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ASSESSMENT REPORT – 2020 PROSPECTING PROGRAM

TOT LAKE PEGMATITE, GULLWING-TOT LAKES PROPERTY

Dryden, Northwestern Ontario, Canada

NTS Sheets: 52F15NE and 52F16NW

Townships: Webb and Drope

POWER METALS CORP.
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Canada

Date: Feb. 18, 2022

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1.0 SUMMARY

J-J Minerals of Sudbury, Ontario, Canada was contracted by Power Metals Corp. ("Power Metals") of Vancouver, British Columbia, Canada to supervise a prospecting and channel sampling program on the Tot Lake pegmatite at the Gullwing-Tot Lakes Property, Dryden, northwestern Ontario and to recommend a future exploration program. The summer 2020 prospecting program was a follow up on the summer 2018 prospecting program (MENDM assessment report 20000018711).

The Gullwing - Tot Lakes Property is located in the Sioux Lookout Mining Division, 30 km northeast of Dryden, northwestern Ontario in Webb and Drope townships on NTS sheets 52F15NE and 52F16NW. The Property consists of 112 contiguous cell claims totaling 1216 ha and is approximately 10 km by 1.5 km in size.

The Gullwing-Tot Lake property is located within the Sioux Lookout Terrane of the Superior Province; the Sioux Lookout Terrane makes up the boundary zone of the granitoid Winnipeg River Subprovince to the north and the granite-greenstone Wabigoon Subprovince to the south. The Terrane itself is composed of mafic to intermediate metavolcanic rocks, clastic sediments, metasedimentary migmatites, and granitoid rocks including key two-mica S-type granitoids which may be the parent bodies of the pegmatite mineralization. The Sioux Lookout Terrane is the host of the Gullwing-Tot Lake Pegmatite Group. The Gullwing-Tot Lake Pegmatite group consists of multiple pegmatite dykes including: Gullwing Lake spodumene pegmatite swarm, Tot Lake spodumene pegmatite, Coates beryl-molybdenite pegmatite and about 15 Rb-Cs pegmatite dykes located in the Drope township area.

Pegmatites in the Gullwing-Tot Lake Group are found within an E-NE trending cluster that has an approximate size of 0.8-2.2 km by 15 km. These pegmatites are typically hosted in highly deformed amphibolite facies mafic metavolcanic rocks and are less commonly found in clastic metasedimentary rocks. The Gullwing-Tot Lake Pegmatite Group contains 2 key known Li-Cs-Rb-Be-Ta bearing pegmatites; the namesake Gullwing Lake and Tot Lake pegmatites.

The Gullwing Lake pegmatite, also known as the Sleeping Giant Pegmatite is located on the western edge of the Gullwing-Tot Lake Property, ranges in width from 25-80 m, is 412 m long and has Li-Nb ±Ta-Be-Mo with local REE enrichment. The dyke is separated into the south, central and north zones. The central and north zones contain spodumene in the quartz core units. Spodumene is pseudomorphed by yellow-green mica in the central zone. The north zone contains 3 spodumene-bearing, blocky microcline, quartz,

albite, muscovite pods, which comprise ~10% its total surface area. The largest pod is 3 x 8 m in size and contains faint green spodumene. The spodumene in these pods can be up to 4 x 40 cm x 100 cm in size and are intergrown with the blocky microcline, quartz, grey muscovite and albite of the quartz core. Spodumene is commonly partially to completely replaced by mauve Li-muscovite or by fine-grained albite and green mica, but in rare cases spodumene is white and unaltered.

The Tot Lake Pegmatite is the most fractionated granitic pegmatite body in the Dryden Pegmatite Field and is among the most fractionated granitic pegmatite bodies in Ontario, as evidenced by the presence of the cesium ore mineral pollucite, which is only found in 4 other pegmatites in Ontario including Power Metal's owned Marko's pegmatite on the Paterson Lake Property and the West Joe Dyke on the Case Lake Property. The chemical fractionation index of the Tot Lake Pegmatite is comparable to the Tanco Pegmatite.

The Tot-Lake pegmatite is 1-6 x >48 m in size and is complexly chemically zoned with abundant variably textured spodumene bearing zones which can contain up to 78% spodumene. Pollucite in the Tot Lake pegmatite is confined to a 1 x 5 m pollucite-spodumene pod where it is found interstitially between pink spodumene crystals. Pollucite makes up to 32% of the pod.

Columbite is found in the Tot-Lake pegmatite where it is typically steely-black, euhedral and up to 1 x 2 cm in diameter. Columbite crystals typically form at the interface between altered blocky microcline and the quartz core.

