where it is most serpentinized. Lower contact at 62 deg CA.			877946	601	603	56	24	21
						877947	603	605	40	< 5	< 5
						877948	605	606.4	465	19	13
						877949	606.4	608	37	< 5	< 5
						877950	Blank		4	< 5	< 5
582.8	591.7	8a/7c	Melanocratic massive Gabbro/Pyroxenite, mixed coarse grains and fine grains of amphiboles and pyroxenes, very dark green, actinolite alteration, with scattered disseminated po but also more concentrated by spots where it is quite magnetic and finally also as millimetric stringers for 3% sulphides globally mostly between 589.5 & 591'. Lower contact at 70 deg CA irregular. A nice 3cm surficial fracture filled with cpy occurs at 583.1'.			877951	608	610.2	26	21	6
						877952	610.2	611.9	413	55	237
						877953	611.9	614.1	49	15	12
						877954	614.1	616	18	< 5	23
						877955	616	618.1	18	< 5	< 5
						877956	618.1	620	248	50	33
						877957	620	622.1	45	9	18
						877958	622.1	624	28	8	7
						877959	624	626	20	< 5	7
						877960	626	629	10	6	6
						877961	629	632	15	6	7
						877962	632	635	13	5	6
						877963	635	638	16	< 5	< 5
						877964	638	641	19	< 5	< 5
						877965	641	644	2	< 5	< 5
						877966	644	647	8	6	< 5
						877967	647	650	5	< 5	< 5
						877968	650	652	8	< 5	< 5
						877969	652	653.8	53	6	6
						877970	653.8	655.5	< 1	< 5	6
						877971	655.5	657.2	4	< 5	< 5

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 5	496305	350	stopped at 396 feet at first, and finished later after hole NR17-072 to get more information	327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR	on this set up and re-cut old hole NR06-020 previously drilled in 2006						
1-Sep-17	6-Sep-17		5394600	330		327.7	-48	156	333.8	-41.7	756
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR							
M.D.	Thunder Bay		North Rock	-50		328	-46.8	306			
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
591.7	756	2	Mafic Volcanics, massive and very fine grained with largely spaced and quite discrete pillow rims that suggests a pillowed flows sequence however in a very massive unit. This is moderately altered with biotite and green chlorite and contains local very weak mineralization in po down to 607' . In some places, whitish millimetric stringers of chert-carbonates occur mostly at low angles but also in an oddly pattern. These stringers might be associated with the water nature of the pillowed flows.			877972	657.2	658.7	96	7	< 5
			652.0-653.8 Sheared interval with strong dark brown banded biotite and distorted quartz-epidote veining along shearing at 55-65 deg. CA			877973	658.7	660.5	< 1	< 5	< 5
			672.5-677.0 Series of millimetric stringers of chert-carbonates (10%) at 35-40 deg CA in massive volcanic flows.			877974	660.5	662.9	1	< 5	< 5
			732.5-736.0 Series of centimetric stringers/veins of po at roughly 20-40 deg CA. Also some cpy at 734 ft.			877975	Standard		1280	5200	408
						877976	662.9	666	8	< 5	6
						877977	666	669	81	< 5	< 5
						877978	669	672	23	43	9
						877979	672	674	< 1	95	72
						877980	674	676	< 1	18	21
			End of Hole at 756 ft.			877981	676	678	< 1	< 5	5
						877982	678	681	3	< 5	< 5
						877983	681	684	1	< 5	< 5
						877984	684	687	7	< 5	< 5
						877985	687	690	11	5	< 5
						877986	690	693	6	< 5	8
						877987	693	696	89	22	11
						877988	696	699	38	10	10
						877989	699	702	45	< 5	6
						877990	702	705	64	6	7
						877991	705	708	76	6	< 5
						877992	708	711.1	84	7	7
						877993	711.1	714	108	7	7
						877994	714	717	104	8	8
						877995	717	720	53	7	8
						877996	720	723	16	7	8
						877997	723	726	241	175	822
						877998	726	728	36	7	10
						877999	728	730	12	5	< 5
						878000	Blank		3	< 5	< 5
						356101	730	731.5	12	7	< 5
						356102	731.5	733	1130	31	19

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-071					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 071 was collared at -50 but turned out go to deviate strongly up so it was	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
16-Aug-17	N.Q.	Page 6	496305	350	stopped at 396 feet at first, and finished later after hole NR17-072 to get more information on this set up and re-cut old hole NR06-020 previously drilled in 2006	327.7	-48	21	332.8	-43.8	606
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		327.7	-48	156	333.8	-41.7	756
1-Sep-17	6-Sep-17		5394600	330		328	-46.8	306			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.6	-45.4	456			
M.D.	Thunder Bay		North Rock	-50							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
						356103	733	734.5	2370	84	69
						356104	734.5	736	218	308	11
						356105	736	737.5	142	35	6
						356106	737.5	739.5	117	48	29
						356107	739.5	741.7	38	< 5	7
						356108	741.7	744.2	2	< 5	5
						356109	744.2	747	16	6	< 5
						356110	747	750	7	< 5	< 5
						356111	750	753	18	< 5	< 5
						356112	753	756	24	< 5	< 5
								EOH			

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 1	496305	350	-55 deg. To control updip deviation related to hole 071	326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR							
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
0	7.7	Cas	Casing through overburden			877634	128.2	130.5	157	< 5	< 5
7.7	109.7	8b	Massive gabbro with multi phases of differentiation and local fluidal texture. Coarse grained with regular chloritic mm chloritic stringers.			877635	Blank		3	< 5	< 5
			39.5-52.4 Felsic epidotitic alteration flowing roughly at 10-20 deg. CA			877636	130.5	132	883	< 5	< 5
109.7	111.6	13d	Massive mafic intrusive dyke, very fine grained, medium chlorite alteration with a few grains of po in the groundmass. Both contacts at 60 deg CA			877637	132	134	1760	< 5	< 5
111.6	172.9	8b	Massive coarse grained gabbro with local cloud texture and local bands of felsic or chloritic material. Weak mineralization occurs as disseminated			877638	134	136	266	< 5	< 5
			po and cpy or locally as wisps with a crescent shapes. Local quartz veining in sheared ground at low angle.			877639	136	138	212	< 5	< 5
			130.8-135.7 Sheared interval at 20 deg. CA that contains a difformed and stretched quartz-carbonate vein. Small po & cpy mineralizatiion on margins			877640	261.9	263.9	49	< 5	< 5
172.9	174.5	13d	Massive mafic intrusive dyke, very fine grained, quite chloritic no textures. Upper and Lower contacts at 67 & 78 deg CA			877641	263.9	265.3	80	< 5	< 5
174.5	369.2	8b	Back to massive medium to coarse grained gabbro, becoming darker with local melanocratic textured intervals + also more felsic cloud textures.			877642	265.3	267.3	62	< 5	< 5
			There is traces of erratic mineralization of disseminated py and po and more localized in melanocratic intervals. Crescent stringer of po at 161.6'			877643	317.3	319.3	53	< 5	< 5
			205.7-217.0 Melanocratic interval with porphyroblastic texture at lower contact. Some pyrite on fracture planes.			877644	319.3	320.8	53	< 5	< 5
			217.0-251.4 Cloud texture in the gabbro including small melanocratic sections then the gabbro gets back to normal after			877645	320.8	323	76	< 5	< 5
			320.1 1cm quartz veinlet swelling to 2cm in place in 2 inches sheared gabbro at 46 deg CA			877646	486	488.7	78	9	13
369.2	392.2	8b, porph	Porphyroblastic textured differentiated gabbro, begins blackish melano then lighter with however big cumulus plagioclases developped. All massive.			877647	488.7	490.4	114	34	17
392.2	488.7	8b	Back to average gabbro, massive medium grained with local mafic veins and also pinched grey quartz stringers also overgrowth hornblende crystals			877648	490.4	492	96	5	< 5
488.7	568.2	8a	Weakly mineralized rather melanocratic gabbro, blackish, medium grained, massive with frequent extra growths of amphiboles and where preferential			877649	492	493.6	254	5	6
			mineralization in po and cpy occurs as blebs, stringers and disseminated crystals but also planar on fracture planes. On a scale of 3-4 inches, there			877650	493.6	495.5	128	14	29
			can have up to 10% sulphides as strong disseminated to veinlets. This is obviously the beginning of the mineralized contact zone.			877651	495.5	498	127	< 5	14
						877652	498	501	134	< 5	< 5
568.2	590	7c	Contact Zone. Amphibolite or Pyroxenite ultramafic unit. Very fine grained but crystallography distinct with needle shaped crystals of pyroxenite			877653	501	504	95	< 5	< 5
			and hornblende-actinolite mixed with plagioclases. Massive intrusive rock medium grey greenish. Scattered mineralization in po + cpy the same as			877654	504	507	135	< 5	< 5
			the previous unit with blebs, distorted veins of po-cpy, wisps and fracture fillings when not disseminated. Chorite-actinolite alteration. The contact			877655	507	510	86	< 5	< 5
			is at 70 deg CA. Black with large crystals (porphyroblasts) remnants of gabbro is frequent in the ultramafic unit.			877656	510	513	124	< 5	< 5
						877657	513	516	180	< 5	< 5
						877658	516	519	119	< 5	< 5
						877659	519	521	92	< 5	< 5
						877660	Standard		1290	4890	423
						877661	521	523.3	328	< 5	< 5
						877662	523.3	525.1	1870	37	6
						877663	525.1	526.8	1990	647	< 5
						877664	526.8	529.2	2790	78	< 5

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 2	496305	350	-55 deg. To control updip deviation related to hole 071	326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.2	-50.8	556			
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
590	593.4	8a	Inclusion of coarse grained melano gabbro, massive, black, traces-1% of cpy as stringers, upper&lower contacts at 55 & 42 deg CA			877665	529.2	531	453	6	< 5
						877666	531	533	116	< 5	< 5
593.4	607.5	7c	Back in the amphibolite/pyroxenite ultramafic unit, fine grained with > 1% po-cpy stringers -blebs-wisps and plaquages of py on fracture planes. Local carb veinlets but nearly 5% of 3-10mm discrete crystals of garnet along a weak foliation at 40-55 deg CA. Nice 8cm po-cpy vein at 595.6'.			877667	533	535	309	9	< 5
						877668	535	538	198	< 5	< 5
						877669	538	540	122	7	< 5
607.5	611.8	8b, porph	Inclusion of massive porphyroblastic gabbro, plagioclase crystals up to 1cm with also presence of reddish garnets 2-8mm. 5mm po vein at 45 deg CA at 609.8'. Local little pockets of biotite occur. Lower ctc undulating at roughly 30 deg CA			877670	540	542	723	29	< 5
						877671	542	544.2	236	< 5	< 5
						877672	544.2	546.5	808	20	< 5
611.8	622	7c	Back in dark green massive chloritic amphibolite (pyroxenite?) ultramafic unit. It contains 1-2% thin stringers of po as well as wisps & blebs of it. A few small discrete crystals of garnet still occur along. This box 612-626' is particularly heavy compare to normal. Lower ctc at 60 deg CA			877673	546.5	548.3	3220	40	< 5
						877674	548.3	550	1520	17	< 5
						877675	550	552	714	20	< 5
622	637.2	7b	Peridotite massive ultramafic intrusive rock, very fine grained with a high density of serpentine in the groundmass and about 5% visible 1-2mm crystal of olivine on surface of the core. The rock is lighter green and locally contains large fragments of black-bluish magnetite. This rock is dense and heavy. There is very little mineralization in the peridotite....most of it at contacts. Lower contact at 36 deg CA. Scatteredly magnetic along.			877676	552	555	146	< 5	< 5
						877677	555	558	1570	20	6
						877678	558	560	107	< 5	5
						877679	560	562	1100	133	< 5
637.2	641.5	7d	Amphibolite ultramafic intrusive rock, massive very fine grained with grouped garnets up to 8mm near lower contact (60 CA), and local wisps of next to upper contact in some sort of felsic vein (carbs?) but also at lower contact as po-cpy disrupted vein ~ 1cm.			877680	562	564	1800	116	19
						877681	564	566	774	90	48
						877682	566	568.2	1300	207	62
641.5	667.9	7b	Peridotite massive ultramafic intrusive rock, lighter green, very fine grained with strong pyroxene content, spinifex textured, serpentine alteration and with at least 5% mini crystals of olivine throughout. Local disseminated po and black blebby black magnetite crystal along a crescent pattern Upper and lower contacts at 57 & 40 deg CA.			877683	568.2	569.7	628	31	17
						877684	569.7	571.7	118	9	7
						877685	Blank		3	< 5	< 5
						877686	571.7	574	114	8	5
667.9	689.4	8a/7c	Dark green massive melanocratic gabbro-pyroxenite mix-up ultramafic intrusive rock, fine to coarse grained all dark with also coarse reddish garnets in scattered groups and local phenocrystic plagioclases. There is interesting mineralization in po-cpy as blebs and stringers at 675' and 683' as a vein of it but also 5%+ of locally highly disseminated brown-bronze po. Lower contact at 66 deg CA.			877687	574	576	101	8	6
						877688	576	578	98	7	5
						877689	578	579.8	185	8	6
						877690	579.8	581.3	827	93	52
689.4	699.7	7d/2	Massive medium green and very fine grained Amphibolite-basalt getting in the more mafic type of rock...likely mafic volcanics. It contains 1-2% small 1-3cm inclusions of gabbro otherwise very little textures but local cpy in tiny stringers. Lower contact at irregular 72 deg CA.			877691	581.3	582.7	109	9	9
						877692	582.7	584.2	62	10	8
						877693	584.2	586	3010	295	< 5
						877694	586	588	1140	34	< 5
						877695	588	590	95	10	8

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at -55 deg. To control updip deviation related to hole 071	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 3	496305	350		326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR	330.2	-50.8	556				
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
						877696	590	591.7	139	34	90
						877697	591.7	593.4	1660	357	39
						877698	593.4	595.1	1520	26	69
						877699	595.1	596.4	7540	384	67
						877700	596.4	597.8	2590	827	< 5
						877701	597.8	600	659	< 5	< 5
						877702	600	602	299	< 5	< 5
						877703	602	604	2630	16	27
						877704	604	605.7	1840	9	65
						877705	605.7	607.5	1370	21	130
						877706	607.5	609.1	62	15	60
						877707	609.1	610.5	5010	48	54
						877708	610.5	611.8	46	< 5	67
						877709	611.8	613.4	76	< 5	72
						877710	Standard		1300	5100	413
						877711	613.4	615	3980	14	80
						877712	615	617	331	20	80
						877713	617	619	1340	9	51
						877714	619	620.5	884	207	84
						877715	620.5	622	548	40	153
						877716	622	624	8	86	152
						877717	624	627	37	76	240
						877718	627	630	48	48	95
						877719	630	633	7	58	91
						877720	633	635.4	174	83	98
						877721	635.4	637.2	648	60	75
						877722	637.2	638.6	1630	47	159
						877723	638.6	640	1130	23	14
						877724	640	641.5	5900	10	25
						877725	641.5	643.3	31	122	56

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 4	496305	350	-55 deg. To control updip deviation related to hole 071	326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.2	-50.8	556			
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
699.7	715.2	8a/7c	Melanocratic Gabbro/Pyroxenite ultramafic intrusive rock, coarse black granulometry although 5% visible white plagioclases also mixed with finer grained pyroxenes with chloritic alteration. There is roughly 1% disseminated po-cpy and a nice 3cm wisp of cpy at 708.1'. Lower ctc at 54 d			877726	643.3	646	50	18	50
						877727	646	648	241	94	43
						877728	648	649.6	198	89	38
715.2	774.4	2	Massive green chlorite altered very fine grained to aphanitic Mafic Volcanics, with local light brecciation and a few discrete pillow rims, including a couple of narrow intervals of coarse grained melano gabbro at 750.0-751.5 and 752.6-753.3 this one ending with a 2cm wide pillow rim with po mineralization. A 3cm quartz vein occurs at 735' at 35 d. CA and with 2 big blebs of po within the vein. Mineralization occurs as local vein of po at 752.2' & 767.2' & 768.5', or blebs/agglomerated grains of po-cpy particularly nearing lower contact. However, most of this unit is pretty bare and the rock itself is rather dull. Lower contact at 60 deg CA. This rock sounds soft when breaking it.			877729	649.6	651.6	219	83	220
						877730	651.6	654	368	126	39
						877731	654	657	271	69	91
						877732	657	660	693	114	25
						877733	660	662	3640	260	519
						877734	662	664	721	204	51
774.4	792.2	7c	Pyroxenite massive ultramafic intrusive rock, fine grained with gabbroic coarse grained sections but in general the texture seems to be influenced by the surrounding mafic flows with chlorite and biotite alterations. Most mineralization occurs on fracture planes as disseminated po-cpy. Lower contact at 40 deg CA.			877735	Blank		8	< 5	< 5
						877736	664	666	494	79	87
						877737	666	667.9	277	89	36
						877738	667.9	669.9	623	< 5	20
						877739	669.9	672	4480	43	13
						877740	672	674	2730	13	98
						877741	674	676	6390	38	50
						877742	676	678	4500	96	17
						877743	678	680	2030	7	23
						877744	680	682	1700	18	25
						877745	682	683.5	24400	173	55
						877746	683.5	685.5	926	< 5	43
						877747	685.5	687.4	1550	< 5	17
						877748	687.4	689.4	828	9	38
						877749	689.4	691.4	776	< 5	14
						877750	691.4	693.9	132	6	16
						877751	693.9	696	428	29	7
						877752	696	698	178	7	8
						877753	698	699.7	663	6	7
						877754	699.7	701.6	333	17	8
						877755	701.6	703.6	88	199	43
						877756	703.6	705.7	180	< 5	9

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 5	496305	350	-55 deg. To control updip deviation related to hole 071	326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.2	-50.8	556			
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
792.2	860	2	Massive grey-greenish Mafic Volcanics, very fine grained, chloritic, with frequent pillow rims for pillowed lava sequence. The volcanics still have a few narrow gabbroic and pyroxenitic "pulses" sections of which contains most of the disseminated sulphides po-cpy observed while the volcanics contain very few. Common biotite alters the rock as well. A 30cm section of gabbro contains nice po-cpy mineralization. Lower contact at 52 d. C			877757	705.7	707.8	83	15	381
						877758	707.8	709.2	2600	16	302
						877759	709.2	711	2	< 5	5
						877760	Standard		1280	4790	422
						877761	711	713.2	25	< 5	< 5
						877762	713.2	715.2	91	15	42
						877763	715.2	717	240	15	14
						877764	717	720	266	70	64
						877765	720	723	202	50	43
						877766	723	726	23	15	21
						877767	726	729	22	< 5	< 5
						877768	729	731	688	135	163
						877769	731	732.7	73	< 5	7
						877770	732.7	734.6	110	8	6
						877771	734.6	736	1790	20	34
						877772	736	738	269	22	22
						877773	738	741	98	69	598
						877774	741	743	9040	150	51
						877775	743	745	457	5	153
						877776	745	747	469	7	5
						877777	747	750	157	7	7
						877778	750	751.5	2390	15	18
						877779	751.5	753.6	1540	15	148
						877780	753.6	755.3	201	9	9
						877781	755.3	758	72	7	8
						877782	758	760	2	< 5	6
						877783	760	761.5	2630	61	29
						877784	761.5	764	6	5	8
						877785	Blank		5	< 5	< 5
						877786	764	766.4	65	< 5	< 5



METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at -55 deg. To control updip deviation related to hole 071	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 6	496305	350		326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR	330.2	-50.8	556				
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
860	863.7	8b	Gabbro mafic intrusive unit squeezed in volcanics, dark melanocratic fine to coarse grained with local patches of coarse white plagioclases.			877787	766.4	768.2	2630	17	16
			Nearing lower contact appears disseminated po and cpy however a nice 3cm disrupted vein of it at 862.5'. Lower contact at 56 deg CA.			877788	768.2	770.3	856	20	17
						877789	770.3	772.4	3090	140	49
						877790	772.4	774.4	1750	144	26
						877791	774.4	776.3	1870	147	44
						877792	776.3	778.2	2480	89	49
						877793	778.2	780.7	127	28	137
						877794	780.7	783.1	534	81	68
						877795	783.1	785.7	5	6	< 5
						877796	785.7	788.2	47	9	12
						877797	788.2	790.3	412	69	6
						877798	790.3	792.2	130	< 5	13
						877799	792.2	794.7	6	7	7
						877800	794.7	797	4	< 5	< 5
						877801	797	799.5	350	7	5
						877802	799.5	802	2040	50	54
						877803	802	805	703	131	11
						877804	805	808	43	16	6
						877805	808	811	12	8	< 5
						877806	811	814	6	< 5	< 5
						877807	814	817	219	69	36
						877808	817	820	209	46	50
						877809	820	823	204	42	48
						877810	Standard		1270	5110	430
						877811	823	826	895	128	147
						877812	826	828	164	46	57
						877813	828	829.5	31	< 5	< 5
						877814	829.5	831	1710	196	32
						877815	831	832.5	66	7	< 5
						877816	832.5	834.5	11	< 5	< 5
						877817	834.5	837	12	14	38

METALCORP LIMITED 490 MAUREEN STREET THUNDER BAY ON P7B 6T2 (807) 683-8161 www.metalcorp.ca						HOLE# NR17-072					
DATE STARTED	CORE SIZE	Drill Log	COORDINATE E	COLLAR ELEVATION	COMMENTS: Hole 072 was started on same set up than hole 071 as re-collared steeper at	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH
20-Aug-17	N.Q.	Page 7	496305	350	-55 deg. To control updip deviation related to hole 071	326.9	-54.8	106	332.6	-49	706
DATE COMPLETED	DATE LOGGED		COORDINATE N	AZIMUTH AT COLLAR		328.2	-53.6	256	334	-47.7	866
	23-Aug-17		5394600	330		329.5	-52.1	406			
LOGGED BY	LOCATION OF CORE		PROPERTY	DIP AT COLLAR		330.2	-50.8	556			
M.D.	Thunder Bay		North Rock	-55							
FOOTAGE FROM	FOOTAGE TO	ROCK CODE	DESCRIPTION (colour, grain size, texture, minerals, alteration, core angle)			SAMPLE #	From	To	Cu	Pt	Pd
863.7	890.8	2b	Massive mafic volcanics in fact a pillowed sequence with several pillow rims along core, fine grained with local amphibole porphyroblasts, boring texture in a grey greenish rock and rare po-py disseminated grains. Weakly chloritic. Lower contact at 63 deg CA.			877818	837	840	1	27	46
						877819	840	843	11	9	< 5
890.8	892.7	8b	Gabbro massive coarse grained mafic intrusive unit or dyke in volcanic flows environment, dark green melanocratic with only a few erratic grains of po as traces. Lower contact at 64 deg CA.			877820	843	846	46	5	< 5
						877821	846	849	211	< 5	< 5
						877822	849	852	23	< 5	6
892.7	936	2b	Massive pillowed mafic volcanic flows, discrete but constant pillow rims along, very fine grained with light chlorite-actinolite alteration where actinolite is sometimes patchy but also strong biotite on some of the natural fracture planes. No significant mineralization observed. End of hole.			877823	852	855	18	< 5	< 5
						877824	855	858	28	< 5	< 5
						877825	858	860	443	16	7
						877826	860	861.7	3410	72	225
			End of Hole			877827	861.7	863.7	19600	68	1080
						877828	863.7	865.3	77	17	15
						877829	865.3	867.3	863	258	15
						877830	867.3	870	187	5	29
						877831	870	873	8	< 5	< 5
						877832	873	876	2	< 5	< 5
						877833	876	879	7	< 5	< 5
						877834	879	882	49	< 5	< 5
						877835	Blank		3	< 5	< 5
						877836	882	885	351	< 5	< 5
						877837	885	887	31	< 5	13
						877838	887	889	1	< 5	< 5
						877839	889	890.8	2	< 5	< 5
						877840	890.8	892.7	79	14	54
						877841	892.7	894.5	117	< 5	< 5
						877842	894.5	896.5	76	< 5	< 5
						877843	896.5	899	< 1	< 5	< 5
						877844	899	902	1	< 5	< 5
						877845	902	905	18	17	< 5
						877846	905	908	6	< 5	< 5
						877847	908	911	8	< 5	16

**Appendix IV**

**List of Samples**

**And**

**Results**

**2017**

		HOLE# NR17-070			Series W											
Hole #	Sample #	From	To	Length	Cu	Ag	Ni	Zn	Au	Pt	Pd	Comments	QA/QC	From (m)	To (m)	Length
NR17-070	877502	260.5	263	2.5	166	< 0.3	51	43	3	< 5	< 5			79.40	80.16	0.76
NR17-070	877503	263	266	3	47	< 0.3	43	69	< 2	< 5	< 5			80.16	81.08	0.91
NR17-070	877504	266	269	3	304	0.5	42	97	11	< 5	< 5			81.08	81.99	0.91
NR17-070	877505	269	272	3	186	< 0.3	65	47	< 2	< 5	< 5			81.99	82.91	0.91
NR17-070	<b>356021</b>				<b>3</b>	<b>&lt; 0.3</b>	<b>1</b>	<b>1</b>	<b>&lt; 2</b>	<b>&lt; 5</b>	<b>&lt; 5</b>		<b>Blank</b>			
NR17-070	877506	272	273.5	1.5	1180	0.6	546	53	3	< 5	< 5	15% po str.		82.91	83.36	0.46
NR17-070	877507	273.5	276	2.5	159	< 0.3	60	47	2	< 5	< 5			83.36	84.12	0.76
NR17-070	877508	276	278	2	155	0.3	52	43	< 2	< 5	< 5			84.12	84.73	0.61
NR17-070	877509	278	280	2	51	< 0.3	48	46	< 2	< 5	< 5			84.73	85.34	0.61
NR17-070	877510	280	282	2	1460	0.4	374	40	< 2	7	< 5	5% po str.		85.34	85.95	0.61
NR17-070	877511	282	285	3	26	< 0.3	35	43	< 2	< 5	< 5			85.95	86.87	0.91
NR17-070	877512	285	288	3	25	< 0.3	41	43	< 2	< 5	< 5			86.87	87.78	0.91
NR17-070	877513	288	291	3	39	< 0.3	50	47	< 2	< 5	< 5			87.78	88.70	0.91
NR17-070	877514	291	294	3	341	0.3	122	50	< 2	< 5	< 5			88.70	89.61	0.91
NR17-070	877515	294	296	2	84	< 0.3	61	49	< 2	< 5	< 5			89.61	90.22	0.61
NR17-070	877516	296	298	2	6890	0.5	201	57	< 2	< 5	< 5			90.22	90.83	0.61
NR17-070	877517	298	301	3	60	< 0.3	30	37	< 2	< 5	< 5			90.83	91.74	0.91
NR17-070	877518	301	303	2	225	< 0.3	115	48	5	20	6			91.74	92.35	0.61
NR17-070	877519	303	306	3	41	< 0.3	193	86	< 2	< 5	< 5			92.35	93.27	0.91
NR17-070	877520	306	309	3	134	< 0.3	174	74	< 2	< 5	< 5			93.27	94.18	0.91
NR17-070	877521	309	312	3	56	< 0.3	197	80	< 2	< 5	< 5			94.18	95.10	0.91
NR17-070	877522	312	315	3	36	0.4	43	51	< 2	< 5	< 5			95.10	96.01	0.91
NR17-070	877523	315	317	2	62	< 0.3	64	53	< 2	< 5	< 5			96.01	96.62	0.61
NR17-070	877524	317	319	2	13	< 0.3	42	49	< 2	< 5	< 5			96.62	97.23	0.61
NR17-070	877525	319	322	3	89	< 0.3	47	52	< 2	< 5	< 5			97.23	98.15	0.91
NR17-070	877526	322	325	3	70	< 0.3	33	54	< 2	< 5	< 5			98.15	99.06	0.91
NR17-070	877527	325	327	2	144	< 0.3	79	56	< 2	< 5	< 5			99.06	99.67	0.61
NR17-070	877528	327	330	3	53	< 0.3	38	54	< 2	< 5	< 5			99.67	100.58	0.91
NR17-070	877529	330	333	3	275	< 0.3	41	45	5	< 5	< 5			100.58	101.50	0.91
NR17-070	877530	333	335	2	110	0.3	164	41	< 2	< 5	< 5			101.50	102.11	0.61
NR17-070	<b>356022</b>				<b>1320</b>	<b>0.4</b>	<b>1570</b>	<b>47</b>	<b>238</b>	<b>5320</b>	<b>409</b>		<b>Standard</b>			
NR17-070	877531	335	337	2	197	< 0.3	103	43	< 2	6	5			102.11	102.72	0.61
NR17-070	877532	337	340	3	62	< 0.3	36	44	< 2	< 5	< 5			102.72	103.63	0.91
NR17-070	877533	340	343	3	65	< 0.3	32	48	< 2	< 5	< 5			103.63	104.55	0.91
NR17-070	877534	343	346	3	126	< 0.3	38	48	3	< 5	< 5			104.55	105.46	0.91
NR17-070	877535	346	349	3	492	0.5	36	47	16	< 5	< 5			105.46	106.38	0.91
NR17-070	877536	349	352	3	157	< 0.3	43	47	4	< 5	< 5			106.38	107.29	0.91
NR17-070	877537	352	355	3	237	< 0.3	46	44	6	< 5	< 5			107.29	108.20	0.91
NR17-070	877538	355	358	3	252	0.4	67	41	< 2	< 5	< 5			108.20	109.12	0.91
NR17-070	877539	358	360	2	213	< 0.3	279	42	2	6	< 5	10% po +/-cpy		109.12	109.73	0.61
NR17-070	877540	360	363	3	67	< 0.3	36	40	< 2	< 5	< 5			109.73	110.64	0.91
NR17-070	877541	363	366	3	73	< 0.3	40	43	< 2	< 5	< 5			110.64	111.56	0.91
NR17-070	877542	366	369	3	109	< 0.3	62	43	< 2	< 5	< 5			111.56	112.47	0.91
NR17-070	877543	369	371	2	3050	0.5	100	45	< 2	< 5	< 5	10% cpy-po		112.47	113.08	0.61
NR17-070	877544	371	373	2	645	< 0.3	656	43	< 2	13	< 5			113.08	113.69	0.61
NR17-070	877545	373	375	2	34	< 0.3	235	46	3	7	< 5	5% po		113.69	114.30	0.61
NR17-070	877546	375	378	3	51	< 0.3	54	46	< 2	< 5	< 5			114.30	115.21	0.91
NR17-070	877547	378	381	3	92	< 0.3	48	50	< 2	< 5	< 5			115.21	116.13	0.91
NR17-070	877548	381	384	3	95	0.3	41	47	< 2	< 5	< 5			116.13	117.04	0.91
NR17-070	877549	384	386	2	394	< 0.3	56	43	2	< 5	< 5			117.04	117.65	0.61
NR17-070	877550	386	388	2	261	< 0.3	61	55	3	< 5	< 5			117.65	118.26	0.61
NR17-070	877551	603	606	3	40	< 0.3	44	60	< 2	< 5	< 5			183.79	184.71	0.91
NR17-070	877552	606	609	3	142	< 0.3	108	69	< 2	< 5	< 5			184.71	185.62	0.91
NR17-070	877553	609	612	3	203	0.4	124	58	< 2	< 5	< 5			185.62	186.54	0.91
NR17-070	877554	612	615	3	66	0.5	53	61	< 2	< 5	< 5			186.54	187.45	0.91
NR17-070	877555	615	617	2	435	< 0.3	119	67	< 2	7	6			187.45	188.06	0.61
NR17-070	<b>356023</b>				<b>4</b>	<b>&lt; 0.3</b>	<b>2</b>	<b>2</b>	<b>&lt; 2</b>	<b>&lt; 5</b>	<b>&lt; 5</b>		<b>Blank</b>			
NR17-070	877556	617	619	2	10	< 0.3	51	50	< 2	< 5	< 5			188.06	188.67	0.61

NR17-070	877557	619	622	3	51	< 0.3	54	52	< 2	5	5	188.67	189.59	0.91
NR17-070	877558	622	625	3	36	< 0.3	101	61	< 2	6	6	189.59	190.50	0.91
NR17-070	877559	625	628	3	241	< 0.3	63	58	3	5	< 5	190.50	191.41	0.91
NR17-070	877560	628	631	3	75	< 0.3	47	55	< 2	< 5	< 5	191.41	192.33	0.91
NR17-070	877561	631	633	2	63	< 0.3	26	39	< 2	< 5	< 5	192.33	192.94	0.61
NR17-070	877562	633	636	3	74	< 0.3	58	56	< 2	< 5	< 5	192.94	193.85	0.91
NR17-070	877563	636	639	3	3	< 0.3	53	52	< 2	< 5	< 5	193.85	194.77	0.91
NR17-070	877564	639	642	3	102	< 0.3	48	56	< 2	< 5	< 5	194.77	195.68	0.91
NR17-070	877565	642	645	3	117	< 0.3	53	55	< 2	< 5	6	195.68	196.60	0.91
NR17-070	877566	645	648	3	43	0.3	52	63	< 2	< 5	< 5	196.60	197.51	0.91
NR17-070	877567	648	650	2	114	< 0.3	56	63	2	< 5	< 5	197.51	198.12	0.61
NR17-070	877568	650	651.5	1.5	131	< 0.3	54	56	2	5	6	198.12	198.58	0.46
NR17-070	877569	651.5	653.5	2	172	< 0.3	53	71	6	< 5	< 5	198.58	199.19	0.61
NR17-070	877570	653.5	655	1.5	219	< 0.3	48	76	6	< 5	< 5	199.19	199.64	0.46
NR17-070	877571	655	657	2	353	< 0.3	47	74	54	< 5	< 5	199.64	200.25	0.61
NR17-070	877572	657	660	3	254	< 0.3	55	68	3	7	< 5	200.25	201.17	0.91
NR17-070	877573	660	663	3	196	< 0.3	51	66	2	< 5	< 5	201.17	202.08	0.91
NR17-070	877574	663	666	3	89	< 0.3	56	60	< 2	< 5	< 5	202.08	203.00	0.91
NR17-070	877575	666	669	3	170	< 0.3	52	70	< 2	< 5	< 5	203.00	203.91	0.91
NR17-070	877576	669	672	3	311	< 0.3	56	71	4	< 5	< 5	203.91	204.83	0.91
NR17-070	877577	672	674	2	400	< 0.3	148	53	4	< 5	< 5	204.83	205.44	0.61
NR17-070	877578	674	676	2	616	< 0.3	142	48	3	< 5	< 5	205.44	206.04	0.61
NR17-070	877579	676	678	2	488	< 0.3	82	46	4	< 5	< 5	206.04	206.65	0.61
NR17-070	877580	678	680	2	61	< 0.3	48	64	< 2	< 5	< 5	206.65	207.26	0.61
NR17-070	<b>356024</b>				<b>1340</b>	<b>0.5</b>	<b>1600</b>	<b>47</b>	<b>255</b>	<b>5410</b>	<b>444</b>			
NR17-070	877581	680	682	2	101	< 0.3	49	49	< 2	< 5	< 5	207.26	207.87	0.61
NR17-070	877582	682	683.5	1.5	86	< 0.3	63	60	< 2	< 5	< 5	207.87	208.33	0.46
NR17-070	877583	683.5	685	1.5	118	< 0.3	48	35	5	< 5	< 5	208.33	208.79	0.46
NR17-070	877584	685	687	2	145	< 0.3	68	75	< 2	< 5	7	208.79	209.40	0.61
NR17-070	877585	803	806	3	19	0.3	45	44	< 2	< 5	< 5	244.75	245.67	0.91
NR17-070	877586	806	809	3	9	< 0.3	42	45	< 2	< 5	< 5	245.67	246.58	0.91
NR17-070	877587	809	812	3	90	< 0.3	47	50	2	< 5	< 5	246.58	247.50	0.91
NR17-070	877588	812	815	3	127	< 0.3	54	45	4	< 5	< 5	247.50	248.41	0.91
NR17-070	877589	815	817	2	117	< 0.3	64	47	3	< 5	< 5	248.41	249.02	0.61
NR17-070	877590	817	819	2	1180	< 0.3	107	46	< 2	< 5	< 5	249.02	249.63	0.61
NR17-070	877591	819	822	3	135	< 0.3	76	44	< 2	< 5	< 5	249.63	250.55	0.91
NR17-070	877592	822	824	2	1120	0.4	230	44	< 2	< 5	< 5	250.55	251.16	0.61
NR17-070	877593	824	826	2	29	< 0.3	29	32	< 2	< 5	5	251.16	251.76	0.61
NR17-070	877594	826	829	3	19	< 0.3	40	44	< 2	< 5	< 5	251.76	252.68	0.91
NR17-070	877595	829	832	3	47	< 0.3	22	47	< 2	< 5	< 5	252.68	253.59	0.91
NR17-070	877596	832	834	2	91	< 0.3	30	46	< 2	< 5	< 5	253.59	254.20	0.61
NR17-070	877597	834	836	2	335	< 0.3	37	46	< 2	< 5	6	254.20	254.81	0.61
NR17-070	877598	836	838	2	504	< 0.3	47	35	< 2	< 5	< 5	254.81	255.42	0.61
NR17-070	877599	838	840	2	266	< 0.3	41	39	< 2	< 5	< 5	255.42	256.03	0.61
NR17-070	877600	840	842	2	272	< 0.3	42	40	< 2	< 5	< 5	256.03	256.64	0.61
NR17-070	877601	842	845	3	80	< 0.3	122	49	24	6	7	256.64	257.56	0.91
NR17-070	877602	845	847	2	52	< 0.3	118	49	9	6	7	257.56	258.17	0.61
NR17-070	877603	847	849	2	1120	< 0.3	84	42	4	< 5	6	258.17	258.78	0.61
NR17-070	877604	849	851	2	161	< 0.3	25	37	7	< 5	6	258.78	259.38	0.61
NR17-070	877605	851	853	2	235	0.3	27	35	< 2	< 5	< 5	259.38	259.99	0.61
NR17-070	<b>356025</b>				<b>4</b>	<b>&lt; 0.3</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>&lt; 5</b>	<b>&lt; 5</b>			
NR17-070	877606	853	855	2	168	< 0.3	29	41	< 2	< 5	< 5	259.99	260.60	0.61
NR17-070	877607	855	857	2	296	< 0.3	140	44	< 2	< 5	< 5	260.60	261.21	0.61
NR17-070	877608	857	859	2	45	< 0.3	277	54	< 2	< 5	< 5	261.21	261.82	0.61
NR17-070	877609	1003	1005	2	31	< 0.3	215	55	< 2	< 5	< 5	305.71	306.32	0.61
NR17-070	877610	1005	1007	2	640	< 0.3	457	53	< 2	7	< 5	306.32	306.93	0.61
NR17-070	877611	1007	1009	2	1140	0.6	1500	50	< 2	108	< 5	306.93	307.54	0.61
NR17-070	877612	1009	1011	2	10	< 0.3	112	66	< 2	< 5	7	307.54	308.15	0.61
NR17-070	877613	1011	1013	2	190	< 0.3	136	51	< 2	< 5	7	308.15	308.76	0.61
NR17-070	877614	1013	1015	2	79	< 0.3	51	41	< 2	< 5	6	308.76	309.37	0.61

qzs str's

Standard

8" qz vein

14" qz vein

5% cpy-po

3% po in qz

Blank

8" qz v. + 10% po

15% po str's

20% qz veining

NR17-070	877615	1015	1016.5	1.5	2	< 0.3	36	38	< 2	< 5	9	20% qz veining	309.37	309.83	0.46
NR17-070	877616	1036	1038	2	280	< 0.3	274	41	4	32	27		315.77	316.38	0.61
NR17-070	877617	1038	1040	2	136	< 0.3	145	26	< 2	26	44	70% silica	316.38	316.99	0.61
NR17-070	877618	1040	1043	3	334	< 0.3	398	35	7	61	41	highly siliceous	316.99	317.91	0.91
NR17-070	877619	1043	1046	3	243	< 0.3	393	43	4	61	27	highly siliceous	317.91	318.82	0.91
NR17-070	877620	1046	1049	3	380	0.4	475	51	5	69	33		318.82	319.74	0.91
NR17-070	877621	1049	1051	2	397	< 0.3	270	46	14	51	35		319.74	320.34	0.61
NR17-070	877622	1051	1053	2	511	0.6	710	55	8	121	77	5% diss po in gabbro	320.34	320.95	0.61
NR17-070	877623	1053	1055	2	397	< 0.3	637	56	13	181	93		320.95	321.56	0.61
NR17-070	877624	1055	1057	2	595	< 0.3	804	57	3	80	53		321.56	322.17	0.61
NR17-070	877625	1057	1059	2	1100	< 0.3	943	55	3	140	29	5% po str's	322.17	322.78	0.61
NR17-070	877626	1059	1061	2	420	< 0.3	710	60	3	108	52		322.78	323.39	0.61
NR17-070	877627	1061	1063	2	462	< 0.3	578	54	< 2	57	23		323.39	324.00	0.61
NR17-070	877628	1063	1066	3	145	< 0.3	390	45	< 2	31	24		324.00	324.92	0.91
NR17-070	877629	1066	1068	2	48	< 0.3	130	55	< 2	6	26		324.92	325.53	0.61
NR17-070	877630	1068	1070	2	181	< 0.3	165	77	< 2	8	21		325.53	326.14	0.61
NR17-070	<b>356026</b>				<b>1290</b>	<b>0.5</b>	<b>1540</b>	<b>42</b>	<b>251</b>	<b>5240</b>	<b>448</b>	<b>Standard</b>			
NR17-070	877631	1070	1072	2	197	< 0.3	160	82	< 2	12	47		326.14	326.75	0.61
NR17-070	877632	1072	1074	2	194	< 0.3	352	69	< 2	57	28		326.75	327.36	0.61
NR17-070	877633	1074	1076	2	136	< 0.3	325	52	< 2	20	25	End of Hole	327.36	327.96	0.61

HOLE NR17-071				SERIES W & A								Comments	QA/QC	From (m)	To (m)	Length
Hole ID	Sample ID	From	To	Length	Cu	Ag	Ni	Zn	Au	Pt	Pd					
NR17-071	877848	204.5	206.6	2.1	141	< 0.3	77	55	4	7	< 5			62.33	62.97	0.64
NR17-071	877849	206.6	208.1	1.5	180	< 0.3	67	54	9	7	< 5	3cm qz-cb vein		62.97	63.43	0.46
NR17-071	877850				3	< 0.3	< 1	2	< 2	< 5	< 5		Blank			
NR17-071	877851	208.1	210.1	2	147	< 0.3	83	57	6	6	< 5			63.43	64.04	0.61
NR17-071	877852	279	281	2	82	< 0.3	38	55	< 2	< 5	< 5	1cm po str.		85.04	85.65	0.61
NR17-071	877853	281	282.6	1.6	2770	0.7	387	60	22	< 5	< 5			85.65	86.14	0.49
NR17-071	877854	282.6	284.7	2.1	74	< 0.3	40	58	4	< 5	< 5			86.14	86.78	0.64
NR17-071	877855	319.3	321.3	2	215	< 0.3	70	56	3	< 5	< 5			97.32	97.93	0.61
NR17-071	877856	321.3	323.3	2	5330	1.3	108	93	51	6	< 5			97.93	98.54	0.61
NR17-071	877857	323.3	325.3	2	5880	1.7	253	82	84	16	< 5			98.54	99.15	0.61
NR17-071	877858	325.3	327.1	1.8	1070	0.4	110	55	12	7	< 5			99.15	99.70	0.55
NR17-071	877859	327.1	329.1	2	261	< 0.3	56	53	3	< 5	< 5			99.70	100.31	0.61
NR17-071	877860	442.1	444.5	2.4	53	< 0.3	70	55	< 2	7	6			134.75	135.48	0.73
NR17-071	877861	444.5	446	1.5	1820	0.6	184	57	19	12	< 5	2mm cpy str		135.48	135.94	0.46
NR17-071	877862	446	449	3	60	< 0.3	81	62	< 2	7	14			135.94	136.86	0.91
NR17-071	877863	449	452	3	72	< 0.3	85	60	< 2	< 5	8			136.86	137.77	0.91
NR17-071	877864	452	455	3	85	< 0.3	71	53	8	85	53			137.77	138.68	0.91
NR17-071	877865	455	458	3	247	< 0.3	85	58	5	12	28			138.68	139.60	0.91
NR17-071	877866	458	461	3	152	< 0.3	75	53	5	< 5	< 5			139.60	140.51	0.91
NR17-071	877867	461	463	2	309	< 0.3	74	55	< 2	< 5	< 5	1% cpy blebby		140.51	141.12	0.61
NR17-071	877868	463	465	2	475	2.3	83	53	4	< 5	< 5	1% po		141.12	141.73	0.61
NR17-071	877869	465	467	2	190	< 0.3	94	59	3	< 5	< 5			141.73	142.34	0.61
NR17-071	877870	467	470	3	127	< 0.3	74	51	3	< 5	< 5			142.34	143.26	0.91
NR17-071	877871	470	473	3	134	< 0.3	79	51	3	< 5	< 5			143.26	144.17	0.91
NR17-071	877872	473	475	2	102	< 0.3	87	59	2	< 5	< 5			144.17	144.78	0.61
NR17-071	877873	475	477	2	750	< 0.3	196	64	14	39	6			144.78	145.39	0.61
NR17-071	877874	477	479	2	549	< 0.3	152	62	4	15	16	2% diss po-cpy		145.39	146.00	0.61
NR17-071	877875				1310	0.4	1540	48	342	4980	424		Standard			
NR17-071	877876	479	481	2	399	< 0.3	192	59	3	29	26	1% po		146.00	146.61	0.61
NR17-071	877877	481	483	2	1330	< 0.3	237	56	23	45	18	2% po-cpy blebs+diss		146.61	147.22	0.61
NR17-071	877878	483	484.5	1.5	1330	0.4	155	64	16	39	29	3% po-cpy blebs		147.22	147.68	0.46
NR17-071	877879	484.5	486	1.5	692	< 0.3	61	49	8	< 5	19			147.68	148.13	0.46
NR17-071	877880	486	488	2	956	< 0.3	295	67	8	28	23	5% po		148.13	148.74	0.61
NR17-071	877881	488	489.3	1.3	7530	1	364	111	69	207	29	Nice str cpy-po		148.74	149.14	0.40
NR17-071	877882	489.3	491	1.7	1100	< 0.3	240	81	6	34	36	1% po		149.14	149.66	0.52
NR17-071	877883	491	492.6	1.6	1090	0.3	1100	74	9	104	44	10% po		149.66	150.14	0.49
NR17-071	877884	492.6	494	1.4	2500	0.5	2220	58	24	314	58	30% po		150.14	150.57	0.43
NR17-071	877885	494	495.4	1.4	1320	< 0.3	811	73	9	126	46	2% po str		150.57	151.00	0.43
NR17-071	877886	495.4	497.2	1.8	193	< 0.3	204	77	2	19	6			151.00	151.55	0.55
NR17-071	877887	497.2	499	1.8	120	< 0.3	128	81	< 2	6	6			151.55	152.10	0.55
NR17-071	877888	499	500.8	1.8	2020	0.4	498	58	14	78	24	7% po		152.10	152.64	0.55
NR17-071	877889	500.8	502.6	1.8	2470	0.5	385	75	13	91	25	3% po str, blebs		152.64	153.19	0.55
NR17-071	877890	502.6	504.5	1.9	3480	0.6	933	62	20	95	20	5% cpy-po		153.19	153.77	0.58
NR17-071	877891	504.5	506	1.5	4650	0.8	680	87	17	127	26	4% cpy-po		153.77	154.23	0.46
NR17-071	877892	506	508	2	2600	0.4	1390	49	20	202	29	10% po		154.23	154.84	0.61
NR17-071	877893	508	510	2	5210	1.1	779	86	30	242	36	6% cpy-po		154.84	155.45	0.61
NR17-071	877894	510	511.8	1.8	4670	0.8	538	99	38	99	38	8% cpy-po		155.45	156.00	0.55
NR17-071	877895	511.8	513.6	1.8	6170	1.2	1060	105	101	194	45	4% cpy-po		156.00	156.55	0.55
NR17-071	877896	513.6	515.2	1.6	5580	1.1	1460	85	113	245	86	4% po-cpy str		156.55	157.03	0.49
NR17-071	877897	515.2	517	1.8	4130	1	731	77	59	171	50	15% po		157.03	157.58	0.55
NR17-071	877898	517	519	2	3640	0.9	307	105	60	278	61	4% cpy-po str		157.58	158.19	0.61
NR17-071	877899	519	521	2	5390	1.1	699	102	143	291	54	10% po-cpy		158.19	158.80	0.61
NR17-071	877900				8	< 0.3	2	1	< 2	< 5	< 5		Blank			
NR17-071	877901	521	523	2	3240	0.8	313	97	39	264	102	3% cpy-po str		158.80	159.41	0.61
NR17-071	877902	523	525	2	1460	0.5	211	88	19	21	36			159.41	160.02	0.61
NR17-071	877903	525	527.1	2.1	2380	1	254	96	36	91	66			160.02	160.66	0.64
NR17-071	877904	527.1	529	1.9	2220	0.6	236	95	171	429	104	2% po		160.66	161.24	0.58
NR17-071	877905	529	531	2	4920	1.1	423	101	84	225	75	5% po		161.24	161.85	0.61
NR17-071	877906	531	533	2	6200	1.6	435	99	101	234	75	8% po		161.85	162.46	0.61