Power Metals conducted a prospecting, grab and channel sampling program Aug. 28 to Sept. 18, 2020 on the Tot Lake pegmatite. A total of nine channels were cut: TL-CH-20-01, 01b, 02, 03, 03b, 04, 05, 06 and 07 to represent the majority of the pegmatite zones as defined by Breaks and Janes (1991). The purpose of the prospecting was to collect channel samples on the Tot Lake pegmatite focussing on the Li, Ta and Cs mineralization. Grab samples were also collected of the host rocks to look for Li and Cs anomalies indicating the presence of blind pegmatites. The samples were collected on the Tot Lake pegmatite on cell claims 195537 and 116833, but descriptions were recorded along the access route on cell claims: 139610, 240281, 116481, 158921, 268289, and 160267. The field work was conducted by Alan Rich, senior geologist, and Kyle Henderson, prospector.

A total of 77 observations was recorded in the prospecting table: 46 samples assayed and 31 stations described but no samples collected. The total number of assays is 46 samples which consist of 22 grab

samples, 19 channel samples and 5 QC samples. The 31 stations consist of 11 man-made features (i.e., road, signs, trenches) and 20 overburden descriptions (i.e., soil, clay, boulders, outcrop).

Assays from the Tot Lake pegmatite contained high grade Li, Ta and Cs. Assay highlights include:

- 2.89 % Li_2O, 0.81% Cs_2O, 57.8 ppm Ta over 0.95 m from channel TL-CH-20-04 from pollucite + spodumene pegmatite zone, sample 150298
- 2.88 % Li_2O, 493 ppm Cs, 254 ppm Ta over 1.30 m from channel TL-CH-20-06 from blocky K-feldspar + spodumene pegmatite zone, sample 157856
- 2.14 % Li_2O, 486 ppm Cs, 78.6 ppm Ta over 1.0 m from channel TL-CH-20-03 from spodumene pegmatite zone, sample 150289
- 2.00 % Li_2O, 1086 ppm Cs, 255 ppm Ta, 2009 ppm Be over 1.0 m from channel TL-CH-20-05 from blocky K-feldspar + spodumene pegmatite zone, sample 157852
- 0.02 % Li_2O, 224 ppm Cs, 1062 ppm Ta, 307 ppm Nb over 0.65 m from channel TL-CH-20-07 from columbite + albitized spodumene zone, sample 157857.

Samples from the spodumene pegmatites zones (1, 2 and 3), blocky K-feldspar + spodumene pegmatite zone (4) and pollucite + spodumene pegmatite zone (5) typically have assays > 2.0 % Li_2O. Samples from aplite (9), columbite-albitized spodumene pegmatite zone (8) and blocky K-feldspar + spodumene pegmatite zone (4) tend to have assays with > 200 ppm Ta. High grade Cs mineralization occurs as pollucite in the pollucite + spodumene zone (5). The pollucite in sample 150298 has pollucite interstitial to coarse-grained pink spodumene blades.

Channels were extended to sample the meta-ultramafic host rock on the north and south contacts. The meta-ultramafic host rock has elevated Fe, Mg, Cr and V as expected, but also contain elevated Li and Cs contents:

- 1.34 % Li_2O and 4364 ppm Cs over 0.20 m, sample 150285, TL-CH-20-01, north contact
- 1.24 % Li_2O and 5618 ppm Cs over 0.20 m, sample 150297, TL-CH-20-03b, south contact.

The channel sampling confirmed the presence of high-grade Li-Cs-Ta mineralization on the Tot Lake pegmatite. The Tot Lake pegmatite is one of the most fractionated pegmatites in Ontario as it contains the Cs ore mineral pollucite. The meta-ultramafic host rocks in contact with the Tot Lake pegmatite are elevated in Li and Cs due to metasomatism of the host rock during the intrusion of the pegmatite melt. This information can be used as an exploration tool in search for more Li pegmatites in the area. The

channels can be plotted as horizontal drill holes in 3D modelling software to be used for future drill hole targeting.

Power Metals Corp recommends the following future exploration:

- A drill program on the Tot Lake Pegmatite to determine Li and Ta grades at depth as well as to look for an extension of the dyke
- Further prospecting on area between the Gullwing Lake Pegmatite and the Tot Lake pegmatite to find more mineralized pegmatites at surface.

The budget for the proposed exploration program is: 1000 m of drilling = $200,000; Prospecting = $50,000 and Total = $250,000.

2.0 INTRODUCTION

2.1 Introduction

J-J Minerals of Sudbury, Ontario, Canada was contracted by Power Metals Corp. ("Power Metals") of Vancouver, British Columbia, Canada to supervise a prospecting and channel sampling program on the Tot Lake pegmatite at the Gullwing-Tot Lakes Property, Dryden, northwestern Ontario and to recommend a future exploration program. The summer 2020 prospecting program was a follow up on the summer 2018 prospecting program (MENDM assessment report 20000018711).

Sources of information for this Report include Ministry of Energy, Northern Development and Mines ("MENDM") assessment files listed in Appendix 4, references listed in section 0 and grab sample assays and notes from Power Metals' 2020 prospecting program. Tenure information was derived from MENDM MLAS map viewer website (https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mlas-map-viewer).

2.2 Terminology

Fusion - This digestion process will melt the entire sample to produce "total digestion". This method is especially used for digestion of silicates and other resistive minerals.

ICP-MS: Inductively Coupled Plasma - Mass Spectrometer: An instrument capable of determining the concentrations of 70+ elements simultaneously by measuring the mass of ions generated by an argon gas

plasma heated to 10,000°K and passing through a magnetic quadrupole to the detector. Capable of ultra low detection limits (ppb to ppt) with very wide linear ranges (up to 7 orders of magnitude) (Acme Analytical Laboratories Ltd: www.acmelab.com).

MENDM: Ministry of Energy, Northern Development and Mines which is the provincial ministry responsible for managing mining claims (Mining Lands Section) and Ontario Geological Survey.

MLAS: Mining Lands Administration System is the electronic system established by the Minister for administering public lands for mining purposes and for the online registration of mining claims.

QA/QC: Quality Assurance/ Quality Control

2.3 Units

The Metric System is the primary system of measure and length used in this Report and is generally expressed in kilometres (km), metres (m) and centimetres (cm); volume is expressed as cubic metres (m^3), mass expressed as metric tonnes (t), area as hectares (ha), and gold and silver concentrations as grams per tonne (g/t). Conversions from the Metric System to the Imperial System are provided below and quoted where practical. Many of the geologic publications and more recent documents now use the Metric System but older documents almost exclusively refer to the Imperial System. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to www.maden.hacettepe.edu.tr/dmmrt/index.html for a glossary.

Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = troy ounce per short ton; Moz = million ounces; Mt = million tonne; t = tonne (1000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2000 pounds).

Dollars are expressed in Canadian currency (CAD$) unless otherwise noted. Where quoted, Universal Transverse Mercator (UTM) coordinates are provided in the datum of Canada, NAD 83, Zone 15.

2.4 Qualified Person

The Qualified Person and author for this Report is Dr. Julie Selway, Ph.D., P.Geo., Principal Geologist for J-J Minerals and a geologist in good standing with the Association of Professional Geoscientists of Ontario (APGO # 0738). Dr. Selway completed a Ph.D. in rare-element pegmatites in 1999, worked as a pegmatite geoscientist for Ontario Geological Survey for 3 years (2001-2003) and has completed 4 NI 43-101 Reports

on the Georgia Lake spodumene pegmatites, Ontario, Canada for Rock Tech Lithium Inc. Dr. Selway has also over 7 years of work experience completing QA/QC reviews of drill core assays for the purpose of resource estimates. Dr. Selway has co-authored over 20 NI 43-101 Technical Reports. Certificate of Qualified Person is given in Appendix 1.

3.0 RELIANCE ON OTHER EXPERTS

The author of this Report relied on Power Metals' legal counsel and MENDM MLAS map viewer website (https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mlas-map-viewer) for tenure information.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Gullwing - Tot Lake Property is located 30 km northeast of Dryden, northwestern Ontario in Webb and Drope townships on NTS sheets 52F15NE and 52F16NW (Figure 4-1 and Figure 4-2).

Figure 4-1 Regional location map for Gullwing-Tot Lake Property, NW Ontario.

4.2 Description and Ownership

The Gullwing-Tot Lake Property consists of 112 contiguous cell claims totaling 1216 ha and is approximately 10 km by 1.5 km in size. (Figure 4-3) Power Metals holds the mining rights of the mining claims and the crown holds the surface rights. Power Metals has legal access to the Property. A detailed cell claim list is provided in Appendix 2.

4.3 Requirements to Retain the Property

In Ontario, to retain a mining claim, companies must submit an assessment file to MENDM's Geoscience Assessment Office showing that they have spent $400/per single cell claim unit and $200 per boundary claim on exploration. The initial mining claim is issued for a term of 2 years and then renewed every year afterwards.

Power Metals does not have an exploration plan or permit on the Gullwing-Tot Lake Property.

For more information on Ontario MENDM's exploration permits see:

https://www.mndm.gov.on.ca/en/mines-and-minerals/mining-act/mining-act-modernization/exploration-permits

To the best of the QP's knowledge, there is no significant factors and risks that may affect access, title or the right or ability to perform work on the Property.