NR17-071	877907	533	535	2	1150	< 0.3	280	83	17	125	74	3% po	162.46	163.07	0.61
NR17-071	877908	535	537	2	1740	< 0.3	206	63	34	64	118	1% [po	163.07	163.68	0.61
NR17-071	877909	537	539	2	6360	1.2	318	84	68	106	36	10% po-cpy	163.68	164.29	0.61
NR17-071	877910	539	541	2	2750	0.5	289	63	40	199	44	5% po-cpy	164.29	164.90	0.61
NR17-071	877911	541	542.5	1.5	1630	< 0.3	154	62	19	58	77	1% cpy	164.90	165.35	0.46
NR17-071	877912	542.5	544	1.5	119	< 0.3	115	53	< 2	23	45	tr cpy	165.35	165.81	0.46
NR17-071	877913	544	545.8	1.8	19	< 0.3	135	55	< 2	59	38		165.81	166.36	0.55
NR17-071	877914	545.8	547.6	1.8	16	< 0.3	87	49	< 2	59	42		166.36	166.91	0.55
NR17-071	877915	547.6	550	2.4	15	< 0.3	126	56	< 2	26	41		166.91	167.64	0.73
NR17-071	877916	550	552	2	13	< 0.3	141	55	< 2	21	86		167.64	168.25	0.61
NR17-071	877917	552	554	2	42	< 0.3	112	47	< 2	42	34		168.25	168.86	0.61
NR17-071	877918	554	556	2	51	< 0.3	155	59	< 2	19	38		168.86	169.47	0.61
NR17-071	877919	556	558	2	35	< 0.3	157	52	< 2	46	22	1% py	169.47	170.08	0.61
NR17-071	877920	558	560	2	102	< 0.3	167	56	12	218	62		170.08	170.69	0.61
NR17-071	877921	560	562	2	22	< 0.3	149	59	< 2	43	117		170.69	171.30	0.61
NR17-071	877922	562	564	2	11	< 0.3	125	59	< 2	47	73		171.30	171.91	0.61
NR17-071	877923	564	566	2	78	< 0.3	136	62	< 2	69	63		171.91	172.52	0.61
NR17-071	877924	566	568	2	9	< 0.3	121	61	< 2	25	33		172.52	173.13	0.61
NR17-071	877925				1210	0.4	1510	42	254	5060	426	Standard			
NR17-071	877926	568	570	2	48	< 0.3	126	60	< 2	34	32		173.13	173.74	0.61
NR17-071	877927	570	572	2	76	< 0.3	150	57	< 2	45	46		173.74	174.35	0.61
NR17-071	877928	572	574	2	257	< 0.3	281	63	3	47	22		174.35	174.96	0.61
NR17-071	877929	574	575.7	1.7	627	< 0.3	622	66	5	144	49	1% po	174.96	175.47	0.52
NR17-071	877930	575.7	577.2	1.5	630	< 0.3	449	64	8	84	15	tr po	175.47	175.93	0.46
NR17-071	877931	577.2	578.5	1.3	171	< 0.3	292	61	2	261	15		175.93	176.33	0.40
NR17-071	877932	578.5	579.9	1.4	248	< 0.3	95	65	< 2	13	10		176.33	176.75	0.43
NR17-071	877933	579.9	581.3	1.4	843	0.5	181	63	5	92	12	tr po	176.75	177.18	0.43
NR17-071	877934	581.3	582.8	1.5	1210	0.6	770	66	51	1870	357	3% po	177.18	177.64	0.46
NR17-071	877935	582.8	584.4	1.6	1620	0.5	257	67	11	434	760	Nice 3cm blob of cpy	177.64	178.13	0.49
NR17-071	877936	584.4	586	1.6	212	< 0.3	177	64	< 2	45	176		178.13	178.61	0.49
NR17-071	877937	586	587.6	1.6	42	< 0.3	151	69	< 2	< 5	380		178.61	179.10	0.49
NR17-071	877938	587.6	589.2	1.6	649	< 0.3	607	45	20	580	157	1% po-py	179.10	179.59	0.49
NR17-071	877939	589.2	590.5	1.3	554	< 0.3	444	58	16	201	209	3% blebby po	179.59	179.98	0.40
NR17-071	877940	590.5	591.7	1.2	545	< 0.3	523	44	8	380	163	2% po str	179.98	180.35	0.37
NR17-071	877941	591.7	593.1	1.4	569	< 0.3	420	47	10	358	77	2% po in joints	180.35	180.78	0.43
NR17-071	877942	593.1	595	1.9	363	< 0.3	142	45	4	80	90		180.78	181.36	0.58
NR17-071	877943	595	597	2	720	< 0.3	199	52	10	102	119		181.36	181.97	0.61
NR17-071	877944	597	599	2	1090	0.3	174	59	10	100	83	1% po-py str	181.97	182.58	0.61
NR17-071	877945	599	601	2	216	< 0.3	79	54	2	11	< 5		182.58	183.18	0.61
NR17-071	877946	601	603	2	56	< 0.3	87	62	< 2	24	21		183.18	183.79	0.61
NR17-071	877947	603	605	2	40	< 0.3	78	65	< 2	< 5	< 5		183.79	184.40	0.61
NR17-071	877948	605	606.4	1.4	465	< 0.3	353	53	< 2	19	13	5mm po str	184.40	184.83	0.43
NR17-071	877949	606.4	608	1.6	37	< 0.3	58	47	< 2	< 5	< 5		184.83	185.32	0.49
NR17-071	877950				4	< 0.3	< 1	2	< 2	< 5	< 5	Blank			
NR17-071	877951	608	610.2	2.2	26	< 0.3	65	44	< 2	21	6		185.32	185.99	0.67
NR17-071	877952	610.2	611.9	1.7	413	< 0.3	117	43	5	55	237		185.99	186.51	0.52
NR17-071	877953	611.9	614.1	2.2	49	< 0.3	73	43	4	15	12		186.51	187.18	0.67
NR17-071	877954	614.1	616	1.9	18	< 0.3	53	43	< 2	< 5	23		187.18	187.76	0.58
NR17-071	877955	616	618.1	2.1	18	< 0.3	52	39	< 2	< 5	< 5		187.76	188.40	0.64
NR17-071	877956	618.1	620	1.9	248	< 0.3	111	39	6	50	33		188.40	188.98	0.58
NR17-071	877957	620	622.1	2.1	45	< 0.3	69	37	< 2	9	18		188.98	189.62	0.64
NR17-071	877958	622.1	624	1.9	28	< 0.3	59	33	< 2	8	7		189.62	190.20	0.58
NR17-071	877959	624	626	2	20	< 0.3	63	33	< 2	< 5	7		190.20	190.80	0.61
NR17-071	877960	626	629	3	10	< 0.3	67	35	< 2	6	6		190.80	191.72	0.91
NR17-071	877961	629	632	3	15	< 0.3	74	35	< 2	6	7		191.72	192.63	0.91
NR17-071	877962	632	635	3	13	< 0.3	58	33	< 2	5	6		192.63	193.55	0.91
NR17-071	877963	635	638	3	16	< 0.3	51	35	9	< 5	< 5		193.55	194.46	0.91
NR17-071	877964	638	641	3	19	< 0.3	51	36	< 2	< 5	< 5		194.46	195.38	0.91
NR17-071	877965	641	644	3	2	< 0.3	51	35	< 2	< 5	< 5		195.38	196.29	0.91
NR17-071	877966	644	647	3	8	< 0.3	55	34	< 2	6	< 5		196.29	197.21	0.91
NR17-071	877967	647	650	3	5	< 0.3	48	35	< 2	< 5	< 5		197.21	198.12	0.91



NR17-071	877968	650	652	2	8	< 0.3	48	45	< 2	< 5	< 5		198.12	198.73	0.61
NR17-071	877969	652	653.8	1.8	53	< 0.3	63	56	< 2	6	6	Strong shearing + biotite alt.	198.73	199.28	0.55
NR17-071	877970	653.8	655.5	1.7	< 1	< 0.3	68	45	< 2	< 5	6		199.28	199.80	0.52
NR17-071	877971	655.5	657.2	1.7	4	< 0.3	53	39	< 2	< 5	< 5		199.80	200.31	0.52
NR17-071	877972	657.2	658.7	1.5	96	< 0.3	62	36	< 2	7	< 5		200.31	200.77	0.46
NR17-071	877973	658.7	660.5	1.8	< 1	< 0.3	46	34	< 2	< 5	< 5		200.77	201.32	0.55
NR17-071	877974	660.5	662.9	2.4	1	< 0.3	44	36	< 2	< 5	< 5		201.32	202.05	0.73
NR17-071	877975				<b>1280</b>	<b>0.4</b>	<b>1510</b>	<b>45</b>	<b>236</b>	<b>5200</b>	<b>408</b>	Standard			
NR17-071	877976	662.9	666	3.1	8	< 0.3	54	41	< 2	< 5	6		202.05	203.00	0.94
NR17-071	877977	666	669	3	81	< 0.3	59	40	2	< 5	< 5		203.00	203.91	0.91
NR17-071	877978	669	672	3	23	< 0.3	70	35	< 2	43	9		203.91	204.83	0.91
NR17-071	877979	672	674	2	< 1	< 0.3	63	32	< 2	95	72	chert str's	204.83	205.44	0.61
NR17-071	877980	674	676	2	< 1	< 0.3	49	32	< 2	18	21		205.44	206.04	0.61
NR17-071	877981	676	678	2	< 1	< 0.3	51	39	< 2	< 5	5		206.04	206.65	0.61
NR17-071	877982	678	681	3	3	< 0.3	45	38	< 2	< 5	< 5		206.65	207.57	0.91
NR17-071	877983	681	684	3	1	< 0.3	48	42	< 2	< 5	< 5		207.57	208.48	0.91
NR17-071	877984	684	687	3	7	< 0.3	48	47	< 2	< 5	< 5		208.48	209.40	0.91
NR17-071	877985	687	690	3	11	< 0.3	48	39	< 2	5	< 5		209.40	210.31	0.91
NR17-071	877986	690	693	3	6	< 0.3	48	43	< 2	< 5	8		210.31	211.23	0.91
NR17-071	877987	693	696	3	89	< 0.3	75	40	< 2	22	11		211.23	212.14	0.91
NR17-071	877988	696	699	3	38	< 0.3	61	45	< 2	10	10		212.14	213.06	0.91
NR17-071	877989	699	702	3	45	< 0.3	82	57	< 2	< 5	6		213.06	213.97	0.91
NR17-071	877990	702	705	3	64	< 0.3	65	56	< 2	6	7		213.97	214.88	0.91
NR17-071	877991	705	708	3	76	< 0.3	82	50	< 2	6	< 5		214.88	215.80	0.91
NR17-071	877992	708	711.1	3.1	84	< 0.3	96	58	< 2	7	7		215.80	216.74	0.94
NR17-071	877993	711.1	714	2.9	108	< 0.3	99	60	< 2	7	7		216.74	217.63	0.88
NR17-071	877994	714	717	3	104	< 0.3	109	62	< 2	8	8		217.63	218.54	0.91
NR17-071	877995	717	720	3	53	< 0.3	80	56	< 2	7	8		218.54	219.46	0.91
NR17-071	877996	720	723	3	16	< 0.3	61	52	< 2	7	8		219.46	220.37	0.91
NR17-071	877997	723	726	3	241	< 0.3	100	50	6	175	822		220.37	221.28	0.91
NR17-071	877998	726	728	2	36	< 0.3	64	44	< 2	7	10		221.28	221.89	0.61
NR17-071	877999	728	730	2	12	< 0.3	53	47	< 2	5	< 5		221.89	222.50	0.61
NR17-071	878000				<b>3</b>	<b>&lt; 0.3</b>	<b>2</b>	<b>1</b>	<b>&lt; 2</b>	<b>&lt; 5</b>	<b>&lt; 5</b>	Blank			
NR17-071	356101	730	731.5	1.5	12	< 0.3	57	47	< 2	7	< 5	New Series	222.50	222.96	0.46
NR17-071	356102	731.5	733	1.5	1130	< 0.3	861	46	31	31	19	1cm po str	222.96	223.42	0.46
NR17-071	356103	733	734.5	1.5	2370	0.4	529	51	52	84	69	Strong blebby po	223.42	223.88	0.46
NR17-071	356104	734.5	736	1.5	218	< 0.3	352	47	485	308	11	1cm po str	223.88	224.33	0.46
NR17-071	356105	736	737.5	1.5	142	< 0.3	82	46	59	35	6	1% po on fracture planes	224.33	224.79	0.46
NR17-071	356106	737.5	739.5	2	117	< 0.3	74	45	4	48	29		224.79	225.40	0.61
NR17-071	356107	739.5	741.7	2.2	38	< 0.3	53	39	< 2	< 5	7		225.40	226.07	0.67
NR17-071	356108	741.7	744.2	2.5	2	< 0.3	60	42	< 2	< 5	5		226.07	226.83	0.76
NR17-071	356109	744.2	747	2.8	16	< 0.3	79	56	< 2	6	< 5		226.83	227.69	0.85
NR17-071	356110	747	750	3	7	< 0.3	90	41	< 2	< 5	< 5		227.69	228.60	0.91
NR17-071	356111	750	753	3	18	< 0.3	88	45	< 2	< 5	< 5		228.60	229.51	0.91
NR17-071	356112	753	756	3	24	< 0.3	87	45	< 2	< 5	< 5	End of Hole	229.51	230.43	0.91

## HOLE NR17-071

Box #	From	To
1	4.4	18.8
2	18.8	33.2
3	33.2	47.2
4	47.2	61.5
5	61.5	76
6	76	90.2
7	90.2	104.4
8	104.4	118.6
9	118.6	133
10	133	146.8
11	146.8	161.3
12	161.3	175.8
13	175.8	189.9
14	189.9	204
15	204	218
16	218	232.4
17	232.4	246.3
18	246.3	259.9
19	259.9	273.8
20	273.8	288
21	288	302
22	302	315.6
23	315.6	330
24	330	344.4
25	344.4	358.3
26	358.3	372.9
27	372.9	386
28	386	400.2
29	400.2	414
30	414	427.9
31	427.9	442.1
32	442.1	456.5
33	456.5	470.5
34	470.5	484.6
35	484.6	498.7
36	498.7	512.9
37	512.9	527.1
38	527.1	541.7
39	541.7	556
40	556	570
41	570	583.9
42	583.9	597.8
43	597.8	611.9
44	611.9	626
45	626	640.8
46	640.8	654.6
47	654.6	668.7
48	668.7	682.8
49	682.8	697
50	697	711.1
51	711.1	725
52	725	738.6
53	738.6	752.8
54	752.8	756
		EOH

HOLE NR17-072				SERIES W								Comments	QA/QC	From (m)	To (m)	Length
Hole ID	Sample ID	From	To	Length	Cu	Ag	Ni	Zn	Au	Pt	Pd					
NR17-072	877634	128.2	130.5	2.3	157	< 0.3	46	21	< 2	< 5	< 5			39.08	39.78	0.70
NR17-072	877635				3	< 0.3	2	8	< 2	< 5	< 5		Blank			
NR17-072	877636	130.5	132	1.5	883	< 0.3	74	11	14	< 5	< 5	Sh'd vein		39.78	40.23	0.46
NR17-072	877637	132	134	2	1760	0.5	83	25	32	< 5	< 5	Sh'd vein		40.23	40.84	0.61
NR17-072	877638	134	136	2	266	< 0.3	57	24	4	< 5	< 5	Sh'd vein		40.84	41.45	0.61
NR17-072	877639	136	138	2	212	< 0.3	53	35	3	< 5	< 5			41.45	42.06	0.61
NR17-072	877640	261.9	263.9	2	49	< 0.3	34	29	< 2	< 5	< 5			79.83	80.44	0.61
NR17-072	877641	263.9	265.3	1.4	80	< 0.3	29	33	< 2	< 5	< 5	1cm qz v, tr po		80.44	80.86	0.43
NR17-072	877642	265.3	267.3	2	62	< 0.3	44	28	< 2	< 5	< 5			80.86	81.47	0.61
NR17-072	877643	317.3	319.3	2	53	< 0.3	40	29	< 2	< 5	< 5			96.71	97.32	0.61
NR17-072	877644	319.3	320.8	1.5	53	< 0.3	35	34	< 2	< 5	< 5	1-2cm qz v.		97.32	97.78	0.46
NR17-072	877645	320.8	323	2.2	76	< 0.3	37	21	< 2	< 5	< 5	tr. Po		97.78	98.45	0.67
NR17-072	877646	486	488.7	2.7	78	< 0.3	62	21	< 2	9	13			148.13	148.96	0.82
NR17-072	877647	488.7	490.4	1.7	114	< 0.3	108	18	< 2	34	17	Contact zone begins		148.96	149.47	0.52
NR17-072	877648	490.4	492	1.6	96	< 0.3	129	13	< 2	5	< 5			149.47	149.96	0.49
NR17-072	877649	492	493.6	1.6	254	< 0.3	116	14	3	5	6	str po-cpy		149.96	150.45	0.49
NR17-072	877650	493.6	495.5	1.9	128	< 0.3	71	23	13	14	29			150.45	151.03	0.58
NR17-072	877651	495.5	498	2.5	127	< 0.3	75	24	2	< 5	14			151.03	151.79	0.76
NR17-072	877652	498	501	3	134	< 0.3	67	22	3	< 5	< 5			151.79	152.70	0.91
NR17-072	877653	501	504	3	95	< 0.3	60	20	< 2	< 5	< 5			152.70	153.62	0.91
NR17-072	877654	504	507	3	135	< 0.3	55	32	< 2	< 5	< 5			153.62	154.53	0.91
NR17-072	877655	507	510	3	86	< 0.3	61	19	< 2	< 5	< 5			154.53	155.45	0.91
NR17-072	877656	510	513	3	124	< 0.3	106	16	< 2	< 5	< 5			155.45	156.36	0.91
NR17-072	877657	513	516	3	180	< 0.3	68	16	< 2	< 5	< 5			156.36	157.28	0.91
NR17-072	877658	516	519	3	119	< 0.3	79	28	< 2	< 5	< 5			157.28	158.19	0.91
NR17-072	877659	519	521	2	92	< 0.3	78	21	< 2	< 5	< 5			158.19	158.80	0.61
NR17-072	877660				1290	2.1	1530	9	241	4890	423		Standard			
NR17-072	877661	521	523.3	2.3	328	< 0.3	79	31	3	< 5	< 5			158.80	159.50	0.70
NR17-072	877662	523.3	525.1	1.8	1870	0.6	183	53	26	37	6	1% po-cpy		159.50	160.05	0.55
NR17-072	877663	525.1	526.8	1.7	1990	0.6	506	50	67	647	< 5	9% po + 1% cpy		160.05	160.57	0.52
NR17-072	877664	526.8	529.2	2.4	2790	0.9	353	55	36	78	< 5	1% po		160.57	161.30	0.73
NR17-072	877665	529.2	531	1.8	453	< 0.3	93	45	7	6	< 5			161.30	161.85	0.55
NR17-072	877666	531	533	2	116	< 0.3	90	58	< 2	< 5	< 5			161.85	162.46	0.61
NR17-072	877667	533	535	2	309	< 0.3	87	45	6	9	< 5	1% cpy-po		162.46	163.07	0.61
NR17-072	877668	535	538	3	198	< 0.3	76	43	3	< 5	< 5			163.07	163.98	0.91
NR17-072	877669	538	540	2	122	< 0.3	81	46	2	7	< 5			163.98	164.59	0.61
NR17-072	877670	540	542	2	723	0.4	193	50	5	29	< 5			164.59	165.20	0.61
NR17-072	877671	542	544.2	2.2	236	0.3	83	45	4	< 5	< 5			165.20	165.87	0.67
NR17-072	877672	544.2	546.5	2.3	808	< 0.3	163	50	13	20	< 5			165.87	166.57	0.70
NR17-072	877673	546.5	548.3	1.8	3220	0.8	424	61	33	40	< 5	5% po 1% cpy		166.57	167.12	0.55
NR17-072	877674	548.3	550	1.7	1520	0.5	265	60	28	17	< 5			167.12	167.64	0.52
NR17-072	877675	550	552	2	714	0.4	375	47	7	20	< 5			167.64	168.25	0.61
NR17-072	877676	552	555	3	146	< 0.3	72	46	< 2	< 5	< 5			168.25	169.16	0.91
NR17-072	877677	555	558	3	1570	0.4	233	50	33	20	6			169.16	170.08	0.91
NR17-072	877678	558	560	2	107	< 0.3	103	50	3	< 5	5			170.08	170.69	0.61
NR17-072	877679	560	562	2	1100	0.4	546	55	21	133	< 5	2" mass. Vn. Po		170.69	171.30	0.61
NR17-072	877680	562	564	2	1800	0.6	198	67	34	116	19	1% cpy-po		171.30	171.91	0.61
NR17-072	877681	564	566	2	774	0.4	185	62	28	90	48	1% py on fract. Plane		171.91	172.52	0.61
NR17-072	877682	566	568.2	2.2	1300	0.6	246	63	30	207	62	3% po 1% cpy ctc zone		172.52	173.19	0.67
NR17-072	877683	568.2	569.7	1.5	628	0.3	211	59	11	31	17	contact zone gab/amphib		173.19	173.64	0.46
NR17-072	877684	569.7	571.7	2	118	< 0.3	96	51	< 2	9	7			173.64	174.25	0.61
NR17-072	877685				3	< 0.3	2	2	< 2	< 5	< 5		Blank			
NR17-072	877686	571.7	574	2.3	114	< 0.3	96	54	< 2	8	5			174.25	174.96	0.70
NR17-072	877687	574	576	2	101	< 0.3	93	58	< 2	8	6			174.96	175.56	0.61
NR17-072	877688	576	578	2	98	< 0.3	96	59	< 2	7	5			175.56	176.17	0.61
NR17-072	877689	578	579.8	1.8	185	< 0.3	100	59	2	8	6			176.17	176.72	0.55
NR17-072	877690	579.8	581.3	1.5	827	0.4	199	67	21	93	52			176.72	177.18	0.46
NR17-072	877691	581.3	582.7	1.4	109	< 0.3	110	57	3	9	9			177.18	177.61	0.43
NR17-072	877692	582.7	584.2	1.5	62	< 0.3	109	70	4	10	8			177.61	178.06	0.46

NR17-072	877693	584.2	586	1.8	3010	1	331	58	397	295	< 5	2% po	178.06	178.61	0.55
NR17-072	877694	586	588	2	1140	0.6	102	58	35	34	< 5		178.61	179.22	0.61
NR17-072	877695	588	590	2	95	< 0.3	124	66	3	10	8		179.22	179.83	0.61
NR17-072	877696	590	591.7	1.7	139	< 0.3	120	56	3	34	90		179.83	180.35	0.52
NR17-072	877697	591.7	593.4	1.7	1660	0.5	159	63	44	357	39		180.35	180.87	0.52
NR17-072	877698	593.4	595.1	1.7	1520	0.5	122	60	12	26	69	1% po-cpy	180.87	181.39	0.52
NR17-072	877699	595.1	596.4	1.3	7540	1.8	270	89	107	384	67		181.39	181.78	0.40
NR17-072	877700	596.4	597.8	1.4	2590	0.7	247	55	112	827	< 5	po str.	181.78	182.21	0.43
NR17-072	877701	597.8	600	2.2	659	< 0.3	123	50	21	< 5	< 5		182.21	182.88	0.67
NR17-072	877702	600	602	2	299	< 0.3	17	38	2	< 5	< 5		182.88	183.49	0.61
NR17-072	877703	602	604	2	2630	0.7	173	50	54	16	27		183.49	184.10	0.61
NR17-072	877704	604	605.7	1.7	1840	0.4	169	52	46	9	65	2% po	184.10	184.62	0.52
NR17-072	877705	605.7	607.5	1.8	1370	0.4	439	49	42	21	130		184.62	185.17	0.55
NR17-072	877706	607.5	609.1	1.6	62	< 0.3	114	46	7	15	60		185.17	185.65	0.49
NR17-072	877707	609.1	610.5	1.4	5010	1.3	280	64	38	48	54	5mm po-cpy str.	185.65	186.08	0.43
NR17-072	877708	610.5	611.8	1.3	46	< 0.3	95	47	< 2	< 5	67		186.08	186.48	0.40
NR17-072	877709	611.8	613.4	1.6	76	< 0.3	101	51	< 2	< 5	72		186.48	186.96	0.49
NR17-072	877710				1300	0.5	1500	43	281	5100	413	Standard			
NR17-072	877711	613.4	615	1.6	3980	1.1	148	64	86	14	80	3% po	186.96	187.45	0.49
NR17-072	877712	615	617	2	331	< 0.3	144	60	11	20	80		187.45	188.06	0.61
NR17-072	877713	617	619	2	1340	< 0.3	202	52	19	9	51	3% wisps po	188.06	188.67	0.61
NR17-072	877714	619	620.5	1.5	884	0.3	206	54	37	207	84	1% po	188.67	189.13	0.46
NR17-072	877715	620.5	622	1.5	548	< 0.3	262	57	12	40	153		189.13	189.59	0.46
NR17-072	877716	622	624	2	8	< 0.3	300	66	6	86	152		189.59	190.20	0.61
NR17-072	877717	624	627	3	37	< 0.3	364	62	6	76	240		190.20	191.11	0.91
NR17-072	877718	627	630	3	48	< 0.3	450	56	2	48	95		191.11	192.02	0.91
NR17-072	877719	630	633	3	7	0.3	351	52	4	58	91		192.02	192.94	0.91
NR17-072	877720	633	635.4	2.4	174	< 0.3	396	51	11	83	98		192.94	193.67	0.73
NR17-072	877721	635.4	637.2	1.8	648	0.3	276	61	18	60	75		193.67	194.22	0.55
NR17-072	877722	637.2	638.6	1.4	1630	0.7	184	97	71	47	159	2% po wisps	194.22	194.65	0.43
NR17-072	877723	638.6	640	1.4	1130	0.5	260	58	7	23	14		194.65	195.07	0.43
NR17-072	877724	640	641.5	1.5	5900	2.1	278	67	219	10	25	2cm po-cpy vein	195.07	195.53	0.46
NR17-072	877725	641.5	643.3	1.8	31	0.4	344	67	17	122	56		195.53	196.08	0.55
NR17-072	877726	643.3	646	2.7	50	< 0.3	558	64	< 2	18	50		196.08	196.90	0.82
NR17-072	877727	646	648	2	241	< 0.3	1160	71	2	94	43		196.90	197.51	0.61
NR17-072	877728	648	649.6	1.6	198	< 0.3	839	73	3	89	38		197.51	198.00	0.49
NR17-072	877729	649.6	651.6	2	219	< 0.3	869	70	6	83	220		198.00	198.61	0.61
NR17-072	877730	651.6	654	2.4	368	< 0.3	943	76	13	126	39		198.61	199.34	0.73
NR17-072	877731	654	657	3	271	< 0.3	742	74	4	69	91		199.34	200.25	0.91
NR17-072	877732	657	660	3	693	< 0.3	1400	77	6	114	25		200.25	201.17	0.91
NR17-072	877733	660	662	2	3640	1	1790	101	94	260	519		201.17	201.78	0.61
NR17-072	877734	662	664	2	721	< 0.3	849	93	12	204	51		201.78	202.39	0.61
NR17-072	877735				8	< 0.3	2	14	< 2	< 5	< 5	Blank			
NR17-072	877736	664	666	2	494	< 0.3	911	89	5	79	87		202.39	203.00	0.61
NR17-072	877737	666	667.9	1.9	277	< 0.3	682	87	8	89	36		203.00	203.58	0.58
NR17-072	877738	667.9	669.9	2	623	0.4	116	65	11	< 5	20		203.58	204.19	0.61
NR17-072	877739	669.9	672	2.1	4480	1.1	381	87	67	43	13		204.19	204.83	0.64
NR17-072	877740	672	674	2	2730	0.8	440	73	76	13	98		204.83	205.44	0.61
NR17-072	877741	674	676	2	6390	1.5	553	73	95	38	50		205.44	206.04	0.61
NR17-072	877742	676	678	2	4500	0.9	1040	72	84	96	17		206.04	206.65	0.61
NR17-072	877743	678	680	2	2030	0.5	764	74	37	7	23		206.65	207.26	0.61
NR17-072	877744	680	682	2	1700	0.5	235	66	16	18	25		207.26	207.87	0.61
NR17-072	877745	682	683.5	1.5	24400	5.6	342	101	271	173	55		207.87	208.33	0.46
NR17-072	877746	683.5	685.5	2	926	< 0.3	112	62	23	< 5	43		208.33	208.94	0.61
NR17-072	877747	685.5	687.4	1.9	1550	0.4	202	65	39	< 5	17		208.94	209.52	0.58
NR17-072	877748	687.4	689.4	2	828	< 0.3	288	54	26	9	38		209.52	210.13	0.61
NR17-072	877749	689.4	691.4	2	776	< 0.3	99	54	19	< 5	14		210.13	210.74	0.61
NR17-072	877750	691.4	693.9	2.5	132	< 0.3	174	43	< 2	6	16		210.74	211.50	0.76
NR17-072	877751	693.9	696	2.1	428	< 0.3	181	55	6	29	7		211.50	212.14	0.64
NR17-072	877752	696	698	2	178	< 0.3	142	51	3	7	8		212.14	212.75	0.61
NR17-072	877753	698	699.7	1.7	663	< 0.3	371	61	7	6	7		212.75	213.27	0.52

NR17-072	877754	699.7	701.6	1.9	333	< 0.3	139	13	7	17	8	213.27	213.85	0.58
NR17-072	877755	701.6	703.6	2	88	< 0.3	94	16	13	199	43	213.85	214.46	0.61
NR17-072	877756	703.6	705.7	2.1	180	< 0.3	97	17	2	< 5	9	214.46	215.10	0.64
NR17-072	877757	705.7	707.8	2.1	83	< 0.3	165	23	3	15	381	215.10	215.74	0.64
NR17-072	877758	707.8	709.2	1.4	2600	0.7	193	25	34	16	302	215.74	216.16	0.43
NR17-072	877759	709.2	711	1.8	2	< 0.3	87	12	< 2	< 5	5	216.16	216.71	0.55
NR17-072	877760				1280	0.5	1520	7	227	4790	422			
NR17-072	877761	711	713.2	2.2	25	< 0.3	58	8	< 2	< 5	< 5	216.71	217.38	0.67
NR17-072	877762	713.2	715.2	2	91	< 0.3	127	10	< 2	15	42	217.38	217.99	0.61
NR17-072	877763	715.2	717	1.8	240	< 0.3	157	9	4	15	14	217.99	218.54	0.55
NR17-072	877764	717	720	3	266	< 0.3	137	11	8	70	64	218.54	219.46	0.91
NR17-072	877765	720	723	3	202	< 0.3	186	11	13	50	43	219.46	220.37	0.91
NR17-072	877766	723	726	3	23	< 0.3	112	13	4	15	21	220.37	221.28	0.91
NR17-072	877767	726	729	3	22	< 0.3	86	11	< 2	< 5	< 5	221.28	222.20	0.91
NR17-072	877768	729	731	2	688	< 0.3	298	7	17	135	163	222.20	222.81	0.61
NR17-072	877769	731	732.7	1.7	73	< 0.3	96	17	< 2	< 5	7	222.81	223.33	0.52
NR17-072	877770	732.7	734.6	1.9	110	< 0.3	62	10	< 2	8	6	223.33	223.91	0.58
NR17-072	877771	734.6	736	1.4	1790	0.5	74	< 5	27	20	34	223.91	224.33	0.43
NR17-072	877772	736	738	2	269	< 0.3	123	12	8	22	22	224.33	224.94	0.61
NR17-072	877773	738	741	3	98	< 0.3	135	13	3	69	598	224.94	225.86	0.91
NR17-072	877774	741	743	2	9040	3	240	106	417	150	51	225.86	226.47	0.61
NR17-072	877775	743	745	2	457	< 0.3	115	56	6	5	153	226.47	227.08	0.61
NR17-072	877776	745	747	2	469	< 0.3	120	56	3	7	5	227.08	227.69	0.61
NR17-072	877777	747	750	3	157	< 0.3	118	48	5	7	7	227.69	228.60	0.91
NR17-072	877778	750	751.5	1.5	2390	0.6	238	54	21	15	18	228.60	229.06	0.46
NR17-072	877779	751.5	753.6	2.1	1540	0.5	364	69	20	15	148	229.06	229.70	0.64
NR17-072	877780	753.6	755.3	1.7	201	< 0.3	121	53	3	9	9	229.70	230.22	0.52
NR17-072	877781	755.3	758	2.7	72	< 0.3	107	50	< 2	7	8	230.22	231.04	0.82
NR17-072	877782	758	760	2	2	< 0.3	61	44	< 2	< 5	6	231.04	231.65	0.61
NR17-072	877783	760	761.5	1.5	2630	0.9	132	48	21	61	29	231.65	232.11	0.46
NR17-072	877784	761.5	764	2.5	6	< 0.3	66	38	< 2	5	8	232.11	232.87	0.76
NR17-072	877785				5	< 0.3	3	1	< 2	< 5	< 5			
NR17-072	877786	764	766.4	2.4	65	< 0.3	70	40	< 2	< 5	< 5	232.87	233.60	0.73
NR17-072	877787	766.4	768.2	1.8	2630	0.9	143	46	129	17	16	233.60	234.15	0.55
NR17-072	877788	768.2	770.3	2.1	856	< 0.3	99	43	28	20	17	234.15	234.79	0.64
NR17-072	877789	770.3	772.4	2.1	3090	0.9	183	53	49	140	49	234.79	235.43	0.64
NR17-072	877790	772.4	774.4	2	1750	0.5	139	46	92	144	26	235.43	236.04	0.61
NR17-072	877791	774.4	776.3	1.9	1870	0.6	185	48	32	147	44	236.04	236.62	0.58
NR17-072	877792	776.3	778.2	1.9	2480	0.7	204	55	60	89	49	236.62	237.20	0.58
NR17-072	877793	778.2	780.7	2.5	127	< 0.3	110	47	2	28	137	237.20	237.96	0.76
NR17-072	877794	780.7	783.1	2.4	534	< 0.3	191	46	9	81	68	237.96	238.69	0.73
NR17-072	877795	783.1	785.7	2.6	5	< 0.3	75	43	< 2	6	< 5	238.69	239.48	0.79
NR17-072	877796	785.7	788.2	2.5	47	< 0.3	97	39	4	9	12	239.48	240.24	0.76
NR17-072	877797	788.2	790.3	2.1	412	< 0.3	129	43	11	69	6	240.24	240.88	0.64
NR17-072	877798	790.3	792.2	1.9	130	< 0.3	165	45	4	< 5	13	240.88	241.46	0.58
NR17-072	877799	792.2	794.7	2.5	6	< 0.3	234	31	< 2	7	7	241.46	242.22	0.76
NR17-072	877800	794.7	797	2.3	4	< 0.3	226	29	< 2	< 5	< 5	242.22	242.93	0.70
NR17-072	877801	797	799.5	2.5	350	< 0.3	203	33	4	7	5	242.93	243.69	0.76
NR17-072	877802	799.5	802	2.5	2040	0.5	207	43	24	50	54	243.69	244.45	0.76
NR17-072	877803	802	805	3	703	< 0.3	321	35	11	131	11	244.45	245.36	0.91
NR17-072	877804	805	808	3	43	< 0.3	163	28	< 2	16	6	245.36	246.28	0.91
NR17-072	877805	808	811	3	12	< 0.3	226	30	< 2	8	< 5	246.28	247.19	0.91
NR17-072	877806	811	814	3	6	< 0.3	187	31	< 2	< 5	< 5	247.19	248.11	0.91
NR17-072	877807	814	817	3	219	< 0.3	191	59	5	69	36	248.11	249.02	0.91
NR17-072	877808	817	820	3	209	< 0.3	231	52	6	46	50	249.02	249.94	0.91
NR17-072	877809	820	823	3	204	< 0.3	207	47	5	42	48	249.94	250.85	0.91
NR17-072	877810				1270	0.5	1550	45	246	5110	430			
NR17-072	877811	823	826	3	895	< 0.3	302	51	15	128	147	250.85	251.76	0.91
NR17-072	877812	826	828	2	164	< 0.3	177	50	3	46	57	251.76	252.37	0.61
NR17-072	877813	828	829.5	1.5	31	< 0.3	135	57	< 2	< 5	< 5	252.37	252.83	0.46
NR17-072	877814	829.5	831	1.5	1710	0.4	295	47	39	196	32	252.83	253.29	0.46

Standard

3cm qz vn, 2% po wisps

5% po

Blank

1cm cpy vn, 2% diss po-cpy

1% diss po-cpy

5% diss po-cpy

3% diss po-cpy

1% po

1% po-cpy

Standard



NR17-072	877815	831	832.5	1.5	66	< 0.3	152	35	< 2	7	< 5	253.29	253.75	0.46
NR17-072	877816	832.5	834.5	2	11	< 0.3	126	39	< 2	< 5	< 5	253.75	254.36	0.61
NR17-072	877817	834.5	837	2.5	12	< 0.3	142	31	< 2	14	38	254.36	255.12	0.76
NR17-072	877818	837	840	3	1	< 0.3	115	34	< 2	27	46	255.12	256.03	0.91
NR17-072	877819	840	843	3	11	< 0.3	230	39	< 2	9	< 5	256.03	256.95	0.91
NR17-072	877820	843	846	3	46	< 0.3	284	38	< 2	5	< 5	256.95	257.86	0.91
NR17-072	877821	846	849	3	211	< 0.3	206	39	2	< 5	< 5	257.86	258.78	0.91
NR17-072	877822	849	852	3	23	< 0.3	195	36	< 2	< 5	6	258.78	259.69	0.91
NR17-072	877823	852	855	3	18	< 0.3	211	34	18	< 5	< 5	259.69	260.60	0.91
NR17-072	877824	855	858	3	28	< 0.3	172	35	< 2	< 5	< 5	260.60	261.52	0.91
NR17-072	877825	858	860	2	443	< 0.3	159	45	10	16	7	261.52	262.13	0.61
NR17-072	877826	860	861.7	1.7	3410	1.2	218	61	39	72	225	262.13	262.65	0.52
NR17-072	877827	861.7	863.7	2	19600	7.7	293	100	1340	68	1080	262.65	263.26	0.61
NR17-072	877828	863.7	865.3	1.6	77	< 0.3	145	50	5	17	15	263.26	263.74	0.49
NR17-072	877829	865.3	867.3	2	863	0.4	177	44	11	258	15	263.74	264.35	0.61
NR17-072	877830	867.3	870	2.7	187	< 0.3	135	35	< 2	5	29	264.35	265.18	0.82
NR17-072	877831	870	873	3	8	< 0.3	182	33	< 2	< 5	< 5	265.18	266.09	0.91
NR17-072	877832	873	876	3	2	< 0.3	238	31	< 2	< 5	< 5	266.09	267.00	0.91
NR17-072	877833	876	879	3	7	< 0.3	208	26	< 2	< 5	< 5	267.00	267.92	0.91
NR17-072	877834	879	882	3	49	< 0.3	192	30	< 2	< 5	< 5	267.92	268.83	0.91
NR17-072	877835				3	< 0.3	2	1	< 2	< 5	< 5	Blank		
NR17-072	877836	882	885	3	351	< 0.3	99	35	5	< 5	< 5	268.83	269.75	0.91
NR17-072	877837	885	887	2	31	< 0.3	128	37	< 2	< 5	13	269.75	270.36	0.61
NR17-072	877838	887	889	2	1	< 0.3	151	28	< 2	< 5	< 5	270.36	270.97	0.61
NR17-072	877839	889	890.8	1.8	2	< 0.3	215	31	< 2	< 5	< 5	270.97	271.52	0.55
NR17-072	877840	890.8	892.7	1.9	79	< 0.3	150	47	< 2	14	54	271.52	272.09	0.58
NR17-072	877841	892.7	894.5	1.8	117	< 0.3	248	63	< 2	< 5	< 5	272.09	272.64	0.55
NR17-072	877842	894.5	896.5	2	76	< 0.3	158	60	< 2	< 5	< 5	272.64	273.25	0.61
NR17-072	877843	896.5	899	2.5	< 1	< 0.3	105	28	< 2	< 5	< 5	273.25	274.02	0.76
NR17-072	877844	899	902	3	1	< 0.3	104	33	< 2	< 5	< 5	274.02	274.93	0.91
NR17-072	877845	902	905	3	18	< 0.3	95	33	< 2	17	< 5	274.93	275.84	0.91
NR17-072	877846	905	908	3	6	< 0.3	76	29	< 2	< 5	< 5	275.84	276.76	0.91
NR17-072	877847	908	911	3	8	< 0.3	98	29	< 2	< 5	16	276.76	277.67	0.91
												End of sampling		

## HOLE NR17-072

Box #	From	To	
1	7.7	16.7	
2	16.7	31.2	
3	31.2	45.3	
4	45.3	59.3	
5	59.3	73.6	
6	73.6	87.4	
7	87.4	101.8	
8	101.8	116	
9	116	130.1	
10	130.1	144.3	
11	144.3	157.4	
12	157.4	172.5	
13	172.5	186.9	
14	186.9	201	
15	201	215.5	
16	215.5	229.4	
17	229.4	243.3	
18	243.3	257.4	
19	257.4	271.5	
20	271.5	286	
21	286	300	
22	300	313.9	
23	313.9	327.8	
24	327.8	342.2	
25	342.2	356.4	
26	356.4	370.8	
27	370.8	384.7	
28	384.7	399.2	
29	399.2	412.7	
30	412.7	426.7	
31	426.7	441.3	
32	441.3	455.7	
33	455.7	469.9	
34	469.9	484.7	
35	484.7	498.7	
36	498.7	512.7	
37	512.7	526.8	
38	526.8	541.2	
39	541.2	555.6	
40	555.6	569.7	
41	569.7	584.2	
42	584.2	597.8	
43	597.8	612.4	
44	612.4	626.5	
45	626.5	641.2	
46	641.2	655.7	
47	655.7	669.9	
48	669.9	684.1	
49	684.1	698.6	
50	698.6	713.2	
51	713.2	727.5	
52	727.5	741.7	
53	741.7	756	
54	756	770	
55	770	784.1	
56	784.1	798.6	
57	798.6	812.7	
58	812.7	827.1	
59	827.1	841.3	
60	841.3	855.4	
61	855.4	869.6	
62	869.6	883.9	
63	883.9	898	
64	898	912.5	
65	912.5	926.7	
66	926.7	936	EOH