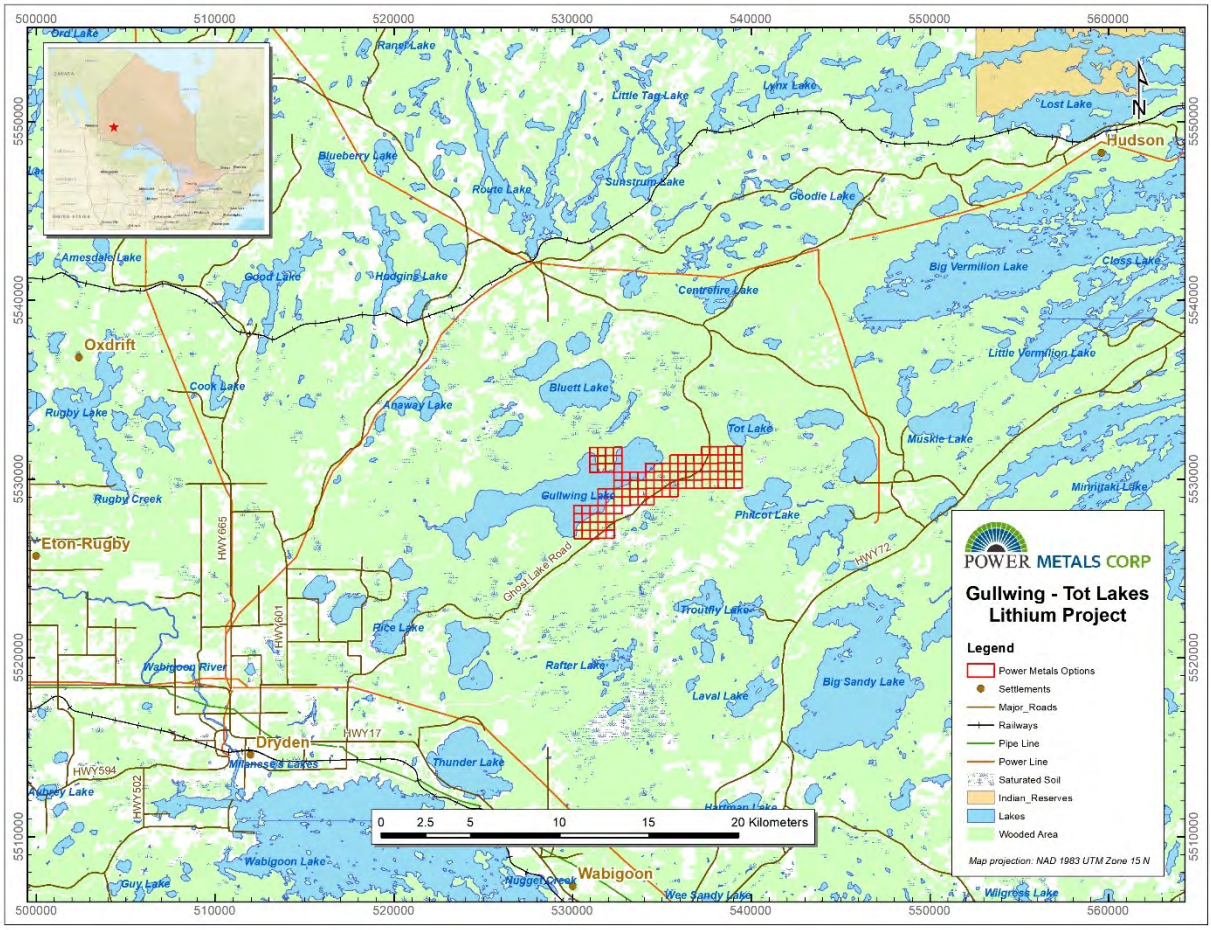

Figure 4-2 Regional location map for Gullwing-Tot Lakes Property.

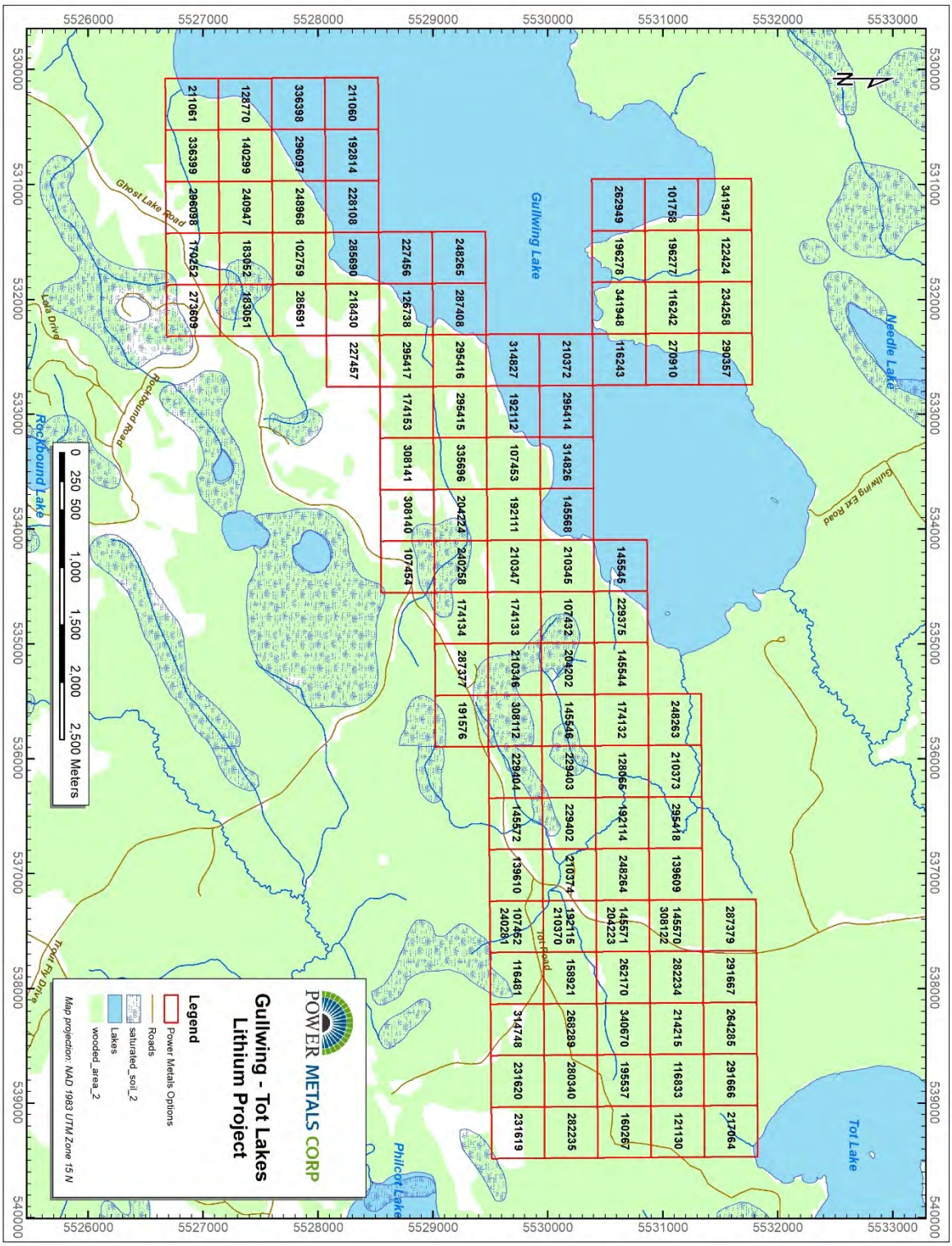

Figure 4-3 Property scale claim map for Gullwing-Tot Lakes Property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Access

The Gullwing-Tot Lake Property has excellent access and infrastructure (Figure 5-7). The property is accessible year-round via the Ghost Lake Road, an all-weather gravel road. The Property can be accessed by driving East of Dryden along Highway 17 for 5 km then turning left onto Highway 601, continuing on Highway 601 for 5 km, then turning right onto Ghost Lake Road (Figure 5-1, Figure 5-2). The Gullwing-Tot Lake property is located 18 km down the Ghost Lake Road. To access the Tot Lake pegmatite, turn off Ghost Lake gravel road onto Tot Lake clay road (Figure 5-3). Parts of the Tot Lake clay road flooded during the 2020 field work and was not driveable (Figure 5-4). The truck was parked on the Tot Lake road as close to the Tot Lake pegmatite as the truck could get (AR-20-16).

Figure 5-1 Turn off Highway 17 onto Highway 601.

Figure 5-2 Turn off Highway 601 onto Ghost Lake Road.

Figure 5-3 Turn off Ghost Lake gravel road onto Tot Lake clay road (AR-20-49).

Figure 5-4 Heavy rain flooded this part of the clay road to Tot Lake. Clay and mud mixture is >30 cm deep (AR-20-17).

The closest commercial airports to the Property are in Winnipeg, Manitoba and in Thunder Bay, Ontario (Figure 5-7). The airport in Dryden links passengers and freight with small adjacent communities such as Kenora, Sioux Lookout, Fort Frances and Thunder Bay and can handle only small aircraft (Dryden Municipal Airport website; https://www.dryden.ca/en/explore/airport.aspx). The closest railroad access to the Gullwing-Tot Lakes Property is the Canadian Pacific Railway which travels through Dryden (Canadian Railroad Atlas; https://rac.jmaponline.net/canadianrailatlas/).

5.2 Topography Vegetation and Physiography

The Gullwing-Tot Lakes property has topography typical of the Canadian Shield; bedrock ridges covered with a thin veneer of glacial overburden. Lowlands are occupied by lakes, swamps and beaver ponds. The property has an average elevation above sea level of ~415m and local relief ranges from 15-30m.