NR13-072	210.74	211.50	0.76	877750	< 2	6	16	+0.3	7.07	+0.3	36	+1	2	7.83	0.6	44	36	132	7.4	18	2	0.21	3.25	4	1080	+1	1.08	174	0.002	+0.3	+5	0.03	43	143	3	0.2	+5	+10	218	+0.5	9	43	
NR13-072	211.50	212.14	0.64	87751	< 2	9	10	+0.3	7.03	+0.3	67	+1	2	7.88	+0.3	48	238	428	7.84	20	+1	0.31	3.07	4	1160	+1	2.18	181	0.003	+0.3	+5	0.11	42	152	7	0.28	+5	+10	180	+0.5	10	60	
NR13-072	212.14	212.75	0.61	87732	< 2	7	8	+0.3	6.77	+0.3	22	+1	2	8.37	+0.3	41	17	178	6.1	19	2	0.14	3.00	2	1170	+1	1.72	142	0.003	+0.3	+5	0.04	40	158	9	0.21	+5	+10	191	+0.5	9	51	
NR13-072	212.75	213.27	0.52	87753	< 2	8	7	+0.3	6.1	+0.3	22	+1	+2	8.0	+0.3	69	27	983	6.5	19	+1	0.17	3.08	2	1110	+1	0.17	371	0.008	+0.3	+5	0.32	43	146	+2	0.18	+5	+10	130	+0.5	12	81	
NR13-072	213.27	213.85	0.58	87754	< 2	7	17	+0.3	6.81	+0.3	8	+1	+2	7.55	+0.3	64	89	333	8.1	20	2	0.3	3.09	8	1280	+1	1.9	139	0.009	+0.3	+5	0.1	39	108	6	0.1	+5	+10	257	+0.5	13	56	
NR13-072	213.85	214.46	0.61	87755	< 2	13	199	+0.3	5.56	+0.3	111	+1	+2	4.94	+0.3	60	89	88	9.85	17	4	0.46	3.62	22	1000	+1	1.72	94	0.012	5	+5	0.02	18	72	2	0.36	+5	+10	284	+0.5	10	54	
NR13-072	214.46	215.10	0.64	87756	< 2	+5	8	+0.3	7.02	+0.3	290	+1	+2	4.97	+0.3	64	105	180	11.2	18	3	1.3	3.45	39	1290	+1	1.78	197	0.012	5	+5	0.06	24	68	0	0.41	+5	+10	346	+0.5	14	56	
NR13-072	215.10	215.74	0.64	87757	< 2	15	381	+0.3	5.25	+0.3	46	+1	3	6	+0.3	67	380	83	12.1	13	2	0.38	4.53	12	1580	+1	1.29	165	0.008	4	+5	0.16	78	46	+2	0.15	+5	+10	620	+0.5	18	60	
NR13-072	215.74	216.36	0.61	87758	< 2	16	302	07	5.79	+0.3	55	+1	+2	6.12	+0.3	81	218	390	13.3	16	4	0.46	3.79	16	1400	+1	1.28	199	0.017	4	+5	0.43	80	26	+2	0.2	+5	+10	380	+0.5	21	84	
NR13-072	216.36	216.75	0.55	87759	< 2	+5	6	+0.3	7.03	+0.3	87	+1	+2	6.25	+0.3	67	47	25	7.17	16	4	0.56	3.1	16	1400	+1	1.56	148	0.002	11	+5	0.06	32	149	+2	0.19	+5	+10	210	+0.5	14	43	
NR13-072	216.75	217.38	0.67	87760	227	4790	< 2	0.5	8.04	+0.3	10	+2	+2	5.57	+0.3	71	140	1280	6.91	12	2	0.22	4.97	21	942	+1	0.39	227	116	12	0.87	+5	+10	99	2	4	2	4	4				
NR13-072	217.38	217.99	0.61	87761	< 2	+5	+5	+0.3	7.03	+0.3	7	61	+1	+2	6.29	+0.3	47	41	25	7.37	21	3	0.34	3.36	6	1140	+1	1.66	146	0.002	11	+5	0.06	30	149	+2	0.19	+5	+10	210	+0.5	14	43
NR13-072	217.99	218.62	0.61	87762	< 2	15	42	+0.3	7.54	+0.3	78	+1	+2	6.62	+0.3	64	116	91	11.5	20	3	0.44	3.14	9	1280	+1	2.08	127	0.008	6	+5	0.03	50	106	+2	0.34	+5	+10	203	+0.5	14	57	
NR13-072	218.62	219.25	0.63	87763	< 2	10	14	+0.3	7.1	+0.3	46	+1	+2	7.53	+0.3	37	80	240	9.85	19	3	0.31	3.44	6	1360	+1	1.87	157	0.008	+0.3	+5	0.04	40	119	1	0.33	+5	+10	264	+0.5	12	50	
NR13-072	219.25	219.85	0.61	87764	< 2	8	84	+0.3	7.83	+0.3	8	+1	+2	7.83	+0.3	64	136	265	9.73	19	2	0.36	3.59	7	1280	+1	1.86	150	0.004	+0.3	+5	0.04	34	148	6	0.26	+5	+10	244	+0.5	10	54	
NR13-072	219.85	220.46	0.61	87765	< 2	13	199	+0.3	5.56	+0.3	111	+1	+2	4.94	+0.3	60	89	88	9.85	17	4	0.46	3.62	22	1000	+1	1.72	94	0.012	5	+5	0.02	18	72	2	0.36	+5	+10	284	+0.5	10	54	
NR13-072	220.46	221.07	0.64	87766	< 2	+5	8	+0.3	7.02	+0.3	290	+1	+2	4.97	+0.3	64	105	180	11.2	18	3	1.3	3.45	39	1290	+1	1.78	197	0.012	5	+5	0.06	24	68	0	0.41	+5	+10	346	+0.5	14	56	
NR13-072	221.07	221.68	0.61	87767	< 2	15	381	+0.3	5.25	+0.3	46	+1	3	6	+0.3	67	380	83	12.1	13	2	0.38	4.53	12	1580	+1	1.29	165	0.008	4	+5	0.16	78	46	+2	0.15	+5	+10	620	+0.5	18	60	
NR13-072	221.68	222.29	0.61	87768	< 2	16	302	07	5.79	+0.3	55	+1	+2	6.12	+0.3	81	218	390	13.3	16	4	0.46	3.79	16	1400	+1	1.28	199	0.017	4	+5	0.43	80	26	+2	0.2	+5	+10	380	+0.5	21	84	
NR13-072	222.29	222.89	0.63	87769	< 2	+5	6	+0.3	7.03	+0.3	87	+1	+2	6.25	+0.3	67	47	25	7.37	21	3	0.34	3.36	6	1140	+1	1.66	146	0.002	11	+5	0.06	30	149	+2	0.19	+5	+10	210	+0.5	14	43	
NR13-072	222.89	223.49	0.61	87770	< 2	15	42	+0.3	7.54	+0.3	78	+1	+2	6.62	+0.3	64	116	91	11.5	20	3	0.44	3.14	9	1280	+1	2.08	127	0.008	6	+5	0.03	50	106	+2	0.34	+5	+10	203	+0.5	14	57	
NR13-072	223.49	224.10	0.61	87771	< 2	10	14	+0.3	7.1	+0.3	46	+1	+2	7.53	+0.3	37	80	240	9.85	19	3	0.31	3.44	6	1360	+1	1.87	157	0.008	+0.3	+5	0.04	40	119	1	0.33	+5	+10	264	+0.5	12	50	
NR13-072	224.10	224.71	0.61	87772	< 2	8	84	+0.3	7.83	+0.3	8	+1	+2	7.83	+0.3	64	136	265	9.73	19	2	0.36	3.59	7	1280	+1	1.86	150	0.004	+0.3	+5	0.04	34	148	6	0.26	+5	+10	244	+0.5	10	54	
NR13-072	224.71	225.31	0.61	87773	< 2	13	199	+0.3	5.56	+0.3	111	+1	+2	4.94	+0.3	60	89	88	9.85	17	4	0.46	3.62	22	1000	+1	1.72	94	0.012	5	+5	0.02	18	72	2	0.36	+5	+10	284	+0.5	10	54	
NR13-072	225.31	225.92	0.64	87774	< 2	+5	8	+0.3	7.02	+0.3	290	+1	+2	4.97	+0.3	64	105	180	11.2	18	3	1.3	3.45	39	1290	+1	1.78	197	0.012	5	+5	0.06	24	68	0	0.41	+5	+10	346	+0.5	14	56	
NR13-072	225.92	226.52	0.61	87775	< 2	15	381	+0.3	5.25	+0.3	46	+1	3	6	+0.3	67	380	83	12.1	13	2	0.38	4.53	12	1580	+1	1.29	165	0.008	4	+5	0.16	78	46	+2	0.15	+5	+10	620	+0.5	18	60	
NR13-072	226.52	227.13	0.61	87776	< 2	16	302	07	5.79	+0.3	55	+1	+2	6.12	+0.3	81	218	390	13.3	16	4	0.46	3.79	16	1400	+1	1.28	199	0.017	4	+5	0.43	80	26	+2	0.2	+5	+10	380	+0.5	21	84	
NR13-072	227.13	227.74	0.65	87777	< 2	+5	6	+0.3	7.03	+0.3	87	+1	+2	6.25	+0.3	67	47	25	7.37	21	3	0.34	3.36	6	1140	+1	1.66	146	0.002	11	+5	0.06	30	149	+2	0.19	+5	+10	210	+0.5	14	43	
NR13-072	227.74	228.34	0.61	87778	< 2	15	42	+0.3	7.54	+0.3	78	+1	+2	6.62	+0.3	64	116	91	11.5	20	3	0.44	3.14	9	1280	+1	2.08	127	0.008	6	+5	0.03	50	106	+2	0.34	+5	+10	203	+0.5	14	57	
NR13-072	228.34	228.95	0.61	87779	< 2	10	14	+0.3	7.1	+0.3	46	+1	+2	7.53	+0.3	37	80	240	9.85	19	3	0.31	3.44	6	1360	+1	1.87	157	0.008	+0.3	+5	0.04	40	119	1	0.33	+5	+10	264	+0.5	12	50	
NR13-072	228.95	229.55	0.61	87780	< 2	8	84	+0.3	7.83	+0.3	8	+1	+2	7.83	+0.3	64	136	265	9.73	19	2	0.36	3.59	7	1280	+1	1.86	150	0.004	+0.3	+5	0.04	34	148	6	0.26	+5	+10	244	+0.5	10	54	
NR13-072	229.55	230.16	0.61	87781	< 2	13	199	+0.3	5.56	+0.3	111	+1	+2	4.94	+0.3	60	89	88	9.85	17	4	0.46	3.62	22	1000	+1	1.72	94	0.012	5	+5	0.02	18	72	2	0.36	+5	+10	284	+0.5	10	54	
NR13-072	230.16	230.77	0.61	87782	< 2	+5	8	+0.3	7.02	+0.3	290	+1	+2	4.97	+0.3	64	105	180	11.2	18	3	1.3	3.45	39	1290	+1	1.78	197	0.012	5	+5	0.06	24	68	0	0.41	+5	+10	346	+0.5	14	56	
NR13-072	230.77	231.37	0.61	87783	< 2	15	381	+0.3	5.25	+0.3	46	+1	3	6	+0.3	67	380	83	12.1	13	2	0.38	4.53	12	1580	+1	1.29	165	0.008	4	+5	0.16	78	46	+2	0.15	+5	+10	620	+0.5	18	60	
NR13-072	231.37	231.98	0.61	87784	< 2	16	302	07	5.79	+0.3	55	+1	+2	6.12	+0.3	81	218	390	13.3	16	4	0.46	3.79	16	1400	+1	1.28	199	0.017	4	+5	0.43	80	26	+2	0.2	+5	+10	380	+0.5	21	84	
NR13-072	231.98	232.59	0.61	87785	< 2	+5	6	+0.3	7.03	+0.3	87	+1	+2	6.25	+0.3	67	47	25	7.37	21	3	0.34	3.36	6	1140	+1	1.66	146	0.002	11	+5	0.06	30	149	+2	0.19	+5	+10	210	+			

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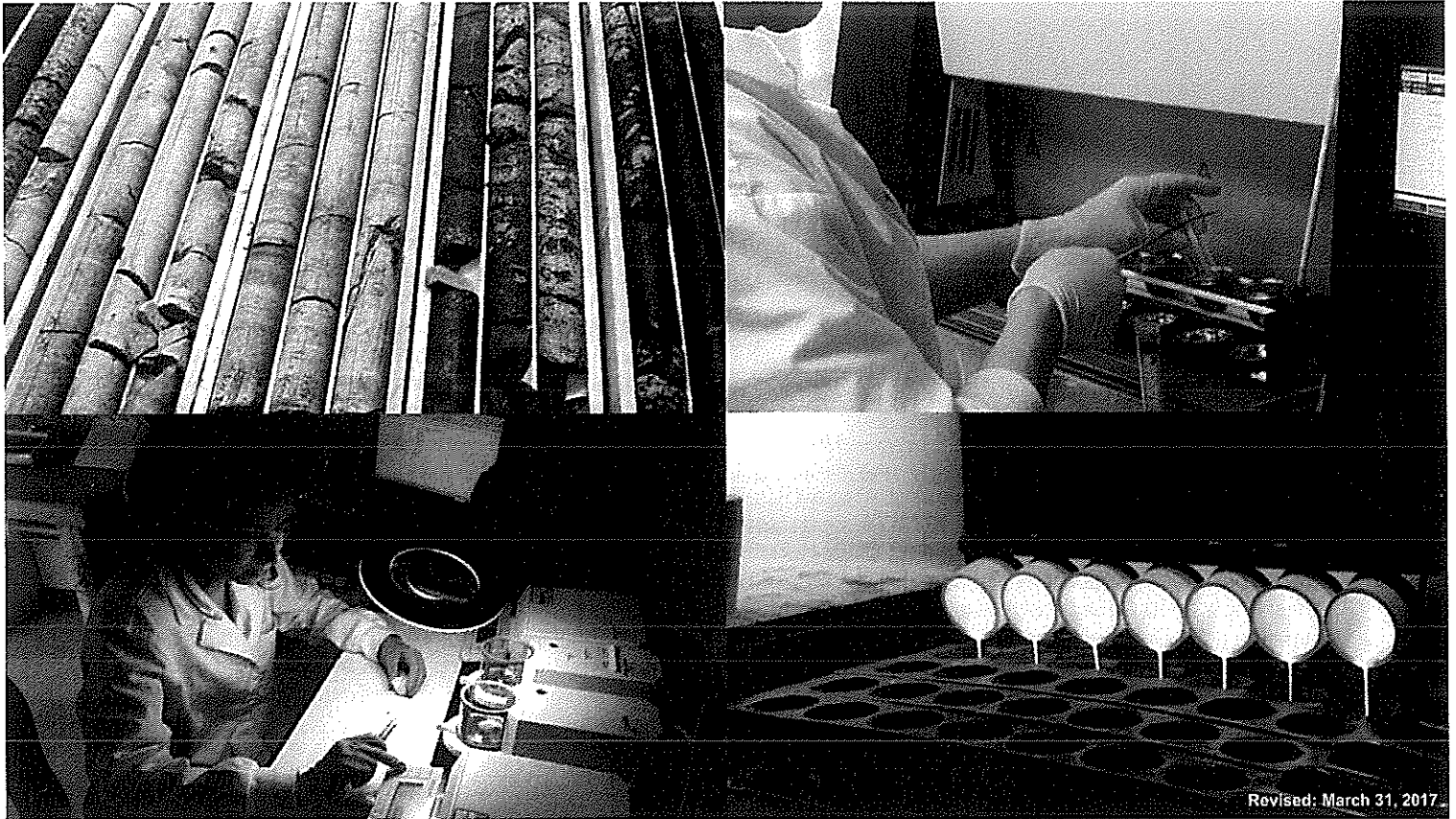
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**Appendix V**  
**Laboratory Procedures**  
**And**  
**Certificates of Analyses**



# 2017 Canadian Schedule of Services



Revised: March 31, 2017



**30** Years of Innovation  
— Since 1987 —



[www.actlabs.com](http://www.actlabs.com)



## Sample Packaging & Shipping Instructions

For convenience and to improve turnaround time, a sample submittal sheet can be filled out on-line and e-mailed. Make sure to include date of shipment, carrier or shipment method and the waybill number so that we can track delayed shipments. Please ensure all samples are identified clearly with sample numbers. This can be accomplished with waterproof ink on the sample bags or with sample tags in the sample bags. Turnaround time will be improved by packaging samples in order, neatly in shipping containers and providing an accurate sample list, with a hard copy with the shipment and an electronic copy sent by e-mail. If using pop top vials or glass bottles, ensure that they are taped shut and protected from breakage. Sealed plastic bags are best for shipping pulps. If using Bus Parcel Express, the bus station of destination is Hamilton, Ontario (for Ancaster, Ontario shipments). For most efficient delivery, we recommend the use of couriers, or transport companies for heavier shipments.

### Samples should be shipped to: (for main Ancaster, Canada lab)

Activation Laboratories Ltd.  
41 Bittern Street  
Ancaster, Ontario  
Canada L9G 4V5  
Tel: 1-888-ACTLABS (1-888-228-5227)  
or 1 (905) 648-9611  
Fax: 1 (905) 648-9613  
E-mail: [samplereception@actlabs.com](mailto:samplereception@actlabs.com)

Instructions for report and invoice distribution should be included with each shipment, or can be sent to our e-mail address [samplereception@actlabs.com](mailto:samplereception@actlabs.com). Complimentary shipping labels are available upon request. Heavy duty plastic sample bags, cloth sample bags, soil envelopes and sample books are available at cost. Filling out a Request for Analysis form will provide all of the information required. *Please visit [www.actlabs.com](http://www.actlabs.com) for a Request for Analysis form.* Sample submissions poorly labelled or packaged, or having incomplete or no submission sheets may not be processed until adequate written instructions are received from the client and may incur additional sorting charges. *All soils and/or vegetation samples from outside Canada being sent to Canada for analysis should be sent to our main lab at 41 Bittern St.*

## Quality Assurance/Quality Control (QA/QC)

Activation Laboratories Ltd. has achieved the ultimate accreditation to international standards, with either ISO 17025 for specific registered tests or certification to ISO 9001:2008. ISO 17025 evaluates the quality system and specific analytical methodologies through proficiency testing and routine audits of the laboratory. In addition, we have achieved accreditation to CAN-P-1579, specific to mineral analysis laboratories. We are one of the few commercial laboratories which have achieved this distinction. Activation Laboratories Ltd. can also advise on methods you can use to ensure security of samples during transport to the laboratory. We have a rigorous chain of custody protocol in place to ensure security of your samples once we receive them. Analytical uncertainty is available on request.

## Turnaround Time

Please enquire regarding turnaround time. Normal turnaround depends on the analytical package, sample volume as well as time of year. Excessively wet samples may slow turnaround time, as will undocumented and unorganized shipments. RUSH Analysis: If you require analyses by a certain date, please ensure that this is clearly noted on the Request for Analysis form. We will make every effort to meet your requirements, however, rush conditions will require payment of a surcharge (i.e., 3 days – 200%, 1 week – 100%, 2 weeks – 50%).

## Return of Data

In an effort to reduce our impact on the environment, all reports and invoices are transmitted electronically in a PDF format and/or as an excel file at the e-mail address that you specified in your Request for Analysis form, sent together with your samples. If required, hard copies of reports and/or invoices are available upon request.

## Weblims

We have implemented an online **Laboratory Information Management System (LIMS)**. Clients can track samples from sample reception and logging through to preparation, analysis and reporting. Please contact [customerservice@actlabs.com](mailto:customerservice@actlabs.com) to establish a WEBLIMS account for your project.

## Sample Preparation Packages

To obtain meaningful analytical results, it is imperative that sample collection and preparation be done properly. Actlabs can advise on sampling protocol for your field program if requested. Once the samples arrive in the laboratory, Actlabs will ensure that they are prepared properly. As a routine practice with rock and core, the entire sample is crushed to a nominal minus 10 mesh (1.7 mm), mechanically split to obtain a representative sample and then pulverized to at least 95% minus 150 mesh (105 microns). All of our steel mills are now mild steel and do not introduce Cr or Ni contamination. Quality of crushing and pulverization is routinely checked as part of our quality assurance program. Samples submitted in an unorganized fashion will be subject to a sorting surcharge and may substantially slow turnaround time. Providing an accurate detailed sample list by e-mail will also aid in improving turnaround time and for Quality Control purposes.

### Rock, Core and Drill Cuttings

Code RX1	Crush (< 7 kg) up to 80% passing 10 mesh, riffle split (250 g) and pulverize (mild steel) to 95% passing 105µ included cleaner sand	\$11.00
Code R1-ORE	Crush up to 90% passing 10 mesh	add \$2.00
Code RX1+500	500 grams pulverized	add \$1.10
Code RX1+800	800 grams pulverized	add \$2.20
Code RX1+1000	1000 grams pulverized	add \$2.50
Code RX1-SD	Crush (< 7 kg) up to 80% passing 10 mesh, rotary split (250 g) and pulverized (mild steel) to 95% passing 105µ	\$10.25
Code RX1-SD-ORE	Crush up to 90% passing 10 mesh	add \$2.00
Code RX3	Oversize charge per kilogram for crushing	\$1.10
Code RX4	Pulverization only (mild steel) (coarse pulp or crushed rock) (< 800 g)	\$7.00
Code RX5	Pulverize ceramic (100 g)	\$17.75
Code RX6	Hand pulverize small samples (agate mortar & pestle) (<5g)	\$17.75
Code RX7	Crush and split (< 5 kg )	\$5.25
Code RX8	Sample prep only surcharge, no analyses	\$4.50
Code RX9	Compositing (per composite) dry weight	\$2.60
Code RX10	Weight (kg) as received	\$2.20
Code RX11	Checking quality of pulps or rejects prepared by other labs and issuing report	\$9.50
Code RX12	Ball Mill preparation	on request
Code RX13	Rod Mill preparation	on request
Code RX14	Core cutting	on request
Code RX15	Special Preparation/Hour	\$65.00
Code RX16 *	Specific Gravity on Core	\$16.25
Code RX16-W	Specific Gravity (WAX) on friable samples	\$21.75
Code RX17	Specific Gravity on the pulp	\$16.25
Code RX17-GP	Specific Gravity on the pulp by gas pycnometer	\$21.75

Note: Larger sample sizes than listed above can be pulverized at additional cost.

### Soils, Stream and Lake Bottom Sediments, and Heavy Minerals

Code S1	Drying (60°C) and sieving (-80 mesh) save all portions	\$4.00
Code S1 DIS	Drying (60°C) and sieving (-80 mesh), discard oversize	\$3.50
Code S1-230	Drying (60°C) and sieving (-230 mesh), save oversize	\$5.50
Code S1-230 DIS	Drying (60°C) and sieving (-230 mesh), discard oversize	\$5.15
Code S2	Lake bottom sediment preparation crush & sieve (-80 mesh)	\$8.50
Code S3	Alternate size fractions and bracket sieving, add	\$2.60
Code S4	Selective Extractions or SGH/OSG drying (40°C) and sieving (-80 mesh)	\$4.50
Code S5	Wet or damp samples submitted in plastic bags, add	\$2.00
Code S6	Separating -2 micron material	\$27.00
Code S7mi	Methylene iodide heavy mineral separation specific gravity can be customized (100 grams)	\$70.25
Code S7w	Sodiumpolytungstate heavy mineral separation specific gravity can be customized (100 grams)	\$70.25
Code S8	Sieve analysis (4 sieve sizes) coarser than 270 mesh	\$38.00
Code S9	Particle size analysis (laser)	\$97.25

Our Sample Preparation pricing is all-inclusive including: sorting, drying, labelling, new reject bags, using cleaner sand between each sample and crushing samples up to 7 kg (for RX1 and RX1-SD).



# Sample Preparation

## Sample Preparation Packages

### Biogeochemical Samples

Code B1	Drying and blending humus	\$5.15
Code B2	Drying and macerating vegetation	\$6.50
Code B3	Dry ashing	\$9.50
Code B4	Washing vegetation	\$4.50
Code B5	Samples submitted in plastic bags, add	\$2.00

### Special Digestion Procedures

Code MDI	Microwave digestion - closed vessel	\$43.75
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## Sample Submission, Storage and Return

When submitting samples, please indicate on the Request for Analysis form if you require sample storage, disposal or if you require samples to be returned after analysis. For returns, please include all necessary shipping information e.g., courier, account number, etc. Return of samples is done at cost + 15%. The reject portion of samples prepared by Actlabs will be retained for a period of not more than 60 days from the date of final report. Pulp and rejects stored at the customer's request will be subject to a storage charge (see sample submittal sheet for charges) billed quarterly. Irradiated material will be discarded after 30 days unless prior arrangements are made. Return of radioactive material requires a Nuclear Safety Commission licence. Cost per shipment of radioactive materials is \$200.00 plus shipping costs. Disposal of soil, sediment or vegetation samples, which have entered Canada under a CFIA permit, will incur a disposal cost for larger sample volumes.

All soil, sediment and vegetation coming from outside Canada require incineration prior to disposal under CFIA regulations. All pulps and rejects will be returned to the client at cost + 15%. Disposal costs are additional. Pulp and rejects will incur a storage fee after the free period listed.

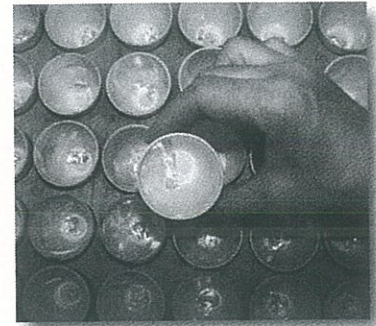
RTRN	Return of all reject portions and/or pulps	At cost + 15%
INCIN	Incineration of soil, sediment and vegetation samples from outside Canada (for samples up to 0.5 kg; samples over 0.5 kg will have higher incineration costs)	\$0.50
H&R	Handling and retrieval of stored sample material	\$57.75/hour
DISP	Disposal of pulps and reject to landfill site	\$0.45
STORE 1	Monthly storage of reject after 60 days	\$0.30
STORE 2	Monthly storage of pulps after 90 days	\$0.15
STORE 3	Monthly storage of sieve rejects after 3 months	\$0.20



## Gold and Silver Analyses

### Gold and Silver Analyses - Geochem

Code	Method	Sample Weight (g)	Metric Range	Price
1A1	Au Fire Assay - INAA	30	1 - 20,000 ppb	\$19.50
1A2 *	Au Fire Assay - AA	30	5 - 5,000 ppb	\$16.25
1A2-50 *	Au Fire Assay - AA	50	5 - 5,000 ppb	\$18.50
1A2-ICP	Au Fire Assay - ICP-OES	30	2 - 30,000 ppb	\$17.25
1A2-ICP-50	Au Fire Assay - ICP-OES	50	2 - 30,000 ppb	\$19.25
1A2-ICPMS	Au Fire Assay - ICP-MS	30	0.5 - 30,000 ppb	\$25.00
1A6	Au BLEG - ICP-MS	1,000	0.1 - 10,000 ppb	\$43.25
1A8	Au Aqua Regia - ICP-MS	30	0.2 - 2,000 ppb	\$17.25
1E-Ag	Ag Aqua Regia - ICP-OES	0.5	0.2 - 100 ppm	\$6.50



### Gold and Silver Analyses - Assay

Code	Method	Sample Weight (g)	Metric Range	Price
1A3-30	Au Fire Assay - Gravimetric	30	0.03 - 10,000 g/mT	\$21.75
1A3-50	Au Fire Assay - Gravimetric	50	0.02 - 10,000 g/mT	\$22.75
1A3-Ag (Au,Ag)	Au, Ag Fire Assay - Gravimetric	30	0.03 - 10,000 g/mT (Au) 3 - 10,000 g/mT (Ag)	\$25.00
1A4 **	Au Fire Assay - Metallic Screen	500	0.03 g/mT	\$75.75
1A4-1000 **	Au Fire Assay - Metallic Screen	1,000	0.03 g/mT	\$86.50
8-Ag	Ag Fire Assay - Gravimetric	30	3 - 10,000 g/mT	\$23.00

When submitting samples for Au and Ag analysis, or Au, Pt Pd and Rh analysis, please try to ensure you send two-times the listed weight.

## Gold, Platinum, Palladium and Rhodium

Code	Method	Sample Weight (g)	Range (ppb)				Price
			Au	Pt	Pd	Rh	
1C-Exploration	Fire Assay - ICP-MS	30	2 - 30,000	1 - 30,000	1 - 30,000	\$21.75	
1C-EXP 2	Fire Assay - ICP-MS	30	1 - 30,000	0.5 - 30,000	0.5 - 30,000	\$23.75	
1C-research	Fire Assay - ICP-MS	30	1 - 30,000	0.1 - 30,000	0.1 - 30,000	\$34.50	
1C-Rhodium	Fire Assay - ICP-MS	30	-	-	-	5 - 10,000	\$32.50
1C-OES	Fire Assay - ICP-OES	30	2 - 30,000	5 - 30,000	5 - 30,000	\$18.50	
8 Au Pt Pd	Fire Assay - ICP-OES	30	0.001 - 1000 g/mT	0.001 - 1000 g/mT	0.001 - 1000 g/mT	\$48.75	

## Platinum Group Elements

Code	Method	Sample Weight (g)	Range (ppb)								Price
			Os	Ir	Ru	Rh	Pt	Pd	Au	Re	
1B1	NiS Fire Assay - INAA	25	2	0.1	5	0.2	5 <sup>+</sup>	2	0.5	5	1-2 samples \$346.00 3+ samples \$173.00
1B2	NiS Fire Assay - ICP-MS	50	-	1	1	1	1	1	1	1	1-2 samples \$346.00 3+ samples \$173.00

### Organic Sample Surcharge - \$1.10/sample for Fire Assay packages

#### Notes:

Use of 50 gram sample for fire assay may not provide optimum recovery.

For proper fire assay fusion, Actlabs may reduce the sample weights to 15 g or smaller at its discretion.

\* Detection limit can be extended to 10,000 ppb if required. Please specify when required.

\*\* A representative 500 gram or 1000 gram (or customized) sample split is sieved at 100 mesh (150 micron), with assays performed on the entire +100 mesh fraction and two splits of the -100 mesh fraction. It is important not to overpulverize the sample too finely, as tests have shown gold will plate out on the mill and be lost. When assays have been completed on the coarse and fine portions of the bulk sample, a final assay is calculated based on the weight of each fraction.

+ Detection limits for Pt are increased with high Au/Pt ratios and limits for other elements will be affected by abnormally high Au, Sb and Cu content.

Samples with high Au can be reanalyzed by Code 1C exploration or research. Zn concentrates are not amenable to the nickel sulphide fire assay. Au results by Code 1B1 or 1B2 can be low by nickel sulphide fire assay. For accurate Au values, please request Code 1C-exploration.



# Trace Element Geochemistry & Digestion Specific Assays

## "Near Total" Digestions

This acid attack is the most vigorous digestion used in geochemistry. It will employ hydrochloric, nitric, perchloric and hydrofluoric acids. Even with this digestion, certain minerals (barite, gahnite, chromite, cassiterite, etc.) may not go into solution. Other minerals including zircon, sphene and magnetite may not be totally dissolved. Most other silicates will be dissolved, however some elements will be erratically volatilized, including As, Sb, Cr, U and Au.

Near-Total digestion **cannot** be used to get accurate determinations of REE, Ta, Nb, As, Sb, Sn, Hg, Cr, Au and U.

*Note: Results from aqua regia or total digestions may be lab dependent or lab operator dependent. Actlabs has automated this aspect of digestion using a microprocessor designed hotbox to accurately reproduce digestion conditions every time.*

**Hg add-on by cold vapour FIMS**  
Code 1G (5 ppb) add \$9.75

### Assays

Package	Code 8 - 4 Acid ICP-OES	Code 8 - 4 Acid ICP-MS
Ag	3 ppm	1 - 10,000 ppm
Bi	-	0.0001 - 1 %
Cd	0.003 %	0.0001 - 1 %
Co	0.003 %	0.0001 - 1 %
Cu	0.001 %	0.0001 - 1 %
Li	0.01 %	-
Mo	0.003 %	0.0001 - 1 %
Ni	0.003 %	0.0001 - 1 %
Pb	0.003 %	0.0001 - 1 %
Se	-	0.0001 - 1 %
Sn	-	0.0001 - 1 %
Tl	-	0.0001 - 1 %
U	-	0.0001 - 1 %
Zn	0.001 %	0.0001 - 1 %
<b>One Element Each</b>	<b>\$2.20</b>	<b>\$2.20</b>
<b>Additional Element All Elements</b>	<b>\$19.50</b>	<b>\$21.75</b>

Package	ICP-OES		ICP-MS		ICP-OES + ICP-MS	
	1F2	UT-4M	Ultratrace 4	Ultratrace 6	ME-MS61	
Ag	0.3 - 100 ppm	0.1 - 100 ppm	0.05 - 100 ppm	0.05 - 100 ppm	0.01 - 100 ppm	
Al *	0.01 - 50 %	0.01 - 20 %	0.01 - 10 %	0.01 - 10 %	0.01 - 50 %	
As *	3 - 5,000 ppm	1 - 10,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	0.2 - 10,000 ppm	
Au *	-	100 - 2,000 ppb	-	-	-	
B *	-	-	1 - 6,000 ppm	-	-	
Ba *	7 - 1,000 ppm	1 - 10,000 ppm	1 - 5,000 ppm	1 - 5,000 ppm	10 - 10,000 ppm	
Be	1 - 10,000 ppm	1 - 1,000 ppm	0.1 - 1,000 ppm	0.1 - 1,000 ppm	0.05 - 1,000 ppm	
Bi	2 - 10,000 ppm	0.1 - 4,000 ppm	0.02 - 2,000 ppm	0.02 - 2,000 ppm	0.01 - 10,000 ppm	
Ca	0.01 - 70 %	0.01 - 40 %	0.01 - 50 %	0.01 - 50 %	0.01 - 50 %	
Cd	0.3 - 2,000 ppm	0.1 - 4,000 ppm	0.1 - 1,000 ppm	0.1 - 1,000 ppm	0.02 - 1,000 ppm	
Ce *	-	1 - 2,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	0.01 - 500 ppm	
Co	1 - 10,000 ppm	0.2 - 4,000 ppm	0.1 - 500 ppm	0.1 - 500 ppm	0.1 - 10,000 ppm	
Cr *	1 - 10,000 ppm	1 - 10,000 ppm	0.5 - 5,000 ppm	0.5 - 5,000 ppm	1 - 10,000 ppm	
Cs	-	0.1 - 10,000 ppm	0.05 - 100 ppm	0.05 - 100 ppm	0.05 - 500 ppm	
Cu	1 - 10,000 ppm	0.1 - 10,000 ppm	0.2 - 10,000 ppm	0.2 - 10,000 ppm	0.2 - 10,000 ppm	
Dy *	-	-	0.1 - 500 ppm	0.1 - 500 ppm	-	
Er *	-	-	0.1 - 1,000 ppm	0.1 - 1,000 ppm	-	
Eu *	-	-	0.05 - 100 ppm	0.05 - 100 ppm	-	
Fe *	0.01 - 50 %	0.01 - 60 %	0.01 - 50 %	0.01 - 50 %	0.01 - 50 %	
Ga	1 - 10,000 ppm	-	0.1 - 500 ppm	0.1 - 500 ppm	0.05 - 10,000 ppm	
Gd *	-	-	0.1 - 5,000 ppm	0.1 - 5,000 ppm	-	
Ge	-	-	0.1 - 500 ppm	0.1 - 500 ppm	0.05 - 500 ppm	
Hf *	-	0.1 - 1,000 ppm	0.1 - 500 ppm	0.1 - 500 ppm	0.1 - 500 ppm	
Hg *	1	-	10 - 10,000 ppb	10 - 10,000 ppb	-	
Ho *	-	-	0.1 - 1,000 ppm	0.1 - 1,000 ppm	-	
In	-	-	0.1 - 100 ppm	0.1 - 100 ppm	0.005 - 500 ppm	
K *	0.01 - 10 %	0.01 - 10 %	0.01 - 5 %	0.01 - 5 %	0.01 - 10 %	
La *	-	0.1 - 2,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	0.5 - 10,000 ppm	
Li	1 - 10,000 ppm	0.1 - 2,000 ppm	0.5 - 400 ppm	0.5 - 400 ppm	0.2 - 10,000 ppm	
Lu *	-	-	0.1 - 100 ppm	0.1 - 100 ppm	-	
Mg	0.01 - 50 %	0.01 - 30 %	0.01 - 50 %	0.01 - 50 %	0.01 - 50 %	
Mn *	1 - 100,000 ppm	1 - 10,000 ppm	1 - 10,000 ppm	1 - 10,000 ppm	5 - 100,000 ppm	
Mo	1 - 10,000 ppm	0.1 - 4,000 ppm	0.05 - 10,000 ppm	0.1 - 10,000 ppm	0.05 - 10,000 ppm	
Na	0.01 - 10 %	0.001 - 10 %	0.01 - 3 %	0.01 - 3 %	0.01 - 10 %	
Nb *	-	0.1 - 2,000 ppm	0.1 - 500 ppm	0.1 - 500 ppm	0.1 - 500 ppm	
Nd *	-	-	0.1 - 10,000 ppm	0.1 - 10,000 ppm	-	
Ni	1 - 10,000 ppm	0.1 - 10,000 ppm	0.5 - 5,000 ppm	0.5 - 5,000 ppm	0.2 - 10,000 ppm	
P	0.001 - 10 %	0.001 - 5 %	-	0.001 - 10 %	10 - 10,000 ppm	
Pb	3 - 5,000 ppm	0.1 - 5,000 ppm	0.5 - 5,000 ppm	0.5 - 5,000 ppm	0.5 - 10,000 ppm	
Pr *	-	-	0.1 - 5,000 ppm	0.1 - 1,000 ppm	- *	
Rb	-	0.1 - 2,000 ppm	0.2 - 500 ppm	0.2 - 5,000 ppm	0.1 - 10,000 ppm	
Re	-	-	0.001 - 100 ppm	0.001 - 100 ppm	0.002 - 50 ppm	
S +	0.01 - 20 %	1 - 10 %	-	0.01 - 20 %	0.01 - 10 %	
Sb *	5 - 10,000 ppm	0.1 - 4,000 ppm	0.1 - 500 ppm	0.1 - 500 ppm	0.05 - 10,000 ppm	
Sc	4 - 10,000 ppm	1 - 200 ppm	-	1 - 5,000 ppm	0.1 - 10,000 ppm	
Se	-	-	0.1 - 1,000 ppm	0.1 - 1,000 ppm	0.1 - 1,000 ppm	
Sm *	-	-	0.1 - 100 ppm	0.1 - 100 ppm	-	
Sn *	-	0.1 - 2,000 ppm	1 - 200 ppm	1 - 200 ppm	0.2 - 500 ppm	
Sr	1 - 10,000 ppm	1 - 10,000 ppm	0.2 - 10,000 ppm	0.2 - 1,000 ppm	0.2 - 10,000 ppm	
Ta *	-	0.1 - 2,000 ppm	0.1 - 1,000 ppm	0.1 - 1,000 ppm	0.05 - 100 ppm	
Tb *	-	-	0.1 - 100 ppm	0.1 - 100 ppm	-	
Te	2 - 10,000 ppm	-	0.1 - 500 ppm	0.1 - 500 ppm	0.05 - 500 ppm	
Th *	-	0.1 - 4,000 ppm	0.1 - 500 ppm	0.1 - 500 ppm	0.2 - 10,000 ppm	
Ti *	0.01 - 10 %	0.001 - 10 %	-	0.0005 - 10 %	0.005 - 10 %	
Tl	5 - 10,000 ppm	0.05 - 10,000 ppm	0.05 - 500 ppm	0.05 - 500 ppm	0.02 - 10,000 ppm	
Tm *	-	-	0.1 - 1,000 ppm	0.1 - 1,000 ppm	-	
U *	10 - 10,000 ppm	0.1 - 4,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	
V	2 - 10,000 ppm	4 - 10,000 ppm	1 - 10,000 ppm	1 - 1,000 ppm	1 - 10,000 ppm	
W *	5 - 10,000 ppm	0.1 - 200 ppm	0.1 - 200 ppm	0.1 - 200 ppm	0.1 - 10,000 ppm	
Y *	1 - 1,000 ppm	0.1 - 2,000 ppm	0.1 - 10,000 ppm	0.1 - 10,000 ppm	0.1 - 500 ppm	
Yb *	-	-	0.1 - 5,000 ppm	0.1 - 5,000 ppm	-	
Zn *	1 - 10,000 ppm	1 - 10,000 ppm	0.2 - 10,000 ppm	0.2 - 10,000 ppm	2 - 10,000 ppm	
Zr *	5 - 10,000 ppm	0.1 - 2,000 ppm	1 - 5,000 ppm	1 - 5,000 ppm	0.5 - 500 ppm	
<b>Price:</b>	<b>\$19.50</b>	<b>\$20.25</b>	<b>\$25.00</b>	<b>\$34.50</b>	<b>\$29.25</b>	

\* Partial extraction only  
+ Sulphide sulphur and soluble sulphates are extracted



**Date Submitted:** 07-Sep-17  
**Invoice No.:** A17-09754  
**Invoice Date:** 02-Oct-17  
**Your Reference:**

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

113 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT      **A17-09754**

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:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and flourishes.

Emmanuel Esemé , Ph.D.  
Quality Control

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

## Results

## Activation Laboratories Ltd.

## Report: A17-09754

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
877662	26	37	6	0.6	7.80	< 3	83	< 1	< 2	6.60	< 0.3	73	38	1870	11.5	18	1	0.56	2.24	18	996	2	1.81
877663	67	647	< 5	0.6	8.56	< 3	117	< 1	< 2	5.77	0.4	151	41	1990	12.1	19	5	0.58	1.86	18	851	13	2.46
877664	36	78	< 5	0.9	8.63	< 3	67	< 1	< 2	6.37	< 0.3	112	37	2790	12.5	21	4	0.46	1.73	15	992	20	2.41
877665	7	6	< 5	< 0.3	8.91	3	68	< 1	< 2	6.81	< 0.3	52	27	453	10.5	20	< 1	0.45	2.54	14	1060	< 1	2.03
877666	< 2	< 5	< 5	< 0.3	7.98	28	123	< 1	< 2	5.08	0.4	51	34	116	11.2	18	5	0.58	3.41	25	1050	< 1	1.47
877667	6	9	< 5	< 0.3	8.67	5	54	< 1	< 2	6.29	0.3	48	32	309	9.09	19	< 1	0.36	2.67	14	945	17	1.89
877668	3	< 5	< 5	< 0.3	8.26	6	75	< 1	< 2	7.01	< 0.3	46	42	198	9.05	18	1	0.44	2.88	11	1120	< 1	1.96
877669	2	7	< 5	< 0.3	8.31	< 3	70	< 1	< 2	6.76	< 0.3	46	39	122	9.08	19	3	0.41	2.65	13	1050	5	2.16
877670	5	29	< 5	0.4	7.03	< 3	65	< 1	< 2	6.56	< 0.3	74	41	723	11.0	19	1	0.38	2.40	13	1120	5	1.98
877671	4	< 5	< 5	0.3	5.22	< 3	48	< 1	< 2	6.74	< 0.3	47	31	236	9.84	18	< 1	0.29	2.61	9	1100	< 1	1.76
877672	13	20	< 5	< 0.3	7.71	11	101	< 1	< 2	6.30	< 0.3	68	42	808	12.5	18	4	0.55	2.24	17	1110	2	1.92
877673	33	40	< 5	0.8	7.63	3	126	< 1	< 2	6.25	< 0.3	134	47	3220	13.3	19	2	0.60	2.26	17	1060	19	2.10
877674	28	17	< 5	0.5	7.76	< 3	123	< 1	< 2	6.41	< 0.3	96	41	1520	14.4	21	3	0.61	2.50	17	1310	8	1.83
877675	7	20	< 5	0.4	7.65	< 3	89	< 1	< 2	6.30	< 0.3	117	29	714	12.9	20	5	0.47	2.18	12	1160	< 1	2.10
877676	< 2	< 5	< 5	< 0.3	7.90	4	56	< 1	< 2	7.30	< 0.3	50	23	146	11.2	20	< 1	0.33	2.69	10	1290	< 1	1.84
877677	33	20	6	0.4	8.16	< 3	92	< 1	< 2	6.63	0.3	90	31	1570	10.6	20	1	0.45	2.51	13	1030	7	2.20
877678	3	< 5	5	< 0.3	7.58	< 3	82	< 1	5	6.69	0.5	60	49	107	12.8	18	< 1	0.47	2.90	12	1310	< 1	1.79
877679	21	133	< 5	0.4	6.94	4	111	< 1	< 2	5.98	0.3	156	48	1100	16.0	19	1	0.57	2.52	15	1450	< 1	1.65
877680	34	116	19	0.6	6.11	< 3	113	< 1	< 2	6.36	0.4	82	59	1800	15.8	17	7	0.60	2.94	16	1540	< 1	1.21
877681	28	90	48	0.4	4.61	< 3	117	< 1	< 2	5.93	0.5	72	78	774	14.1	18	3	0.59	3.05	17	1470	< 1	1.17
877682	30	207	62	0.6	5.56	3	97	< 1	< 2	6.26	< 0.3	88	86	1300	14.9	17	3	0.55	3.13	15	1500	< 1	1.02
877683	11	31	17	0.3	6.43	< 3	66	< 1	< 2	7.55	< 0.3	76	180	628	11.5	17	1	0.40	3.98	10	1300	< 1	1.42
877684	< 2	9	7	< 0.3	7.04	< 3	42	< 1	< 2	7.18	0.5	48	140	118	8.86	17	< 1	0.28	3.74	7	1220	< 1	1.71
877685	< 2	< 5	< 5	< 0.3	0.43	< 3	21	< 1	< 2	0.05	< 0.3	< 1	26	3	0.06	< 1	1	0.19	0.03	< 1	22	< 1	0.02
877686	< 2	8	5	< 0.3	7.61	6	74	< 1	< 2	7.07	1.2	44	144	114	9.17	18	< 1	0.41	3.66	9	1210	< 1	1.87
877687	< 2	8	6	< 0.3	7.55	< 3	55	< 1	< 2	6.91	< 0.3	43	128	101	8.62	18	1	0.31	3.55	8	1170	< 1	1.92
877688	< 2	7	5	< 0.3	7.63	< 3	53	< 1	< 2	7.13	< 0.3	43	138	98	8.82	19	< 1	0.33	3.66	7	1230	< 1	1.86
877689	2	8	6	< 0.3	7.60	< 3	73	< 1	< 2	7.14	0.5	45	138	185	8.99	19	2	0.39	3.74	7	1260	< 1	1.83
877690	21	93	52	0.4	6.28	< 3	125	< 1	< 2	6.48	0.5	78	70	827	15.3	18	1	0.66	3.42	18	1560	< 1	1.28
877691	3	9	9	< 0.3	6.17	< 3	74	< 1	< 2	6.74	< 0.3	46	204	109	8.93	16	< 1	0.37	3.78	8	1320	22	1.67
877692	4	10	8	< 0.3	6.98	< 3	387	< 1	< 2	4.92	< 0.3	53	227	62	11.9	16	1	1.33	4.17	30	1280	< 1	1.13
877693	397	295	< 5	1.0	5.37	< 3	357	< 1	6	5.46	< 0.3	119	58	3010	15.7	21	5	1.07	2.19	26	1930	< 1	0.54
877694	35	34	< 5	0.6	5.62	< 3	304	1	< 2	7.93	0.5	66	115	1140	12.6	17	1	0.76	3.45	25	1420	< 1	1.14
877695	3	10	8	< 0.3	7.38	< 3	425	< 1	< 2	5.94	< 0.3	64	202	95	12.5	17	4	1.37	4.51	27	1350	< 1	1.57
877696	3	34	90	< 0.3	6.38	5	126	< 1	< 2	6.40	< 0.3	63	41	139	13.5	15	7	0.62	3.53	14	1600	< 1	1.44
877697	44	357	39	0.5	5.59	7	93	< 1	3	7.29	< 0.3	78	78	1660	16.1	17	7	0.55	3.24	13	1740	< 1	0.88
877698	12	26	69	0.5	6.71	< 3	225	< 1	< 2	6.44	0.4	64	65	1520	13.7	17	5	0.76	3.63	21	1430	< 1	1.40
877699	107	384	67	1.8	6.25	7	145	< 1	< 2	7.51	0.6	98	70	7540	15.3	19	< 1	0.71	3.38	16	1510	5	0.97
877700	112	827	< 5	0.7	5.81	186	71	< 1	< 2	9.97	0.7	178	121	2590	13.2	16	3	0.47	3.42	16	1640	113	0.77
877701	21	< 5	< 5	< 0.3	6.23	< 3	15	< 1	12	5.98	0.3	52	115	659	13.2	18	4	0.22	3.13	17	1520	2	0.79
877702	2	< 5	< 5	< 0.3	5.79	< 3	31	< 1	< 2	4.82	< 0.3	35	23	299	13.4	21	2	0.26	1.90	18	1430	< 1	0.63
877703	54	16	27	0.7	6.54	< 3	37	< 1	< 2	5.21	< 0.3	74	35	2630	17.3	20	4	0.33	2.64	16	1710	5	0.67