The Gullwing-Tot Lakes Property has been recently logged and the secondary growth includes deciduous and coniferous trees such as jack pine, spruce, birch, poplars, tamarack, and alders.

The Canadian Climate normals for 1981-2010 from Environment Canada (www.climate.weatheroffice.gc.ca/climate_normals/) for Dryden (closest weather station to the property) indicate that the daily average temperature ranges from -17.4ºC in January to 18.5ºC in July. The highest average accumulation of rain for a month is 127.6 mm in July. The highest average accumulation of snow for a month is 28.4 cm in November. The highest average snow depth is 45 cm in February. Drilling can be conducted year-round except for spring thaw in mid-March and April. Geological mapping and outcrop sampling can be conducted May to November when there is no snow on the ground.

5.3 Infrastructure and Local Resources

The town of Dryden can provide accommodations, grocery stores, hardware stores and hospital for labourers (Figure 5-5). The population of town of Dryden is 7,749 people according to the 2016 Census (Statistics Canada, www.statcan.gc.ca). Dryden is on the Trans-Canada Highway, also known as Ontario Highway 17. Dryden can provide the skilled labour and field supplies required to run an exploration program.

Figure 5-5 Dryden's Max the Moose

Ontario Power Generation's Northwest Operations (NWO) group operates 11 hydroelectric stations and two thermal stations for a total of 42 generating units. With a combined capacity of about 1,046 megawatts (MW), these stations provide a clean, low cost, renewable and reliable source of power to Ontarians all year

round (http://www.opg.com/communities-and-partners/host-communities/Pages/northeast.aspx). The closest hydroelectric dam to the Gullwing-Tot Lakes property is located at the Ear Falls which is 164km NW of Dryden; electricity generated by this dam is transported along 115kV transmission line to Dryden.

Sources of water on the Property includes Gullwing Lake, Tot lake and numerous swamps and various beaver ponds (Figure 5-6).

The Property's surface rights are owned by the crown and they are sufficient for future mining operations. The Gullwing-Tot Lakes Property does not a have a resource estimate and thus a discussion of potential tailings storage areas, potential waste disposal areas, heap leach pad areas and potential processing plant sites is not currently relevant to the Property.

Figure 5-6 View from the top of the central zone of the Gullwing Lake Pegmatite looking at Gullwing Lake.