## Results

## Activation Laboratories Ltd.

## Report: A17-09754

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
877704	46	9	65	0.4	7.10	47	61	< 1	< 2	6.41	< 0.3	108	34	1840	18.1	22	6	0.44	2.57	16	2190	49	0.72
877705	42	21	130	0.4	5.51	< 3	98	< 1	< 2	6.93	0.3	167	41	1370	18.7	18	5	0.76	2.56	14	1400	< 1	0.71
877706	7	15	60	< 0.3	8.37	< 3	203	< 1	< 2	5.48	0.3	54	132	62	13.5	16	4	0.95	2.89	27	1480	4	1.41
877707	38	48	54	1.3	8.30	4	151	< 1	< 2	5.88	0.5	113	67	5010	12.7	19	4	0.83	2.06	19	1100	4	2.13
877708	< 2	< 5	67	< 0.3	8.74	4	156	< 1	< 2	5.81	< 0.3	50	137	46	11.5	17	7	0.86	2.80	19	1210	< 1	1.92
877709	< 2	< 5	72	< 0.3	7.94	8	228	< 1	< 2	4.96	< 0.3	54	151	76	12.2	16	7	1.08	2.80	23	1270	< 1	1.69
877710	281	5100	413	0.5	7.15	< 3	46	< 1	< 2	5.56	0.7	77	259	1300	5.94	10	2	0.22	7.01	20	918	< 1	1.07
877711	86	14	80	1.1	6.80	6	269	< 1	< 2	5.18	0.5	74	119	3980	14.5	17	3	1.16	2.56	27	1300	2	1.03
877712	11	20	80	< 0.3	5.29	4	84	< 1	< 2	5.85	< 0.3	75	172	331	16.0	15	7	0.61	4.18	15	1590	< 1	0.73
877713	19	9	51	< 0.3	5.62	5	73	< 1	< 2	5.57	< 0.3	88	72	1340	16.5	17	7	0.57	3.25	15	1340	47	0.79
877714	37	207	84	0.3	5.66	< 3	160	< 1	< 2	5.18	< 0.3	106	87	884	17.6	18	9	1.25	4.05	25	1400	188	0.73
877715	12	40	153	< 0.3	4.03	< 3	200	< 1	< 2	5.06	0.4	79	548	548	16.0	11	2	1.64	5.98	26	1710	< 1	0.45
877716	6	86	152	< 0.3	2.98	< 3	93	< 1	< 2	3.84	0.6	81	973	8	16.8	7	5	0.71	8.80	10	2490	< 1	0.21
877717	6	76	240	< 0.3	2.10	7	12	< 1	< 2	4.05	< 0.3	78	1280	37	15.1	7	5	0.13	9.09	3	2230	< 1	0.17
877718	2	48	95	< 0.3	2.13	< 3	< 7	< 1	< 2	4.16	0.4	80	1260	48	14.7	7	< 1	0.08	9.47	2	1950	< 1	0.18
877719	4	58	91	0.3	1.21	< 3	< 7	< 1	< 2	3.87	< 0.3	66	1320	7	14.1	5	< 1	0.04	8.45	1	1830	< 1	0.14
877720	11	83	98	< 0.3	1.91	< 3	26	< 1	< 2	5.32	0.4	74	1730	174	13.4	6	< 1	0.23	8.56	5	1520	< 1	0.19
877721	18	60	75	0.3	1.44	< 3	7	< 1	< 2	6.54	0.4	68	1550	648	13.2	5	< 1	0.08	7.96	3	2060	< 1	0.23
877722	71	47	159	0.7	3.71	< 3	38	< 1	< 2	7.38	0.7	80	724	1630	14.4	13	8	0.33	4.88	14	1880	4	0.61
877723	7	23	14	0.5	6.75	6	110	< 1	3	5.97	< 0.3	116	82	1130	16.1	25	8	0.73	2.40	21	2290	< 1	1.32
877724	219	10	25	2.1	6.34	< 3	59	< 1	< 2	6.50	0.5	141	91	5900	18.2	23	< 1	0.51	2.77	15	2710	11	1.10
877725	17	122	56	0.4	1.74	< 3	16	< 1	< 2	4.10	0.4	85	1210	31	15.9	7	3	0.16	8.74	3	2870	< 1	0.19
877726	< 2	18	50	< 0.3	1.84	< 3	< 7	< 1	< 2	4.19	< 0.3	89	1160	50	16.5	7	< 1	0.04	9.81	1	2450	< 1	0.10
877727	2	94	43	< 0.3	1.98	< 3	< 7	< 1	< 2	3.72	1.0	119	1400	241	17.2	8	4	0.02	10.1	< 1	2360	< 1	0.06
877728	3	89	38	< 0.3	2.11	< 3	< 7	< 1	< 2	3.58	1.2	107	1410	198	17.5	9	6	0.03	9.32	< 1	2240	< 1	0.09
877729	6	83	220	< 0.3	2.40	< 3	< 7	< 1	< 2	3.23	0.8	105	1690	219	15.7	9	5	0.02	9.79	1	1890	< 1	0.05
877730	13	126	39	< 0.3	2.29	< 3	< 7	< 1	< 2	3.19	0.6	106	2020	368	16.8	9	6	0.03	9.93	< 1	2030	< 1	0.09
877731	4	69	91	< 0.3	2.03	3	< 7	< 1	< 2	3.50	0.3	89	1920	271	15.5	8	2	0.03	10.0	1	2010	< 1	0.10
877732	6	114	25	< 0.3	1.95	< 3	< 7	< 1	< 2	3.31	0.4	134	1860	693	18.0	9	1	0.01	10.2	< 1	1890	< 1	0.05
877733	94	260	519	1.0	2.04	3	< 7	< 1	< 2	3.17	< 0.3	168	1440	3640	16.4	10	3	0.01	10.1	< 1	1940	< 1	0.04
877734	12	204	51	< 0.3	2.50	< 3	< 7	< 1	< 2	4.02	0.3	100	1170	721	14.9	9	1	0.06	9.70	2	2090	< 1	0.17
877735	< 2	< 5	< 5	< 0.3	0.43	< 3	21	< 1	< 2	0.04	< 0.3	< 1	13	8	0.06	< 1	< 1	0.20	0.03	< 1	25	< 1	0.02
877736	5	79	87	< 0.3	2.33	< 3	< 7	< 1	< 2	2.93	0.9	106	1090	494	16.0	9	9	0.03	9.56	1	2410	< 1	0.12
877737	8	89	36	< 0.3	2.74	< 3	16	< 1	< 2	3.92	0.6	85	975	277	14.4	11	< 1	0.16	8.99	12	2340	< 1	0.17
877738	11	< 5	20	0.4	8.38	< 3	143	< 1	< 2	4.85	< 0.3	57	121	623	13.3	19	7	0.77	2.54	29	1640	1	2.15
877739	67	43	13	1.1	8.54	< 3	209	< 1	< 2	3.46	0.5	129	73	4480	14.8	21	3	0.99	2.55	35	1610	< 1	2.03
877740	76	13	98	0.8	8.27	3	212	< 1	< 2	3.61	0.7	119	62	2730	16.4	20	5	1.18	2.43	37	1990	3	1.71
877741	95	38	50	1.5	7.61	6	172	< 1	< 2	4.81	< 0.3	127	87	6390	15.5	19	6	0.82	2.63	32	1280	14	1.85
877742	84	96	17	0.9	6.55	4	125	< 1	3	4.78	0.5	210	99	4500	16.5	18	4	0.73	2.73	27	1330	1	1.53
877743	37	7	23	0.5	6.58	5	91	< 1	< 2	6.28	1.0	173	100	2030	17.6	21	2	0.61	2.66	17	1510	49	1.38
877744	16	18	25	0.5	7.93	< 3	175	< 1	< 2	5.06	< 0.3	103	101	1700	12.8	18	7	0.89	2.54	25	1440	82	2.28
877745	271	173	55	5.6	6.74	< 3	116	< 1	< 2	5.53	1.0	95	102	> 10000	13.6	18	3	0.59	2.84	15	1300	25	1.66

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
877746	23	< 5	43	< 0.3	7.86	< 3	172	< 1	< 2	5.83	0.4	63	110	926	12.4	20	5	0.79	2.98	19	1380	22	2.16
877747	39	< 5	17	0.4	7.41	< 3	79	< 1	< 2	6.59	0.5	62	50	1550	10.9	21	< 1	0.46	3.14	9	1270	17	2.07
877748	26	9	38	< 0.3	6.69	< 3	245	< 1	< 2	3.35	< 0.3	87	106	828	9.89	18	< 1	1.06	2.32	24	1050	2	2.77
877749	19	< 5	14	< 0.3	7.61	< 3	161	< 1	< 2	4.70	< 0.3	52	77	776	9.81	19	3	0.85	2.44	17	1100	2	2.78
877750	< 2	6	16	< 0.3	7.07	< 3	36	< 1	2	7.83	0.6	44	36	132	7.40	18	2	0.21	3.25	4	1080	< 1	1.98
877751	6	29	7	< 0.3	7.03	< 3	57	< 1	< 2	7.86	< 0.3	48	23	428	7.84	20	< 1	0.31	3.07	4	1150	< 1	2.15
877752	3	7	8	< 0.3	6.77	< 3	22	< 1	< 2	9.37	< 0.3	41	17	178	6.10	19	2	0.14	3.09	3	1170	< 1	1.72
877753	7	6	7	< 0.3	6.70	< 3	22	< 1	< 2	8.96	< 0.3	69	27	663	6.94	17	< 1	0.17	3.26	2	1110	< 1	1.67
877774	417	150	51	3.0	5.54	< 3	54	< 1	< 2	9.28	1.5	91	73	9040	11.1	17	< 1	0.44	3.13	10	1090	22	1.45
877775	6	5	153	< 0.3	6.24	< 3	65	< 1	< 2	7.10	< 0.3	52	86	457	10.5	18	2	0.44	3.61	9	1100	< 1	1.88
877776	3	7	5	< 0.3	6.89	< 3	64	< 1	< 2	8.45	0.4	44	82	469	8.14	17	< 1	0.38	3.74	6	1060	< 1	1.75
877777	5	7	7	< 0.3	6.81	< 3	174	< 1	< 2	7.00	< 0.3	47	82	157	9.07	16	< 1	0.63	3.85	16	1120	< 1	1.98
877778	21	15	18	0.6	4.50	4	40	< 1	< 2	5.84	< 0.3	105	284	2390	12.6	14	2	0.35	3.76	14	1310	< 1	1.61
877779	20	15	148	0.5	3.17	< 3	28	< 1	< 2	6.82	< 0.3	159	294	1540	12.9	10	2	0.23	5.39	7	1450	< 1	0.85
877780	3	9	9	< 0.3	6.74	< 3	64	< 1	2	6.58	< 0.3	56	169	201	10.0	17	< 1	0.44	3.98	15	1240	< 1	1.81
877781	< 2	7	8	< 0.3	7.05	< 3	47	< 1	< 2	7.07	< 0.3	53	143	72	9.98	17	< 1	0.34	4.36	15	1380	< 1	1.88
877782	< 2	< 5	6	< 0.3	7.03	< 3	38	< 1	3	6.25	< 0.3	47	44	2	10.1	18	< 1	0.29	3.76	12	1290	< 1	2.48
877783	21	61	29	0.9	6.88	7	48	< 1	< 2	6.63	1.0	64	63	2630	12.5	20	4	0.38	2.99	11	1120	6	2.07
877784	< 2	5	8	< 0.3	6.87	< 3	30	< 1	< 2	7.65	< 0.3	44	79	6	9.40	18	< 1	0.24	3.76	6	1090	< 1	2.15
877785	< 2	< 5	< 5	< 0.3	0.43	< 3	21	< 1	< 2	0.05	< 0.3	< 1	13	5	0.06	< 1	< 1	0.19	0.03	< 1	103	2	0.02
877786	< 2	< 5	< 5	< 0.3	7.21	4	36	< 1	< 2	7.83	< 0.3	47	91	65	10.3	19	< 1	0.27	3.75	6	1140	< 1	2.10
877787	129	17	16	0.9	5.08	< 3	33	< 1	< 2	6.21	< 0.3	64	85	2630	10.5	20	2	0.29	2.17	10	1000	< 1	2.51
877788	28	20	17	< 0.3	7.90	< 3	49	< 1	< 2	5.01	< 0.3	55	90	856	9.46	15	< 1	0.36	2.46	12	1010	< 1	3.23
877789	49	140	49	0.9	7.91	< 3	53	< 1	< 2	5.40	0.4	74	93	3090	10.9	17	2	0.41	2.39	15	1020	< 1	3.00
877790	92	144	26	0.5	7.21	< 3	57	< 1	< 2	6.21	< 0.3	67	114	1750	11.1	19	3	0.40	3.18	13	1120	< 1	2.40
877791	32	147	44	0.6	7.18	< 3	65	< 1	< 2	6.04	0.3	69	91	1870	12.0	19	< 1	0.45	3.03	19	1240	< 1	2.46
877792	60	89	49	0.7	7.06	< 3	61	< 1	< 2	5.97	< 0.3	78	89	2480	12.8	15	< 1	0.44	2.86	15	1290	< 1	2.26
877793	2	28	137	< 0.3	7.36	< 3	73	< 1	< 2	6.76	< 0.3	54	123	127	11.1	19	1	0.44	3.84	15	1130	< 1	2.08
877794	9	81	68	< 0.3	7.11	< 3	68	< 1	< 2	7.17	< 0.3	56	122	534	10.0	17	1	0.39	4.36	14	1100	< 1	1.82

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
877662	183	0.039	< 3	< 5	0.33	15	121	9	0.34	< 5	< 10	213	< 5	13	53	32
877663	506	0.017	< 3	< 5	1.48	9	139	8	0.16	< 5	< 10	184	< 5	12	50	29
877664	353	0.027	< 3	< 5	1.05	10	124	10	0.26	< 5	< 10	164	< 5	11	55	26
877665	93	0.010	< 3	< 5	0.08	27	130	3	0.22	< 5	< 10	208	< 5	11	45	16
877666	90	0.008	< 3	< 5	0.04	33	77	9	0.24	< 5	< 10	337	< 5	9	58	25
877667	87	0.014	< 3	< 5	0.09	29	104	13	0.34	< 5	< 10	215	< 5	10	45	48
877668	76	0.019	< 3	< 5	0.04	34	143	13	0.52	< 5	< 10	388	< 5	12	43	30
877669	81	0.014	< 3	< 5	0.05	30	138	5	0.52	< 5	< 10	349	< 5	10	46	27
877670	193	0.032	< 3	< 5	0.45	21	122	9	0.67	< 5	< 10	335	< 5	13	50	28
877671	83	0.013	< 3	< 5	0.05	20	112	< 2	0.65	< 5	< 10	509	< 5	9	45	22
877672	163	0.012	< 3	< 5	0.25	11	101	16	0.44	< 5	< 10	203	< 5	18	50	25
877673	424	0.049	4	< 5	1.27	10	114	5	0.29	< 5	< 10	287	< 5	23	61	23
877674	265	0.039	< 3	< 5	0.55	8	90	11	0.49	< 5	< 10	254	< 5	25	60	21
877675	375	0.011	< 3	< 5	0.95	17	117	9	0.32	< 5	< 10	139	< 5	15	47	20
877676	72	0.008	< 3	< 5	0.04	39	143	12	0.22	< 5	< 10	156	< 5	15	46	24
877677	233	0.028	5	< 5	0.65	27	144	13	0.43	< 5	< 10	239	< 5	13	50	32
877678	103	0.012	7	< 5	0.02	31	105	< 2	0.19	< 5	< 10	206	< 5	17	50	28
877679	546	0.011	< 3	5	1.36	12	84	13	0.35	< 5	< 10	116	< 5	24	55	8
877680	198	0.015	8	< 5	0.30	16	37	11	0.34	< 5	< 10	230	< 5	27	67	21
877681	185	0.007	4	< 5	0.17	10	40	14	0.53	< 5	< 10	430	< 5	24	62	37
877682	246	0.016	9	< 5	0.46	19	30	4	0.45	< 5	< 10	358	< 5	30	63	33
877683	211	0.208	< 3	< 5	0.33	32	79	12	0.44	< 5	< 10	288	< 5	17	59	13
877684	96	0.019	< 3	< 5	0.10	34	113	< 2	0.18	< 5	< 10	132	< 5	16	51	19
877685	2	0.002	< 3	< 5	< 0.01	< 4	6	< 2	0.03	< 5	< 10	3	< 5	4	2	6
877686	96	0.030	< 3	< 5	0.11	33	126	13	0.55	< 5	< 10	273	< 5	21	54	69
877687	93	0.025	< 3	< 5	0.09	32	127	5	0.42	< 5	< 10	218	< 5	21	58	65
877688	96	0.023	< 3	< 5	0.09	32	133	< 2	0.36	< 5	< 10	198	< 5	20	59	57
877689	100	0.023	4	< 5	0.11	32	148	12	0.31	< 5	< 10	197	< 5	20	59	51
877690	199	0.007	7	< 5	0.19	16	44	14	0.52	< 5	< 10	443	< 5	38	67	38
877691	110	0.019	< 3	< 5	0.06	24	155	< 2	0.57	< 5	< 10	288	< 5	11	57	40
877692	109	0.014	< 3	< 5	0.02	37	103	4	0.34	< 5	< 10	283	< 5	12	70	31
877693	331	0.194	7	< 5	1.19	34	27	< 2	0.45	< 5	< 10	45	< 5	52	58	75
877694	102	0.113	< 3	< 5	0.47	30	210	9	0.34	< 5	< 10	158	< 5	28	58	40
877695	124	0.027	5	< 5	0.02	40	222	< 2	0.46	< 5	< 10	293	< 5	13	66	29
877696	120	< 0.001	< 3	< 5	0.02	49	149	< 2	0.32	< 5	< 10	116	< 5	14	56	39
877697	159	0.322	4	< 5	0.28	24	31	12	0.27	< 5	< 10	186	< 5	30	63	13
877698	122	0.058	3	< 5	0.15	41	196	9	0.43	< 5	< 10	159	< 5	24	60	46
877699	270	0.460	16	< 5	0.87	25	55	7	0.45	< 5	< 10	265	< 5	29	89	24
877700	247	0.172	6	< 5	0.52	25	54	12	0.38	< 5	< 10	168	< 5	26	55	33
877701	123	0.115	< 3	< 5	0.17	32	41	14	0.23	< 5	< 10	86	< 5	33	50	34
877702	17	0.236	3	< 5	0.08	35	25	7	0.16	< 5	< 10	12	< 5	56	38	16
877703	173	0.049	10	< 5	0.58	15	15	7	0.39	< 5	< 10	128	< 5	26	50	39

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
877704	169	0.128	7	6	0.44	11	24	6	0.41	< 5	< 10	124	< 5	17	52	23
877705	439	0.116	6	< 5	1.91	11	15	11	0.27	< 5	< 10	125	< 5	20	49	14
877706	114	0.007	< 3	< 5	0.02	69	81	6	0.22	< 5	< 10	218	< 5	16	46	15
877707	280	0.117	< 3	< 5	1.41	31	135	< 2	0.19	< 5	< 10	122	< 5	11	64	13
877708	95	0.002	< 3	< 5	0.02	74	125	3	0.36	< 5	< 10	166	< 5	9	47	22
877709	101	0.001	< 3	< 5	0.04	105	105	2	0.33	< 5	< 10	210	< 5	11	51	11
877710	1500	0.004	10	< 5	0.38	24	119	< 2	0.07	< 5	< 10	97	< 5	2	43	9
877711	148	0.015	< 3	< 5	0.56	49	44	14	0.54	< 5	< 10	182	< 5	16	64	13
877712	144	< 0.001	7	< 5	0.17	93	8	14	0.29	< 5	< 10	249	< 5	19	60	17
877713	202	0.002	5	< 5	0.91	28	9	7	0.14	< 5	< 10	166	< 5	19	52	10
877714	206	0.001	6	< 5	0.56	32	9	9	0.19	< 5	< 10	179	< 5	20	54	11
877715	262	0.002	3	< 5	0.09	104	8	3	0.42	< 5	< 10	307	< 5	17	57	15
877716	300	0.001	6	< 5	0.02	106	6	5	0.29	< 5	< 10	407	< 5	15	66	22
877717	364	< 0.001	5	< 5	0.06	101	5	4	0.35	< 5	< 10	372	< 5	13	62	50
877718	450	0.002	4	< 5	0.10	92	6	4	0.37	< 5	< 10	369	< 5	14	56	24
877719	351	0.001	6	< 5	0.02	75	7	20	0.91	< 5	< 10	373	< 5	12	52	26
877720	396	0.003	< 3	< 5	0.14	74	7	12	0.35	< 5	< 10	434	< 5	16	51	30
877721	276	< 0.001	4	< 5	0.23	113	7	11	0.41	< 5	< 10	502	< 5	19	61	24
877722	184	0.010	< 3	< 5	0.26	112	19	17	0.46	< 5	< 10	445	< 5	25	97	47
877723	260	0.232	8	< 5	0.75	45	72	15	0.38	< 5	< 10	35	< 5	66	58	81
877724	278	0.262	7	< 5	1.32	46	54	5	0.42	< 5	< 10	71	< 5	65	67	175
877725	344	0.002	7	< 5	0.04	75	8	4	0.39	< 5	< 10	431	< 5	15	67	29
877726	558	0.002	7	< 5	0.07	73	14	9	0.45	< 5	< 10	418	< 5	13	64	26
877727	1160	0.007	11	< 5	0.33	57	15	11	0.54	< 5	< 10	359	< 5	10	71	22
877728	839	< 0.001	12	< 5	0.18	79	8	18	0.21	< 5	< 10	112	< 5	13	73	6
877729	869	0.009	4	< 5	0.23	30	12	13	0.47	< 5	< 10	262	< 5	8	70	22
877730	943	0.005	8	< 5	0.35	40	8	< 2	0.60	< 5	< 10	340	< 5	14	76	26
877731	742	0.002	6	< 5	0.28	48	7	19	0.58	< 5	< 10	374	< 5	12	74	25
877732	1400	0.002	13	< 5	0.64	42	13	5	0.39	< 5	< 10	353	< 5	8	77	18
877733	1790	0.005	11	< 5	1.14	33	10	8	0.32	< 5	< 10	247	< 5	7	101	15
877734	849	0.002	9	< 5	0.38	49	6	6	0.48	< 5	< 10	289	< 5	13	93	19
877735	2	0.002	< 3	< 5	0.01	< 4	5	< 2	0.03	< 5	< 10	3	< 5	4	14	6
877736	911	0.001	9	< 5	0.42	58	6	10	0.50	< 5	< 10	310	< 5	9	89	17
877737	682	0.003	4	< 5	0.23	41	5	11	0.54	< 5	< 10	295	< 5	15	87	23
877738	116	0.008	6	< 5	0.24	30	146	4	0.15	< 5	< 10	235	< 5	14	65	41
877739	381	0.008	12	< 5	1.50	14	133	< 2	0.08	< 5	< 10	156	< 5	18	87	36
877740	440	0.017	10	< 5	1.40	14	91	3	0.16	< 5	< 10	188	< 5	16	73	29
877741	553	0.050	17	< 5	2.11	22	84	8	0.11	< 5	< 10	258	< 5	26	73	30
877742	1040	0.007	8	< 5	3.43	30	73	13	0.10	< 5	< 10	271	< 5	21	72	60
877743	764	0.152	6	< 5	2.28	38	35	12	0.12	< 5	< 10	254	< 5	25	74	31
877744	235	0.003	< 3	< 5	0.96	31	108	4	0.14	< 5	< 10	216	< 5	14	66	41
877745	342	0.029	4	< 5	3.08	38	84	6	0.17	< 5	< 10	235	< 5	16	101	23

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
877746	112	0.006	4	6	0.23	38	97	3	0.32	< 5	< 10	289	< 5	12	62	13
877747	202	0.007	< 3	< 5	0.27	43	109	11	0.40	< 5	< 10	250	< 5	12	65	11
877748	288	0.006	< 3	< 5	0.92	17	124	6	0.37	< 5	< 10	266	< 5	9	54	19
877749	99	0.002	< 3	5	0.20	20	115	9	0.20	< 5	< 10	198	< 5	8	54	10
877750	174	0.002	< 3	< 5	0.03	43	143	3	0.20	< 5	< 10	218	< 5	9	43	9
877751	181	0.003	< 3	< 5	0.11	42	152	7	0.28	< 5	< 10	160	< 5	10	55	< 5
877752	142	0.003	< 3	< 5	0.04	40	158	9	0.21	< 5	< 10	191	< 5	9	51	7
877753	371	0.008	< 3	< 5	0.32	43	146	< 2	0.18	< 5	< 10	124	< 5	12	61	< 5
877774	240	1.04	12	< 5	1.12	26	86	3	0.10	< 5	< 10	306	21	28	106	< 5
877775	115	0.028	< 3	< 5	0.08	43	95	4	0.37	< 5	< 10	247	< 5	22	56	26
877776	120	0.003	< 3	< 5	0.10	40	178	4	0.33	< 5	< 10	186	< 5	13	56	7
877777	118	0.003	< 3	< 5	0.03	39	128	7	0.52	< 5	< 10	226	< 5	10	48	11
877778	238	0.051	< 3	< 5	0.66	68	69	11	0.53	< 5	< 10	231	< 5	11	54	10
877779	364	0.010	6	< 5	1.16	77	37	15	0.22	< 5	< 10	353	< 5	11	69	22
877780	121	0.008	< 3	< 5	0.06	36	92	11	0.23	< 5	< 10	238	< 5	11	53	15
877781	107	0.008	< 3	< 5	0.05	36	111	7	0.28	8	< 10	215	< 5	10	50	13
877782	61	0.004	< 3	< 5	< 0.01	39	122	7	0.24	< 5	< 10	160	< 5	11	44	13
877783	132	0.012	< 3	< 5	0.35	32	127	9	0.62	< 5	< 10	268	< 5	14	48	16
877784	66	0.004	< 3	< 5	< 0.01	41	132	< 2	0.30	< 5	< 10	182	< 5	10	38	10
877785	3	0.002	< 3	< 5	0.01	< 4	5	< 2	0.03	< 5	< 10	5	< 5	4	1	14
877786	70	0.005	< 3	< 5	0.01	42	136	7	0.49	< 5	< 10	242	< 5	11	40	11
877787	143	0.007	6	< 5	0.38	15	178	12	0.83	< 5	< 10	178	< 5	7	46	9
877788	99	0.017	3	< 5	0.13	26	146	6	0.19	< 5	< 10	66	< 5	10	43	5
877789	183	0.104	< 3	< 5	0.54	33	133	14	0.32	< 5	< 10	78	< 5	15	53	7
877790	139	0.015	6	< 5	0.24	37	124	< 2	0.22	< 5	< 10	105	< 5	13	46	7
877791	185	0.032	< 3	< 5	0.30	32	111	< 2	0.31	< 5	< 10	217	< 5	37	48	16
877792	204	0.028	< 3	< 5	0.46	28	116	< 2	0.29	< 5	< 10	109	< 5	31	55	8
877793	110	0.004	< 3	< 5	0.02	39	113	11	0.40	< 5	< 10	178	< 5	14	47	18
877794	191	0.010	4	< 5	0.09	35	105	12	0.55	< 5	< 10	257	< 5	12	46	11

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
GXR-1 Meas				31.6	2.03	451	646	1	1390	0.89	3.2	5	14	1170	23.3	12	5	0.06	0.20	8	902	13	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				32.0	2.23	442	647	1	1390	0.90	3.3	4	17	1170	23.5	14	10	0.06	0.20	8	913	16	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.4	6.33	97	117	2	9	1.05	0.5	16	39	6390	2.98	18	< 1	3.52	1.68	11	169	315	0.53
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					7.98	4	630	3		1.08		19	43	29	4.76	22	< 1	2.09	1.00	34	851		1.57
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					7.45	5	578	3		1.04		18	56	29	4.49	21	< 1	1.86	0.96	33	872		1.50
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
GXR-6 Meas				0.5	12.8	256	> 1000	1	< 2	0.17	0.5	14	59	72	5.90	32	2	1.96	0.64	35	1070	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
GXR-6 Meas				0.4	12.6	211	> 1000	1	< 2	0.17	0.3	15	46	73	5.59	32	2	1.85	0.60	32	991	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												662		8800	30.2								
OREAS 14P Cert												750		9970	37.2								
OREAS 14P Meas												677		9250	31.4								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						< 3						150	200	324	9.67								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
DNC-1a Meas							97					56	167	104		14				5			
DNC-1a Cert							118					57	270	100		15				5.2			
DNC-1a Meas							93					53	206	94		14				4			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	5020	6190	5000																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4940	6190	4900																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4990	6190	5010																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	5010	6170	4860																				
PK2 Cert	4790	5918.00	4749.00																				
SBC-1 Meas						34	776	3	< 2		< 0.3	23	82	38		26				157		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0				163		2	
SBC-1 Meas						24	765	3	< 2		0.5	22	71	32		27				150		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	31.0000		27.0				163		2	
CDN-PGMS-25 Meas	504	1900	429																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	481	1840	397																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	493	1790	390																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	465	1770	393																				
CDN-PGMS-25 Cert	483	1830	400																				
SdAR-M2 (U.S.G.S.) Meas							> 1000	7	< 2		5.7	15	32	242		18	2			18		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
SdAR-M2 (U.S.G.S.) Meas							987	7	< 2		5.5	14	34	239		17	< 1			17		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
877672 Orig	12	21	< 5																				
877672 Dup	14	19	6																				
877674 Orig				0.4	7.67	4	122	< 1	< 2	6.35	< 0.3	96	40	1510	14.2	21	5	0.60	2.47	17	1290	5	1.82
877674 Dup				0.5	7.84	< 3	124	< 1	< 2	6.46	0.4	97	42	1540	14.5	21	2	0.61	2.52	18	1330	10	1.85
877682 Orig	31	207	66																				
877682 Dup	30	207	57																				
877688 Orig				< 0.3	7.64	< 3	53	< 1	< 2	7.13	< 0.3	44	139	99	8.79	19	< 1	0.33	3.66	7	1220	< 1	1.86
877688 Dup				< 0.3	7.62	< 3	53	< 1	< 2	7.13	< 0.3	43	137	97	8.85	19	2	0.33	3.65	7	1230	< 1	1.85
877693 Orig	396	290	< 5																				
877693 Dup	398	300	< 5																				
877707 Orig	34	48	56																				
877707 Dup	43	47	51																				
877711 Orig	86	14	80	1.1	6.80	6	269	< 1	< 2	5.18	0.5	74	119	3980	14.5	17	3	1.16	2.56	27	1300	2	1.03
877711 Split PREP DUP	118	17	93	1.1	7.13	< 3	279	< 1	< 2	5.37	0.4	74	116	4130	15.0	18	8	1.18	2.63	27	1310	< 1	1.08
877712 Orig				< 0.3	5.28	4	85	< 1	< 2	5.83	< 0.3	75	183	331	15.9	14	4	0.61	4.18	15	1590	< 1	0.73
877712 Dup				< 0.3	5.30	3	84	< 1	< 2	5.87	< 0.3	76	161	330	16.1	15	10	0.61	4.17	15	1600	< 1	0.73
877717 Orig	6	76	244																				
877717 Dup	6	76	235																				



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
877726 Orig				< 0.3	1.85	< 3	< 7	< 1	< 2	4.21	< 0.3	89	1150	49	16.5	7	3	0.03	9.84	1	2470	< 1	0.10
877726 Dup				< 0.3	1.84	< 3	< 7	< 1	< 2	4.17	0.3	88	1170	52	16.5	7	< 1	0.04	9.79	1	2430	< 1	0.10
877728 Orig	3	86	32																				
877728 Dup	3	92	44																				
877741 Orig	85	38	52																				
877741 Dup	106	38	47																				
877751 Orig	7	28	7	< 0.3	7.05	< 3	58	< 1	< 2	7.90	< 0.3	48	25	430	7.90	20	1	0.31	3.10	4	1160	< 1	2.16
877751 Dup	6	30	6	< 0.3	7.00	< 3	57	< 1	< 2	7.83	< 0.3	48	21	426	7.77	20	< 1	0.30	3.05	4	1150	< 1	2.14
877781 Orig	< 2	7	8	< 0.3	7.05	< 3	47	< 1	< 2	7.07	< 0.3	53	143	72	9.98	17	< 1	0.34	4.36	15	1380	< 1	1.88
877781 Split PREP DUP	< 2	8	7	< 0.3	7.08	< 3	48	< 1	< 2	7.11	< 0.3	53	139	85	9.93	17	1	0.35	4.36	15	1390	< 1	1.90
877782 Orig	< 2	5	6																				
877782 Dup	< 2	< 5	6																				
877784 Orig				< 0.3	6.87	< 3	30	< 1	6	7.62	< 0.3	44	75	8	9.33	18	1	0.24	3.75	6	1080	< 1	2.14
877784 Dup				< 0.3	6.88	< 3	30	< 1	< 2	7.67	< 0.3	44	83	4	9.46	18	< 1	0.24	3.78	6	1110	< 1	2.16
877787 Orig	141	17	16																				
877787 Dup	117	16	17																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 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	< 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	< 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		2	< 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	< 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		2	< 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		2	< 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
GXR-1 Meas	40	0.058	721	25	0.25	< 4	289	20	0.03	< 5	40	87	162	34	725	25
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	42	0.060	727	20	0.25	< 4	293	16	0.03	< 5	40	86	160	34	736	25
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	45	0.131	55	< 5	1.77	8	212	17	0.29	< 5	< 10	88	33	15	68	40
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	35	0.052	21	< 5		16	175		0.13	< 5	< 10	42	< 5		97	20
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	0.052	18	< 5		16	166		0.21	< 5	< 10	57	< 5		94	44
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
GXR-6 Meas	28	0.036	94	< 5	0.02	28	38	< 2		< 5	< 10	122	< 5	13	135	61
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
GXR-6 Meas	29	0.032	90	< 5	0.02	27	37	< 2		< 5	< 10	92	< 5	13	125	47
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6480				1.66											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
DNC-1a Meas	259		< 3	< 5		31	130		0.29			141		17	55	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	251		5	< 5		30	125		0.27			133		17	56	32
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																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	91		31	< 5		20	179		0.53	< 5	< 10	217	< 5	32	178	107
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		27	6		20	172		0.51	< 5	< 10	209	< 5	33	172	107
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
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																

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
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
SdAR-M2 (U.S.G.S.) Meas	54		824				4	143			< 10	23	9	30	785	100
SdAR-M2 (U.S.G.S.) Cert	49		808				4.1	144			2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	52		816				4	144			< 10	26	8	29	769	96
SdAR-M2 (U.S.G.S.) Cert	49		808				4.1	144			2.53	25.2	2.8	32.7	760	259
877672 Orig																
877672 Dup																
877674 Orig	266	0.037	4	< 5	0.54	8	89	7	0.42	< 5	< 10	245	< 5	25	60	21
877674 Dup	264	0.041	< 3	< 5	0.56	8	90	15	0.55	< 5	< 10	263	< 5	25	61	21
877682 Orig																
877682 Dup																
877688 Orig	97	0.023	< 3	< 5	0.09	32	133	< 2	0.34	< 5	< 10	193	< 5	20	59	56
877688 Dup	96	0.024	< 3	< 5	0.09	32	133	3	0.37	< 5	< 10	202	< 5	20	59	58
877693 Orig																
877693 Dup																
877707 Orig																
877707 Dup																
877711 Orig	148	0.015	< 3	< 5	0.56	49	44	14	0.54	< 5	< 10	182	< 5	16	64	13
877711 Split PREP DUP	148	0.011	7	< 5	0.57	51	46	4	0.40	< 5	< 10	169	< 5	16	66	13
877712 Orig	143	0.001	6	< 5	0.17	93	8	17	0.28	< 5	< 10	247	< 5	19	60	17
877712 Dup	144	< 0.001	9	< 5	0.17	94	8	11	0.29	< 5	< 10	250	< 5	19	61	16
877717 Orig																
877717 Dup																
877726 Orig	559	0.001	6	< 5	0.07	74	14	6	0.45	< 5	< 10	421	< 5	13	64	24
877726 Dup	557	0.002	8	< 5	0.07	72	14	13	0.45	< 5	< 10	415	< 5	13	65	28
877728 Orig																
877728 Dup																
877741 Orig																
877741 Dup																

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
877751 Orig	182	0.003	< 3	< 5	0.11	42	152	6	0.25	< 5	< 10	141	< 5	10	55	< 5
877751 Dup	180	0.003	< 3	< 5	0.11	41	151	9	0.31	< 5	< 10	179	< 5	10	55	6
877781 Orig	107	0.008	< 3	< 5	0.05	36	111	7	0.28	8	< 10	215	< 5	10	50	13
877781 Split PREP DUP	106	0.009	< 3	< 5	0.05	37	112	< 2	0.46	< 5	< 10	272	< 5	10	50	14
877782 Orig																
877782 Dup																
877784 Orig	63	0.003	< 3	< 5	< 0.01	41	131	11	0.25	< 5	< 10	179	< 5	10	38	10
877784 Dup	68	0.004	3	< 5	< 0.01	41	133	< 2	0.34	< 5	< 10	186	< 5	10	38	10
877787 Orig																
877787 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	2	< 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	< 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	< 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	< 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



**Date Submitted:** 07-Sep-17  
**Invoice No.:** A17-09754 (i)  
**Invoice Date:** 13-Oct-17  
**Your Reference:**

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

113 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT **A17-09754 (i)**

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:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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Analyte Symbol	Cu
Unit Symbol	%
Lower Limit	0.001
Method Code	4Acid ICPOE S
877745	2.44

Analyte Symbol	Cu
Unit Symbol	%
Lower Limit	0.001
Method Code	4Acid ICPOE S
CZN-3 Meas	0.685
CZN-3 Cert	0.685
OREAS 14P Meas	0.961
OREAS 14P Cert	0.997
GBW 07239 Control Meas	0.005
GBW 07239 Control Cert	0.00486
MP-1b Meas	3.13
MP-1b Cert	3.07
CCU-1d Meas	23.3
CCU-1d Cert	23.93
PTC-1b Meas	7.63
PTC-1b Cert	7.97
Method Blank	< 0.001



**Date Submitted:** 14-Sep-17  
**Invoice No.:** A17-10037  
**Invoice Date:** 03-Oct-17  
**Your Reference:** North Rock

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

117 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT      **A17-10037**

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Notes:

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

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613  
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## Results

## Activation Laboratories Ltd.

## Report: A17-10037

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
877848	4	7	< 5	< 0.3	9.38	< 3	56	< 1	< 2	7.64	< 0.3	44	26	141	8.80	21	2	0.29	2.30	11	1270	< 1	2.26
877849	9	7	< 5	< 0.3	8.36	13	54	< 1	3	6.69	< 0.3	41	33	180	8.22	17	3	0.27	2.23	8	1160	< 1	2.18
877850	< 2	< 5	< 5	< 0.3	0.43	3	22	< 1	< 2	0.05	< 0.3	< 1	9	3	0.06	< 1	< 1	0.19	0.03	< 1	38	< 1	0.02
877851	6	6	< 5	< 0.3	9.01	< 3	53	< 1	< 2	7.39	< 0.3	42	35	147	9.23	19	5	0.31	2.33	8	1280	< 1	2.43
877852	< 2	< 5	< 5	< 0.3	8.45	< 3	62	< 1	< 2	6.91	< 0.3	42	26	82	9.59	18	9	0.41	2.32	10	1440	< 1	1.97
877853	22	< 5	< 5	0.7	7.62	< 3	76	2	< 2	4.94	< 0.3	197	26	2770	13.5	16	5	0.38	2.26	18	1120	< 1	2.11
877854	4	< 5	< 5	< 0.3	8.28	< 3	67	< 1	< 2	6.88	< 0.3	41	26	74	9.26	19	1	0.41	2.26	11	1390	< 1	2.03
877855	3	< 5	< 5	< 0.3	7.59	< 3	65	< 1	< 2	6.85	0.6	50	27	215	9.70	18	9	0.34	2.31	11	1430	< 1	2.14
877856	51	6	< 5	1.3	6.52	3	52	< 1	< 2	6.84	0.4	68	26	5330	11.1	18	3	0.29	2.36	11	1480	4	1.84
877857	84	16	< 5	1.7	4.83	4	54	< 1	< 2	6.26	< 0.3	136	23	5880	11.7	17	6	0.27	2.08	10	1380	< 1	1.66
877858	12	7	< 5	0.4	7.38	< 3	65	< 1	< 2	6.78	< 0.3	68	28	1070	10.8	17	< 1	0.33	2.48	12	1470	< 1	2.06
877859	3	< 5	< 5	< 0.3	8.50	< 3	60	< 1	< 2	7.16	< 0.3	50	15	261	10.3	18	4	0.31	2.36	11	1430	< 1	2.24
877860	< 2	7	6	< 0.3	9.03	< 3	49	< 1	< 2	7.97	< 0.3	40	34	53	7.62	18	< 1	0.22	3.01	7	1150	< 1	2.05
877861	19	12	< 5	0.6	8.62	< 3	79	< 1	< 2	7.21	< 0.3	62	38	1820	8.05	18	< 1	0.32	2.28	14	1170	< 1	2.51
877862	< 2	7	14	< 0.3	9.05	< 3	58	< 1	< 2	7.74	< 0.3	42	51	60	7.95	18	1	0.26	2.93	8	1190	< 1	2.21
877863	< 2	< 5	8	< 0.3	9.82	3	84	< 1	< 2	7.21	< 0.3	44	41	72	8.34	19	9	0.37	2.46	11	1130	< 1	2.53
877864	8	85	53	< 0.3	9.49	< 3	60	< 1	< 2	7.93	< 0.3	39	40	85	7.12	19	< 1	0.25	2.86	8	1050	< 1	2.23
877865	5	12	28	< 0.3	9.31	< 3	77	< 1	< 2	7.46	< 0.3	46	36	247	7.97	18	< 1	0.32	2.73	9	1150	< 1	2.29
877866	5	< 5	< 5	< 0.3	8.91	< 3	58	< 1	< 2	7.70	< 0.3	42	35	152	8.00	18	< 1	0.26	2.97	10	1090	< 1	2.12
877867	< 2	< 5	< 5	< 0.3	6.37	7	74	< 1	< 2	6.83	< 0.3	41	48	309	7.88	18	3	0.30	2.34	11	1130	11	2.19
877868	4	< 5	< 5	2.3	10.3	< 3	281	< 1	< 2	5.52	< 0.3	54	31	475	8.91	19	6	1.01	2.14	20	975	< 1	3.26
877869	3	< 5	< 5	< 0.3	9.57	< 3	129	< 1	< 2	7.13	< 0.3	50	44	190	9.52	20	6	0.52	2.50	14	1140	1	2.35
877870	3	< 5	< 5	< 0.3	9.06	< 3	57	< 1	< 2	7.93	< 0.3	44	45	127	8.17	19	2	0.26	2.99	7	1110	< 1	2.10
877871	3	< 5	< 5	< 0.3	8.95	3	57	< 1	< 2	7.91	< 0.3	45	42	134	8.78	19	3	0.27	2.90	8	1190	< 1	2.03
877872	2	< 5	< 5	< 0.3	8.67	< 3	69	< 1	< 2	7.79	< 0.3	46	32	102	9.47	19	6	0.33	2.96	10	1230	< 1	1.94
877873	14	39	6	< 0.3	8.77	6	88	< 1	< 2	6.63	< 0.3	73	62	750	10.8	18	1	0.42	2.35	16	1220	< 1	2.20
877874	4	15	16	< 0.3	8.88	4	103	< 1	< 2	7.05	< 0.3	62	62	549	10.5	18	4	0.47	2.51	14	1200	2	2.31
877875	342	4980	424	0.4	8.11	< 3	50	< 1	< 2	5.96	< 0.3	77	151	1310	6.35	10	< 1	0.24	7.58	21	1000	< 1	1.14
877876	3	29	26	< 0.3	8.69	< 3	117	< 1	< 2	6.74	< 0.3	72	56	399	11.0	17	7	0.53	2.47	15	1210	< 1	2.29
877877	23	45	18	< 0.3	5.08	< 3	107	< 1	< 2	6.22	< 0.3	83	81	1330	10.8	17	< 1	0.44	1.82	13	1080	8	2.13
877878	16	39	29	0.4	8.12	< 3	127	< 1	< 2	6.49	< 0.3	69	64	1330	10.6	17	5	0.50	2.01	12	1180	< 1	2.42
877879	8	< 5	19	< 0.3	9.56	< 3	51	< 1	< 2	8.25	< 0.3	34	51	692	9.45	22	5	0.29	1.63	7	999	< 1	2.13
877880	8	28	23	< 0.3	7.79	< 3	98	< 1	< 2	6.53	< 0.3	101	57	956	12.3	16	8	0.51	2.41	12	1160	5	2.07
877881	69	207	29	1.0	7.02	< 3	99	< 1	< 2	6.50	< 0.3	120	55	7530	13.2	16	5	0.50	2.65	13	1240	< 1	1.96
877882	6	34	36	< 0.3	7.44	4	109	< 1	3	6.48	< 0.3	87	52	1100	13.6	16	< 1	0.54	2.84	16	1400	7	1.75
877883	9	104	44	0.3	6.99	4	131	< 1	< 2	6.10	< 0.3	267	37	1090	16.3	17	4	0.61	2.35	15	1180	< 1	1.68
877884	24	314	58	0.5	6.66	< 3	77	< 1	< 2	5.52	< 0.3	492	31	2500	19.5	15	6	0.41	1.79	14	1210	< 1	1.79
877885	9	126	46	< 0.3	7.15	< 3	108	< 1	< 2	6.38	0.4	200	22	1320	13.6	17	3	0.46	1.99	14	1170	146	2.45
877886	2	19	6	< 0.3	7.47	< 3	68	< 1	< 2	7.87	< 0.3	69	226	193	10.7	15	5	0.43	4.30	12	1350	< 1	1.43
877887	< 2	6	6	< 0.3	7.39	4	38	< 1	< 2	7.75	< 0.3	54	245	120	10.2	15	3	0.33	4.53	10	1470	< 1	1.48
877888	14	78	24	0.4	7.65	< 3	75	< 1	< 2	7.62	< 0.3	132	29	2020	12.0	18	8	0.43	1.96	12	1090	61	1.99
877889	13	91	25	0.5	7.03	< 3	107	< 1	< 2	6.90	< 0.3	115	42	2470	13.6	16	2	0.54	2.56	17	1280	8	1.80

## Results

## Activation Laboratories Ltd.

## Report: A17-10037

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
877890	20	95	20	0.6	7.74	< 3	114	< 1	< 2	6.62	1.2	221	37	3480	14.0	18	3	0.54	1.82	14	980	< 1	2.07
877891	17	127	26	0.8	7.40	< 3	121	< 1	< 2	6.58	0.8	172	42	4650	13.6	15	3	0.59	2.02	15	1050	< 1	2.12
877892	20	202	29	0.4	6.45	< 3	122	< 1	< 2	9.19	< 0.3	299	19	2600	14.0	16	7	0.56	1.81	13	898	< 1	1.89
877893	30	242	36	1.1	6.80	< 3	149	< 1	< 2	6.46	< 0.3	191	49	5210	15.1	17	3	0.69	2.57	19	1130	11	1.72
877894	38	99	38	0.8	7.01	< 3	111	< 1	< 2	6.68	< 0.3	160	48	4670	16.4	17	4	0.59	2.53	16	1410	< 1	1.56
877895	101	194	45	1.2	6.57	< 3	118	< 1	4	6.24	< 0.3	248	36	6170	17.4	17	< 1	0.62	2.47	17	1250	5	1.51
877896	113	245	86	1.1	7.44	4	150	< 1	< 2	5.79	< 0.3	332	31	5580	16.3	17	7	0.68	1.69	17	900	< 1	2.13
877897	59	171	50	1.0	5.17	< 3	160	< 1	< 2	6.28	0.5	177	32	4130	12.5	17	7	0.62	1.70	14	976	< 1	1.97
877898	60	278	61	0.9	6.68	4	154	< 1	< 2	6.54	< 0.3	100	43	3640	14.6	17	3	0.68	3.04	16	1410	< 1	1.42
877899	143	291	54	1.1	6.93	< 3	110	< 1	3	6.60	0.7	179	58	5390	14.9	18	5	0.54	2.86	14	1210	< 1	1.62
877900	< 2	< 5	< 5	< 0.3	0.43	< 3	22	< 1	< 2	0.05	< 0.3	< 1	5	8	0.07	< 1	< 1	0.20	0.03	< 1	40	< 1	0.02
877901	39	264	102	0.8	7.27	< 3	103	< 1	< 2	6.97	0.4	97	67	3240	14.3	19	6	0.53	3.15	14	1420	12	1.65
877902	19	21	36	0.5	7.86	4	126	< 1	< 2	6.92	< 0.3	77	83	1460	13.7	19	5	0.58	2.94	14	1380	8	1.80
877903	36	91	66	1.0	7.70	< 3	142	< 1	< 2	7.44	< 0.3	96	53	2380	14.7	19	6	0.69	2.61	13	1320	1	1.43
877904	171	429	104	0.6	7.42	< 3	123	< 1	3	7.04	< 0.3	98	59	2220	15.9	21	2	0.63	2.90	16	1410	< 1	1.47
877905	84	225	75	1.1	7.75	18	161	< 1	< 2	6.54	< 0.3	144	33	4920	12.9	20	7	0.64	1.93	16	1090	< 1	2.38
877906	101	234	75	1.6	5.04	25	163	< 1	< 2	5.46	< 0.3	132	83	6200	10.8	18	1	0.61	1.88	16	962	4	2.40
877907	17	125	74	< 0.3	6.01	< 3	116	< 1	< 2	6.41	< 0.3	92	84	1150	13.7	15	9	0.60	3.48	16	1480	< 1	1.35
877908	34	64	118	< 0.3	9.11	< 3	168	< 1	< 2	6.34	< 0.3	77	33	1740	11.9	17	4	0.63	1.94	17	1190	< 1	2.49
877909	68	106	36	1.2	9.36	< 3	221	< 1	< 2	6.84	< 0.3	106	33	6360	10.2	19	4	0.69	1.63	16	931	< 1	2.55
877910	40	199	44	0.5	10.3	5	281	< 1	< 2	6.25	< 0.3	75	39	2750	9.16	20	4	0.86	1.31	17	886	1	2.91
877911	19	58	77	< 0.3	10.3	< 3	211	< 1	< 2	6.24	< 0.3	55	50	1630	9.70	17	6	0.75	1.93	18	966	21	2.93
877912	< 2	23	45	< 0.3	9.31	< 3	192	< 1	< 2	6.59	< 0.3	46	82	119	9.76	15	5	0.82	2.96	20	1120	2	2.31
877913	< 2	59	38	< 0.3	5.90	< 3	54	< 1	< 2	6.84	< 0.3	57	78	19	11.8	12	3	0.38	4.87	13	1450	1	1.35
877914	< 2	59	42	< 0.3	9.48	< 3	154	< 1	< 2	6.96	< 0.3	40	78	16	8.88	15	4	0.67	3.12	18	1070	< 1	2.28
877915	< 2	26	41	< 0.3	7.36	< 3	86	< 1	< 2	6.99	< 0.3	53	70	15	11.1	15	6	0.48	3.84	14	1250	2	1.82
877916	< 2	21	86	< 0.3	5.02	< 3	64	< 1	< 2	6.69	< 0.3	54	101	13	11.2	13	< 1	0.36	4.19	11	1410	< 1	1.39
877917	< 2	42	34	< 0.3	7.42	< 3	83	< 1	< 2	6.79	< 0.3	49	97	42	10.3	14	3	0.42	3.80	12	1220	1	1.87
877918	< 2	19	38	< 0.3	5.85	< 3	55	< 1	< 2	7.02	< 0.3	62	117	51	12.3	14	6	0.38	4.58	13	1410	2	1.41
877919	< 2	46	22	< 0.3	5.41	< 3	61	< 1	< 2	6.56	< 0.3	64	130	35	12.8	12	7	0.38	4.80	13	1440	5	1.34
877920	12	218	62	< 0.3	4.56	< 3	124	< 1	< 2	5.83	< 0.3	68	120	102	13.4	9	3	0.64	5.57	16	1630	9	0.77
877921	< 2	43	117	< 0.3	5.12	< 3	121	< 1	< 2	5.42	< 0.3	59	121	22	13.3	10	4	0.59	5.57	17	1660	1	0.97
877922	< 2	47	73	< 0.3	5.64	< 3	121	< 1	< 2	4.80	< 0.3	55	119	11	12.2	10	2	0.54	5.03	19	1530	< 1	1.12
877923	< 2	69	63	< 0.3	5.52	3	68	< 1	< 2	6.38	< 0.3	58	127	78	13.3	11	2	0.42	4.88	14	1620	12	1.02
877924	< 2	25	33	< 0.3	5.26	< 3	129	< 1	< 2	5.62	< 0.3	54	135	9	12.6	10	2	0.56	5.63	17	1720	7	1.08
877925	254	5060	426	0.4	3.85	< 3	44	< 1	< 2	5.44	< 0.3	76	256	1210	5.70	10	< 1	0.19	5.67	19	979	< 1	1.04
877926	< 2	34	32	< 0.3	5.74	< 3	69	< 1	< 2	6.09	< 0.3	54	199	48	11.1	11	3	0.33	5.19	13	1690	< 1	1.37
877927	< 2	45	46	< 0.3	5.66	< 3	30	< 1	< 2	7.66	< 0.3	50	210	76	10.5	11	2	0.20	5.33	6	1590	< 1	1.40
877928	3	47	22	< 0.3	5.29	6	44	< 1	< 2	8.05	< 0.3	62	245	257	10.7	13	5	0.26	5.53	5	1600	< 1	1.31
877929	5	144	49	< 0.3	5.19	< 3	58	< 1	< 2	7.90	< 0.3	85	262	627	10.8	12	1	0.36	5.46	6	1550	< 1	1.22
877930	8	84	15	< 0.3	5.41	< 3	92	< 1	< 2	8.40	< 0.3	76	224	630	10.2	13	4	0.41	5.51	6	1450	< 1	1.25
877931	2	261	15	< 0.3	7.29	< 3	164	< 1	< 2	6.09	< 0.3	66	71	171	9.77	15	< 1	0.50	5.18	19	1340	< 1	1.99

## Results

## Activation Laboratories Ltd.

## Report: A17-10037

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
877932	< 2	13	10	< 0.3	7.50	7	221	< 1	< 2	5.47	< 0.3	50	78	248	9.89	18	10	0.68	5.07	27	1280	< 1	2.16
877933	5	92	12	0.5	7.48	< 3	329	1	2	6.24	< 0.3	59	102	843	9.20	18	2	0.77	4.15	25	1080	< 1	2.41
877934	51	1870	357	0.6	6.52	< 3	145	< 1	< 2	6.17	< 0.3	194	67	1210	13.7	16	6	0.50	4.00	14	1500	< 1	1.81
877935	11	434	760	0.5	7.28	< 3	493	< 1	< 2	5.96	< 0.3	75	108	1620	11.1	16	5	1.28	4.20	19	1370	12	1.84
877936	< 2	45	176	< 0.3	3.33	< 3	69	< 1	8	5.79	< 0.3	70	337	212	11.4	10	1	0.30	4.66	11	1630	1	1.25
877937	< 2	< 5	380	< 0.3	5.08	< 3	67	< 1	< 2	5.72	< 0.3	60	330	42	12.0	10	5	0.37	5.44	12	1750	24	1.37
877938	20	580	157	< 0.3	8.62	< 3	101	< 1	< 2	5.15	0.6	138	85	649	10.8	18	1	0.48	2.48	15	966	< 1	3.13
877939	16	201	209	< 0.3	6.20	< 3	44	< 1	< 2	5.78	< 0.3	117	193	554	12.1	14	4	0.29	4.43	12	1440	< 1	1.87
877940	8	380	163	< 0.3	8.16	< 3	62	< 1	< 2	4.73	< 0.3	127	98	545	10.7	17	4	0.39	2.98	15	1150	< 1	3.15
877941	10	358	77	< 0.3	8.39	4	75	< 1	< 2	5.27	< 0.3	106	65	569	10.7	19	4	0.45	2.97	16	1170	< 1	3.06
877942	4	80	90	< 0.3	7.56	< 3	36	< 1	< 2	6.30	< 0.3	61	84	363	10.7	19	4	0.25	4.01	10	1490	< 1	2.38
877943	10	102	119	< 0.3	7.70	< 3	36	< 1	< 2	7.13	< 0.3	63	82	720	10.6	20	3	0.26	4.06	8	1390	< 1	2.27
877944	10	100	83	0.3	7.63	< 3	37	< 1	< 2	6.88	0.6	62	91	1090	10.7	19	2	0.29	3.98	10	1490	< 1	2.25
877945	2	11	< 5	< 0.3	7.56	< 3	22	< 1	< 2	7.07	< 0.3	51	86	216	10.6	19	6	0.19	4.16	7	1470	< 1	2.20
877946	< 2	24	21	< 0.3	5.07	< 3	21	< 1	< 2	5.92	< 0.3	49	99	56	10.5	17	< 1	0.17	3.42	9	1520	2	1.99
877947	< 2	< 5	< 5	< 0.3	7.34	< 3	30	< 1	< 2	5.09	< 0.3	51	112	40	10.9	19	8	0.22	3.82	15	1510	< 1	2.45
877948	< 2	19	13	< 0.3	7.40	< 3	21	< 1	< 2	6.26	< 0.3	88	108	465	11.0	19	< 1	0.17	3.68	8	1410	< 1	2.49
877949	< 2	< 5	< 5	< 0.3	7.88	4	23	< 1	< 2	7.32	< 0.3	43	85	37	9.17	19	4	0.18	3.85	7	1350	< 1	2.39
877950	< 2	< 5	< 5	< 0.3	0.43	< 3	23	< 1	< 2	0.05	< 0.3	< 1	16	4	0.06	< 1	< 1	0.20	0.03	< 1	46	< 1	0.02
877951	< 2	21	6	< 0.3	7.97	< 3	21	< 1	< 2	7.21	< 0.3	42	72	26	9.81	20	9	0.17	3.74	8	1410	< 1	2.39
877952	5	55	237	< 0.3	7.87	3	19	< 1	< 2	7.25	< 0.3	55	76	413	9.79	20	5	0.15	3.78	10	1410	< 1	2.44
877953	4	15	12	< 0.3	7.42	5	17	< 1	< 2	7.57	< 0.3	46	84	49	9.90	18	< 1	0.16	4.01	6	1330	< 1	2.15
877954	< 2	< 5	23	< 0.3	7.50	< 3	23	< 1	4	7.68	< 0.3	44	66	18	10.3	19	5	0.21	3.75	6	1250	< 1	1.95
877955	< 2	< 5	< 5	< 0.3	7.15	< 3	48	< 1	< 2	6.70	< 0.3	44	103	18	9.86	19	3	0.30	3.70	11	1220	< 1	1.93
877956	6	50	33	< 0.3	7.44	5	44	< 1	< 2	6.45	< 0.3	47	118	248	10.2	17	3	0.29	3.90	13	1290	< 1	2.20
877957	< 2	9	18	< 0.3	7.23	< 3	40	< 1	2	6.52	< 0.3	42	110	45	9.99	18	1	0.29	3.79	12	1230	< 1	2.24
877958	< 2	8	7	< 0.3	7.47	4	21	< 1	< 2	7.54	< 0.3	43	99	28	9.85	18	5	0.19	3.63	5	1160	< 1	2.02
877959	< 2	< 5	7	< 0.3	7.26	3	43	< 1	< 2	7.54	< 0.3	42	79	20	9.58	17	9	0.37	3.72	17	1180	< 1	2.01
877960	< 2	6	6	< 0.3	7.30	< 3	30	< 1	< 2	7.60	< 0.3	44	88	10	9.83	17	3	0.24	3.79	8	1160	< 1	1.97
877961	< 2	6	7	< 0.3	7.21	< 3	30	< 1	< 2	7.55	< 0.3	44	91	15	9.96	18	6	0.21	3.79	6	1110	< 1	1.94
877962	< 2	5	6	< 0.3	7.14	< 3	25	< 1	< 2	7.01	< 0.3	44	64	13	9.66	18	1	0.18	3.82	7	1080	< 1	2.15
877963	9	< 5	< 5	< 0.3	7.19	< 3	21	< 1	2	7.21	< 0.3	42	68	16	9.35	19	2	0.17	3.60	5	973	< 1	2.10
877964	< 2	< 5	< 5	< 0.3	4.04	< 3	20	< 1	< 2	6.45	< 0.3	43	124	19	9.37	18	< 1	0.14	2.68	6	1110	< 1	1.92

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
877848	77	0.029	4	< 5	0.08	31	129	4	0.15	< 5	< 10	129	< 5	14	55	14
877849	67	0.030	< 3	< 5	0.12	28	117	< 2	0.15	< 5	< 10	91	< 5	12	54	9
877850	< 1	0.003	< 3	< 5	< 0.01	< 4	6	< 2	0.03	< 5	< 10	3	< 5	3	2	13
877851	83	0.037	< 3	< 5	0.08	30	129	11	0.24	< 5	< 10	101	< 5	12	57	20
877852	38	0.021	6	< 5	0.09	35	117	6	0.37	< 5	< 10	214	< 5	16	55	26
877853	387	0.026	4	< 5	3.57	30	100	10	0.44	< 5	< 10	244	< 5	13	60	29
877854	40	0.019	< 3	< 5	0.10	34	135	6	0.31	< 5	< 10	216	< 5	16	58	34
877855	70	0.010	9	< 5	0.14	34	131	5	0.39	< 5	< 10	376	< 5	14	56	24
877856	108	0.023	< 3	< 5	0.80	28	103	6	0.57	< 5	< 10	424	< 5	14	93	29
877857	253	0.121	9	< 5	1.90	20	100	8	0.54	< 5	< 10	408	< 5	13	82	27
877858	110	0.020	< 3	< 5	0.43	34	112	< 2	0.51	< 5	< 10	388	< 5	14	55	34
877859	56	0.019	5	< 5	0.09	37	138	2	0.33	< 5	< 10	313	< 5	15	53	25
877860	70	0.014	6	< 5	0.04	33	126	< 2	0.30	< 5	< 10	208	< 5	10	55	18
877861	184	0.014	< 3	< 5	0.56	21	148	12	0.28	< 5	< 10	62	< 5	9	57	12
877862	81	0.016	< 3	< 5	0.02	33	146	8	0.30	< 5	< 10	199	< 5	11	62	24
877863	85	0.010	< 3	< 5	0.04	25	147	< 2	0.34	< 5	< 10	199	< 5	10	60	22
877864	71	0.012	< 3	< 5	0.04	31	136	7	0.34	< 5	< 10	238	< 5	9	53	17
877865	85	0.011	< 3	< 5	0.06	30	141	< 2	0.33	< 5	< 10	198	< 5	11	58	21
877866	75	0.008	< 3	< 5	0.05	33	127	< 2	0.31	< 5	< 10	233	< 5	11	53	34
877867	74	0.011	13	< 5	0.07	19	117	6	0.36	< 5	< 10	235	< 5	7	55	25
877868	83	0.010	< 3	< 5	0.31	9	149	8	0.33	< 5	< 10	190	< 5	11	53	28
877869	94	0.013	< 3	< 5	0.12	27	123	< 2	0.39	< 5	< 10	263	< 5	12	59	20
877870	74	0.011	3	< 5	0.05	35	124	< 2	0.27	< 5	< 10	268	< 5	11	51	22
877871	79	0.007	< 3	< 5	0.08	33	121	2	0.29	< 5	< 10	260	< 5	10	51	21
877872	87	0.010	< 3	< 5	0.05	40	116	12	0.29	6	< 10	239	< 5	11	59	17
877873	196	0.027	< 3	< 5	0.43	25	113	5	0.27	< 5	< 10	103	< 5	11	64	9
877874	152	0.056	< 3	< 5	0.28	30	122	12	0.32	< 5	< 10	127	< 5	11	62	13
877875	1540	0.004	13	< 5	0.42	29	124	9	0.08	< 5	< 10	99	< 5	2	48	8
877876	192	0.051	< 3	< 5	0.38	24	114	< 2	0.24	< 5	< 10	113	< 5	13	59	11
877877	237	0.041	< 3	< 5	0.69	18	106	10	0.83	< 5	< 10	298	< 5	8	56	18
877878	155	0.013	4	< 5	0.48	18	124	< 2	0.36	< 5	< 10	144	< 5	9	64	11
877879	61	0.004	< 3	< 5	0.13	21	162	8	0.27	< 5	< 10	162	< 5	12	49	14
877880	295	0.027	3	< 5	0.76	20	105	6	0.41	< 5	< 10	323	< 5	16	67	32
877881	364	0.083	13	< 5	1.54	18	90	7	0.32	< 5	< 10	296	< 5	22	111	19
877882	240	0.004	5	< 5	0.50	16	84	< 2	0.59	< 5	< 10	296	< 5	21	81	15
877883	1100	0.045	11	< 5	3.22	8	95	11	0.41	< 5	< 10	231	< 5	20	74	17
877884	2220	0.256	11	< 5	6.44	< 4	93	13	0.38	< 5	< 10	226	6	21	58	17
877885	811	0.250	8	< 5	2.33	< 4	107	6	0.42	< 5	< 10	156	< 5	17	73	20
877886	204	0.016	4	< 5	0.28	34	71	6	0.51	< 5	< 10	253	< 5	10	77	13
877887	128	0.014	< 3	< 5	0.10	36	74	< 2	0.46	< 5	< 10	260	< 5	10	81	12
877888	498	0.229	9	< 5	1.11	9	146	7	0.30	< 5	< 10	248	< 5	14	58	11
877889	385	0.227	6	< 5	0.90	13	87	12	0.37	< 5	< 10	186	< 5	22	75	13

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
877890	933	0.202	6	< 5	2.61	11	120	19	0.36	< 5	< 10	170	< 5	15	62	15
877891	680	0.213	25	< 5	2.07	14	107	3	0.39	< 5	< 10	202	< 5	14	87	20
877892	1390	1.51	13	< 5	3.62	< 4	105	2	0.06	< 5	< 10	345	< 5	49	49	12
877893	779	0.224	18	< 5	2.28	10	79	7	0.45	5	< 10	394	< 5	31	86	51
877894	538	0.144	14	< 5	1.58	11	65	3	0.46	< 5	< 10	237	< 5	28	99	21
877895	1060	0.127	12	< 5	3.20	6	67	5	0.37	< 5	< 10	309	< 5	33	105	21
877896	1460	0.120	9	< 5	4.34	5	112	5	0.33	< 5	< 10	272	< 5	18	85	27
877897	731	0.412	9	< 5	2.16	< 4	120	10	0.49	< 5	< 10	321	< 5	19	77	49
877898	307	0.115	10	< 5	0.73	7	58	4	0.36	< 5	< 10	406	< 5	43	105	24
877899	699	0.065	10	< 5	2.02	16	85	5	0.28	< 5	< 10	422	< 5	40	102	29
877900	2	0.003	< 3	< 5	0.01	< 4	6	< 2	0.03	< 5	< 10	4	< 5	4	1	13
877901	313	0.119	< 3	< 5	0.71	25	67	7	0.61	< 5	< 10	572	< 5	44	97	36
877902	211	0.010	< 3	< 5	0.33	39	80	4	0.75	< 5	< 10	370	< 5	31	88	26
877903	254	0.063	4	< 5	0.52	14	63	7	0.61	< 5	< 10	384	< 5	28	96	28
877904	236	0.035	4	6	0.47	13	54	11	0.76	< 5	< 10	595	< 5	40	95	37
877905	423	0.155	4	< 5	1.19	5	108	5	0.46	< 5	< 10	267	< 5	21	101	29
877906	435	0.132	14	< 5	1.38	15	115	2	0.33	< 5	< 10	302	< 5	15	99	28
877907	280	0.021	4	< 5	0.35	30	49	7	0.61	< 5	< 10	240	< 5	26	83	19
877908	206	0.025	6	< 5	0.34	9	115	4	0.16	< 5	< 10	59	< 5	11	63	7
877909	318	0.044	16	< 5	1.05	8	130	< 2	0.40	< 5	< 10	109	< 5	8	84	28
877910	289	0.011	< 3	< 5	0.70	9	156	< 2	0.35	< 5	< 10	69	< 5	10	63	19
877911	154	0.006	< 3	< 5	0.33	20	135	< 2	0.38	< 5	< 10	122	< 5	10	62	10
877912	115	0.028	< 3	< 5	0.03	48	124	13	0.41	< 5	< 10	158	< 5	13	53	11
877913	135	0.003	4	< 5	0.02	57	54	2	0.33	< 5	< 10	231	< 5	16	55	22
877914	87	< 0.001	< 3	< 5	< 0.01	43	130	2	0.40	< 5	< 10	124	< 5	8	49	24
877915	126	0.005	< 3	6	0.01	41	83	11	0.29	< 5	< 10	265	< 5	24	56	22
877916	141	0.003	< 3	< 5	0.01	41	56	< 2	0.41	< 5	< 10	260	< 5	22	55	26
877917	112	0.001	4	< 5	0.03	41	103	2	0.23	< 5	< 10	185	< 5	14	47	17
877918	155	0.006	5	< 5	0.02	50	55	7	0.26	< 5	< 10	334	< 5	30	59	19
877919	157	0.008	5	< 5	0.03	56	50	6	0.30	< 5	< 10	271	< 5	26	52	11
877920	167	< 0.001	5	< 5	0.08	64	18	9	0.40	< 5	< 10	179	< 5	13	56	16
877921	149	0.001	5	< 5	0.06	62	21	12	0.36	< 5	< 10	183	< 5	10	59	21
877922	125	< 0.001	< 3	< 5	0.02	62	42	16	0.35	< 5	< 10	133	< 5	7	59	20
877923	136	0.001	5	< 5	0.04	64	29	9	0.35	< 5	< 10	234	< 5	14	62	24
877924	121	< 0.001	< 3	6	0.02	66	35	6	0.38	< 5	< 10	184	< 5	11	61	21
877925	1510	0.003	17	< 5	0.37	10	116	6	0.07	< 5	< 10	99	< 5	2	42	8
877926	126	0.002	6	< 5	0.04	60	64	6	0.35	< 5	< 10	231	< 5	13	60	20
877927	150	0.004	< 3	< 5	0.02	61	91	< 2	0.25	< 5	< 10	240	< 5	16	57	17
877928	281	0.011	< 3	< 5	0.17	60	87	8	0.41	< 5	< 10	315	< 5	18	63	24
877929	622	0.009	7	< 5	0.61	59	94	10	0.34	< 5	< 10	293	< 5	16	66	16
877930	449	0.013	4	< 5	0.48	60	120	13	0.40	< 5	< 10	289	< 5	16	64	17
877931	292	0.005	< 3	< 5	0.26	25	213	12	0.22	< 5	< 10	129	< 5	6	61	11

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
877932	95	0.021	< 3	< 5	0.06	23	256	13	0.24	< 5	< 10	154	< 5	6	65	18
877933	181	0.161	< 3	< 5	0.35	22	468	6	0.45	< 5	< 10	252	< 5	33	63	98
877934	770	0.060	7	< 5	1.91	21	176	9	0.17	< 5	< 10	769	< 5	54	66	60
877935	257	0.016	6	< 5	0.50	30	203	4	0.18	< 5	< 10	527	< 5	39	67	51
877936	177	0.033	8	< 5	0.21	99	78	10	0.13	< 5	< 10	256	< 5	11	64	24
877937	151	0.002	5	< 5	0.05	130	78	7	0.27	< 5	< 10	596	< 5	18	69	25
877938	607	0.012	< 3	< 5	1.58	31	182	< 2	0.12	< 5	< 10	161	< 5	9	45	7
877939	444	0.032	4	< 5	1.05	86	90	< 2	0.11	< 5	< 10	428	< 5	12	58	8
877940	523	0.018	4	< 5	1.38	40	136	< 2	0.15	< 5	< 10	261	< 5	8	44	7
877941	420	0.032	3	< 5	1.05	29	142	< 2	0.50	< 5	< 10	265	< 5	12	47	12
877942	142	0.003	5	< 5	0.19	47	111	6	0.61	< 5	< 10	415	< 5	7	45	13
877943	199	0.005	3	5	0.26	42	119	4	0.62	< 5	< 10	547	< 5	8	52	10
877944	174	0.005	< 3	< 5	0.30	43	119	< 2	0.56	< 5	< 10	371	< 5	7	59	9
877945	79	0.006	< 3	< 5	0.09	37	107	11	0.52	< 5	< 10	400	< 5	8	54	10
877946	87	0.026	< 3	< 5	0.02	23	69	5	0.56	< 5	< 10	363	< 5	11	62	15
877947	78	0.007	3	< 5	0.01	37	69	< 2	0.43	< 5	< 10	344	< 5	9	65	16
877948	353	0.024	5	< 5	0.59	33	99	< 2	0.39	< 5	< 10	284	< 5	13	53	15
877949	58	0.006	< 3	< 5	0.03	37	130	10	0.24	< 5	< 10	285	< 5	10	47	8
877950	< 1	0.003	< 3	< 5	< 0.01	< 4	6	< 2	0.03	< 5	< 10	4	< 5	4	2	16
877951	65	0.006	4	< 5	0.01	37	141	< 2	0.29	< 5	< 10	244	< 5	10	44	8
877952	117	0.005	9	< 5	0.07	37	143	< 2	0.44	< 5	< 10	332	< 5	8	43	10
877953	73	0.005	< 3	< 5	0.02	37	106	< 2	0.38	< 5	< 10	288	< 5	8	43	9
877954	53	0.003	< 3	< 5	< 0.01	39	93	5	0.20	< 5	< 10	249	< 5	9	43	9
877955	52	0.006	4	< 5	< 0.01	35	99	7	0.32	< 5	< 10	293	< 5	8	39	10
877956	111	0.006	< 3	< 5	0.05	35	109	< 2	0.28	< 5	< 10	247	< 5	11	39	13
877957	69	0.006	< 3	< 5	0.01	40	111	4	0.20	< 5	< 10	209	< 5	11	37	19
877958	59	0.010	< 3	< 5	< 0.01	40	109	5	0.21	< 5	< 10	210	< 5	12	33	12
877959	63	0.014	< 3	< 5	< 0.01	38	123	8	0.22	< 5	< 10	196	< 5	14	33	16
877960	67	0.014	< 3	< 5	< 0.01	38	109	4	0.22	< 5	< 10	202	< 5	14	35	16
877961	74	0.012	3	< 5	0.01	38	103	7	0.29	< 5	< 10	209	< 5	12	35	13
877962	58	0.007	4	< 5	0.01	38	109	6	0.23	< 5	< 10	172	< 5	13	33	14
877963	51	0.007	8	< 5	< 0.01	38	108	< 2	0.15	< 5	< 10	215	< 5	13	35	13
877964	51	0.015	5	< 5	0.01	17	102	14	0.75	< 5	< 10	357	< 5	7	36	14

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
GXR-1 Meas				31.4	2.19	421	712	1	1500	0.87	2.7	9	13	1150	23.1	11	9	0.05	0.21	8	874	14	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.6	6.51	93	203	2	19	1.08	0.5	14	39	6480	3.07	18	1	2.83	1.76	11	151	325	0.56
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					7.73	< 3	630	3		1.07		19	42	29	4.73	21	< 1	1.87	1.01	33	894		1.48
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
GXR-6 Meas				0.6	12.1	225	> 1000	1	< 2	0.16	< 0.3	15	46	71	5.91	28	2	1.92	0.61	32	1080	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
Oreas 72a (4 Acid Digest) Meas						7						148	211	312	9.51								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
DNC-1a Meas							99					56	194	99		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4910	6070	4870																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4870	5860	4760																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4870	6010	4660																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4880	6020	4650																				
PK2 Cert	4790	5918.000	4749.000																				
SBC-1 Meas						10	803	3	< 2		0.4	23	70	32		28				160		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
CDN-PGMS-25 Meas	475	1710	384																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	492	1900	409																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	514	1890	421																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	498	1890	430																				
CDN-PGMS-25 Cert	483	1830	400																				

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
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.6	14	34	244		18	< 1			18		12	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44			18		13	
877858 Orig	14	7	< 5																				
877858 Dup	9	7	< 5																				
877860 Orig				< 0.3	9.07	< 3	49	< 1	< 2	7.97	< 0.3	39	34	54	7.62	18	< 1	0.22	3.01	7	1150	< 1	2.05
877860 Dup				< 0.3	8.99	4	49	< 1	< 2	7.96	< 0.3	40	34	53	7.63	17	< 1	0.22	3.01	7	1160	< 1	2.04
877868 Orig	5	< 5	< 5																				
877868 Dup	4	< 5	< 5																				
877874 Orig				< 0.3	8.85	3	103	< 1	< 2	7.04	< 0.3	62	61	553	10.5	18	5	0.47	2.51	14	1190	4	2.32
877874 Dup				< 0.3	8.91	5	103	< 1	< 2	7.06	< 0.3	62	63	546	10.5	18	4	0.47	2.51	14	1200	1	2.30
877879 Orig	9	< 5	19																				
877879 Dup	8	< 5	18																				
877893 Orig	29	244	37																				
877893 Dup	30	239	34																				
877897 Orig	59	171	50	1.0	5.17	< 3	160	< 1	< 2	6.28	0.5	177	32	4130	12.5	17	7	0.62	1.70	14	976	< 1	1.97
877897 Split PREP DUP	66	195	58	1.0	6.04	10	163	< 1	< 2	6.82	< 0.3	181	31	4310	12.7	18	6	0.66	1.82	15	983	< 1	2.05
877898 Orig				1.0	6.74	4	155	< 1	< 2	6.57	0.4	100	44	3680	14.6	18	2	0.69	3.05	16	1430	< 1	1.43
877898 Dup				0.9	6.62	4	154	< 1	5	6.52	< 0.3	99	42	3610	14.6	17	4	0.68	3.04	16	1390	< 1	1.42
877903 Orig	33	91	64																				
877903 Dup	38	92	68																				
877912 Orig				< 0.3	9.36	< 3	193	< 1	< 2	6.57	< 0.3	45	79	120	9.69	15	6	0.82	2.95	20	1120	2	2.31
877912 Dup				< 0.3	9.27	< 3	192	< 1	< 2	6.60	< 0.3	46	86	117	9.83	16	4	0.81	2.96	20	1130	2	2.31
877914 Orig	< 2	58	45																				
877914 Dup	< 2	61	39																				
877927 Orig	< 2	42	46																				
877927 Dup	< 2	48	45																				
877937 Orig	< 2	< 5	381	< 0.3	5.09	< 3	67	< 1	< 2	5.76	< 0.3	61	342	41	12.0	11	7	0.37	5.45	12	1770	24	1.36
877937 Dup	< 2	< 5	380	< 0.3	5.06	3	67	< 1	< 2	5.68	< 0.3	60	319	42	12.0	10	4	0.36	5.43	12	1740	25	1.37
877947 Orig	< 2	< 5	< 5	< 0.3	7.34	< 3	30	< 1	< 2	5.09	< 0.3	51	112	40	10.9	19	8	0.22	3.82	15	1510	< 1	2.45
877947 Split PREP DUP	< 2	< 5	< 5	< 0.3	7.54	< 3	31	< 1	< 2	5.17	< 0.3	52	86	40	10.9	20	2	0.23	3.86	16	1450	< 1	2.48
877948 Orig	5	23	16																				
877948 Dup	< 2	14	10																				
877950 Orig				< 0.3	0.44	< 3	22	< 1	< 2	0.05	< 0.3	< 1	25	4	0.06	1	< 1	0.20	0.03	< 1	49	< 1	0.02
877950 Dup				< 0.3	0.43	< 3	23	< 1	< 2	0.04	< 0.3	< 1	7	3	0.06	< 1	< 1	0.20	0.03	< 1	43	< 1	0.02
877961 Orig	< 2	6	6																				
877961 Dup	< 2	6	7																				
Method Blank	< 2	< 5	< 5																				
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	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 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

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
GXR-1 Meas	41	0.059	712	24	0.24	< 4	290	16	0.03	< 5	30	85	159	34	729	26
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	44	0.132	48	6	1.82	8	218	4	0.29	8	< 10	91	35	15	70	41
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	37	0.054	19	< 5		16	167		0.17	< 5	< 10	52	< 5		97	40
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
GXR-6 Meas	28	0.033	96	< 5	0.01	28	35	< 2		< 5	< 10	100	< 5	13	127	49
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
Oreas 72a (4 Acid Digest) Meas	6320				1.63											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
DNC-1a Meas	256		5	< 5		31	127		0.28			139		16	55	33
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																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	87		31	< 5		21	176		0.51	< 5	< 10	217	5	32	174	108
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
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
SdAR-M2 (U.S.G.S.) Meas	54		831			5	148				< 10	27	8	30	788	83
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
877858 Orig																

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
877858 Dup																
877860 Orig	70	0.014	5	< 5	0.04	33	125	< 2	0.29	< 5	< 10	204	< 5	10	53	18
877860 Dup	69	0.014	6	< 5	0.04	32	126	4	0.30	< 5	< 10	213	< 5	10	56	18
877868 Orig																
877868 Dup																
877874 Orig	154	0.055	< 3	< 5	0.29	30	122	9	0.31	< 5	< 10	125	< 5	11	62	13
877874 Dup	151	0.056	6	< 5	0.27	30	122	16	0.33	< 5	< 10	129	< 5	11	62	14
877879 Orig																
877879 Dup																
877893 Orig																
877893 Dup																
877897 Orig	731	0.412	9	< 5	2.16	< 4	120	10	0.49	< 5	< 10	321	< 5	19	77	49
877897 Split PREP DUP	742	0.304	11	< 5	2.08	< 4	128	15	0.29	< 5	< 10	326	< 5	23	77	45
877898 Orig	307	0.119	12	< 5	0.74	7	58	3	0.35	< 5	< 10	365	< 5	43	106	20
877898 Dup	308	0.111	8	< 5	0.73	7	57	6	0.37	< 5	< 10	448	11	43	104	27
877903 Orig																
877903 Dup																
877912 Orig	116	0.027	< 3	< 5	0.03	48	123	15	0.36	< 5	< 10	151	< 5	14	52	11
877912 Dup	114	0.029	3	< 5	0.03	48	124	12	0.45	< 5	< 10	166	< 5	13	54	10
877914 Orig																
877914 Dup																
877927 Orig																
877927 Dup																
877937 Orig	151	0.002	6	< 5	0.05	131	78	6	0.27	< 5	< 10	594	< 5	18	72	26
877937 Dup	151	0.002	5	< 5	0.05	130	77	8	0.26	< 5	< 10	598	< 5	18	66	25
877947 Orig	78	0.007	3	< 5	0.01	37	69	< 2	0.43	< 5	< 10	344	< 5	9	65	16
877947 Split PREP DUP	79	0.005	4	< 5	0.01	39	70	15	0.19	< 5	< 10	274	< 5	10	66	16
877948 Orig																
877948 Dup																
877950 Orig	< 1	0.002	< 3	< 5	0.01	< 4	6	< 2	0.03	< 5	< 10	4	< 5	4	2	13
877950 Dup	2	0.003	< 3	< 5	< 0.01	< 4	6	< 2	0.03	< 5	< 10	4	< 5	4	1	19
877961 Orig																
877961 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5



**Date Submitted:** 19-Sep-17  
**Invoice No.:** A17-10199  
**Invoice Date:** 12-Oct-17  
**Your Reference:** North Rock

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

101 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT      **A17-10199**

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:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is written in a cursive style with a horizontal line underneath.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A17-10199

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
877634	< 2	< 5	< 5	< 0.3	8.79	3	65	< 1	< 2	6.54	< 0.3	41	25	157	8.34	19	2	0.32	1.98	11	1040	< 1	2.26
877635	< 2	< 5	< 5	< 0.3	0.46	< 3	20	< 1	< 2	0.04	< 0.3	< 1	6	3	0.06	< 1	< 1	0.19	0.03	< 1	36	< 1	0.02
877636	14	< 5	< 5	< 0.3	8.08	< 3	130	< 1	< 2	6.93	< 0.3	61	23	883	9.85	19	2	0.54	2.27	14	1270	< 1	1.59
877637	32	< 5	< 5	< 0.3	6.89	19	207	< 1	< 2	8.03	< 0.3	104	25	1760	9.00	17	< 1	0.80	2.15	18	1240	4	1.51
877638	4	< 5	< 5	< 0.3	7.74	< 3	124	< 1	< 2	7.02	< 0.3	57	20	266	8.72	18	< 1	0.49	2.22	12	1240	< 1	1.92
877639	3	< 5	< 5	< 0.3	9.05	< 3	62	< 1	< 2	6.74	< 0.3	43	24	212	8.67	20	< 1	0.31	2.16	11	1080	< 1	2.27
877640	< 2	< 5	< 5	< 0.3	8.52	< 3	65	< 1	< 2	6.61	< 0.3	39	32	49	9.48	19	3	0.40	2.12	12	1530	< 1	1.80
877641	< 2	< 5	< 5	< 0.3	8.75	< 3	64	< 1	3	6.59	< 0.3	36	29	80	10.4	19	5	0.44	2.19	11	1640	< 1	2.17
877642	< 2	< 5	< 5	< 0.3	8.55	4	101	< 1	< 2	6.90	< 0.3	38	31	62	8.83	19	2	0.53	2.24	14	1380	< 1	2.06
877643	< 2	< 5	< 5	< 0.3	5.40	< 3	54	< 1	< 2	6.56	< 0.3	38	36	53	8.35	18	< 1	0.28	1.96	11	1270	< 1	2.02
877644	< 2	< 5	< 5	< 0.3	7.25	< 3	48	< 1	< 2	6.26	< 0.3	37	31	53	9.05	18	< 1	0.29	2.11	11	1360	< 1	1.89
877645	< 2	< 5	< 5	< 0.3	8.41	< 3	46	< 1	< 2	6.77	< 0.3	41	23	76	9.63	18	4	0.30	2.29	8	1400	< 1	2.06
877646	< 2	9	13	< 0.3	8.78	< 3	45	< 1	< 2	7.13	< 0.3	41	34	78	7.78	17	4	0.23	2.71	8	1180	< 1	2.05
877647	< 2	34	17	< 0.3	7.61	4	40	< 1	2	7.14	< 0.3	54	139	114	9.90	16	4	0.28	3.84	13	1400	< 1	1.68
877648	< 2	5	< 5	< 0.3	7.83	< 3	37	< 1	< 2	7.24	< 0.3	50	207	96	9.59	16	2	0.25	4.19	12	1410	< 1	1.54
877649	3	5	6	< 0.3	7.53	< 3	30	< 1	< 2	7.26	< 0.3	50	154	254	9.84	17	1	0.22	4.08	11	1430	< 1	1.57
877650	13	14	29	< 0.3	8.81	< 3	63	< 1	< 2	6.46	< 0.3	51	41	128	9.90	18	2	0.36	2.25	13	1160	1	1.95
877651	2	< 5	14	< 0.3	8.03	< 3	57	< 1	< 2	7.07	< 0.3	45	41	127	8.30	18	< 1	0.30	2.57	11	1210	< 1	1.98
877652	3	< 5	< 5	< 0.3	8.53	< 3	51	< 1	< 2	6.77	< 0.3	45	34	134	7.39	18	1	0.26	2.41	10	1120	< 1	2.51
877653	< 2	< 5	< 5	< 0.3	5.51	< 3	42	< 1	< 2	6.21	< 0.3	35	42	95	7.11	18	< 1	0.22	2.09	9	993	< 1	2.18
877654	< 2	< 5	< 5	< 0.3	8.83	< 3	37	< 1	< 2	5.54	< 0.3	36	41	135	7.90	17	6	0.23	2.37	17	966	< 1	2.62
877655	< 2	< 5	< 5	< 0.3	9.35	4	38	< 1	< 2	6.48	< 0.3	34	21	86	7.52	20	< 1	0.24	2.06	9	973	< 1	2.63
877656	< 2	< 5	< 5	< 0.3	8.12	< 3	47	< 1	< 2	6.98	< 0.3	46	126	124	8.98	16	< 1	0.29	3.55	10	1230	< 1	1.74
877657	< 2	< 5	< 5	< 0.3	6.33	< 3	15	< 1	< 2	8.62	< 0.3	36	26	180	11.3	14	< 1	0.15	3.50	12	1320	< 1	0.61
877658	< 2	< 5	< 5	< 0.3	8.44	< 3	47	< 1	< 2	5.93	< 0.3	43	35	119	10.8	18	7	0.31	3.39	18	1260	< 1	1.48
877659	< 2	< 5	< 5	< 0.3	8.73	< 3	64	< 1	< 2	6.71	< 0.3	43	42	92	8.40	18	7	0.38	2.76	13	1110	< 1	1.70
877660	241	4890	423	2.1	7.96	< 3	47	< 1	3	5.58	< 0.3	75	135	1290	6.01	10	< 1	0.23	6.90	21	952	< 1	1.08
877661	3	< 5	< 5	< 0.3	8.35	< 3	39	< 1	< 2	7.08	< 0.3	45	48	328	8.74	19	4	0.25	2.69	11	1070	< 1	1.77
877754	7	17	8	< 0.3	6.81	< 3	45	< 1	< 2	7.09	< 0.3	69	69	333	9.60	20	2	0.30	3.97	6	1280	< 1	1.90
877755	13	199	43	< 0.3	5.56	< 3	111	< 1	< 2	4.94	< 0.3	60	89	88	9.85	17	4	0.46	3.82	22	1350	< 1	1.72
877756	2	< 5	9	< 0.3	7.02	< 3	260	< 1	< 2	4.67	< 0.3	64	101	180	11.2	18	3	1.30	3.45	31	1290	< 1	1.79
877757	3	15	381	< 0.3	5.25	< 3	46	< 1	3	6.00	< 0.3	67	380	83	12.1	13	2	0.36	4.53	11	1550	< 1	1.29
877758	34	16	302	0.7	5.79	< 3	55	< 1	< 2	6.12	< 0.3	81	218	2600	13.9	16	4	0.46	3.79	16	1400	< 1	1.26
877759	< 2	< 5	5	< 0.3	7.00	< 3	98	< 1	< 2	6.05	< 0.3	51	57	2	11.2	18	4	0.56	3.50	16	1390	< 1	1.97
877760	227	4790	422	0.5	8.04	10	47	< 1	< 2	5.57	< 0.3	71	140	1280	6.01	12	2	0.22	6.97	21	942	< 1	1.09
877761	< 2	< 5	< 5	< 0.3	7.03	7	61	< 1	< 2	8.29	< 0.3	47	47	25	7.57	21	3	0.34	3.36	6	1140	< 1	1.56
877762	< 2	15	42	< 0.3	7.54	< 3	76	< 1	< 2	6.62	< 0.3	64	116	91	11.5	20	3	0.44	3.14	9	1360	9	2.08
877763	4	15	14	< 0.3	7.10	< 3	45	< 1	< 2	7.53	< 0.3	57	80	240	9.85	19	3	0.31	3.44	6	1220	1	1.87
877764	8	70	64	< 0.3	7.09	4	60	< 1	< 2	7.15	< 0.3	53	96	266	9.73	19	3	0.36	3.16	7	1250	< 1	1.86
877765	13	50	43	< 0.3	6.81	< 3	82	< 1	< 2	6.55	< 0.3	61	119	202	10.5	17	3	0.46	3.45	13	1250	< 1	1.88
877766	4	15	21	< 0.3	6.68	< 3	47	< 1	< 2	7.06	< 0.3	55	93	23	10.2	18	4	0.36	3.37	12	1220	< 1	1.91
877767	< 2	< 5	< 5	< 0.3	6.88	< 3	54	< 1	< 2	7.14	< 0.3	50	63	22	9.85	20	6	0.34	3.42	9	1150	< 1	2.01

## Results

## Activation Laboratories Ltd.

## Report: A17-10199

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
877768	17	135	163	< 0.3	7.20	< 3	68	< 1	< 2	6.46	< 0.3	81	106	688	11.1	19	5	0.38	3.42	16	1310	< 1	1.99
877769	< 2	< 5	7	< 0.3	7.24	7	82	< 1	< 2	5.46	< 0.3	52	75	73	10.8	18	3	0.40	3.15	29	1290	< 1	2.51
877770	< 2	8	6	< 0.3	6.98	< 3	102	< 1	< 2	7.12	< 0.3	49	53	110	9.56	20	7	0.49	3.52	11	1170	< 1	2.07
877771	27	20	34	0.5	5.65	9	56	< 1	< 2	5.88	< 0.3	49	77	1790	8.60	15	4	0.33	3.15	7	1070	< 1	1.72
877772	8	22	22	< 0.3	7.01	< 3	104	< 1	< 2	7.08	< 0.3	53	80	269	10.1	17	7	0.55	3.57	11	1220	< 1	1.91
877773	3	69	598	< 0.3	7.52	< 3	72	< 1	< 2	6.41	< 0.3	48	107	98	9.16	16	< 1	0.42	3.91	16	1080	< 1	2.29
877795	< 2	6	< 5	< 0.3	5.64	< 3	51	< 1	< 2	6.50	< 0.3	47	159	5	9.71	17	2	0.35	3.32	8	1180	< 1	1.81
877796	4	9	12	< 0.3	6.86	< 3	51	< 1	< 2	6.99	< 0.3	48	141	47	9.49	17	5	0.34	3.65	10	1200	< 1	1.86
877797	11	69	6	< 0.3	6.79	< 3	31	< 1	< 2	6.86	< 0.3	68	167	412	10.5	17	3	0.26	3.94	8	1310	< 1	1.87
877798	4	< 5	13	< 0.3	6.66	< 3	30	< 1	< 2	7.50	< 0.3	54	62	130	9.40	17	4	0.23	3.94	11	1320	< 1	1.88
877799	< 2	7	7	< 0.3	6.98	16	27	< 1	< 2	8.52	< 0.3	41	50	6	6.80	17	9	0.22	3.42	6	1010	< 1	1.86
877800	< 2	< 5	< 5	< 0.3	7.05	10	22	< 1	< 2	8.65	< 0.3	48	51	4	7.43	17	5	0.16	3.49	3	1050	< 1	1.84
877801	4	7	5	< 0.3	7.08	< 3	29	< 1	< 2	8.78	< 0.3	59	65	350	7.90	17	< 1	0.25	3.26	9	1100	< 1	1.92
877802	24	50	54	0.5	7.56	22	42	< 1	< 2	6.82	< 0.3	95	100	2040	10.3	18	2	0.29	3.30	9	1110	3	2.63
877803	11	131	11	< 0.3	7.50	6	36	< 1	< 2	8.17	< 0.3	93	67	703	8.93	19	< 1	0.25	3.30	7	1110	< 1	2.14
877804	< 2	16	6	< 0.3	5.15	5	26	< 1	< 2	7.83	< 0.3	59	101	43	7.48	17	< 1	0.17	3.01	14	1030	< 1	2.21
877805	< 2	8	< 5	< 0.3	6.81	< 3	21	< 1	< 2	9.01	< 0.3	60	90	12	7.74	18	< 1	0.18	3.30	7	1080	< 1	1.86
877806	< 2	< 5	< 5	< 0.3	6.79	< 3	24	< 1	< 2	8.65	< 0.3	59	79	6	8.11	18	< 1	0.18	3.35	7	1050	< 1	2.08
877807	5	69	36	< 0.3	7.04	< 3	45	< 1	< 2	8.15	< 0.3	60	75	219	10.0	18	2	0.33	3.85	7	1330	< 1	1.90
877808	6	46	50	< 0.3	6.85	< 3	66	< 1	< 2	7.65	< 0.3	62	73	209	10.1	17	3	0.41	4.39	12	1220	< 1	1.70
877809	5	42	48	< 0.3	6.84	< 3	63	< 1	< 2	7.88	< 0.3	58	64	204	9.78	17	2	0.37	4.18	12	1210	< 1	1.80
877810	246	5110	430	0.5	8.34	< 3	49	< 1	< 2	5.80	< 0.3	78	142	1270	6.30	10	< 1	0.24	7.28	22	951	< 1	1.15
877811	15	128	147	< 0.3	6.90	< 3	32	< 1	< 2	8.49	< 0.3	68	70	895	10.2	17	3	0.27	4.24	6	1130	< 1	1.73
877812	3	46	57	< 0.3	6.73	< 3	50	< 1	< 2	8.57	< 0.3	57	66	164	10.2	18	7	0.32	4.24	7	1170	< 1	1.65
877813	< 2	< 5	< 5	< 0.3	6.72	7	54	< 1	< 2	8.61	< 0.3	56	61	31	10.2	18	6	0.35	4.28	7	1210	< 1	1.60
877814	39	196	32	0.4	6.50	< 3	62	< 1	< 2	7.14	< 0.3	96	126	1710	10.8	16	6	0.37	3.12	14	1210	< 1	2.08
877815	< 2	7	< 5	< 0.3	6.93	< 3	30	< 1	< 2	8.25	< 0.3	48	70	66	8.74	17	1	0.23	3.23	6	1030	< 1	1.90
877816	< 2	< 5	< 5	< 0.3	6.86	< 3	26	< 1	< 2	9.02	< 0.3	47	57	11	8.38	19	2	0.19	3.30	4	1030	< 1	1.73
877817	< 2	14	38	< 0.3	6.69	< 3	38	< 1	< 2	8.48	< 0.3	45	49	12	7.79	18	2	0.26	3.41	12	1010	< 1	1.95
877818	< 2	27	46	< 0.3	6.56	< 3	34	< 1	< 2	6.70	< 0.3	46	67	1	9.09	15	< 1	0.22	3.51	8	1190	< 1	2.46
877819	< 2	9	< 5	< 0.3	6.54	< 3	32	< 1	< 2	8.20	< 0.3	52	53	11	9.90	22	5	0.24	3.14	6	1070	< 1	1.75
877820	< 2	5	< 5	< 0.3	6.12	4	26	< 1	< 2	8.88	< 0.3	58	59	46	10.1	24	2	0.21	3.06	4	1060	< 1	1.49
877821	2	< 5	< 5	< 0.3	6.11	< 3	26	< 1	< 2	7.91	< 0.3	54	66	211	10.7	23	3	0.22	3.20	6	1140	< 1	1.88
877822	< 2	< 5	6	< 0.3	6.28	< 3	22	< 1	< 2	8.14	< 0.3	55	68	23	10.3	20	8	0.19	3.27	5	1120	< 1	1.78
877823	18	< 5	< 5	< 0.3	5.87	< 3	19	< 1	< 2	7.71	< 0.3	53	79	18	9.77	21	< 1	0.17	2.99	5	1070	< 1	1.83
877824	< 2	< 5	< 5	< 0.3	6.27	< 3	21	< 1	< 2	6.40	< 0.3	50	78	28	9.88	17	1	0.20	3.21	10	1040	< 1	2.38
877825	10	16	7	< 0.3	6.59	< 3	28	< 1	< 2	5.77	< 0.3	62	95	443	11.0	17	1	0.25	3.24	13	1120	< 1	2.43
877826	39	72	225	1.2	6.56	5	56	< 1	< 2	6.07	< 0.3	95	86	3410	12.5	21	5	0.36	2.92	19	1150	26	2.17
877827	1340	68	1080	7.7	6.10	< 3	50	< 1	< 2	7.69	0.6	143	77	> 10000	15.2	23	3	0.36	2.70	19	1120	2	1.30
877828	5	17	15	< 0.3	6.61	< 3	41	< 1	< 2	6.45	< 0.3	80	60	77	11.4	18	6	0.31	3.04	12	1140	< 1	2.19
877829	11	258	15	0.4	7.11	< 3	62	< 1	2	6.36	< 0.3	77	127	863	12.5	22	2	0.38	2.95	19	1200	4	2.29
877830	< 2	5	29	< 0.3	7.63	< 3	82	< 1	< 2	7.29	< 0.3	64	50	187	10.3	24	< 1	0.36	3.16	13	1050	< 1	2.54