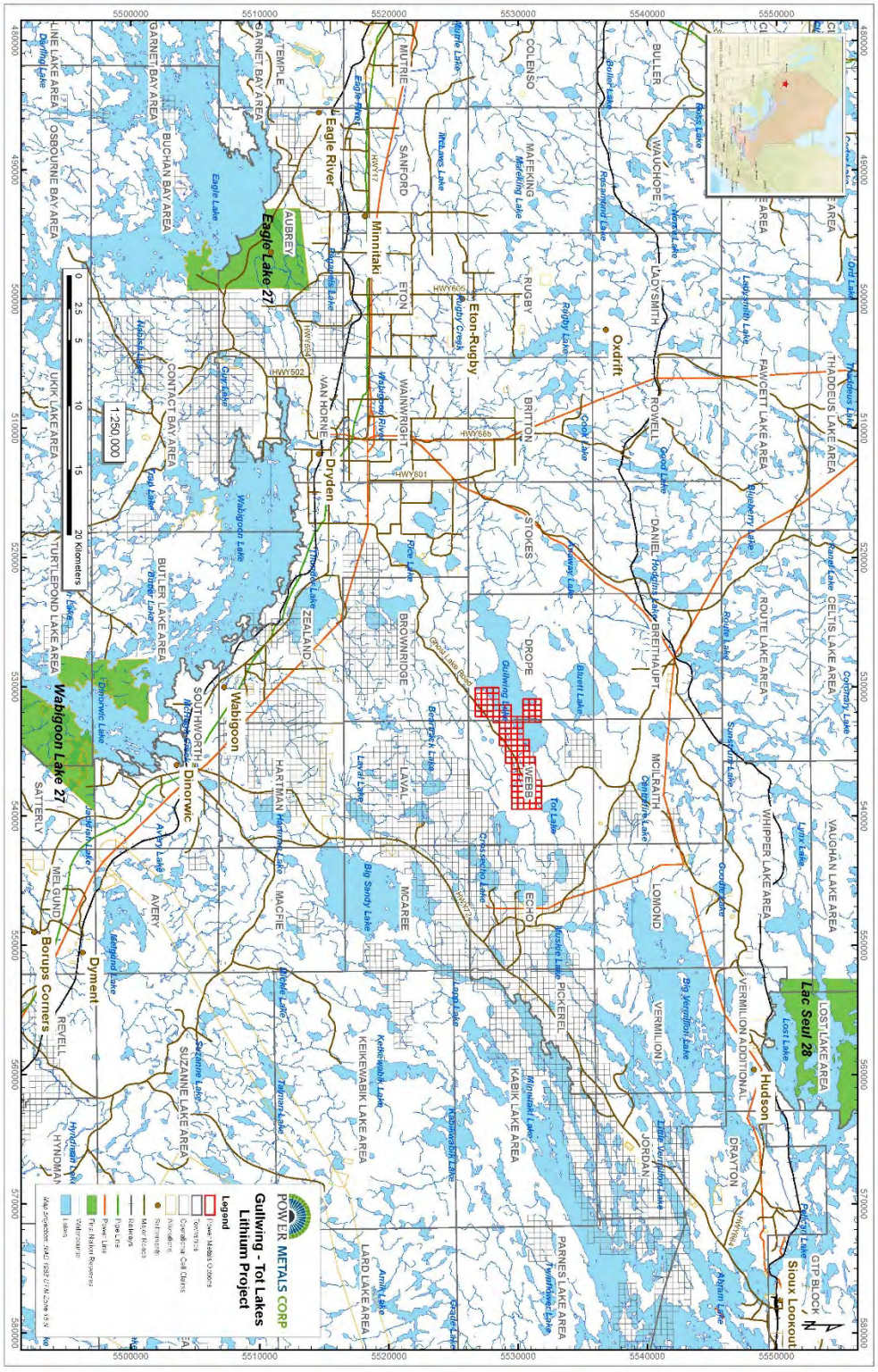

Figure 5-7 Regional infrastructure map

6.0 HISTORY

The following section summarizes previous exploration completed in the Gullwing-Tot Lakes area and is taken from Power Metals assessment report filed in 2019 (MENDM assessment report 20000018711).

6.1 1964 diamond drilling by Canol Metal M.L.

Four diamond drill holes totalling 732 ft (=223.11 m) were completed by Canol Metal M.L during August and October 1964 (MENDM report 52F16NW0130). The drill holes were located south of Tot Lake and were collared on Power Metals current claims (Figure 6-4). Pegmatite was intersected in drill hole # 1 and drill hole # 2. Spodumene and lepidolite were recorded in the log for drill hole # 1 and spodumene was recorded in the log for drill hole # 2.

6.2 1969 Airborne radiometric surveys

Coleman Morton, a Californian, conducted airborne radiometric surveys over seven of his claimed properties in the Sioux Lookout-Dryden area including Northeast Gullwing and Southwest Gullwing (MENDM report 52K01SW9511). The instrument used was a GIS-2 Gamma Ray Integrating Spectrometer, which was used to detect uranium, thorium, and potassium anomalies on the properties. The survey detected anomalies in both the Northeast Gullwing and Southwest Gullwing properties. It was reported that the highest anomalies were detected in the northwest and northeast portions of the Northeast Gullwing property, and in the southeast corner of the Southwest Gullwing property. Neither of the properties were located on Power Metals' current claims.

6.3 1970 diamond drilling by Canadian Nickel Company

One diamond drill hole totalling 324 ft (=98.76 m) was completed by the Canadian Nickel Company on the eastern shore of Gullwing Lake during July 1970 (MENDM report 52F15NE0353) (Figure 6-3). The drill hole was collared on Power Metals current properties and intersected pink quartz mica pegmatite at depth.

6.4 1972 diamond drilling by Mike Woitowicz

In 1972, four diamond drill holes totalling 439 ft (=133.81 m) were completed by Mike Woitowicz (MENDM report 52F15NE0351). The drillholes were located near the eastern shore of Gullwing Lake and

all four holes were collared on Power Metals current property (Figure 6-3). White pegmatite was intersected in hole #3 and hole #4. No assays were reported.

6.5 1978 diamond drilling by Tantalum Mining Co. (Tanco)

Tantalum Mining Co. (Tanco) conducted a brief diamond drill program ~2km south of Tot Lake between December 1978 and January 1979 with three drill holes totalling 512 ft (=156.06 m; MENDM report 52F16NW0122). All three holes were collared on Power Metals current properties (Figure 6-4). Pegmatite with patchy quartz, K-felspar and muscovite was intersected in drill holes GW-1, GW-2, and GW-3. Only base metals were assayed for.

6.6 1979 diamond drilling by Rio Tinto Canadian Exploration

Diamond drilling was conducted by Rio Tinto Canadian Exploration (Rio Tinto) in the Gullwing-Tot Lake area during February 1979 (MENDM report 52F15NE0015). Four drill holes were completed totalling 1337 ft (=407.52 m): 79-G1, 79-G1A, 79-G4, and 79-G6 (Figure 6-3). Two of the holes, 79-G4 and 79-G6, were collared on Power Metals current property. The purpose of the drill holes was to test electromagnetic (EM) and HLEM anomalies around Gullwing Lake. Pegmatite was intersected in drill hole 79-G1A and 79-G4 (minor). Drill hole samples were only assayed for base metals.