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
877831	< 2	< 5	< 5	< 0.3	6.76	5	50	< 1	< 2	8.30	< 0.3	68	60	8	8.82	20	1	0.25	3.42	8	1070	< 1	2.10
877832	< 2	< 5	< 5	< 0.3	6.59	6	35	< 1	< 2	8.85	< 0.3	72	52	2	8.36	20	3	0.19	3.38	5	1070	< 1	1.91
877833	< 2	< 5	< 5	< 0.3	5.63	< 3	35	< 1	4	7.96	< 0.3	62	77	7	6.95	18	< 1	0.17	2.64	5	992	< 1	1.91
877834	< 2	< 5	< 5	< 0.3	6.85	7	53	< 1	4	7.94	< 0.3	59	66	49	7.44	20	< 1	0.25	2.71	7	1040	< 1	2.32
877835	< 2	< 5	< 5	< 0.3	0.46	< 3	20	< 1	< 2	0.05	< 0.3	< 1	9	3	0.06	< 1	< 1	0.18	0.03	< 1	102	< 1	0.02
877836	5	< 5	< 5	< 0.3	7.72	< 3	196	< 1	< 2	5.73	< 0.3	42	48	351	6.23	20	< 1	0.29	2.48	8	813	< 1	3.48
877837	< 2	< 5	13	< 0.3	6.95	< 3	108	< 1	< 2	7.07	< 0.3	52	52	31	8.18	20	< 1	0.37	2.77	8	1100	< 1	2.59
877838	< 2	< 5	< 5	< 0.3	7.04	< 3	29	< 1	< 2	8.09	< 0.3	54	48	1	7.33	17	1	0.15	2.87	3	1080	< 1	2.48
877839	< 2	< 5	< 5	< 0.3	7.50	17	65	< 1	< 2	7.81	< 0.3	69	59	2	7.75	24	7	0.24	2.87	4	985	< 1	2.52
877840	< 2	14	54	< 0.3	7.32	< 3	109	< 1	< 2	6.09	< 0.3	61	47	79	11.2	21	3	0.53	2.62	15	1120	3	2.67
877841	< 2	< 5	< 5	< 0.3	6.38	< 3	289	< 1	< 2	6.96	< 0.3	51	301	117	7.90	17	< 1	0.73	5.11	34	1140	< 1	1.86
877842	< 2	< 5	< 5	< 0.3	6.38	< 3	172	< 1	< 2	7.63	< 0.3	52	144	76	8.33	18	< 1	0.41	3.99	22	1140	< 1	2.16
877843	< 2	< 5	< 5	< 0.3	5.88	< 3	39	< 1	4	7.46	< 0.3	55	74	< 1	8.13	20	< 1	0.19	3.15	7	1120	< 1	2.20
877844	< 2	< 5	< 5	< 0.3	6.31	< 3	28	< 1	< 2	7.78	< 0.3	55	55	1	8.39	19	2	0.17	3.13	7	1060	< 1	2.16
877845	< 2	17	< 5	< 0.3	6.78	< 3	26	< 1	3	8.78	< 0.3	62	42	18	8.45	22	< 1	0.16	3.30	9	995	< 1	2.15
877846	< 2	< 5	< 5	< 0.3	7.14	< 3	25	< 1	3	8.53	< 0.3	53	45	6	7.78	22	< 1	0.13	2.92	4	987	< 1	2.43
877847	< 2	< 5	16	< 0.3	7.15	8	36	< 1	< 2	7.63	< 0.3	55	49	8	8.55	22	6	0.20	2.89	7	1020	< 1	2.66

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu
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
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
877634	46	0.020	< 3	< 5	0.06	31	122	10	0.18	< 5	< 10	171	< 5	16	76	21	
877635	2	0.002	< 3	< 5	0.01	< 4	5	< 2	0.03	< 5	< 10	3	< 5	4	2	8	
877636	74	0.028	< 3	< 5	0.16	28	81	< 2	0.11	< 5	< 10	160	< 5	19	80	11	
877637	83	0.020	5	< 5	0.31	22	73	< 2	0.34	< 5	< 10	307	< 5	19	78	25	
877638	57	0.021	< 3	< 5	0.08	23	92	< 2	0.29	< 5	< 10	234	< 5	13	65	24	
877639	53	0.018	< 3	6	0.05	31	119	< 2	0.29	< 5	< 10	229	< 5	17	88	35	
877640	34	0.012	4	< 5	0.05	34	125	< 2	0.32	< 5	< 10	214	< 5	17	55	29	
877641	29	0.015	< 3	< 5	0.15	34	115	6	0.46	< 5	< 10	254	< 5	17	58	33	
877642	44	0.043	6	< 5	0.08	34	143	12	0.44	< 5	< 10	230	< 5	16	58	28	
877643	40	0.025	3	< 5	0.07	19	124	10	0.51	< 5	< 10	264	< 5	11	51	29	
877644	35	0.018	< 3	< 5	0.08	29	100	12	0.41	< 5	< 10	248	< 5	13	72	34	
877645	37	0.017	< 3	< 5	0.11	36	113	5	0.25	< 5	< 10	167	< 5	17	64	21	
877646	62	0.010	< 3	< 5	0.07	33	125	< 2	0.29	< 5	< 10	213	< 5	10	48	21	
877647	108	0.010	4	< 5	0.12	46	89	5	0.47	< 5	< 10	247	< 5	10	58	18	
877648	129	0.012	< 3	< 5	0.10	33	84	12	0.47	< 5	< 10	253	< 5	9	69	13	
877649	116	0.014	< 3	< 5	0.15	36	80	< 2	0.48	< 5	< 10	260	< 5	11	62	14	
877650	71	0.007	< 3	< 5	0.16	32	117	14	0.32	< 5	< 10	214	< 5	9	46	23	
877651	75	0.010	< 3	< 5	0.06	30	131	12	0.41	< 5	< 10	294	< 5	10	45	24	
877652	67	0.012	< 3	< 5	0.06	29	141	8	0.37	< 5	< 10	263	< 5	9	51	22	
877653	60	0.011	< 3	< 5	0.06	15	121	< 2	0.32	< 5	< 10	198	< 5	6	39	20	
877654	55	0.015	< 3	< 5	0.07	25	107	10	0.39	< 5	< 10	227	< 5	10	44	32	
877655	61	0.008	< 3	< 5	0.08	27	145	5	0.19	< 5	< 10	96	< 5	10	51	19	
877656	106	0.011	< 3	< 5	0.09	34	93	4	0.28	< 5	< 10	205	< 5	10	70	16	
877657	68	0.008	< 3	< 5	0.07	30	35	< 2	0.30	< 5	< 10	166	< 5	50	58	16	
877658	79	0.011	4	< 5	0.04	33	78	11	0.38	< 5	< 10	266	< 5	8	55	28	
877659	78	0.007	< 3	< 5	0.04	34	115	< 2	0.28	< 5	< 10	261	< 5	10	41	21	
877660	1530	0.004	11	< 5	0.39	27	118	< 2	0.07	< 5	< 10	95	< 5	2	44	9	
877661	79	0.014	< 3	6	0.06	33	110	9	0.38	< 5	< 10	293	< 5	11	42	31	
877754	139	0.009	< 3	< 5	0.10	39	103	6	0.60	< 5	< 10	357	< 5	13	56	13	
877755	94	0.012	5	< 5	0.02	18	72	6	0.56	< 5	< 10	284	< 5	10	54	16	
877756	97	0.012	5	< 5	0.06	24	66	6	0.41	< 5	< 10	346	< 5	14	58	17	
877757	165	0.008	4	< 5	0.16	78	46	< 2	0.15	< 5	< 10	620	< 5	18	60	23	
877758	193	0.017	4	< 5	0.43	80	26	< 2	0.20	< 5	< 10	360	< 5	21	84	25	
877759	87	0.002	6	< 5	0.01	34	92	< 2	0.26	< 5	< 10	190	< 5	16	56	12	
877760	1520	0.004	9	< 5	0.39	27	116	12	0.07	< 5	< 10	96	9	2	44	7	
877761	58	0.002	11	< 5	< 0.01	38	149	< 2	0.19	< 5	< 10	210	< 5	16	43	8	
877762	127	0.008	6	< 5	0.03	50	106	< 2	0.34	< 5	< 10	203	< 5	14	57	10	
877763	157	0.004	< 3	< 5	0.04	40	119	3	0.33	< 5	< 10	264	< 5	12	50	9	
877764	137	0.004	< 3	< 5	0.04	35	148	6	0.25	< 5	< 10	254	< 5	10	54	11	
877765	186	0.003	5	< 5	0.06	37	106	7	0.22	< 5	< 10	243	< 5	10	56	11	
877766	112	0.003	3	< 5	< 0.01	39	112	< 2	0.18	< 5	< 10	204	< 5	12	55	13	



Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu
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
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
877767	86	0.003	13	< 5	< 0.01	38	122	< 2	0.16	< 5	< 10	172	< 5	12	53	11	
877768	298	0.016	< 3	< 5	0.32	33	112	6	0.20	< 5	< 10	149	< 5	9	68	7	
877769	96	0.003	5	< 5	0.06	31	98	4	0.43	< 5	< 10	220	< 5	15	61	17	
877770	62	0.006	< 3	< 5	0.07	36	168	< 2	0.30	< 5	< 10	221	< 5	10	54	10	
877771	74	0.007	11	< 5	0.26	33	91	< 2	0.14	< 5	< 10	137	5	9	72	< 5	
877772	123	0.005	4	< 5	0.11	37	115	6	0.41	< 5	< 10	255	< 5	11	55	12	
877773	135	0.003	< 3	< 5	0.04	41	125	< 2	0.46	< 5	< 10	274	< 5	11	44	13	
877795	75	0.011	< 3	< 5	< 0.01	24	93	16	0.66	< 5	< 10	292	< 5	10	43	11	
877796	97	0.007	< 3	< 5	0.01	38	94	9	0.24	< 5	< 10	208	< 5	13	39	10	
877797	129	0.012	< 3	< 5	0.14	37	92	7	0.35	< 5	< 10	199	< 5	13	43	13	
877798	165	0.002	3	< 5	0.02	39	117	< 2	0.24	< 5	< 10	156	< 5	12	45	16	
877799	234	0.009	9	< 5	< 0.01	39	155	< 2	0.19	< 5	< 10	159	< 5	15	31	13	
877800	226	0.030	4	< 5	< 0.01	38	153	5	0.22	< 5	< 10	140	< 5	15	29	13	
877801	203	0.041	4	< 5	0.06	39	145	5	0.27	< 5	< 10	118	< 5	14	33	10	
877802	207	0.035	< 3	< 5	0.39	41	129	< 2	0.61	< 5	< 10	231	< 5	13	43	19	
877803	321	0.062	< 3	< 5	0.28	35	147	< 2	0.27	< 5	< 10	155	< 5	16	35	9	
877804	163	0.068	5	< 5	0.04	24	149	8	0.73	< 5	< 10	267	< 5	11	28	17	
877805	226	0.083	< 3	< 5	< 0.01	36	149	< 2	0.39	< 5	< 10	217	< 5	18	30	11	
877806	187	0.062	< 3	< 5	< 0.01	38	152	< 2	0.13	< 5	< 10	153	< 5	18	31	7	
877807	191	0.010	6	< 5	0.13	37	125	< 2	0.27	< 5	< 10	241	< 5	13	59	14	
877808	231	0.005	< 3	< 5	0.05	35	111	7	0.33	< 5	< 10	244	< 5	10	52	12	
877809	207	0.004	< 3	< 5	0.04	36	129	< 2	0.28	< 5	< 10	236	< 5	13	47	13	
877810	1550	0.004	13	6	0.39	29	121	< 2	0.07	< 5	< 10	98	< 5	2	45	9	
877811	302	0.007	< 3	< 5	0.20	35	133	< 2	0.46	< 5	< 10	251	< 5	11	51	11	
877812	177	0.005	< 3	< 5	0.05	35	136	11	0.38	< 5	< 10	229	< 5	12	50	13	
877813	135	0.006	3	< 5	0.01	35	117	7	0.32	< 5	< 10	189	< 5	13	57	13	
877814	295	0.038	5	< 5	0.64	35	102	6	0.32	< 5	< 10	195	< 5	18	47	10	
877815	152	0.022	< 3	< 5	0.01	37	141	4	0.16	< 5	< 10	206	6	12	35	11	
877816	126	0.011	3	< 5	< 0.01	37	168	< 2	0.18	< 5	< 10	217	< 5	12	39	13	
877817	142	0.016	4	< 5	< 0.01	39	153	2	0.16	< 5	< 10	122	< 5	15	31	16	
877818	115	0.011	5	< 5	< 0.01	46	124	< 2	0.24	< 5	< 10	122	< 5	13	34	27	
877819	230	0.025	11	< 5	0.01	35	143	< 2	0.26	< 5	< 10	247	< 5	13	39	15	
877820	284	0.046	< 3	< 5	0.05	34	158	6	0.37	< 5	< 10	303	< 5	13	38	12	
877821	206	0.025	4	< 5	0.05	35	142	< 2	0.44	< 5	< 10	309	< 5	21	39	16	
877822	195	0.024	6	< 5	0.01	37	140	< 2	0.28	< 5	< 10	187	< 5	14	36	19	
877823	211	0.037	4	< 5	0.03	30	118	13	0.79	< 5	< 10	317	< 5	13	34	21	
877824	172	0.013	4	< 5	0.01	35	104	15	0.22	< 5	< 10	176	< 5	15	35	33	
877825	159	0.004	3	< 5	0.07	35	86	< 2	0.26	< 5	< 10	217	< 5	19	45	33	
877826	218	0.032	8	< 5	0.51	23	83	9	0.42	< 5	< 10	243	< 5	27	61	33	
877827	293	0.480	12	< 5	2.20	24	63	4	0.28	< 5	< 10	150	5	31	100	23	1.96
877828	145	0.002	4	< 5	0.01	32	80	< 2	0.33	< 5	< 10	154	< 5	28	50	36	

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu
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
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
877829	177	0.003	< 3	< 5	0.16	22	76	< 2	0.57	< 5	< 10	314	< 5	38	44	26	
877830	135	0.048	< 3	< 5	0.04	29	126	< 2	0.46	< 5	< 10	207	< 5	26	35	20	
877831	182	0.060	< 3	< 5	< 0.01	38	124	6	0.37	< 5	< 10	187	< 5	23	33	19	
877832	238	0.065	11	< 5	< 0.01	37	146	< 2	0.28	< 5	< 10	149	< 5	24	31	13	
877833	208	0.082	< 3	< 5	< 0.01	29	135	5	0.79	< 5	< 10	317	< 5	17	26	21	
877834	192	0.067	< 3	< 5	< 0.01	36	153	< 2	0.14	< 5	< 10	106	< 5	18	30	10	
877835	2	0.002	< 3	< 5	< 0.01	< 4	5	< 2	0.03	< 5	< 10	4	< 5	3	1	8	
877836	99	0.092	< 3	< 5	0.14	25	570	< 2	0.19	< 5	< 10	85	< 5	14	35	30	
877837	128	0.026	3	5	0.02	34	169	< 2	0.24	< 5	< 10	132	< 5	19	37	22	
877838	151	0.083	< 3	< 5	< 0.01	40	144	2	0.20	< 5	< 10	76	< 5	21	28	12	
877839	215	0.080	8	11	< 0.01	40	149	8	0.21	< 5	< 10	91	< 5	24	31	8	
877840	150	0.032	< 3	< 5	0.05	21	164	7	0.47	< 5	< 10	288	< 5	33	47	55	
877841	248	0.187	< 3	< 5	0.20	26	608	< 2	0.59	< 5	< 10	169	< 5	19	63	93	
877842	158	0.109	< 3	< 5	0.05	30	295	< 2	0.38	< 5	< 10	115	< 5	22	60	42	
877843	105	0.062	< 3	< 5	< 0.01	32	138	8	0.82	< 5	< 10	327	< 5	23	28	33	
877844	104	0.038	< 3	< 5	< 0.01	35	124	4	0.13	< 5	< 10	137	< 5	27	33	20	
877845	95	0.028	8	< 5	< 0.01	36	137	4	0.14	< 5	< 10	164	< 5	28	33	18	
877846	76	0.022	< 3	< 5	< 0.01	38	139	10	0.13	< 5	< 10	101	< 5	22	29	12	
877847	98	0.032	25	< 5	< 0.01	39	125	2	0.25	< 5	< 10	141	< 5	20	29	23	

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
GXR-1 Meas				32.1	2.18	452	657	1	1390	0.87	1.5	8	26	1180	23.6	11	4	0.05	0.20	8	896	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.0	2.16	436	640	1	1350	0.86	0.9	6	14	1120	22.9	10	8	0.04	0.20	8	836	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.6	7.09	107	196	2	11	1.08	< 0.3	16	36	6760	3.09	18	< 1	4.14	1.71	12	175	333	0.55
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.4	6.67	119	195	2	9	1.04	< 0.3	16	42	6370	2.95	18	6	3.32	1.63	11	145	321	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
CZN-3 Meas																							
CZN-3 Cert																							
SDC-1 Meas					8.40	< 3	630	3		1.08		19	38	28	4.77	22	1	1.93	0.97	33	866		1.59
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					7.63	11	570	3		0.98		19	59	27	4.63	21	2	1.53	0.93	33	852		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
GXR-6 Meas				0.4	12.6	244	> 1000	1	< 2	0.17	< 0.3	15	49	70	5.69	30	1	1.79	0.58	33	1070	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
GXR-6 Meas				0.3	12.3	214	> 1000	1	< 2	0.17	< 0.3	14	48	67	5.49	31	5	1.61	0.56	33	984	1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												662		9290	31.8								
OREAS 14P Cert												750		9970	37.2								
OREAS 14P Meas												660		8980	31.4								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						4						153	205	312	9.35								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						< 3						145	189	315	9.15								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
MP-1b Meas																							
MP-1b Cert																							
DNC-1a Meas							95					56	185	96		12					4		
DNC-1a Cert							118					57	270	100		15					5.2		
DNC-1a Meas							95					53	226	95		14					5		
DNC-1a Cert							118					57	270	100		15					5.2		
PK2 Meas	4980	6050	5000																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4880	6010	4840																				
PK2 Cert	4790	5918.000	4749.000																				

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
PK2 Meas	4640	5600	4590																				
PK2 Cert	4790	5918.000	4749.000																				
CCU-1d Meas																							
CCU-1d Cert																							
SBC-1 Meas							22	748	3	< 2	< 0.3	24	96	28		28					158		1
SBC-1 Cert							25.7	788.0	3.20	0.70	0.40	22.7	109			27.0					163		2
SBC-1 Meas							18	747	3	< 2	< 0.3	23	74	31		27					152		2
SBC-1 Cert							25.7	788.0	3.20	0.70	0.40	22.7	109			27.0					163		2
CDN-PGMS-25 Meas	497	1870	395																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	480	1890	424																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	486	1810	406																				
CDN-PGMS-25 Cert	483	1830	400																				
PTC-1b Meas																							
PTC-1b Cert																							
SdAR-M2 (U.S.G.S.) Meas							936	7	< 2		5.7	15	37	241		18	< 1				18		12
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44				18		13
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.4	14	32	237		18	< 1				18		8
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44				18		10
877644 Orig	< 2	< 5	< 5																				
877644 Dup	< 2	< 5	< 5																				
877646 Orig				< 0.3	8.79	6	46	< 1	< 2	7.13	< 0.3	41	37	79	7.78	16	6	0.23	2.71	8	1170	< 1	2.04
877646 Dup				< 0.3	8.76	< 3	45	< 1	< 2	7.13	< 0.3	41	32	77	7.78	18	1	0.23	2.71	8	1200	< 1	2.05
877654 Orig	< 2	< 5	< 5																				
877654 Dup	< 2	< 5	< 5																				
877660 Orig				0.5	7.87	4	47	< 1	2	5.50	< 0.3	74	130	1270	5.94	10	< 1	0.22	6.82	21	938	< 1	1.06
877660 Dup				3.6	8.06	< 3	47	< 1	3	5.67	< 0.3	75	140	1300	6.07	10	< 1	0.23	6.98	22	965	< 1	1.09
877757 Orig	3	16	387																				
877757 Dup	2	15	374																				
877771 Orig	32	20	37																				
877771 Dup	22	20	32																				

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
877796 Orig	4	9	12	< 0.3	6.86	< 3	51	< 1	< 2	6.99	< 0.3	48	141	47	9.49	17	5	0.34	3.65	10	1200	< 1	1.86
877796 Split PREP DUP	< 2	< 5	< 5	< 0.3	7.03	< 3	52	< 1	4	7.16	< 0.3	49	115	48	9.62	17	4	0.35	3.70	11	1170	< 1	1.87
877797 Orig				< 0.3	6.75	< 3	31	< 1	< 2	6.83	< 0.3	68	171	410	10.5	16	3	0.26	3.90	8	1310	< 1	1.85
877797 Dup				< 0.3	6.83	< 3	31	< 1	< 2	6.89	< 0.3	68	162	414	10.5	17	3	0.26	3.98	8	1310	< 1	1.88
877802 Orig	24	50	54																				
877802 Dup	23	50	53																				
877811 Orig				< 0.3	6.87	< 3	32	< 1	< 2	8.42	< 0.3	68	67	888	10.1	17	5	0.27	4.21	6	1110	< 1	1.71
877811 Dup				< 0.3	6.93	< 3	32	< 1	< 2	8.57	< 0.3	69	72	902	10.2	18	1	0.27	4.27	6	1140	< 1	1.75
877813 Orig	< 2	< 5	5																				
877813 Dup	< 2	< 5	< 5																				
877826 Orig	36	71	229	1.3	6.45	5	56	< 1	< 2	6.03	< 0.3	95	92	3390	12.4	21	6	0.36	2.89	19	1140	22	2.14
877826 Dup	42	72	222	1.2	6.67	5	57	< 1	< 2	6.11	< 0.3	95	81	3420	12.6	21	4	0.36	2.94	19	1160	29	2.20
877836 Orig	5	< 5	< 5																				
877836 Dup	5	< 5	< 5																				
877840 Orig				< 0.3	7.34	< 3	108	< 1	< 2	6.10	< 0.3	62	50	67	11.1	21	3	0.53	2.60	15	1110	3	2.65
877840 Dup				< 0.3	7.29	5	110	< 1	< 2	6.08	< 0.3	61	45	92	11.3	21	4	0.53	2.64	15	1130	2	2.68
877846 Orig	< 2	< 5	< 5	< 0.3	7.14	< 3	25	< 1	3	8.53	< 0.3	53	45	6	7.78	22	< 1	0.13	2.92	4	987	< 1	2.43
877846 Split PREP DUP	< 2	< 5	< 5	< 0.3	7.20	4	25	< 1	< 2	8.60	< 0.3	52	42	8	7.77	22	1	0.13	2.92	4	989	< 1	2.44
877847 Orig	< 2	< 5	18																				
877847 Dup	< 2	< 5	14																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	Cu
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
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
GXR-1 Meas	42	0.059	716	40	0.25	< 4	285	13	0.02	< 5	40	86	159	33	727	26	
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0	
GXR-1 Meas	40	0.057	706	27	0.24	< 4	274	13	0.02	< 5	30	84	145	32	685	24	
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0	
GXR-4 Meas	51	0.133	41	< 5	1.80	8	219	13	0.29	< 5	< 10	92	36	16	70	43	
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186	
GXR-4 Meas	45	0.125	51	11	1.77	8	205	7	0.28	< 5	< 10	87	35	15	68	42	
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186	
CZN-3 Meas																	0.703
CZN-3 Cert																	0.685
SDC-1 Meas	36	0.048	22	< 5		17	170		0.11	< 5	< 10	41	< 5		97	13	
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	0.052	21	12		15	159		0.25	< 5	< 10	62	< 5		94	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	
GXR-6 Meas	27	0.033	96	< 5	0.01	27	37	< 2		< 5	< 10	122	< 5	12	125	61	
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110	
GXR-6 Meas	27	0.030	91	< 5	0.01	25	35	< 2		< 5	< 10	95	< 5	12	122	48	
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110	
OREAS 14P Meas	> 10000																0.954
OREAS 14P Cert	21000																0.997
OREAS 14P Meas	> 10000																
OREAS 14P Cert	21000																
Oreas 72a (4 Acid Digest) Meas	6270				1.59												
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74												
Oreas 72a (4 Acid Digest) Meas	6270				1.59												
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74												
MP-1b Meas																	3.12
MP-1b Cert																	3.07
DNC-1a Meas	254		4	< 5		31	126		0.27			137		17	56	34	
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0	
DNC-1a Meas	244		8	< 5		31	123		0.26			136		16	51	33	
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																	

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu
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
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
PK2 Meas																	
PK2 Cert																	
CCU-1d Meas																	24.3
CCU-1d Cert																	23.93
SBC-1 Meas	86		31	< 5		21	171		0.47	< 5	< 10	214	< 5	35	183	111	
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		20	165		0.47	< 5	< 10	207	< 5	34	176	107	
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	
CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
PTC-1b Meas																	8.21
PTC-1b Cert																	7.97
SdAR-M2 (U.S.G.S.) Meas	53		826			4	146				< 10	27	8	30	792	124	
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259	
SdAR-M2 (U.S.G.S.) Meas	53		805			4	142				< 10	23	8	30	781	76	
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259	
877644 Orig																	
877644 Dup																	
877646 Orig	61	0.011	6	< 5	0.07	33	125	< 2	0.29	< 5	< 10	210	< 5	10	48	20	
877646 Dup	63	0.010	< 3	< 5	0.06	34	125	< 2	0.29	< 5	< 10	215	< 5	10	48	21	
877654 Orig																	
877654 Dup																	
877660 Orig	1520	0.004	11	< 5	0.37	27	116	3	0.07	< 5	< 10	94	< 5	2	44	9	
877660 Dup	1550	0.004	11	< 5	0.41	27	119	< 2	0.07	< 5	< 10	97	< 5	2	45	8	
877757 Orig																	
877757 Dup																	
877771 Orig																	
877771 Dup																	
877796 Orig	97	0.007	< 3	< 5	0.01	38	94	9	0.24	< 5	< 10	208	< 5	13	39	10	

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr	Cu
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
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
877796 Split PREP DUP	98	0.005	5	< 5	0.01	39	97	3	0.16	< 5	< 10	184	< 5	14	42	9	
877797 Orig	129	0.012	< 3	< 5	0.14	37	92	5	0.31	< 5	< 10	168	< 5	13	42	11	
877797 Dup	128	0.012	< 3	8	0.14	37	92	9	0.39	< 5	< 10	230	< 5	13	45	16	
877802 Orig																	
877802 Dup																	
877811 Orig	301	0.007	< 3	< 5	0.20	35	133	6	0.43	< 5	< 10	238	< 5	11	51	10	
877811 Dup	303	0.007	< 3	< 5	0.20	35	133	< 2	0.49	< 5	< 10	264	< 5	11	51	11	
877813 Orig																	
877813 Dup																	
877826 Orig	216	0.030	7	< 5	0.50	23	82	9	0.37	< 5	< 10	236	< 5	27	62	33	
877826 Dup	220	0.033	8	6	0.51	23	83	9	0.46	< 5	< 10	249	< 5	27	61	33	
877836 Orig																	
877836 Dup																	
877840 Orig	149	0.031	< 3	< 5	0.05	21	165	3	0.49	< 5	< 10	282	< 5	33	43	54	
877840 Dup	150	0.032	4	< 5	0.05	21	164	12	0.45	< 5	< 10	295	< 5	33	51	57	
877846 Orig	76	0.022	< 3	< 5	< 0.01	38	139	10	0.13	< 5	< 10	101	< 5	22	29	12	
877846 Split PREP DUP	79	0.022	< 3	< 5	< 0.01	38	141	< 2	0.19	< 5	< 10	123	< 5	22	32	16	
877847 Orig																	
877847 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
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	< 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	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	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5	
Method Blank																	< 0.001





**Date Submitted:** 19-Sep-17  
**Invoice No.:** A17-10201  
**Invoice Date:** 09-Oct-17  
**Your Reference:** North Rock

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

48 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT      **A17-10201**

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:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a horizontal line underneath.

Emmanuel Esemé , Ph.D.  
Quality Control

**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  
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## Results

## Activation Laboratories Ltd.

## Report: A17-10201

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
877965	< 2	< 5	< 5	< 0.3	7.28	< 3	21	< 1	< 2	6.50	< 0.3	43	69	2	10.2	20	2	0.17	3.24	6	1140	< 1	2.29
877966	< 2	6	< 5	< 0.3	6.96	< 3	29	< 1	< 2	6.57	< 0.3	45	78	8	10.7	20	5	0.22	3.35	8	1140	< 1	2.26
877967	< 2	< 5	< 5	< 0.3	7.35	< 3	26	< 1	< 2	6.72	< 0.3	44	103	5	10.7	21	2	0.20	3.31	8	1120	< 1	2.23
877968	< 2	< 5	< 5	< 0.3	7.00	< 3	30	< 1	< 2	7.04	< 0.3	46	83	8	11.0	21	1	0.21	3.07	8	1160	< 1	2.07
877969	< 2	6	6	< 0.3	7.32	5	122	< 1	< 2	6.49	< 0.3	46	103	53	10.6	19	2	0.47	3.21	16	1350	< 1	1.79
877970	< 2	< 5	6	< 0.3	7.74	< 3	27	< 1	< 2	6.95	< 0.3	45	103	< 1	10.2	20	5	0.18	3.82	8	1170	< 1	2.31
877971	< 2	< 5	< 5	< 0.3	7.47	7	24	< 1	< 2	7.06	< 0.3	40	59	4	9.51	20	6	0.16	3.20	7	999	< 1	2.18
877972	< 2	7	< 5	< 0.3	7.27	< 3	25	< 1	< 2	6.91	< 0.3	44	65	96	10.1	20	7	0.18	3.01	7	1060	< 1	2.12
877973	< 2	< 5	< 5	< 0.3	7.17	< 3	22	< 1	< 2	6.85	< 0.3	41	62	< 1	9.99	21	6	0.17	3.03	7	1060	< 1	2.15
877974	< 2	< 5	< 5	< 0.3	6.81	< 3	20	< 1	< 2	6.80	< 0.3	41	64	1	10.1	20	1	0.18	3.01	10	1010	< 1	1.97
877975	236	5200	408	0.4	7.94	< 3	46	< 1	< 2	5.64	< 0.3	75	142	1280	5.82	12	1	0.22	6.78	20	932	< 1	1.05
877976	< 2	< 5	6	< 0.3	6.82	< 3	29	< 1	< 2	6.75	< 0.3	42	61	8	9.93	20	2	0.22	3.13	11	1060	< 1	2.02
877977	2	< 5	< 5	< 0.3	7.41	< 3	23	< 1	< 2	6.90	< 0.3	48	76	81	10.6	19	3	0.18	3.20	9	1120	< 1	2.22
877978	< 2	43	9	< 0.3	6.64	< 3	20	< 1	2	5.59	< 0.3	47	101	23	10.4	17	< 1	0.15	3.05	8	1200	< 1	2.48
877979	< 2	95	72	< 0.3	6.60	4	20	< 1	4	6.46	< 0.3	41	81	< 1	9.75	19	2	0.16	2.74	8	1010	< 1	2.10
877980	< 2	18	21	< 0.3	7.11	< 3	24	< 1	5	7.05	< 0.3	40	68	< 1	9.71	22	< 1	0.19	2.66	10	993	< 1	2.06
877981	< 2	< 5	5	< 0.3	7.17	< 3	21	< 1	< 2	6.27	< 0.3	51	75	< 1	11.1	17	< 1	0.17	3.18	9	1260	< 1	2.31
877982	< 2	< 5	< 5	< 0.3	7.28	4	20	< 1	< 2	6.70	< 0.3	50	69	3	10.6	20	6	0.14	3.19	8	1180	< 1	2.17
877983	< 2	< 5	< 5	< 0.3	7.27	< 3	22	< 1	< 2	6.75	< 0.3	52	75	1	10.9	20	6	0.16	3.11	9	1130	< 1	2.14
877984	< 2	< 5	< 5	< 0.3	6.78	< 3	25	< 1	< 2	6.76	< 0.3	51	76	7	10.7	22	5	0.17	3.05	8	1120	< 1	2.13
877985	< 2	5	< 5	< 0.3	6.84	< 3	23	< 1	< 2	6.66	< 0.3	50	71	11	10.5	19	3	0.15	3.10	8	1230	< 1	2.25
877986	< 2	< 5	8	< 0.3	7.25	< 3	22	< 1	< 2	7.22	< 0.3	48	70	6	10.0	22	6	0.14	3.05	9	1240	< 1	2.24
877987	< 2	22	11	< 0.3	6.81	3	27	< 1	< 2	6.74	< 0.3	47	82	89	9.79	19	3	0.17	3.04	10	1200	< 1	2.15
877988	< 2	10	10	< 0.3	6.46	< 3	28	< 1	< 2	6.70	< 0.3	45	112	38	9.80	19	< 1	0.17	3.01	9	1280	< 1	2.00
877989	< 2	< 5	6	< 0.3	7.14	5	41	< 1	< 2	6.36	< 0.3	50	129	45	10.6	18	3	0.23	3.41	15	1340	< 1	2.04
877990	< 2	6	7	< 0.3	7.01	< 3	32	< 1	< 2	6.63	< 0.3	52	124	64	10.3	19	< 1	0.22	3.37	8	1300	< 1	1.96
877991	< 2	6	< 5	< 0.3	7.88	3	100	< 1	< 2	5.86	< 0.3	38	138	76	7.54	18	1	0.35	3.11	23	1040	< 1	2.64
877992	< 2	7	7	< 0.3	7.70	< 3	60	< 1	< 2	7.16	< 0.3	45	134	84	8.93	18	3	0.29	3.64	9	1290	< 1	1.99
877993	< 2	7	7	< 0.3	7.98	< 3	51	< 1	< 2	7.17	< 0.3	47	136	108	8.78	18	1	0.27	3.61	10	1290	< 1	2.00
877994	< 2	8	8	< 0.3	7.47	< 3	35	< 1	3	7.50	< 0.3	51	142	104	9.15	17	< 1	0.22	3.92	7	1330	1	1.73
877995	< 2	7	8	< 0.3	7.08	< 3	25	< 1	< 2	7.15	< 0.3	51	112	53	10.3	19	5	0.19	3.70	6	1350	< 1	1.89
877996	< 2	7	8	< 0.3	7.27	< 3	27	< 1	< 2	6.60	< 0.3	51	75	16	10.8	19	3	0.18	3.27	10	1350	< 1	2.36
877997	6	175	822	< 0.3	6.59	3	24	< 1	< 2	7.41	< 0.3	50	100	241	10.9	19	7	0.19	3.20	7	1230	< 1	1.82
877998	< 2	7	10	< 0.3	6.58	< 3	25	< 1	< 2	6.39	< 0.3	47	106	36	10.5	18	< 1	0.17	2.94	6	1200	< 1	2.01
877999	< 2	5	< 5	< 0.3	6.99	4	26	< 1	2	6.65	< 0.3	47	77	12	11.0	20	3	0.19	3.03	8	1220	< 1	2.07
878000	< 2	< 5	< 5	< 0.3	0.47	< 3	22	< 1	< 2	0.04	< 0.3	< 1	6	3	0.06	< 1	< 1	0.20	0.03	< 1	11	< 1	0.02
356101	< 2	7	< 5	< 0.3	7.11	6	27	< 1	< 2	6.51	< 0.3	44	77	12	10.5	21	3	0.17	3.13	5	1230	< 1	2.24
356102	31	31	19	< 0.3	6.06	< 3	25	< 1	< 2	6.02	< 0.3	129	94	1130	12.3	17	4	0.16	2.95	7	1170	< 1	2.03
356103	52	84	69	0.4	6.33	3	26	< 1	< 2	6.46	< 0.3	80	90	2370	11.4	17	3	0.18	3.14	7	1170	< 1	1.91
356104	485	308	11	< 0.3	6.63	< 3	27	< 1	25	6.36	< 0.3	73	94	218	11.5	19	2	0.19	3.16	7	1240	< 1	2.09
356105	59	35	6	< 0.3	7.13	< 3	26	< 1	3	6.33	< 0.3	50	80	142	11.2	19	1	0.18	3.21	5	1290	< 1	2.24
356106	4	48	29	< 0.3	6.93	10	25	< 1	< 2	6.42	< 0.3	51	76	117	10.7	19	4	0.18	3.19	6	1230	< 1	2.09

## Results

## Activation Laboratories Ltd.

## Report: A17-10201

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
356107	< 2	< 5	7	< 0.3	6.73	< 3	24	< 1	2	6.15	< 0.3	46	76	38	10.0	18	5	0.18	2.99	12	1110	< 1	2.12
356108	< 2	< 5	5	< 0.3	7.06	3	26	< 1	< 2	6.70	< 0.3	49	93	2	10.6	19	2	0.18	3.32	7	1170	< 1	2.05
356109	< 2	6	< 5	< 0.3	7.41	5	29	< 1	< 2	7.17	< 0.3	47	88	16	10.1	20	4	0.19	3.66	7	1210	< 1	2.03
356110	< 2	< 5	< 5	< 0.3	7.72	< 3	83	< 1	< 2	6.90	< 0.3	45	87	7	9.27	20	6	0.26	3.57	8	1090	< 1	2.15
356111	< 2	< 5	< 5	< 0.3	7.29	< 3	87	< 1	< 2	6.75	< 0.3	43	79	18	9.51	19	2	0.33	3.64	12	1150	< 1	2.06
356112	< 2	< 5	< 5	< 0.3	7.49	< 3	91	< 1	< 2	6.54	< 0.3	48	83	24	9.71	19	< 1	0.31	3.47	9	1190	< 1	2.10

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
877965	51	0.011	4	< 5	< 0.01	38	122	< 2	0.34	< 5	< 10	218	< 5	13	35	17
877966	55	0.013	5	< 5	< 0.01	35	117	3	0.41	< 5	< 10	224	< 5	15	34	20
877967	48	0.013	< 3	< 5	< 0.01	38	120	10	0.37	< 5	< 10	209	< 5	15	35	19
877968	48	0.014	6	< 5	0.02	36	123	< 2	0.38	< 5	< 10	244	< 5	14	45	17
877969	63	0.008	4	6	0.04	37	119	< 2	0.23	< 5	< 10	218	< 5	13	56	22
877970	68	0.007	< 3	< 5	< 0.01	39	118	9	0.19	< 5	< 10	159	< 5	14	45	15
877971	53	0.009	< 3	< 5	< 0.01	38	112	5	0.19	< 5	< 10	171	< 5	13	39	14
877972	62	0.011	< 3	< 5	0.03	39	107	10	0.26	< 5	< 10	210	< 5	14	36	14
877973	46	0.012	7	5	< 0.01	37	116	10	0.30	< 5	< 10	188	< 5	15	34	15
877974	44	0.010	7	< 5	< 0.01	36	115	5	0.32	< 5	< 10	215	< 5	14	36	14
877975	1510	0.003	14	< 5	0.38	27	118	4	0.07	6	< 10	98	< 5	2	45	8
877976	54	0.009	5	< 5	< 0.01	37	118	11	0.31	< 5	< 10	189	< 5	14	41	14
877977	59	0.011	7	< 5	0.02	39	122	< 2	0.29	< 5	< 10	217	< 5	15	40	17
877978	70	0.007	11	< 5	0.02	35	110	8	0.47	< 5	< 10	265	< 5	11	35	18
877979	63	0.004	7	< 5	< 0.01	37	167	7	0.14	< 5	< 10	193	< 5	12	32	12
877980	49	0.006	< 3	< 5	< 0.01	39	188	7	0.17	< 5	< 10	194	< 5	14	32	13
877981	51	0.009	6	< 5	< 0.01	38	123	< 2	0.27	< 5	< 10	185	< 5	15	39	15
877982	45	0.012	4	< 5	< 0.01	37	146	< 2	0.26	< 5	< 10	154	< 5	17	38	20
877983	48	0.017	< 3	< 5	< 0.01	39	110	< 2	0.31	< 5	< 10	203	< 5	18	42	23
877984	48	0.016	11	< 5	0.02	38	108	< 2	0.34	< 5	< 10	185	< 5	17	47	19
877985	48	0.017	9	< 5	< 0.01	37	113	< 2	0.39	< 5	< 10	194	< 5	16	39	19
877986	48	0.013	< 3	< 5	< 0.01	39	152	15	0.33	< 5	< 10	198	< 5	19	43	16
877987	75	0.008	6	< 5	0.02	36	126	11	0.24	< 5	< 10	214	< 5	17	40	16
877988	61	0.019	< 3	< 5	0.03	32	117	7	0.64	< 5	< 10	303	< 5	14	45	17
877989	82	0.019	6	< 5	0.06	36	120	8	0.23	< 5	< 10	215	< 5	15	57	25
877990	65	0.013	4	< 5	0.09	37	129	< 2	0.25	< 5	< 10	217	< 5	16	56	18
877991	82	0.061	< 3	< 5	0.12	26	253	< 2	0.30	< 5	< 10	156	< 5	21	50	79
877992	96	0.024	3	< 5	0.09	34	141	< 2	0.45	< 5	< 10	260	< 5	20	58	66
877993	99	0.024	< 3	< 5	0.10	33	138	9	0.49	< 5	< 10	267	< 5	19	60	66
877994	109	0.019	< 3	7	0.11	35	124	< 2	0.52	< 5	< 10	297	< 5	15	62	38
877995	80	0.015	< 3	< 5	0.05	39	117	5	0.45	< 5	< 10	246	< 5	15	56	19
877996	61	0.014	< 3	< 5	0.03	39	112	4	0.34	< 5	< 10	195	< 5	16	52	21
877997	100	0.008	4	< 5	0.03	39	96	< 2	0.22	< 5	< 10	277	< 5	21	50	21
877998	64	0.016	3	< 5	0.02	34	115	5	0.45	< 5	< 10	272	< 5	14	44	23
877999	53	0.012	5	< 5	< 0.01	39	143	< 2	0.15	< 5	< 10	176	< 5	16	47	28
878000	2	0.002	< 3	< 5	0.01	< 4	6	< 2	0.03	< 5	< 10	3	< 5	4	1	10
356101	57	0.010	4	< 5	< 0.01	39	139	8	0.30	< 5	< 10	183	< 5	16	47	25
356102	861	0.012	10	< 5	1.76	35	116	< 2	0.47	< 5	< 10	245	< 5	14	46	21
356103	529	0.030	< 3	< 5	1.06	37	121	< 2	0.42	< 5	< 10	252	< 5	16	51	25
356104	352	0.018	< 3	< 5	0.68	36	122	< 2	0.61	< 5	< 10	296	< 5	15	47	23
356105	82	0.013	< 3	< 5	0.10	38	117	6	0.58	< 5	< 10	271	< 5	15	46	25
356106	74	0.011	< 3	< 5	0.02	38	107	7	0.30	< 5	< 10	183	< 5	16	45	26

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
356107	53	0.014	7	< 5	< 0.01	36	100	9	0.15	< 5	< 10	202	< 5	15	39	30
356108	60	0.018	5	< 5	< 0.01	37	114	5	0.20	< 5	< 10	172	< 5	18	42	31
356109	79	0.024	< 3	< 5	< 0.01	36	125	7	0.25	< 5	< 10	157	< 5	21	56	34
356110	90	0.032	3	< 5	< 0.01	32	250	9	0.30	< 5	< 10	151	< 5	19	41	49
356111	88	0.027	3	< 5	0.03	32	216	2	0.36	< 5	< 10	179	< 5	18	45	46
356112	87	0.039	3	< 5	0.04	32	237	7	0.39	< 5	< 10	188	< 5	18	45	49

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
GXR-1 Meas				32.1	2.18	452	657	1	1390	0.87	1.5	8	26	1180	23.6	11	4	0.05	0.20	8	896	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.0	2.16	436	640	1	1350	0.86	0.9	6	14	1120	22.9	10	8	0.04	0.20	8	836	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.6	7.09	107	196	2	11	1.08	< 0.3	16	36	6760	3.09	18	< 1	4.14	1.71	12	175	333	0.55
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.4	6.67	119	195	2	9	1.04	< 0.3	16	42	6370	2.95	18	6	3.32	1.63	11	145	321	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.40	< 3	630	3		1.08		19	38	28	4.77	22	1	1.93	0.97	33	866		1.59
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					7.63	11	570	3		0.98		19	59	27	4.63	21	2	1.53	0.93	33	852		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
GXR-6 Meas				0.4	12.6	244	> 1000	1	< 2	0.17	< 0.3	15	49	70	5.69	30	1	1.79	0.58	33	1070	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
GXR-6 Meas				0.3	12.3	214	> 1000	1	< 2	0.17	< 0.3	14	48	67	5.49	31	5	1.61	0.56	33	984	1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												662		9290	31.8								
OREAS 14P Cert												750		9970	37.2								
OREAS 14P Meas												660		8980	31.4								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						4						153	205	312	9.35								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
Oreas 72a (4 Acid Digest) Meas						< 3						145	189	315	9.15								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
DNC-1a Meas							95					56	185	96		12				4			
DNC-1a Cert							118					57	270	100		15				5.2			
DNC-1a Meas							95					53	226	95		14				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4700	5850	4740																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4740	5770	4650																				
PK2 Cert	4790	5918.000	4749.000																				
SBC-1 Meas						22	748	3	< 2		< 0.3	24	96	28		28				158		1	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0				163		2	
SBC-1 Meas						18	747	3	< 2		< 0.3	23	74	31		27				152		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	31.0000		27.0				163		2	
CDN-PGMS-25 Meas	443	1760	385																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	475	1800	444																				
CDN-PGMS-25 Cert	483	1830	400																				
SdAR-M2 (U.S.G.S.) Meas							936	7	< 2		5.7	15	37	241		18	< 1			18		12	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.4	14	32	237		18	< 1			18		8	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		10	
877974 Orig	< 2	< 5	< 5																				
877974 Dup	< 2	< 5	5																				
877981 Orig				< 0.3	7.17	< 3	21	< 1	< 2	6.29	< 0.3	51	76	< 1	11.1	18	< 1	0.17	3.19	10	1260	< 1	2.32
877981 Dup				< 0.3	7.17	< 3	21	< 1	< 2	6.24	< 0.3	52	74	2	11.1	17	3	0.17	3.18	9	1260	< 1	2.31
877985 Orig	< 2	5	5																				
877985 Dup	< 2	5	< 5																				
877995 Orig				< 0.3	7.08	< 3	25	< 1	< 2	7.18	< 0.3	51	110	53	10.3	18	5	0.18	3.71	6	1360	< 1	1.89
877995 Dup				< 0.3	7.09	< 3	25	< 1	< 2	7.12	< 0.3	50	113	52	10.3	19	5	0.19	3.69	6	1350	< 1	1.90
877996 Orig	< 2	7	7																				
877996 Dup	< 2	6	8																				
356109 Orig	< 2	7	5																				
356109 Dup	< 2	6	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 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	< 1	< 0.01
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	< 1	< 0.01
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	< 1	< 0.01
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	< 1	< 0.01
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	< 1	< 0.01
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	< 1	< 0.01
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	< 1	< 0.01
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	< 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
GXR-1 Meas	42	0.059	716	40	0.25	< 4	285	13	0.02	< 5	40	86	159	33	727	26
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	40	0.057	706	27	0.24	< 4	274	13	0.02	< 5	30	84	145	32	685	24
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	51	0.133	41	< 5	1.80	8	219	13	0.29	< 5	< 10	92	36	16	70	43
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	45	0.125	51	11	1.77	8	205	7	0.28	< 5	< 10	87	35	15	68	42
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	36	0.048	22	< 5		17	170		0.11	< 5	< 10	41	< 5		97	13
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	0.052	21	12		15	159		0.25	< 5	< 10	62	< 5		94	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
GXR-6 Meas	27	0.033	96	< 5	0.01	27	37	< 2		< 5	< 10	122	< 5	12	125	61
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
GXR-6 Meas	27	0.030	91	< 5	0.01	25	35	< 2		< 5	< 10	95	< 5	12	122	48
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6270				1.59											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
Oreas 72a (4 Acid Digest) Meas	6270				1.59											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
DNC-1a Meas	254		4	< 5		31	126		0.27			137		17	56	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	244		8	< 5		31	123		0.26			136		16	51	33
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																
SBC-1 Meas	86		31	< 5		21	171		0.47	< 5	< 10	214	< 5	35	183	111
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		20	165		0.47	< 5	< 10	207	< 5	34	176	107
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
CDN-PGMS-25 Meas																



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
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
SdAR-M2 (U.S.G.S.) Meas	53		826			4	146				< 10	27	8	30	792	124
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	53		805			4	142				< 10	23	8	30	781	76
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
877974 Orig																
877974 Dup																
877981 Orig	51	0.009	6	< 5	< 0.01	39	123	< 2	0.23	< 5	< 10	192	< 5	15	38	15
877981 Dup	50	0.010	6	< 5	< 0.01	38	123	10	0.32	< 5	< 10	178	< 5	15	39	14
877985 Orig																
877985 Dup																
877995 Orig	80	0.014	< 3	< 5	0.05	38	117	8	0.44	< 5	< 10	248	< 5	15	55	19
877995 Dup	80	0.015	< 3	< 5	0.05	39	118	3	0.47	< 5	< 10	244	< 5	15	57	19
877996 Orig																
877996 Dup																
356109 Orig																
356109 Dup																
Method Blank																
Method Blank																
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	< 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	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	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5



**Date Submitted:** 26-Sep-17  
**Invoice No.:** A17-10517  
**Invoice Date:** 13-Oct-17  
**Your Reference:** North Rock

**Metalcorp**  
**659 Maureen Street**  
**Thunder Bay ON P7B 6T2**  
**Canada**

**ATTN: Mitch Dumoulin**

## CERTIFICATE OF ANALYSIS

138 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT      **A17-10517**

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:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**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: A17-10517

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
877502	3	< 5	< 5	< 0.3	6.57	< 3	37	< 1	< 2	7.16	< 0.3	52	53	166	12.2	24	2	0.31	2.42	13	1400	< 1	1.67
877503	< 2	< 5	< 5	< 0.3	6.40	< 3	47	< 1	< 2	6.38	< 0.3	52	50	47	12.7	23	3	0.34	2.61	16	1760	< 1	2.03
877504	11	< 5	< 5	0.5	6.34	< 3	74	< 1	< 2	6.30	< 0.3	52	55	304	12.8	23	4	0.39	2.65	18	1710	< 1	2.02
877505	< 2	< 5	< 5	< 0.3	6.05	< 3	196	< 1	< 2	6.41	< 0.3	65	57	186	13.1	23	5	0.67	2.78	23	1790	2	1.92
356021	< 2	< 5	< 5	< 0.3	0.46	< 3	22	< 1	< 2	0.05	< 0.3	< 1	7	3	0.09	< 1	< 1	0.19	0.03	< 1	45	< 1	0.02
877506	3	< 5	< 5	0.6	4.33	5	119	< 1	3	7.43	< 0.3	278	39	1180	19.4	18	5	0.47	2.83	19	3230	< 1	1.18
877507	2	< 5	< 5	< 0.3	5.35	< 3	42	< 1	< 2	6.63	< 0.3	72	47	159	13.5	22	6	0.36	2.61	16	2190	59	1.88
877508	< 2	< 5	< 5	0.3	5.81	4	41	< 1	< 2	6.45	< 0.3	72	63	155	12.8	25	4	0.31	2.47	15	1530	< 1	1.89
877509	< 2	< 5	< 5	< 0.3	5.64	< 3	136	< 1	< 2	5.53	< 0.3	77	62	51	12.8	23	6	0.53	2.87	24	1580	< 1	1.91
877510	< 2	7	< 5	0.4	3.30	< 3	38	< 1	2	6.32	0.5	204	53	1460	15.3	21	2	0.26	2.18	14	1480	13	1.73
877511	< 2	< 5	< 5	< 0.3	4.75	< 3	49	< 1	< 2	6.54	< 0.3	52	60	26	12.3	23	< 1	0.32	2.51	15	1600	< 1	1.99
877512	< 2	< 5	< 5	< 0.3	5.86	< 3	41	< 1	< 2	6.60	< 0.3	52	51	25	12.0	22	2	0.30	2.50	14	1500	< 1	2.08
877513	< 2	< 5	< 5	< 0.3	6.57	< 3	44	< 1	< 2	6.39	< 0.3	57	74	39	12.6	22	4	0.34	2.81	17	1710	< 1	2.13
877514	< 2	< 5	< 5	0.3	5.71	< 3	41	< 1	< 2	6.35	< 0.3	97	76	341	13.2	22	6	0.35	2.70	19	1680	4	2.04
877515	< 2	< 5	< 5	< 0.3	6.00	< 3	51	< 1	< 2	6.56	< 0.3	65	70	84	13.0	23	6	0.36	2.92	19	1760	< 1	1.93
877516	< 2	< 5	< 5	0.5	4.82	7	43	< 1	9	8.18	< 0.3	127	65	6890	15.7	20	4	0.37	3.48	14	1940	139	1.09
877517	< 2	< 5	< 5	< 0.3	6.41	5	42	< 1	< 2	6.16	< 0.3	54	51	60	11.6	22	5	0.29	2.46	15	1480	< 1	2.09
877518	5	20	6	< 0.3	6.15	< 3	64	< 1	< 2	6.46	< 0.3	82	79	225	12.5	21	6	0.37	2.88	17	1510	< 1	1.98
877519	< 2	< 5	< 5	< 0.3	7.13	6	139	< 1	< 2	6.85	< 0.3	56	151	41	11.4	21	5	0.54	4.32	27	1660	< 1	1.87
877520	< 2	< 5	< 5	< 0.3	3.97	< 3	87	< 1	3	6.39	< 0.3	80	142	134	12.3	21	3	0.36	3.25	19	1650	5	1.84
877521	< 2	< 5	< 5	< 0.3	6.49	8	181	< 1	3	6.62	< 0.3	58	174	56	11.7	19	4	0.66	4.37	31	1710	< 1	1.88
877522	< 2	< 5	< 5	0.4	6.49	< 3	41	< 1	< 2	6.24	< 0.3	57	75	36	12.5	21	2	0.32	2.79	19	1490	< 1	2.03
877523	< 2	< 5	< 5	< 0.3	6.41	< 3	35	< 1	2	6.18	< 0.3	64	59	62	12.6	22	8	0.31	2.66	18	1440	< 1	1.88
877524	< 2	< 5	< 5	< 0.3	6.53	< 3	39	< 1	< 2	6.10	< 0.3	49	32	13	12.5	22	4	0.30	2.70	19	1400	< 1	2.04
877525	< 2	< 5	< 5	< 0.3	6.31	< 3	106	< 1	< 2	5.35	< 0.3	54	41	89	13.0	23	12	0.50	3.14	26	1450	< 1	1.69
877526	< 2	< 5	< 5	< 0.3	6.55	< 3	40	< 1	< 2	6.51	< 0.3	55	36	70	12.8	24	7	0.33	2.68	16	1570	< 1	2.07
877527	< 2	< 5	< 5	< 0.3	6.02	10	35	< 1	< 2	6.38	< 0.3	71	38	144	12.7	23	8	0.30	2.73	17	1520	< 1	1.87
877528	< 2	< 5	< 5	< 0.3	6.29	< 3	34	< 1	3	6.18	< 0.3	51	37	53	11.9	23	8	0.30	2.60	16	1450	< 1	2.00
877529	5	< 5	< 5	< 0.3	6.10	8	39	< 1	< 2	6.14	< 0.3	54	53	275	12.2	21	4	0.29	2.49	15	1400	< 1	2.14
877530	< 2	< 5	< 5	0.3	3.62	< 3	39	< 1	< 2	5.76	< 0.3	106	58	110	13.6	23	7	0.27	2.27	15	1430	< 1	2.10
356022	238	5320	409	0.4	7.75	< 3	50	< 1	< 2	5.99	< 0.3	81	271	1320	6.03	9	2	0.22	7.33	21	982	< 1	1.10
877531	< 2	6	5	< 0.3	6.21	< 3	39	< 1	< 2	6.33	< 0.3	86	60	197	12.8	23	5	0.28	2.47	15	1240	< 1	2.11
877532	< 2	< 5	< 5	< 0.3	6.71	< 3	37	< 1	< 2	6.40	< 0.3	47	53	62	12.3	21	5	0.28	2.67	16	1380	< 1	2.20
877533	< 2	< 5	< 5	< 0.3	6.55	< 3	32	< 1	< 2	6.38	< 0.3	51	37	65	12.4	23	7	0.27	2.71	17	1320	< 1	2.06
877534	3	< 5	< 5	< 0.3	6.55	< 3	43	< 1	< 2	6.50	< 0.3	51	43	126	12.7	22	7	0.32	2.71	17	1370	< 1	2.03
877535	16	< 5	< 5	0.5	6.36	< 3	40	< 1	< 2	6.96	< 0.3	50	47	492	12.2	25	10	0.32	2.48	15	1360	< 1	2.24
877536	4	< 5	< 5	< 0.3	6.27	3	43	< 1	< 2	6.55	< 0.3	53	48	157	12.4	23	8	0.33	2.50	16	1430	< 1	2.21
877537	6	< 5	< 5	< 0.3	6.06	< 3	47	< 1	< 2	6.11	< 0.3	58	48	237	12.3	22	12	0.32	2.44	15	1430	< 1	2.28
877538	< 2	< 5	< 5	0.4	5.91	< 3	50	< 1	< 2	6.12	< 0.3	94	55	252	12.6	22	6	0.33	2.51	17	1350	< 1	2.19
877539	2	6	< 5	< 0.3	5.21	6	41	< 1	< 2	8.03	< 0.3	166	31	213	13.7	20	6	0.30	2.50	14	1320	52	1.71
877540	< 2	< 5	< 5	< 0.3	6.47	7	53	< 1	< 2	6.15	< 0.3	55	54	67	12.4	22	4	0.33	2.57	16	1470	< 1	2.34
877541	< 2	< 5	< 5	< 0.3	6.36	< 3	53	< 1	3	6.27	< 0.3	59	97	73	12.6	22	5	0.35	2.51	15	1400	< 1	2.17

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
877542	< 2	< 5	< 5	< 0.3	6.04	< 3	45	< 1	< 2	6.17	< 0.3	76	52	109	12.6	22	6	0.34	2.51	16	1450	< 1	2.21
877543	< 2	< 5	< 5	0.5	5.68	4	48	< 1	3	5.82	< 0.3	107	57	3050	12.6	21	9	0.33	2.34	16	1340	< 1	1.90
877544	< 2	13	< 5	< 0.3	3.85	< 3	34	< 1	< 2	6.86	< 0.3	363	32	645	19.9	18	6	0.24	2.69	11	1350	7	1.12
877545	3	7	< 5	< 0.3	5.54	< 3	69	< 1	< 2	6.44	< 0.3	221	49	34	14.6	22	7	0.38	2.47	19	1410	< 1	1.86
877546	< 2	< 5	< 5	< 0.3	6.31	< 3	55	< 1	< 2	6.26	< 0.3	56	50	51	12.6	23	4	0.35	2.59	18	1500	< 1	2.31
877547	< 2	< 5	< 5	< 0.3	6.07	< 3	48	< 1	< 2	6.24	< 0.3	57	54	92	12.2	22	8	0.34	2.50	14	1430	< 1	2.15
877548	< 2	< 5	< 5	0.3	3.51	< 3	40	< 1	2	5.84	< 0.3	54	66	95	12.2	22	1	0.30	2.25	13	1530	< 1	2.27
877549	2	< 5	< 5	< 0.3	3.98	< 3	60	< 1	3	6.73	< 0.3	56	66	394	9.69	17	2	0.23	2.09	7	1180	< 1	1.44
877550	3	< 5	< 5	< 0.3	5.59	< 3	97	< 1	< 2	6.66	< 0.3	64	66	261	11.7	21	3	0.43	2.53	12	1520	< 1	2.13
877551	< 2	< 5	< 5	< 0.3	6.78	< 3	34	< 1	< 2	6.58	< 0.3	51	69	40	11.1	21	4	0.27	3.23	11	1690	< 1	2.16
877552	< 2	< 5	< 5	< 0.3	6.03	< 3	310	< 1	< 2	5.44	< 0.3	164	105	142	12.6	20	4	1.13	3.26	26	1650	< 1	1.69
877553	< 2	< 5	< 5	0.4	6.95	< 3	411	< 1	< 2	5.45	< 0.3	59	146	203	9.45	22	3	1.10	3.48	26	1200	< 1	2.63
877554	< 2	< 5	< 5	0.5	8.08	8	522	2	< 2	5.15	< 0.3	28	55	66	5.54	21	2	1.02	2.70	26	814	< 1	3.19
877555	< 2	7	6	< 0.3	6.79	5	570	< 1	< 2	5.31	< 0.3	71	245	435	12.5	21	3	1.84	4.53	46	1390	< 1	1.51
356023	< 2	< 5	< 5	< 0.3	0.45	< 3	22	< 1	< 2	0.05	< 0.3	< 1	11	4	0.12	1	< 1	0.19	0.03	< 1	29	< 1	0.02
877556	< 2	< 5	< 5	< 0.3	6.71	4	61	< 1	< 2	6.82	< 0.3	47	82	10	11.4	20	6	0.44	3.22	14	1580	< 1	1.96
877557	< 2	5	5	< 0.3	4.01	< 3	43	< 1	< 2	6.35	< 0.3	51	110	51	11.0	21	3	0.29	3.03	13	1610	< 1	2.01
877558	< 2	6	6	< 0.3	6.50	< 3	62	< 1	< 2	7.01	< 0.3	52	243	36	10.5	19	3	0.36	4.40	17	1650	< 1	1.88
877559	3	5	< 5	< 0.3	6.59	< 3	81	< 1	< 2	6.99	< 0.3	67	104	241	11.7	20	6	0.40	3.34	12	1630	< 1	1.91
877560	< 2	< 5	< 5	< 0.3	6.77	3	79	< 1	< 2	6.62	< 0.3	51	77	75	10.8	21	2	0.44	3.35	13	1590	< 1	2.17
877561	< 2	< 5	< 5	< 0.3	6.76	< 3	318	2	< 2	3.89	< 0.3	29	34	63	5.75	20	2	0.81	1.79	18	892	< 1	3.17
877562	< 2	< 5	< 5	< 0.3	6.50	4	109	< 1	< 2	6.91	< 0.3	52	88	74	11.1	20	3	0.55	3.41	15	1610	< 1	1.82
877563	< 2	< 5	< 5	< 0.3	6.68	< 3	76	< 1	< 2	6.42	< 0.3	47	72	3	10.5	19	2	0.44	3.59	17	1670	< 1	2.28
877564	< 2	< 5	< 5	< 0.3	6.64	< 3	70	< 1	< 2	6.68	< 0.3	49	72	102	10.8	20	2	0.43	3.47	17	1630	< 1	2.08
877565	< 2	< 5	6	< 0.3	6.60	< 3	70	< 1	< 2	6.96	< 0.3	53	74	117	11.3	21	7	0.45	3.41	16	1660	< 1	2.02
877566	< 2	< 5	< 5	0.3	6.40	< 3	69	< 1	< 2	7.04	< 0.3	49	95	43	12.6	22	4	0.52	3.16	16	1640	< 1	1.80
877567	2	< 5	< 5	< 0.3	4.13	< 3	213	< 1	< 2	6.17	< 0.3	51	125	114	11.3	22	1	0.80	2.85	24	1620	< 1	2.07
877568	2	5	6	< 0.3	6.15	< 3	130	< 1	2	6.88	< 0.3	53	128	131	11.1	19	3	0.61	3.01	16	1520	< 1	1.72
877569	6	< 5	< 5	< 0.3	6.39	< 3	294	1	< 2	6.55	< 0.3	51	94	172	11.3	20	3	1.21	3.06	23	1430	< 1	1.85
877570	6	< 5	< 5	< 0.3	5.97	< 3	223	2	< 2	6.63	< 0.3	53	86	219	10.9	20	2	1.11	2.91	21	1380	< 1	1.93
877571	54	< 5	< 5	< 0.3	5.79	< 3	250	2	2	6.24	< 0.3	53	75	353	10.9	18	3	0.99	2.78	19	1360	< 1	2.04
877572	3	7	< 5	< 0.3	6.13	17	156	2	< 2	6.63	< 0.3	51	92	254	10.9	19	3	0.65	2.62	12	1530	< 1	2.21
877573	2	< 5	< 5	< 0.3	6.25	< 3	129	< 1	< 2	6.55	< 0.3	50	75	196	11.4	20	4	0.66	2.93	16	1580	< 1	2.15
877574	< 2	< 5	< 5	< 0.3	6.31	< 3	159	< 1	< 2	6.16	< 0.3	53	83	89	12.0	21	6	0.66	2.96	19	1580	< 1	2.37
877575	< 2	< 5	< 5	< 0.3	6.23	< 3	134	1	< 2	6.91	< 0.3	53	79	170	11.6	21	5	0.65	3.26	16	1580	< 1	2.02
877576	4	< 5	< 5	< 0.3	5.70	< 3	277	2	< 2	6.07	< 0.3	55	86	311	10.8	21	3	0.92	3.08	25	1470	< 1	1.98
877577	4	< 5	< 5	< 0.3	4.44	< 3	56	< 1	< 2	6.44	< 0.3	96	65	400	9.96	13	1	0.30	2.47	6	1420	< 1	1.33
877578	3	< 5	< 5	< 0.3	5.28	< 3	66	< 1	< 2	6.91	< 0.3	95	85	616	10.1	15	3	0.30	2.48	7	1390	< 1	1.38
877579	4	< 5	< 5	< 0.3	5.20	< 3	63	< 1	< 2	7.39	< 0.3	78	78	488	9.23	16	2	0.24	2.45	7	1460	< 1	1.36
877580	< 2	< 5	< 5	< 0.3	6.87	< 3	108	< 1	< 2	7.34	< 0.3	50	77	61	11.2	22	4	0.50	3.33	17	1640	< 1	2.05
356024	255	5410	444	0.5	7.95	< 3	51	< 1	< 2	6.07	< 0.3	82	133	1340	6.19	11	< 1	0.23	7.52	21	971	< 1	1.12
877581	< 2	< 5	< 5	< 0.3	5.93	8	152	< 1	5	6.26	< 0.3	51	80	101	8.92	17	2	0.58	2.65	21	1470	< 1	1.59

## Results

## Activation Laboratories Ltd.

## Report: A17-10517

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
877582	< 2	< 5	< 5	< 0.3	6.70	21	61	< 1	< 2	6.70	< 0.3	68	130	86	10.6	20	4	0.34	3.52	15	1650	< 1	2.09
877583	5	< 5	< 5	< 0.3	3.72	< 3	36	< 1	< 2	4.87	< 0.3	33	120	118	6.03	13	2	0.20	2.00	7	983	7	0.97
877584	< 2	< 5	7	< 0.3	6.86	5	74	< 1	2	6.91	< 0.3	59	222	145	12.3	24	9	0.45	4.04	24	1790	2	1.66
877585	< 2	< 5	< 5	0.3	4.81	< 3	73	< 1	2	6.08	< 0.3	47	95	19	10.5	20	2	0.34	3.15	21	1690	< 1	1.97
877586	< 2	< 5	< 5	< 0.3	5.12	< 3	68	< 1	3	6.39	< 0.3	48	101	9	10.7	20	2	0.32	3.28	17	1600	51	2.01
877587	2	< 5	< 5	< 0.3	6.42	< 3	70	< 1	< 2	6.82	< 0.3	49	83	90	11.1	21	3	0.35	3.15	15	1550	< 1	1.83
877588	4	< 5	< 5	< 0.3	6.77	< 3	81	< 1	< 2	6.61	< 0.3	52	86	127	11.1	21	3	0.36	3.16	17	1490	< 1	2.12
877589	3	< 5	< 5	< 0.3	6.80	7	85	< 1	< 2	6.58	< 0.3	55	80	117	11.4	21	5	0.40	3.19	19	1540	< 1	2.11
877590	< 2	< 5	< 5	< 0.3	6.27	< 3	92	< 1	2	6.68	< 0.3	66	75	1180	12.2	21	8	0.40	2.98	19	1540	< 1	1.92
877591	< 2	< 5	< 5	< 0.3	6.69	< 3	120	< 1	< 2	5.98	< 0.3	63	70	135	11.5	21	5	0.51	3.17	24	1600	< 1	2.18
877592	< 2	< 5	< 5	0.4	5.98	< 3	144	< 1	3	5.95	< 0.3	101	72	1120	13.7	21	< 1	0.54	3.28	25	1350	16	1.84
877593	< 2	< 5	5	< 0.3	7.06	4	32	< 1	< 2	7.78	< 0.3	49	19	29	10.3	27	2	0.26	2.23	14	1020	< 1	1.65
877594	< 2	< 5	< 5	< 0.3	6.29	< 3	132	< 1	< 2	6.69	< 0.3	54	54	19	11.1	21	2	0.52	2.93	23	1220	< 1	1.82
877595	< 2	< 5	< 5	< 0.3	5.68	< 3	274	< 1	< 2	5.95	< 0.3	40	31	47	6.63	18	2	0.65	2.61	21	1050	2	2.74
877596	< 2	< 5	< 5	< 0.3	6.22	< 3	169	< 1	< 2	9.20	< 0.3	59	31	91	8.97	18	2	0.40	2.91	13	1440	2	1.77
877597	< 2	< 5	6	< 0.3	6.41	5	74	< 1	< 2	8.52	< 0.3	96	22	335	10.9	20	3	0.28	2.46	10	1370	< 1	1.51
877598	< 2	< 5	< 5	< 0.3	6.41	< 3	65	< 1	2	7.81	< 0.3	124	30	504	10.9	23	3	0.27	2.10	12	1050	< 1	1.63
877599	< 2	< 5	< 5	< 0.3	6.15	< 3	60	< 1	< 2	6.76	< 0.3	95	25	266	10.9	22	4	0.27	2.65	15	1230	< 1	2.05
877600	< 2	< 5	< 5	< 0.3	6.31	< 3	44	< 1	< 2	6.92	< 0.3	89	28	272	10.7	22	1	0.23	2.76	16	1220	< 1	1.89
877601	24	6	7	< 0.3	7.25	< 3	69	< 1	< 2	7.16	< 0.3	59	131	80	9.75	17	2	0.26	4.29	21	1480	< 1	2.08
877602	9	6	7	< 0.3	7.09	< 3	42	< 1	< 2	7.28	< 0.3	52	135	52	9.33	17	3	0.18	4.20	15	1380	< 1	2.01
877603	4	< 5	6	< 0.3	6.19	< 3	68	< 1	< 2	6.50	< 0.3	72	80	1120	11.3	20	4	0.29	2.79	16	1130	< 1	2.00
877604	7	< 5	6	< 0.3	6.11	< 3	41	< 1	4	7.19	< 0.3	64	25	161	10.3	21	3	0.21	2.64	14	1230	< 1	2.07
877605	< 2	< 5	< 5	0.3	4.27	3	56	< 1	< 2	6.20	< 0.3	75	30	235	9.84	21	3	0.19	2.39	13	1220	< 1	2.25
356025	5	< 5	< 5	< 0.3	0.44	< 3	22	< 1	< 2	0.05	< 0.3	< 1	18	4	0.08	1	< 1	0.19	0.03	< 1	42	< 1	0.02
877606	< 2	< 5	< 5	< 0.3	6.60	< 3	55	< 1	< 2	6.67	< 0.3	59	28	168	10.7	21	2	0.25	2.92	13	1370	< 1	2.23
877607	< 2	< 5	< 5	< 0.3	6.50	< 3	521	< 1	< 2	6.77	< 0.3	62	152	296	8.91	22	2	0.91	3.36	20	1080	< 1	1.98
877608	< 2	< 5	< 5	< 0.3	6.71	< 3	608	1	< 2	4.19	< 0.3	36	253	45	4.34	17	< 1	1.55	5.25	40	761	< 1	3.13
877609	< 2	< 5	< 5	< 0.3	6.60	< 3	157	< 1	< 2	7.03	< 0.3	53	268	31	8.49	15	2	0.59	5.17	22	1380	3	1.85
877610	< 2	7	< 5	< 0.3	6.27	< 3	253	< 1	< 2	5.98	< 0.3	132	210	640	12.3	15	3	1.04	4.35	35	1230	339	1.80
877611	< 2	108	< 5	0.6	4.29	< 3	72	2	4	4.49	< 0.3	577	122	1140	22.4	16	6	0.98	3.97	38	1180	8	0.89
877612	< 2	< 5	7	< 0.3	6.41	7	221	< 1	< 2	6.83	< 0.3	56	212	10	10.2	16	2	0.91	5.46	36	1780	2	1.55
877613	< 2	< 5	7	< 0.3	6.52	< 3	39	< 1	< 2	8.11	< 0.3	65	188	190	10.9	19	2	0.25	3.61	11	1710	1	1.60
877614	< 2	< 5	6	< 0.3	6.03	< 3	31	< 1	4	8.17	< 0.3	40	36	79	9.12	19	1	0.21	2.56	11	1590	2	1.16
877615	< 2	< 5	9	< 0.3	5.77	< 3	25	< 1	6	6.96	< 0.3	33	34	2	7.43	16	2	0.16	2.56	10	1520	< 1	1.44
877616	4	32	27	< 0.3	6.35	< 3	54	< 1	< 2	8.12	< 0.3	47	45	280	8.68	16	2	0.26	3.71	9	1370	< 1	1.62
877617	< 2	26	44	< 0.3	11.6	< 3	170	< 1	< 2	6.95	< 0.3	30	21	136	5.41	18	1	0.45	2.43	20	736	< 1	3.00
877618	7	61	41	< 0.3	7.86	< 3	50	< 1	< 2	8.28	< 0.3	53	42	334	6.75	16	2	0.19	3.67	9	976	< 1	1.98
877619	4	61	27	< 0.3	6.96	< 3	34	< 1	< 2	8.62	< 0.3	62	61	243	7.74	13	2	0.18	4.20	7	1080	< 1	1.60
877620	5	69	33	0.4	5.96	< 3	35	< 1	< 2	8.24	< 0.3	73	78	380	9.42	14	2	0.23	5.35	10	1270	< 1	1.35
877621	14	51	35	< 0.3	5.79	3	25	< 1	< 2	9.10	< 0.3	53	60	397	8.86	14	3	0.18	5.38	8	1340	< 1	1.13
877622	8	121	77	0.6	4.41	< 3	66	< 1	< 2	7.59	< 0.3	92	79	511	12.2	11	4	0.39	6.01	19	1530	1	0.90

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
877623	13	181	93	< 0.3	4.10	5	29	< 1	< 2	7.55	< 0.3	85	89	397	11.5	11	3	0.25	5.51	13	1480	< 1	0.96
877624	3	80	53	< 0.3	4.78	5	26	< 1	< 2	7.98	< 0.3	102	109	595	12.0	11	3	0.24	5.94	12	1410	3	1.05
877625	3	140	29	< 0.3	5.47	< 3	31	< 1	3	7.97	< 0.3	114	155	1100	11.7	12	5	0.24	5.52	11	1290	5	1.17
877626	3	108	52	< 0.3	4.27	< 3	19	< 1	< 2	8.04	< 0.3	90	86	420	11.6	11	3	0.21	6.32	12	1460	< 1	0.84
877627	< 2	57	23	< 0.3	4.89	< 3	20	< 1	< 2	8.33	0.4	86	164	462	10.5	11	2	0.19	5.58	10	1340	< 1	0.90
877628	< 2	31	24	< 0.3	5.46	< 3	30	< 1	< 2	7.85	< 0.3	73	125	145	10.2	11	3	0.27	5.57	14	1290	< 1	1.25
877629	< 2	6	26	< 0.3	6.04	< 3	74	< 1	< 2	7.09	< 0.3	56	101	48	11.7	13	5	0.57	4.76	22	1340	< 1	1.39
877630	< 2	8	21	< 0.3	4.07	3	36	< 1	< 2	7.31	< 0.3	71	159	181	12.9	13	6	0.39	5.35	18	1580	< 1	0.68
356026	251	5240	448	0.5	7.77	< 3	50	< 1	4	6.00	0.4	81	131	1290	6.05	12	2	0.23	7.35	20	972	< 1	1.09
877631	< 2	12	47	< 0.3	4.49	< 3	62	< 1	< 2	6.96	< 0.3	66	181	197	12.7	14	4	0.49	4.90	21	1610	1	0.84
877632	< 2	57	28	< 0.3	3.52	< 3	47	< 1	< 2	7.41	< 0.3	75	138	194	12.1	11	3	0.37	5.93	18	1590	< 1	0.66
877633	< 2	20	25	< 0.3	4.88	4	22	< 1	5	8.87	< 0.3	63	123	136	8.86	12	1	0.17	4.90	10	1290	< 1	0.88

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
877502	51	0.051	3	< 5	0.23	36	167	6	0.27	< 5	< 10	191	< 5	29	43	30
877503	43	0.045	12	< 5	0.10	36	126	7	0.28	< 5	< 10	218	< 5	30	69	57
877504	42	0.044	25	< 5	0.13	36	139	8	0.38	< 5	< 10	295	< 5	29	97	83
877505	65	0.050	3	< 5	0.41	34	130	14	0.50	< 5	< 10	289	< 5	26	47	71
356021	1	0.003	< 3	< 5	< 0.01	< 4	6	< 2	0.04	< 5	< 10	4	< 5	3	1	30
877506	546	0.248	35	6	4.76	25	71	7	0.27	< 5	50	193	< 5	28	53	65
877507	60	0.057	4	< 5	0.32	30	114	12	0.47	< 5	< 10	287	< 5	28	47	76
877508	52	0.062	< 3	< 5	0.41	33	116	5	0.76	< 5	< 10	360	< 5	26	43	81
877509	48	0.054	6	< 5	0.14	30	95	12	0.81	< 5	< 10	341	< 5	21	46	92
877510	374	0.142	4	< 5	3.28	17	124	7	0.87	< 5	< 10	323	< 5	15	40	63
877511	35	0.063	< 3	< 5	0.07	25	127	11	0.97	< 5	< 10	387	< 5	23	43	83
877512	41	0.046	< 3	< 5	0.08	34	132	< 2	0.22	< 5	< 10	220	< 5	28	43	55
877513	50	0.051	< 3	< 5	0.12	38	136	6	0.25	< 5	< 10	203	< 5	25	47	53
877514	122	0.099	3	< 5	0.83	33	127	5	0.36	< 5	< 10	263	< 5	30	50	75
877515	61	0.050	< 3	< 5	0.25	35	119	< 2	0.38	< 5	< 10	257	< 5	28	49	67
877516	201	0.391	41	< 5	2.04	28	51	12	0.40	< 5	80	230	< 5	33	57	56
877517	30	0.047	< 3	< 5	0.15	37	139	6	0.30	< 5	< 10	202	< 5	28	37	53
877518	115	0.062	3	< 5	0.62	32	148	10	0.52	< 5	< 10	266	< 5	27	48	75
877519	193	0.139	< 3	< 5	0.11	29	208	12	0.45	< 5	< 10	61	< 5	32	86	20
877520	174	0.180	6	< 5	0.61	16	173	18	1.47	< 5	< 10	274	< 5	20	74	80
877521	197	0.161	12	< 5	0.12	25	208	23	1.37	< 5	< 10	211	< 5	28	80	44
877522	43	0.046	7	< 5	0.11	38	137	< 2	0.23	< 5	< 10	214	< 5	30	51	61
877523	64	0.050	3	< 5	0.18	38	127	10	0.20	< 5	< 10	173	< 5	27	53	35
877524	42	0.045	3	< 5	0.03	37	120	5	0.24	< 5	< 10	226	< 5	31	49	89
877525	47	0.049	< 3	< 5	0.24	37	75	< 2	0.42	< 5	< 10	225	< 5	26	52	66
877526	33	0.054	6	< 5	0.15	37	137	2	0.31	< 5	< 10	224	< 5	31	54	65
877527	79	0.169	< 3	< 5	0.48	36	117	6	0.31	< 5	< 10	167	< 5	34	56	36
877528	38	0.053	< 3	< 5	0.14	36	142	13	0.19	< 5	< 10	142	< 5	32	54	33
877529	41	0.051	< 3	< 5	0.24	35	130	10	0.26	< 5	< 10	172	< 5	27	45	32
877530	164	0.098	< 3	< 5	1.36	19	120	8	0.96	< 5	< 10	357	< 5	19	41	81
356022	1570	0.004	16	< 5	0.41	29	125	5	0.08	< 5	< 10	102	< 5	2	47	7
877531	103	0.047	3	< 5	0.78	35	154	< 2	0.35	< 5	< 10	226	< 5	29	43	62
877532	36	0.044	4	< 5	0.07	38	141	8	0.22	< 5	< 10	196	< 5	31	44	59
877533	32	0.045	< 3	< 5	0.07	38	129	< 2	0.24	< 5	< 10	204	< 5	30	48	64
877534	38	0.059	5	< 5	0.11	38	122	9	0.30	< 5	< 10	209	< 5	32	48	56
877535	36	0.053	7	< 5	0.16	37	157	9	0.40	< 5	< 10	227	< 5	31	47	54
877536	43	0.056	< 3	< 5	0.23	37	137	2	0.33	< 5	< 10	176	< 5	25	47	41
877537	46	0.052	< 3	< 5	0.27	36	133	4	0.33	< 5	< 10	168	< 5	29	44	40
877538	67	0.048	3	< 5	0.56	34	128	10	0.43	< 5	< 10	235	< 5	29	41	63
877539	279	0.622	4	< 5	1.92	28	107	4	0.25	< 5	< 10	285	< 5	30	42	26
877540	36	0.052	< 3	< 5	0.15	38	126	6	0.23	< 5	< 10	153	< 5	31	40	30
877541	40	0.075	< 3	< 5	0.19	36	122	< 2	0.19	< 5	< 10	150	< 5	30	43	26

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
877542	62	0.047	3	< 5	0.42	36	120	7	0.34	< 5	< 10	216	< 5	33	43	47
877543	100	0.045	4	5	1.11	33	108	10	0.29	< 5	< 10	221	< 5	27	45	67
877544	656	0.182	18	< 5	6.61	19	75	12	0.25	< 5	< 10	194	< 5	28	43	48
877545	235	0.044	< 3	< 5	2.19	32	124	7	0.30	< 5	< 10	235	< 5	27	46	80
877546	54	0.049	< 3	< 5	0.20	37	149	5	0.51	< 5	< 10	247	< 5	32	46	75
877547	48	0.073	< 3	< 5	0.23	36	126	7	0.38	< 5	< 10	193	< 5	26	50	44
877548	41	0.062	< 3	< 5	0.21	18	131	12	0.97	< 5	< 10	371	< 5	14	47	74
877549	56	0.046	4	< 5	1.09	23	281	4	0.80	< 5	< 10	276	< 5	19	43	60
877550	61	0.049	< 3	< 5	0.58	32	205	< 2	0.31	< 5	< 10	188	< 5	26	55	38
877551	44	0.049	< 3	< 5	0.10	41	148	< 2	0.25	< 5	< 10	139	< 5	27	60	26
877552	108	0.051	8	< 5	0.89	34	126	10	0.34	< 5	< 10	220	< 5	23	69	50
877553	124	0.097	< 3	< 5	0.74	25	452	20	0.48	< 5	< 10	161	< 5	33	58	114
877554	53	0.166	< 3	< 5	0.21	15	702	4	0.54	< 5	< 10	118	< 5	46	61	232
877555	119	0.047	5	< 5	0.56	37	143	23	0.70	< 5	< 10	277	< 5	20	67	48
356023	2	0.002	< 3	< 5	< 0.01	< 4	6	< 2	0.04	< 5	< 10	3	< 5	4	2	9
877556	51	0.049	< 3	< 5	0.02	41	154	3	0.54	< 5	< 10	228	< 5	25	50	44
877557	54	0.055	5	< 5	0.07	19	133	14	0.86	< 5	< 10	327	< 5	16	52	58
877558	101	0.051	< 3	< 5	0.04	37	114	< 2	0.80	< 5	< 10	299	< 5	23	61	60
877559	63	0.048	4	< 5	0.38	39	118	7	0.29	< 5	< 10	163	< 5	27	58	20
877560	47	0.047	4	< 5	0.13	40	128	< 2	0.24	< 5	< 10	131	< 5	28	55	25
877561	26	0.030	7	< 5	0.09	18	175	< 2	0.08	< 5	< 10	44	< 5	34	39	32
877562	58	0.047	< 3	< 5	0.15	38	129	9	0.40	5	< 10	187	< 5	27	56	33
877563	53	0.047	< 3	6	0.01	38	150	9	0.41	< 5	< 10	182	< 5	26	52	62
877564	48	0.051	< 3	< 5	0.13	40	134	< 2	0.55	< 5	< 10	224	< 5	27	56	47
877565	53	0.050	5	< 5	0.23	39	132	15	0.68	< 5	< 10	259	< 5	27	55	46
877566	52	0.052	12	< 5	0.14	38	114	11	0.39	< 5	10	251	< 5	27	63	52
877567	56	0.059	4	< 5	0.24	17	156	13	0.93	< 5	< 10	337	< 5	15	63	48
877568	54	0.047	< 3	< 5	0.39	38	147	9	0.62	< 5	< 10	256	< 5	24	56	43
877569	53	0.049	6	< 5	0.51	39	212	7	0.32	< 5	< 10	162	< 5	26	71	20
877570	48	0.042	< 3	< 5	0.73	35	242	6	0.34	< 5	< 10	230	< 5	25	76	43
877571	47	0.044	< 3	< 5	1.32	33	267	8	0.29	< 5	< 10	198	< 5	24	74	41
877572	55	0.039	4	< 5	0.88	37	324	5	0.44	< 5	< 10	222	< 5	26	68	44
877573	51	0.047	5	< 5	0.58	37	222	11	0.46	< 5	< 10	230	< 5	26	66	42
877574	56	0.049	< 3	< 5	0.31	38	187	6	0.50	< 5	< 10	201	< 5	26	60	36
877575	52	0.044	3	< 5	0.56	35	244	< 2	0.45	< 5	< 10	246	< 5	26	70	63
877576	56	0.044	4	< 5	0.93	34	282	10	0.37	< 5	< 10	226	< 5	23	71	45
877577	148	0.028	3	< 5	1.90	26	272	< 2	0.42	< 5	< 10	160	< 5	18	53	40
877578	142	0.033	< 3	< 5	1.95	27	262	4	0.37	< 5	< 10	110	< 5	18	48	31
877579	82	0.046	< 3	< 5	1.48	31	236	5	0.36	< 5	< 10	145	< 5	21	46	25
877580	48	0.050	< 3	< 5	0.21	40	187	11	0.28	< 5	< 10	145	< 5	28	64	24
356024	1600	0.004	22	< 5	0.42	30	127	< 2	0.08	< 5	< 10	101	< 5	2	47	8
877581	49	0.042	< 3	< 5	0.33	33	162	3	0.19	< 5	< 10	92	< 5	24	49	20



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
877582	63	0.029	< 3	< 5	0.31	39	162	6	0.57	< 5	< 10	225	< 5	21	60	62
877583	48	0.024	< 3	< 5	0.39	19	104	10	0.41	< 5	< 10	132	< 5	17	35	28
877584	68	0.055	< 3	< 5	0.46	42	109	7	0.83	< 5	< 10	367	< 5	23	75	70
877585	45	0.058	< 3	< 5	0.07	24	119	10	0.91	< 5	< 10	322	< 5	19	44	65
877586	42	0.057	< 3	< 5	0.02	26	124	9	0.93	< 5	< 10	338	< 5	21	45	69
877587	47	0.052	< 3	< 5	0.06	38	114	2	0.24	< 5	< 10	196	< 5	29	50	46
877588	54	0.041	< 3	< 5	0.07	40	114	< 2	0.30	< 5	< 10	209	< 5	27	45	56
877589	64	0.041	3	< 5	0.14	40	111	16	0.36	< 5	< 10	230	< 5	27	47	56
877590	107	0.080	< 3	< 5	0.78	36	108	10	0.34	< 5	< 10	204	< 5	27	46	40
877591	76	0.073	< 3	< 5	0.34	38	108	< 2	0.22	< 5	< 10	146	< 5	27	44	21
877592	230	0.092	4	< 5	1.90	35	84	< 2	0.37	< 5	< 10	217	< 5	26	44	57
877593	29	0.056	< 3	< 5	0.09	36	191	11	0.32	< 5	< 10	148	< 5	35	32	47
877594	40	0.055	< 3	< 5	0.05	35	157	< 2	0.50	< 5	< 10	186	< 5	29	44	70
877595	22	0.074	< 3	< 5	0.12	12	318	12	0.37	< 5	< 10	153	< 5	12	47	73
877596	30	0.075	< 3	< 5	0.24	29	217	14	0.74	< 5	< 10	205	< 5	26	46	72
877597	37	0.073	< 3	< 5	0.89	39	166	8	0.31	< 5	< 10	99	< 5	28	46	23
877598	47	0.072	4	< 5	1.28	38	170	2	0.35	< 5	< 10	110	< 5	30	35	25
877599	41	0.062	< 3	< 5	0.60	37	115	< 2	0.33	< 5	< 10	136	< 5	42	39	42
877600	42	0.060	3	< 5	0.52	39	120	< 2	0.31	< 5	< 10	131	< 5	34	40	32
877601	122	0.029	< 3	< 5	0.16	37	115	12	0.53	< 5	< 10	240	< 5	16	49	55
877602	118	0.028	< 3	< 5	0.13	37	113	12	0.59	< 5	< 10	255	< 5	18	49	53
877603	84	0.045	< 3	< 5	1.40	37	108	< 2	0.31	< 5	< 10	187	< 5	29	42	58
877604	25	0.062	< 3	< 5	0.44	38	171	10	0.58	< 5	< 10	180	< 5	32	37	49
877605	27	0.080	< 3	< 5	0.56	20	194	16	0.90	< 5	< 10	251	< 5	24	35	69
356025	1	0.003	< 3	< 5	< 0.01	< 4	6	< 2	0.04	< 5	< 10	4	< 5	3	1	33
877606	29	0.071	< 3	< 5	0.37	40	186	4	0.23	< 5	< 10	96	< 5	37	41	18
877607	140	0.073	< 3	< 5	0.61	32	370	< 2	0.31	< 5	< 10	101	< 5	31	44	39
877608	277	0.118	< 3	< 5	0.03	16	436	4	0.32	< 5	< 10	96	< 5	13	54	123
877609	215	0.047	< 3	< 5	0.13	35	137	10	0.47	< 5	< 10	200	< 5	19	55	45
877610	457	0.220	18	< 5	2.86	24	93	< 2	0.29	< 5	30	157	< 5	15	53	29
877611	1500	0.175	24	< 5	10.6	28	42	< 2	0.32	< 5	< 10	191	< 5	14	50	21
877612	112	0.021	4	< 5	0.03	40	74	5	0.47	< 5	< 10	248	< 5	15	66	20
877613	136	0.072	11	< 5	0.55	34	114	9	0.53	< 5	30	206	< 5	22	51	40
877614	51	0.132	9	< 5	0.17	34	117	4	0.23	< 5	< 10	137	< 5	27	41	19
877615	36	0.031	< 3	< 5	< 0.01	35	106	< 2	0.19	< 5	< 10	130	< 5	23	38	18
877616	274	0.083	< 3	< 5	0.34	49	127	9	0.26	< 5	< 10	100	< 5	28	41	30
877617	145	0.002	< 3	< 5	0.23	26	226	< 2	0.11	< 5	< 10	63	< 5	5	26	5
877618	398	0.008	< 3	< 5	0.34	42	151	3	0.24	< 5	< 10	151	< 5	9	35	9
877619	393	0.003	< 3	< 5	0.38	55	128	< 2	0.24	< 5	< 10	183	< 5	11	43	8
877620	475	0.003	< 3	< 5	0.45	55	86	6	0.25	< 5	< 10	207	< 5	12	51	11
877621	270	0.002	< 3	< 5	0.18	63	106	11	0.23	< 5	< 10	224	< 5	11	46	7
877622	710	0.002	3	< 5	0.93	69	42	5	0.25	< 5	< 10	230	< 5	14	55	10

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
877623	637	0.002	< 3	< 5	0.87	55	54	< 2	0.21	< 5	< 10	203	< 5	13	56	10
877624	804	0.002	5	< 5	1.60	60	60	2	0.21	< 5	< 10	219	< 5	11	57	7
877625	943	0.003	< 3	< 5	2.28	59	77	< 2	0.20	< 5	< 10	212	< 5	10	55	7
877626	710	0.010	< 3	< 5	1.01	67	39	< 2	0.25	< 5	< 10	242	< 5	14	60	9
877627	578	0.002	4	< 5	0.93	64	63	4	0.18	< 5	< 10	190	< 5	13	54	9
877628	390	0.002	< 3	< 5	0.33	75	74	< 2	0.23	< 5	< 10	209	< 5	11	45	8
877629	130	< 0.001	5	< 5	0.12	88	77	10	0.29	< 5	< 10	191	< 5	17	55	18
877630	165	0.006	3	< 5	0.48	111	10	8	0.41	< 5	< 10	239	< 5	29	77	17
356026	1540	0.004	9	< 5	0.40	29	123	10	0.08	15	< 10	103	< 5	2	42	8
877631	160	< 0.001	< 3	< 5	0.46	110	28	9	0.62	< 5	< 10	176	< 5	21	82	30
877632	352	0.001	3	< 5	0.46	76	14	3	0.23	< 5	< 10	208	< 5	13	69	12
877633	325	0.002	< 3	< 5	0.23	68	82	< 2	0.21	< 5	< 10	228	< 5	11	52	7

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	
GXR-1 Meas				31.4	2.05	451	693	1	1440	0.91	2.5	5	14	1190	23.4	15	9	0.04	0.21	8	887	15	0.05	
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520	
GXR-1 Meas				31.5	2.13	456	698	1	1380	0.91	2.3	6	15	1200	23.7	13	10	0.04	0.21	8	908	16	0.05	
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520	
GXR-4 Meas				3.7	6.80	110	382	2	22	1.13	< 0.3	15	29	6770	3.10	20	2	3.18	1.80	12	164	323	0.55	
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564	
GXR-4 Meas				3.5	6.44	99	344	2	22	1.09	0.4	15	36	6430	2.99	18	< 1	3.78	1.73	11	149	314	0.53	
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564	
SDC-1 Meas					8.14	< 3	673	3		1.14		20	46	31	4.89	22	1	2.60	1.05	35	894		1.59	
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					6.49	5	630	3		1.00		19	64	29	4.76	23	< 1	1.76	0.95	34	922		1.59	
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	
GXR-6 Meas				0.4	11.4	222	> 1000	1	< 2	0.17	< 0.3	15	49	69	5.50	29	2	1.80	0.57	33	1020	< 1	0.10	
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104	
OREAS 14P Meas												708		9410	31.7									
OREAS 14P Cert												750		9970	37.2									
OREAS 14P Meas												712		9220	31.3									
OREAS 14P Cert												750		9970	37.2									
Oreas 72a (4 Acid Digest) Meas						< 3						155	159	315	9.24									
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63									
Oreas 72a (4 Acid Digest) Meas						3						162	201	332	9.48									
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63									
DNC-1a Meas							102					57	160	100		15					5			
DNC-1a Cert							118					57	270	100		15					5.2			
DNC-1a Meas							101					56	234	98		14					5			
DNC-1a Cert							118					57	270	100		15					5.2			
PK2 Meas	4920	6030	4900																					
PK2 Cert	4790	5918.00	4749.00																					
PK2 Meas	5030	6050	4960																					
PK2 Cert	4790	5918.00	4749.00																					
PK2 Meas	4960	6190	4920																					
PK2 Cert	4790	5918.00	4749.00																					
PK2 Meas	5050	6190	4850																					
PK2 Cert	4790	5918.00	4749.00																					

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 Meas						26	816	3	< 2		< 0.3	24	70	32		27				156		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0				163		2	
														31.0000									
SBC-1 Meas						25	767	3	< 2		< 0.3	23	70	30		26				148		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0				163		2	
														31.0000									
CDN-PGMS-25 Meas	483	1880	383																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	510	1900	406																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	491	1930	439																				
CDN-PGMS-25 Cert	483	1830	400																				
SdAR-M2 (U.S.G.S.) Meas							> 1000	7	< 2		5.6	14	53	238		17	2			18		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.6	15	25	244		17	2			18		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
877510 Orig	7	8	< 5																				
877510 Dup	< 2	7	< 5																				
877513 Orig				< 0.3	6.52	< 3	44	< 1	5	6.38	< 0.3	56	73	38	12.5	21	3	0.34	2.78	17	1720	< 1	2.11
877513 Dup				< 0.3	6.63	4	44	< 1	< 2	6.40	< 0.3	58	74	39	12.7	23	5	0.34	2.83	18	1690	< 1	2.16
877520 Orig	< 2	< 5	< 5																				
877520 Dup	< 2	< 5	< 5																				
877527 Orig				< 0.3	6.07	12	35	< 1	< 2	6.38	< 0.3	72	38	143	12.7	23	9	0.30	2.74	17	1520	< 1	1.87
877527 Dup				< 0.3	5.96	7	35	< 1	< 2	6.38	< 0.3	71	38	145	12.6	23	8	0.30	2.73	17	1520	< 1	1.87
877530 Orig	< 2	5	< 5																				
877530 Dup	< 2	< 5	< 5																				
877544 Orig	2	13	< 5																				
877544 Dup	< 2	13	< 5																				
877549 Orig	2	< 5	< 5	< 0.3	3.98	< 3	60	< 1	3	6.73	< 0.3	56	66	394	9.69	17	2	0.23	2.09	7	1180	< 1	1.44
877549 Split PREP DUP	2	< 5	< 5	< 0.3	4.88	< 3	59	1	< 2	6.69	< 0.3	56	57	388	9.50	18	3	0.24	2.15	7	1120	< 1	1.43
877551 Orig				< 0.3	6.71	< 3	34	< 1	4	6.52	< 0.3	50	70	40	11.0	20	5	0.27	3.19	11	1670	< 1	2.14
877551 Dup				< 0.3	6.86	< 3	35	< 1	< 2	6.64	< 0.3	52	68	40	11.2	21	4	0.27	3.27	12	1700	< 1	2.19
877554 Orig	< 2	< 5	< 5																				
877554 Dup	< 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
877563 Orig	< 2	< 5	< 5																				
877563 Dup	< 2	< 5	< 5																				
877564 Orig				< 0.3	6.70	< 3	70	< 1	< 2	6.72	< 0.3	50	74	103	10.8	20	2	0.43	3.48	17	1620	< 1	2.08
877564 Dup				< 0.3	6.58	< 3	70	< 1	< 2	6.64	< 0.3	49	71	101	10.8	21	3	0.43	3.46	16	1640	< 1	2.08
877578 Orig	3	< 5	< 5																				
877578 Dup	3	< 5	< 5																				
877587 Orig	3	< 5	< 5																				
877587 Dup	2	< 5	< 5																				
877588 Orig				< 0.3	6.68	< 3	80	< 1	< 2	6.60	< 0.3	52	98	123	11.0	20	1	0.36	3.14	16	1480	< 1	2.09
877588 Dup				< 0.3	6.87	< 3	81	< 1	< 2	6.62	< 0.3	52	75	131	11.2	21	4	0.37	3.19	17	1510	< 1	2.14
877597 Orig	< 2	< 5	6	< 0.3	6.41	5	74	< 1	< 2	8.52	< 0.3	96	22	335	10.9	20	3	0.28	2.46	10	1370	< 1	1.51
877597 Split PREP DUP	< 2	< 5	5	< 0.3	6.33	< 3	72	< 1	< 2	8.34	< 0.3	94	25	328	10.5	21	2	0.28	2.45	10	1330	< 1	1.47
877598 Orig	< 2	< 5	< 5																				
877598 Dup	< 2	< 5	5																				
877602 Orig				< 0.3	7.11	< 3	42	< 1	< 2	7.30	< 0.3	52	137	52	9.33	16	2	0.18	4.21	15	1370	< 1	2.01
877602 Dup				< 0.3	7.07	5	42	< 1	< 2	7.26	< 0.3	51	133	51	9.32	17	3	0.18	4.18	15	1380	< 1	2.01
877610 Orig	< 2	7	< 5																				
877610 Dup	< 2	8	< 5																				
877620 Orig	6	68	32																				
877620 Dup	5	70	34																				
877626 Orig				< 0.3	4.30	< 3	19	< 1	< 2	8.06	< 0.3	91	90	419	11.6	11	3	0.21	6.35	12	1460	1	0.84
877626 Dup				< 0.3	4.25	< 3	19	< 1	< 2	8.02	< 0.3	89	82	421	11.5	12	3	0.21	6.29	12	1450	< 1	0.83
877631 Orig	< 2	12	50																				
877631 Dup	< 2	12	44																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 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	< 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	< 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	< 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	< 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	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

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
GXR-1 Meas	48	0.062	731	39	0.26	< 4	298	17	0.03	< 5	30	89	149	34	744	26
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	43	0.061	732	21	0.26	< 4	295	13	0.03	< 5	30	87	151	33	742	25
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	43	0.139	50	6	1.87	9	226	6	0.31	< 5	< 10	92	34	15	72	47
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	44	0.132	42	< 5	1.82	9	215	7	0.29	< 5	< 10	89	44	15	69	42
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	37	0.055	16	< 5		17	179		0.24	< 5	< 10	52	< 5		100	27
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	0.054	19	< 5		15	166		0.37	< 5	< 10	75	< 5		95	48
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
GXR-6 Meas	27	0.031	88	< 5	0.01	26	36	< 2		< 5	< 10	110	< 5	12	123	53
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6540				1.65											
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74											
Oreas 72a (4 Acid Digest) Meas	6680				1.70											
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74											
DNC-1a Meas	260		3	< 5		33	132		0.30			141		17	59	33
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	256		5	< 5		33	128		0.29			138		16	57	33
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																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	90		26	< 5		23	180		0.54	< 5	< 10	221	< 5	34	179	112
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		31	< 5		21	168		0.48	< 5	< 10	208	< 5	32	180	101
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

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
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
SdAR-M2 (U.S.G.S.) Meas	54		806			< 4	128				< 10	27	8	24	783	122
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	53		819			5	147				< 10	26	10	30	781	94
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
877510 Orig																
877510 Dup																
877513 Orig	50	0.052	< 3	< 5	0.12	38	136	9	0.23	< 5	< 10	182	< 5	25	47	42
877513 Dup	50	0.050	5	< 5	0.12	38	136	3	0.27	< 5	< 10	225	< 5	25	48	64
877520 Orig																
877520 Dup																
877527 Orig	79	0.170	< 3	< 5	0.47	36	117	4	0.31	< 5	< 10	167	< 5	34	56	34
877527 Dup	78	0.168	< 3	< 5	0.48	36	117	8	0.31	< 5	< 10	168	< 5	34	56	37
877530 Orig																
877530 Dup																
877544 Orig																
877544 Dup																
877549 Orig	56	0.046	4	< 5	1.09	23	281	4	0.80	< 5	< 10	276	< 5	19	43	60
877549 Split PREP DUP	57	0.041	< 3	< 5	1.07	29	273	< 2	0.37	< 5	< 10	181	< 5	22	44	45
877551 Orig	44	0.051	< 3	< 5	0.10	40	147	3	0.18	< 5	< 10	114	< 5	27	60	17
877551 Dup	44	0.047	7	< 5	0.10	41	150	< 2	0.32	< 5	< 10	164	< 5	28	60	35
877554 Orig																
877554 Dup																
877563 Orig																
877563 Dup																
877564 Orig	50	0.051	5	< 5	0.13	40	134	< 2	0.52	< 5	< 10	222	< 5	27	57	47
877564 Dup	45	0.051	< 3	< 5	0.13	40	134	5	0.58	< 5	< 10	225	< 5	27	56	47
877578 Orig																
877578 Dup																

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
877587 Orig																
877587 Dup																
877588 Orig	53	0.040	4	< 5	0.07	39	113	< 2	0.28	< 5	< 10	203	< 5	26	46	51
877588 Dup	54	0.041	< 3	< 5	0.07	40	115	< 2	0.33	< 5	< 10	215	< 5	27	43	60
877597 Orig	37	0.073	< 3	< 5	0.89	39	166	8	0.31	< 5	< 10	99	< 5	28	46	23
877597 Split PREP DUP	36	0.072	< 3	< 5	0.87	39	164	3	0.31	< 5	< 10	102	< 5	27	43	23
877598 Orig																
877598 Dup																
877602 Orig	117	0.028	< 3	< 5	0.13	37	113	14	0.58	< 5	< 10	256	< 5	18	50	53
877602 Dup	120	0.028	< 3	< 5	0.12	37	113	9	0.59	< 5	< 10	254	< 5	18	49	53
877610 Orig																
877610 Dup																
877620 Orig																
877620 Dup																
877626 Orig	713	0.011	< 3	< 5	1.02	67	39	< 2	0.25	< 5	< 10	242	< 5	14	60	9
877626 Dup	707	0.010	8	< 5	1.01	68	39	8	0.25	< 5	< 10	242	< 5	14	59	9
877631 Orig																
877631 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
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	< 1	< 0.001	< 3	7	< 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	< 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																
Method Blank																
Method Blank																



**Appendix VI**

**Tables of Total Costs,**

**Invoices,**

**Receipts**

**And**

**All Employee Daily Logs**

**NORTH ROCK PROJECT**  
**Summer 2017 Drill Program**  
**Total Costs Involved for Program**

**Final Costs of Drill Project June 01 to December 01, 2017**

<i>Time &amp; Salaries</i>	<i>Material, Food &amp; Lodging</i>	<i>Rentals</i>	<i>Sampling costs</i>
<b>\$95,718.26</b>	<b>\$38,803.67</b>	<b>\$58,139.22</b>	<b>\$19,717.65</b>

<i>Drilling Phase 1</i>	<i>Meters Drilled</i>	<i>Total Costs of Drilling</i>	<i>Cost/m of Drilling</i>
	<b>843.7</b>	<b>\$212,378.80</b>	<b>\$251.73</b>

Total costs account for -\$13,240.72 Discount for Rentals & -\$24,062.50 Discount in Salaries  
 Also, demobilization of the drill was done at no charge off from other material & equipment

**Metalcorp North Rock Project**  
**Drill Rig BBS 37 NQ Rods Diameter**  
**Diamond Drilling Production Table**

Date	Name	Hole ID	Claim ID	Azimuth	Dip	From (ft)	To (ft)	Total (ft)	From (m)	To (m)	Total (m)	Comment
30-Jul-17	Marcel Smith	NR17-070	1214878	288	-50	0	0	0	0.0	0.0	0.0	Travel day
30-Jul-17	George Gottwald											
31-Jul-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Set up drill on drill site
31-Jul-17	George Gottwald											
1-Aug-17	Marcel Smith					0	16	16	0.0	4.9	4.9	Set at -50° start casing
1-Aug-17	George Gottwald											
2-Aug-17	Marcel Smith					16	96	80	4.9	29.3	24.4	Coring
2-Aug-17	George Gottwald											
3-Aug-17	Marcel Smith					96	176	80	29.3	53.6	24.4	Coring
3-Aug-17	George Gottwald											
4-Aug-17	Marcel Smith					176	326	150	53.6	99.4	45.7	Coring
4-Aug-17	George Gottwald											
5-Aug-17	Marcel Smith					326	406	80	99.4	123.7	24.4	Coring, protect environment
5-Aug-17	George Gottwald											
6-Aug-17	Marcel Smith					406	436	30	123.7	132.9	9.1	Coring in hard rock (slow)
6-Aug-17	George Gottwald											
7-Aug-17	Marcel Smith					436	486	50	132.9	148.1	15.2	Coring, do repairs
7-Aug-17	George Gottwald											
8-Aug-17	Marcel Smith					486	626	140	148.1	190.8	42.7	Coring good
8-Aug-17	George Gottwald											
9-Aug-17	Marcel Smith					626	716	90	190.8	218.2	27.4	Coring , blocky
9-Aug-17	George Gottwald											
10-Aug-17	Marcel Smith					716	836	120	218.2	254.8	36.6	Coring good + lost & retrieve
10-Aug-17	George Gottwald											
11-Aug-17	Marcel Smith					836	956	120	254.8	291.4	36.6	Coring good
11-Aug-17	George Gottwald											
12-Aug-17	Marcel Smith					956	1076	120	291.4	328.0	36.6	End of Hole, pull out rods
12-Aug-17	George Gottwald											
13-Aug-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Rods out, move next drill site
13-Aug-17	George Gottwald											
14-Aug-17	Marcel Smith					0	0	0	0.0	0.0	0.0	Prep new site, move, set up
14-Aug-17	George Gottwald											
15-Aug-17	Marcel Smith	NR17-071	1247174	330	-50	0	66	66	0.0	20.1	20.1	Finish set up, do casing, drill
15-Aug-17	George Gottwald											
16-Aug-17	Marcel Smith					66	216	150	20.1	65.8	45.7	Good coring, strong deviation
16-Aug-17	George Gottwald											
17-Aug-17	Marcel Smith					216	326	110	65.8	99.4	33.5	Good coring, more deviation
17-Aug-17	George Gottwald											
18-Aug-17	Marcel Smith					326	386	60	99.4	117.7	18.3	Hole stopped by geologist
18-Aug-17	George Gottwald	NR17-072	1247174	330	-55	0	2	2	0.0	0.6	0.6	Re-collared new hole at -55°
19-Aug-17	Marcel Smith					2	96	94	0.6	29.3	28.7	Controlled drilling & deviation
19-Aug-17	George Gottwald											
20-Aug-17	Marcel Smith					96	216	120	29.3	65.8	36.6	Good coring
20-Aug-17	George Gottwald											
21-Aug-17	Marcel Smith					216	376	160	65.8	114.6	48.8	Good coring
21-Aug-17	George Gottwald											
22-Aug-17	Marcel Smith					376	476	100	114.6	145.1	30.5	Good coring, hard rock
22-Aug-17	George Gottwald											
23-Aug-17	Marcel Smith					476	576	100	145.1	175.6	30.5	Good coring
23-Aug-17	George Gottwald											
24-Aug-17	Marcel Smith					576	706	130	175.6	215.2	39.6	Good coring
24-Aug-17	George Gottwald											
25-Aug-17	Marcel Smith					706	796	90	215.2	242.6	27.4	Coring OK, minor problems
25-Aug-17	George Gottwald											
26-Aug-17	Marcel Smith					796	866	70	242.6	264.0	21.3	Problems with engine contols
26-Aug-17	George Gottwald											
27-Aug-17	Marcel Smith					866	936	70	264.0	285.3	21.3	Hole shut down, end of hole
27-Aug-17	George Gottwald											
28-Aug-17	Marcel Smith	NR17-071	1247174	330	-50	386	456	70	117.7	139.0	21.3	Re-enter NR17-071, flush hole
28-Aug-17	George Gottwald											Move back on old collar
29-Aug-17	Marcel Smith					456	576	120	139.0	175.6	36.6	Good coring, rods well greased
29-Aug-17	George Gottwald											
30-Aug-17	Marcel Smith					576	666	90	175.6	203.0	27.4	Good coring, rods well greased
30-Aug-17	George Gottwald											
31-Aug-17	Marcel Smith					666	756	90	203.0	230.4	27.4	Good coring
31-Aug-17	George Gottwald											
1-Sep-17	Marcel Smith					756	756	0	230.4	230.4	0.0	Hole shut down, pull rods out
1-Sep-17	George Gottwald											Tear down, hibernate drill rig
2-Sep-17	Marcel Smith											Finish packing, lock all supplies
2-Sep-17	George Gottwald											Get out property, back home
										Total (m)	843.7	

**Metalcorp North Rock Daily Report (Logs) Compilation**

Date	Name	Scope of Work	Hours	Salary Rate/hour	Salary Costs	Drilling (ft)	Drilling (m)	Invoices Dates
10-Jul-17	Mitch Dumoulin	Geologist traveling to North Rock with service man & spot + mark up drill trails	8	\$80.00	\$640.00			
10-Jul-17	Jerry Nichols	Service man assisting geologist above to spot + mark up drill trails	8	\$75.00	\$600.00			
11-Jul-17	Mitch Dumoulin	Spotting 2 creeks to cross and to instal bridges later as well as marking up trails	8	\$80.00	\$640.00			
11-Jul-17	Jerry Nichols	Service man assisting geologist in preparation for installing bridges along drilling trails	8	\$75.00	\$600.00			
25-Jul-17	Jerry Nichols	Take down the bulldozer from float truck & park it, set-up living quarters for workers	12	\$75.00	\$900.00			
25-Jul-17	Gary Grenier	Float truck driver driving to property to bring D6 bulldozer and come back home	11	\$75.00	\$825.00			
26-Jul-17	Marcel Smith	Drill runner traveling to the first drill site at North Rock to prepare for diamond drilling	8	\$75.00	\$600.00			
26-Jul-17	Mitch Dumoulin	Geologist in charge travelling with drill runner above to spot and prepare first drill site	8	\$80.00	\$640.00			
26-Jul-17	Gary Grenier	Float truck driver driving to property to bring Link Belt excavator and come back home	11.5	\$75.00	\$862.50			
26-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			
27-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			
28-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			<b>Jul 10-Jul 29</b>
29-Jul-17	Jerry Nichols	Run back hoe excavator Link Belt to re-hab old road & open access to new drill pads	12	\$75.00	\$900.00			<b>\$9,907.50</b>
30-Jul-17	Marcel Smith	Drill runner moving equipment on property to first drill set up NR17-070	11.5	\$50.00	\$575.00			
30-Jul-17	George Gottwald	Drill helper working on moving equipment with runner to first set up NR17-070	10.5	\$50.00	\$525.00			
30-Jul-17	Jerry Nichols	Service man helping drillers to move equipment making their way to first drill set up	11	\$75.00	\$825.00			
30-Jul-17	Gary Grenier	Float truck driver to bring Drill Rig & drill material to property and come back home	11	\$75.00	\$825.00			
31-Jul-17	Marcel Smith	Set up and start the drill on drill site, check material & parts, test hydraulics	13	\$50.00	\$650.00			
31-Jul-17	George Gottwald	Move and attach equipment to the drill, pumps, sloop with drill rods in place	11	\$50.00	\$550.00			
31-Jul-17	Jerry Nichols	Unload material, make trail to water pond to connect drill with water line	12	\$75.00	\$900.00			
31-Jul-17	Gary Grenier	Set up core shack that geologists can log drill core coming out from the property	5	\$75.00	\$375.00			
1-Aug-17	Marcel Smith	Set the tower at -50 degrees and start drilling casing	12	\$50.00	\$600.00	16	4.9	
1-Aug-17	George Gottwald	Get the drill rods and casings ready and install the water barrel,	11	\$50.00	\$550.00	NR17-070		
1-Aug-17	Jerry Nichols	Bring material for drilling to the drill site & build trail to hole #2 with Linkbelt excavator	11.5	\$75.00	\$862.50			
1-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
2-Aug-17	Marcel Smith	Drilling all day and check for maintenance	11	\$50.00	\$550.00	80	24.4	
2-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface	10	\$50.00	\$500.00			
2-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
3-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	11.5	\$50.00	\$575.00	80	24.4	
3-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	10.5	\$50.00	\$525.00			
3-Aug-17	Jerry Nichols	Open new trail with Linkbelt excavator to planned hole #1, dig trench for water draining	11	\$75.00	\$825.00			
4-Aug-17	Marcel Smith	Drilling all day and check for maintenance	12	\$50.00	\$600.00	150	45.7	
4-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	11	\$50.00	\$550.00			
4-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
5-Aug-17	Marcel Smith	Drilling all day and check for maintenance, install hay bales to control cuttings spreading	12	\$50.00	\$600.00	80	24.4	
5-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take tests	11	\$50.00	\$550.00			
5-Aug-17	Jerry Nichols	Clear vegetation in drill area to verify & have a look at EM geophysics anomaly	12	\$75.00	\$900.00			
6-Aug-17	Marcel Smith	Drilling part of the day and repair D-Ring on cyclinder of motor	13	\$50.00	\$650.00	30	9.1	
6-Aug-17	George Gottwald	Keep helping normal tasks of drilling and assist runner at repairing the motor	11	\$50.00	\$550.00			
6-Aug-17	Jerry Nichols	Moving earth material and marking up trail to next point of interest	12	\$75.00	\$900.00			
6-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00			
7-Aug-17	Marcel Smith	Finish repairing the drill as above then start drilling steady	15	\$50.00	\$750.00	50	15.2	
7-Aug-17	George Gottwald	Help runner finish to repair motor then back to drilling with helper's normal tasks, test	10.5	\$50.00	\$525.00			
7-Aug-17	Jerry Nichols	Open road with excavator to next EM geophysics anomaly to check & verify in drill area	12	\$75.00	\$900.00			
8-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	140	42.7	
8-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00			
8-Aug-17	Jerry Nichols	Work on moving material over the EM geophysics anomaly same as day before	12	\$75.00	\$900.00			
9-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	12.5	\$50.00	\$625.00	90	27.4	
9-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface	11.5	\$50.00	\$575.00			

9-Aug-17	Jerry Nichols	Finishing up moving earth material over EM anomaly the same as days before	12	\$75.00	\$900.00		
9-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00		
10-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	13.5	\$50.00	\$675.00	120	36.6
10-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	12.5	\$50.00	\$625.00		
10-Aug-17	Jerry Nichols	Move Link Belt excavator and bulldozer to go and build bridge with Gary at creek #1	12	\$75.00	\$900.00		
10-Aug-17	Gary Grenier	Drive to property with float truck then move excavator and D6 dozer to build creek bridge	12	\$75.00	\$900.00		
11-Aug-17	Marcel Smith	Drilling all day and check for maintenance	11.5	\$50.00	\$575.00	120	36.6
11-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$50.00	\$575.00		
11-Aug-17	Jerry Nichols	Move with Link Belt excavator and build trail to hole #3 and make the set-up	12	\$75.00	\$900.00		
11-Aug-17	Gary Grenier	Running D6 tractor and prepare for moving equipment across highway & move to hole #3	12	\$75.00	\$900.00		
11-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00		
12-Aug-17	Marcel Smith	Drilling all day and until end of hole at 1076 feet, break rods & pull out to the sloop	11.5	\$50.00	\$575.00	120	36.6
12-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & put the rods back in the sloop end of hole	10.5	\$50.00	\$525.00	EOH 1076'	
12-Aug-17	Jerry Nichols	Finish set upping area of hole #3 and mark up trail to next holes #4 & 5	12	\$75.00	\$900.00		
12-Aug-17	Gary Grenier	Open new trail with D6 bulldozer to prepare for next following hole #4	12	\$75.00	\$900.00		
13-Aug-17	Marcel Smith	Finish pulling out the rods and move the sloop off drill site & prep to move next site	13	\$50.00	\$650.00	Moving	
13-Aug-17	George Gottwald	Help breaking the rods and putting them all in the sloop, help moving equipment off	12	\$50.00	\$600.00	Moving	
14-Aug-17	Marcel Smith	Move all equipment out to the highway and then moving to next site NR17-071	12.5	\$50.00	\$625.00	Moving	
14-Aug-17	George Gottwald	Help runner to move all equipment out with D6 tractor at highway to next drill site	11.5	\$50.00	\$575.00	Moving	
14-Aug-17	Jerry Nichols	Build trail to hole #4 and make the drill pad	12	\$75.00	\$900.00		
14-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00		
15-Aug-17	Marcel Smith	Finish set upping drill on new site, make trail for water line to pond, start drilling	13	\$50.00	\$650.00	66	20.1
15-Aug-17	George Gottwald	Help driller connect the drill with water on new site then bring rods in for drilling	12	\$50.00	\$600.00	NR17-071	
15-Aug-17	Jerry Nichols	Build trail to hole #5 and go help set-upping the drill on its new site	12	\$75.00	\$900.00		
16-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	13.5	\$50.00	\$675.00	150	45.6
16-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	12.5	\$50.00	\$625.00		
16-Aug-17	Jerry Nichols	Finish drill pad hole #5, make trail to water, finish helping at set-upping drill	12	\$75.00	\$900.00		
16-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00		
16-Aug-17	John Corkery	Supervise drill site and drilling, do field mapping work, bring core boxes to logging site	8	\$80.00	\$640.00		
17-Aug-17	Marcel Smith	Drilling all day and check for maintenance, try to recover all core	11	\$50.00	\$550.00	110	33.5
17-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	10	\$50.00	\$500.00		
17-Aug-17	Jerry Nichols	Build trail to second creek/bridge then make trip back home to thunder bay	12	\$75.00	\$900.00		
18-Aug-17	Marcel Smith	Drilling but stopped hole at 386' then move to next dip on same drill set up	11	\$50.00	\$550.00	60	18.3
18-Aug-17	George Gottwald	Helped pulling out the rods, and move on next dip after hole NR17-071 was stopped	11	\$50.00	\$550.00	stop 386'	
		Marcel drilled 2 feet of NR17-072	1	\$50.00	\$50.00	NR17-072	0.6
18-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00		
19-Aug-17	Marcel Smith	Drill all day adding stabilizer for control drilling	12	\$50.00	\$600.00	95	29.0
19-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
20-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	120	36.6
20-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
21-Aug-17	Marcel Smith	Drilling all day and check for maintenance & instructions with geologist	12	\$50.00	\$600.00	160	48.7
21-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
21-Aug-17	Jerry Nichols	Transport material to drillers and finish fixing the trail	12	\$75.00	\$900.00		
22-Aug-17	Marcel Smith	Drill all day, check controls as rock changes, do maintenance	12	\$50.00	\$600.00	100	30.5
22-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
22-Aug-17	Jerry Nichols	Mark up trail to hole #3 and keep fixing access trail after last rain	12	\$50.00	\$600.00		
22-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00		
23-Aug-17	Marcel Smith	Drilled all day no problems	12	\$50.00	\$600.00	100	30.5
23-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
23-Aug-17	Jerry Nichols	Work at fixing rollers on backhoe excavator machine	12	\$50.00	\$600.00		
24-Aug-17	Marcel Smith	Drilled all day no problems	12	\$50.00	\$600.00	130	39.6

**Jul 30-Aug 12**  
**\$35,147.50**

24-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$50.00	\$550.00		
24-Aug-17	Jerry Nichols	Build trail towards planned hole #3 and make grooves on the side to drain water	12	\$50.00	\$600.00		
25-Aug-17	Marcel Smith	Minor problems with drill and water but finished drilling OK	12	\$50.00	\$600.00	90	27.4
25-Aug-17	George Gottwald	Help stabilize little problems get water OK and keep helping on drilling, take test	11	\$50.00	\$550.00		
25-Aug-17	Jerry Nichols	Move earth material over outcrop and wash it	12	\$50.00	\$600.00		
25-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00		
26-Aug-17	Marcel Smith	Re-adjust same little problems re-setting pressure on rods and keep drilling	12	\$50.00	\$600.00	70	21.3
26-Aug-17	George Gottwald	Help stabilize little problems get water OK and keep helping on drilling, take test	11	\$50.00	\$550.00		
26-Aug-17	Jerry Nichols	Clean and wash opened areas for the geologist to verify EM anomaly	12	\$50.00	\$600.00		
27-Aug-17	Marcel Smith	Finished drilling to 936 feet then start breaking the rods to pull them out the hole	12	\$50.00	\$600.00	70	21.3
27-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, end of hole	11	\$50.00	\$550.00	Stop 936'	
27-Aug-17	Jerry Nichols	Keep building new trail to planned hole #3 and help drillers at drill site	12	\$50.00	\$600.00	NR17-071	
28-Aug-17	Marcel Smith	Re-collar NR17-071 hole and resume drilling from the bottom at 386'	12.5	\$50.00	\$625.00	70	21.3
28-Aug-17	George Gottwald	Help moving head of drill to previous hole, re-collar to it and assist driller	11.5	\$50.00	\$575.00		
28-Aug-17	Jerry Nichols	Move earth material over a new spot and spend time at drill to help drillers	12	\$50.00	\$600.00		
29-Aug-17	Marcel Smith	Drilled all day no problems	12.5	\$50.00	\$625.00	120	36.6
29-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$50.00	\$575.00		
29-Aug-17	Jerry Nichols	Wash new opened area for geologist to verify EM anomaly and help drillers	12	\$50.00	\$600.00		
30-Aug-17	Marcel Smith	Drilled all day no problems	12	\$75.00	\$900.00	90	27.4
30-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11	\$75.00	\$825.00		
30-Aug-17	Jerry Nichols	Fuel drill tank, check pump at water intake for drill rig and housekeeping around	13.5	\$75.00	\$1,012.50		
30-Aug-17	Mitch Dumoulin	Supervise drill site and drilling, do field work, bring core boxes to logging site	8	\$80.00	\$640.00		
31-Aug-17	Marcel Smith	Drilled all day no problems	12.5	\$75.00	\$937.50	90	27.4
31-Aug-17	George Gottwald	Helper bring the rods, shoot down the tube & recover the core to surface, take test	11.5	\$75.00	\$862.50		
1-Sep-17	Marcel Smith	Hole shut down by geologist at 756', hibernate drill and pack up to prep for trip out	13	\$75.00	\$975.00	Stop 756'	
1-Sep-17	George Gottwald	Pull out rods, set up and pack all material to hibernate drill, pack up, prep to go out	11	\$75.00	\$825.00		
2-Sep-17	Marcel Smith	Finish securing drill rig, equipment and site, move out area and go home	7.5	\$75.00	\$562.50		
2-Sep-17	George Gottwald	Finish securing drill rig, equipment and site, move out area and go home	7.5	\$75.00	\$562.50		
							<b>Aug 13-Sep 02</b>
							<b>\$41,192.50</b>
5-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
6-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
7-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
11-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
12-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
13-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
14-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	8	\$75.00	\$600.00		
15-Oct-17	George Gottwald	Cutting drill core from the North Rock drilling program in Thunder Bay facility	4	\$75.00	\$300.00		
27-Oct-17	Mitch Dumoulin	Start gathering data in preparation for North Rock report	8		\$288.16		
30-Oct-17	Mitch Dumoulin	Continue on gathering data in preparation for North Rock report	4		\$288.16		
31-Oct-17	Mitch Dumoulin	Compilation work to gather information for North Rock report	4		\$252.14		
1-Nov-17	Mitch Dumoulin	Carry on compilation of data for North Rock report	4		\$216.12		
2-Nov-17	Mitch Dumoulin	Work on spreadsheets to compile receipts and invoices related to North Rock Drilling	7		\$252.14		
3-Nov-17	Mitch Dumoulin	Work on spreadsheets to compile receipts and invoices related to North Rock Drilling	7		\$252.14		
6-Nov-17	Mitch Dumoulin	North Rock drill report going through the invoices to fit with numbers (time, material,etc....)	8		\$288.16		
7-Nov-17	Mitch Dumoulin	North Rock drill report going through the invoices to fit with numbers (time, material,etc....)	6		\$216.12		
8-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	7		\$252.14		
9-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12		
10-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12		
13-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	6		\$216.12		
14-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4		\$144.08		
15-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4		\$144.08		

16-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	3	\$108.06		
17-Nov-17	Mitch Dumoulin	Build all category spreadsheets, create maps & sections + figures-tables to paste in report	4	\$144.08		
21-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	2	\$72.04		
22-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6	\$216.12		
23-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6	\$216.12		
24-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	6	\$216.12		
27-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	5	\$180.10		
28-Nov-17	Mitch Dumoulin	Write report, format it, compile all appendix with all details & information from work	5	\$180.10		
29-Nov-17	Mitch Dumoulin	Make pagination of the report, fine tune all last details related to it, finish formatting	4	\$144.08		
30-Nov-17	Mitch Dumoulin	Make pagination of the report, fine tune all last details related to it, finish formatting	3	\$108.06		<b>Oct05-Dec01</b>
1-Dec-17	Mitch Dumoulin	Finish report and prepare to send it out to MNM Lands Assessment Office in Sudbury	4	\$144.08		<b>\$9,470.76</b>
			<b>Total</b>	<b>\$95,718.26</b>	2768 feet	843.7 meters <b>\$95,718.26</b>

**SUMMARY OF DAILY LOGS**

<b>Name</b>	<b>Duties</b>	<b>Hours</b>	<b>Salary</b>
Marcel Smith	Foreman-Driller	433	\$22,975.00
George Gottwall	Helper-Driller	445.5	\$24,800.00
Jerry Nichols	Third Man Field Support	411	\$28,425.00
Gary Grenier	Driver Float Truck and Heavy Equipment	74.5	\$5,587.50
Mitch Dumoulin	Geologist	193	\$10,090.76
John Corkery	Geologist	48	\$3,840.00
			<b>\$95,718.26</b>

Note: John Corkery's time sheet is not available at Metalcorp but at Nordmin Engineering  
Note: Mitch Dumoulin charges are based at \$288.16/hour on 8 hours bases for the report  
Note: The driller and his helper were charged \$50/hour for the time of drilling

**Metalcorp North Rock Project  
Diamond Drilling Program  
Rentals by Month, Days and Hours**

Date	2012 F-150 Truck	2014 F-350Truck	2009 GMC 1500 Truck	Suzuki ATV	Honda ATV	16 feet boat	12 feet boat	160 Linkbelt Excavator	D6 Bulldozer	Drill Rig	Beam Float Truck	Load King Float Truck	Sea Container
25-Jul-17		\$2,225.00				\$1,800.00	\$1,200.00		\$10,500.00		\$2,475.00		
26-Jul-17	\$1,700.00	Monthly				Monthly	Monthly	\$5,500.00	Monthly		Hourly	\$2,012.50	\$150.00
27-Jul-17	Monthly							Monthly				Hourly	Monthly
28-Jul-17													
29-Jul-17													
30-Jul-17			\$1,700.00	\$1,550.00	\$1,550.00					\$15,000.00		\$1,925.00	
31-Jul-17			Monthly	Monthly	Monthly					Monthly		Hourly	
1-Aug-17													
2-Aug-17													
3-Aug-17													
4-Aug-17													
5-Aug-17													
6-Aug-17													
7-Aug-17													
8-Aug-17													
9-Aug-17													
10-Aug-17												\$1,400.00	
11-Aug-17												Hourly	
12-Aug-17													
13-Aug-17													
14-Aug-17													
15-Aug-17													
16-Aug-17													
17-Aug-17													
18-Aug-17													
19-Aug-17													
20-Aug-17													
21-Aug-17													
22-Aug-17													
23-Aug-17													
24-Aug-17													
25-Aug-17	Daily	Daily											Daily
26-Aug-17	\$56.67	\$74.17											\$5.00
27-Aug-17	\$56.67	\$74.17											\$5.00
28-Aug-17	\$56.67	\$74.17								Daily			\$5.00
29-Aug-17	\$56.67	\$74.17	Daily		Daily					\$50.00			\$5.00
30-Aug-17	\$56.67	\$74.17	\$56.67		\$103.33					\$550.00			\$5.00
31-Aug-17	\$56.67	\$74.17	\$56.67		\$103.33					\$575.00			\$5.00
1-Sep-17	\$56.67	\$74.17	\$56.67		\$103.33					\$550.00			\$5.00
2-Sep-17	\$56.67	\$74.17	\$56.67		\$103.33					\$500.00			\$5.00
<b>Total Blue</b>	\$1,700.00	\$2,225.00	\$1,700.00	\$1,550.00	\$1,550.00	\$1,800.00	\$1,200.00	\$5,500.00	\$10,500.00	\$15,000.00	\$2,475.00	\$5,337.50	\$150.00
<b>Total Orange</b>	\$453.36	\$593.36	\$226.68		\$413.32					\$2,225.00			\$40.00
<b>Total Both</b>	\$2,153.36	\$2,818.36	\$1,926.68	\$1,550.00	\$1,963.32	\$1,800.00	\$1,200.00	\$5,500.00	\$10,500.00	\$17,225.00	\$2,475.00	\$5,337.50	\$190.00
	<b>Monthly</b>	<b>Total Rentals Blue</b>	<b>\$50,687.50</b>										
	<b>Daily</b>	<b>Total Rentals Orange</b>	<b>\$3,951.72</b>										
27-Oct-17	<b>Demobilization</b>	<b>All of the above</b>	<b>\$3,500.00</b>										
		<b>Grand Total</b>	<b>\$58,139.22</b>										



**Metalcorp North Rock Project**  
**Material-Food-Lodging**

Date	Gas	Gas Total	Field Material	Total Field	Food	Total Food	Cabin Rental	Reflex Tool
1-Jun-17			Flag tape	\$18.00				
1-Jun-17			Bug Dope	\$28.48				
22-Jun-17								\$2,459.40
10-Jul-17	Trip to Fort Frances	\$292.57	Tick removers	\$44.95				
10-Jul-17	Prepare for drill program	\$78.41	Insects repellent	\$244.20	Grocery	\$325.30		
11-Jul-17					Supper	\$21.06	\$3,500.00	
11-Jun-17	Filled in Fort Frances	\$74.87	Fast food	\$26.03	add-ups	\$24.05		
11-Jul-17					Grocery	\$51.77		
12-Jul-17					Breakfast	\$13.98		
24-Jul-17	Trip to Fort Frances	\$110.16						
25-Jul-17	Trip to Fort Frances	\$89.80	Drill Core boxes	\$2,375.00	Grocery	\$107.28		
25-Jul-17			Emergency kit	\$281.76	Lunch	\$16.07		
25-Jul-17			Parts to prep drill	\$1,717.31				
25-Jul-17			Parts to prep drill	\$77.15				
25-Jul-17			Tools/safety - drill	\$21.72				
28-Jul-17	Trip back home	\$83.67						
30-Jul-17					Lunch	\$23.73		
30-Jul-17	Filled Diesel machines	\$353.04					\$3,500.00	
31-Jul-17					Grocery	\$370.45		
31-Jul-17					Lunch	\$36.85		
1-Aug-17	Geology truck T-Bay	\$92.70						
1-Aug-17	Filled in Fort Frances	\$101.70						
2-Aug-17	Filled in Thunder Bay	\$105.54						
2-Aug-17	Filled Diesel machines	\$262.57			Lunch	\$16.21		
3-Aug-17	Filled in Fort Frances	\$79.65						
4-Aug-17	45 gal. gas drum to drill	\$75.00			Grocery	\$159.92		
4-Aug-17	Filled in Thunder Bay	\$131.26						
6-Aug-17			Parts for drill rig	\$58.52				
6-Aug-17	Geology truck T-Bay	\$89.93						
7-Aug-17	Filled Diesel machines	\$306.33	Maxed out @ 350l.					
7-Aug-17	Filled Diesel machines	\$306.33	Second shot					
7-Aug-17	Filled Diesel machines	\$306.33	Third final shot					
7-Aug-17	Filled in Fort Frances	\$74.23						
9-Aug-17	Geology truck T-Bay	\$89.66						
9-Aug-17	Gas & oil for trucks	\$153.58	Reaming Shell parts	\$77.88				
10-Aug-17	Filled Diesel machines	\$355.76	Rice sample bags	\$97.25	Grocery	\$512.28	\$3,500.00	
11-Aug-17	Geology truck T-Bay	\$100.42						
14-Aug-17	Flat bed truck T-Bay	\$528.38			Grocery	\$344.60		
14-Aug-17	Filled Diesel machines	\$682.61			Lunch	\$10.81		
14-Aug-17	Geology truck T-Bay	\$98.30						
17-Aug-17	Filled in Thunder Bay	\$29.55	Reaming Shell	\$1,030.85				
18-Aug-17	Diesel Conditioner	\$230.75						
20-Aug-17	Geology truck T-Bay	\$178.47						
21-Aug-17	Filled in Thunder Bay	\$169.64	Core lifter springs	\$136.77				
22-Aug-17	Filled in Fort Frances	\$92.28			Snacks	\$76.06		
23-Aug-17	Filled in Thunder Bay	\$91.47	Casing 2 feet&cap	\$244.61				
24-Aug-17	Filled Drill rig tank	\$485.47						
26-Aug-17	Filled Drill rig tank	\$359.79			Lunch	\$26.57		
28-Aug-17	Filled in Thunder Bay	\$136.20						
30-Aug-17	Filled in Fort Frances	\$177.15			Grocery	\$280.99		
30-Aug-17					Lunch	\$37.36		
31-Aug-17								\$2,283.60
1-Sep-17	Filled in Fort Frances	\$33.04			Grocery	\$60.32		
5-Sep-17			Full gear drill parts	\$5,876.66				
7-Sep-17								\$456.72
8-Sep-17			Expense Report	\$714.84				
29-Sep-17			Air liquid fill up	\$163.50				
3-Oct-17	Filled in Thunder Bay	\$116.73						
4-Oct-17	Makabi Inn Motel	\$122.00						
4-Oct-17					Lunch AW	\$11.25		
5-Oct-17	Geology truck Ft Frances	\$96.22						
	<b>Total Categories</b>	<b>\$7,341.56</b>		<b>\$13,235.48</b>		<b>\$2,526.91</b>	<b>\$10,500.00</b>	<b>\$5,199.72</b>
			<b>Grand Total</b>	<b>\$38,803.67</b>				

**Metalcorp North Rock Project**  
**Drill Rig BBS 37 NQ Rods Diameter**  
**Various Costs**

**Costs related to Assay Result from Activation Laboratory in Thunder Bay**

<b>Date</b>	<b>Invoice #</b>	<b>No. Samples</b>	<b>Costs</b>
2-Oct-17	A17-09754	113	\$4,308.85
16-Oct-17	A17-09754B	1	\$14.00
3-Oct-17	A17-10037	117	\$4,453.65
10-Oct-17	A17-10201	48	\$1,827.60
16-Oct-17	A17-10199	101	\$3,861.45
16-Oct-17	A17-10517	138	\$5,252.10
	<b>Total</b>	<b>518</b>	<b>\$19,717.65</b>

**Summary of Daily Logs / Jul 10-Dec 01**

Name	Position - Job	Rate/Hour	Total Hours	Total Salary
Marcel Smith	Foreman-Driller	\$75.00	53	\$3,975.00
Marcel Smith	Driller	\$50.00	380	\$19,000.00
George Gottwall	Helper-Driller	\$75.00	41	\$3,075.00
George Gottwall	Helper	\$50.00	344.5	\$17,225.00
George Gottwall	Core Cutter	\$75.00	60	\$4,500.00
Jerry Nichols	Third Man Field Support	\$75.00	315	\$23,625.00
Jerry Nichols	Field Support	\$50.00	96	\$4,800.00
Gary Grenier	Driver Float Truck and Heavy Equipment	\$75.00	74.5	\$5,587.50
Mitch Dumoulin	Geologist/Field	\$80.00	64	\$5,120.00
Mitch Dumoulin	Geologist/Office		129	\$4,970.76
John Corkery	Geologist	\$80.00	48	\$3,840.00
	<b>Total</b>			<b>\$95,718.26</b>

**Summary of Rentals**

		Rate/Month	Rate/Day	Rate/Hour	Total Months	Total Days	Total Hours	Total Rental
2012 F-150 Truck	Geology truck	\$1,700.00	\$56.67		1	8		\$2,153.36
2014 F-350Truck	Field truck for Jerry	\$2,225.00	\$74.17		1	8		\$2,818.36
2009 GMC 1500 Truck	Diamond drillers truck	\$1,700.00	\$56.67		1	4		\$1,926.68
Suzuki ATV	4x4 quad to move men & material	\$1,550.00	\$103.33		1			\$1,550.00
Honda ATV	4x4 quad to move men & material	\$1,550.00	\$103.33		1	4		\$1,963.32
16 feet boat	transport to cabin with material	\$1,800.00			1			\$1,800.00
12 feet boat	transport men to cabin	\$1,200.00			1			\$1,200.00
160 Linkbelt Excavator	Back Hoe to open trails, strip vegetation	\$5,500.00			1			\$5,500.00
D6 Bulldozer	D6 to refine access trails, make set-ups	\$10,500.00			1			\$10,500.00
Drill Rig	Machine to drill core down holes	\$15,000.00		\$50.00	1		44.5	\$17,225.00
Beam Float Truck	Transport heavy machines, material			\$225.00			11	\$2,475.00
Load King Float Truck	Transport heavy machines, material			\$175.00			30.5	\$5,337.50
Sea Container	Box to lock important equipment	\$150.00	\$5.00		1	\$8.00		\$190.00
Demobilization	Withdrawal of all the equipment above	\$3,500.00						\$3,500.00
	<b>Total</b>							<b>\$58,139.22</b>

**Summary of Material, food and Lodging**

		Total
Gas	3 trucks, floats, dozer, excavator, drill rig	\$7,341.56
Food	Groceries, lunches & suppers in town	\$2,526.91
Cabin Rental	Lodging 3 men up to 4 at times	\$10,500.00
Field Material	All parts/packages needed for drilling	\$13,235.48
Reflex Ez-shot	Survey instrument rental for drill hole	\$5,199.72
	<b>Total</b>	<b>\$38,803.67</b>

**Summary of Assaying Core Samples**

<b>Invoice #</b>	<b>Analyses for Platinum &amp; Copper Suites</b>	<b>No. of Samples</b>	<b>Total</b>
A17-09754	Crush, pulverized, analyse 39 elements	113	\$4,308.85
A17-09754B	Crush, pulverized, analyse 39 elements	1	\$14.00
A17-10037	Crush, pulverized, analyse 39 elements	117	\$4,453.65
A17-10201	Crush, pulverized, analyse 39 elements	48	\$1,827.60
A17-10199	Crush, pulverized, analyse 39 elements	101	\$3,861.45
A17-10517	Crush, pulverized, analyse 39 elements	138	\$5,252.10
	<b>Total</b>	<b>518</b>	<b>\$19,717.65</b>

Prep of samples (Code RX1): \$9.00 per sample (see invoices)

Platinum Package (Code 1C-OES): \$14.00 per sample (see invoices)

Copper Package (Method ICP-OES Code 1F2): \$15.00 per sample (see invoices)

Disposal of samples: \$0.45 per sample