6.7 1981 Patino Mines Ltd Geophysical surveys

Both magnetic and electromagnetic (EM) surveys were conducted by Patino Mine Ltd at the Patino Webb Township Property located near the eastern shore of Gullwing Lake (legacy claim 57818; MENDM report 52F15NE8293). The area surveyed is located on Power Metals' current properties. The instrument used for the magnetic survey was a Geometric "Unimag II" (model 836) portable proton magnetometer. The magnetic survey outlined a general E-W magnetic pattern in the rocks, and the steepest magnetic gradients were in the eastern part of the claim. For the EM survey, a "Geonics" EM-16 unit was used. One weak, E-W trending conductor was detected by the EM survey and was interpreted to be related to the outcrop-overburden interface or slightly conductive overburden in the area.

6.8 1994 prospecting by Mike Woitowicz

Prospecting was carried out in 1993 by Mike Woitowicz in the Gullwing Lake area as part of the Webb Twp. Base Metal Project. Work included line cutting, an EM survey, and a magnetometer survey (MENDM

report 52F16NW0008). The goal of the program was to find a very-low frequency (VLF) conductor where previous drilling intersected base metal minerals. The instruments used were a RONKA EM 16 and a Scintrex MP-2 Proton Procession Magnetometer. A conductor and associated magnetic anomaly were located, potentially indicating pyrrhotite associated with Cu-Zn mineralization. Follow-up prospecting, however, failed to locate outcrops in the conductive zone. Five grab samples were taken and assayed during this program. Pegmatites were not sampled and only base metals were assayed for. The claims that were prospected during this program are located on Power Metals' current properties.

6.9 1998 magnetometer survey by Champion Bear

In 1998, Champion Bear conducted a ground magnetometer survey over a pegmatite dyke located on Claim P 1163139 in Webb Township NW Ontario (MENDM report 52F16NW2003). The western portion of Claim P 1163139 is located on Power Metals' current property. The north-south striking pegmatite dyke is located close to Tot Lake and contains both pollucite and spodumene. The goal of the survey was to determine the magnetic signature of the pegmatite dyke and to provide basic information and a control grid for continued exploration of the property. The results of the survey suggest that the pegmatite dyke has a distinct magnetic signature.

6.10 1997-1999 Prospecting of pegmatites in the Gullwing Lake area

Reconnaissance prospecting was conducted by Alex Glatz and Mike Woitowicz in 1997 proximal to the Lateral Lake Stock to look for base metal and rare metal mineralization (MENDM report 52F15NE2001). A magnetometer and EM survey were also done during this time but did not produce any valuable results (MENDM report 52F16NW2004). Pegmatite dykes were found to intrude both the west and east sides of the granite, strike N-S, and host rare metal mineralization including lithium, tantalite, niobium, rubidium, and pollucite. Rare metal mineralization was observed in two legacy claims: 1161478 and 1163139. The entirety of legacy claim 1161478 and the western half of legacy claim 1163139 are located on Power Metals' current properties. A large pegmatite dyke called the "Sleeping Giant" was located south of Gullwing Lake that contains zones of tantalite and spodumene. It was noted that the area favourable for hosting pegmatite dykes is 9km long and 0.8 km wide.

Follow-up prospecting was conducting in 1998 by Alex Glatz and Mike Woitowicz on the Sleeping Giant pegmatite, located south of Gullwing Lake, and several other pegmatite dykes. The pegmatites are found over a 1.5 km long area located on legacy claim 1161478, which is entirely on Power Metals' current

properties. The Sleeping Giant pegmatite was recorded as being 425 m long and 30 to 60 m wide. All pegmatites were sampled and assayed for tantalite, niobium, spodumene, and cesium. Assay results indicated that the most abundant rare metal is rubidium, with an average grade for all pegmatites being 1243 ppm. The highest assays were 0.31% Rb and 0.33% Rb. The rubidium is contained in feldspar, which occurs with pollucite and lepidolite.

Drilling commenced in August 1999 on the pegmatites prospected the previous year (MENDM report 52F15NE2002). The objective of drilling was to determine if the high Rb values of the pegmatites at surface could be replicated at depth. Two holes were drilled totalling 337 ft (=102.72 m) and sixty-four core samples were assayed (see Figure 6-1). In addition, 39 grab samples from nearby pegmatite dykes were analysed. Like the 1998 prospecting, rubidium was the dominant element in all pegmatite assays: Drill hole 99-01 averaged 1353 ppm Rb over 119 ft (=35.27 m) of core and hole 99-02 averaged 1243 ppm Rb over 135 ft (=41.148 m) of core.

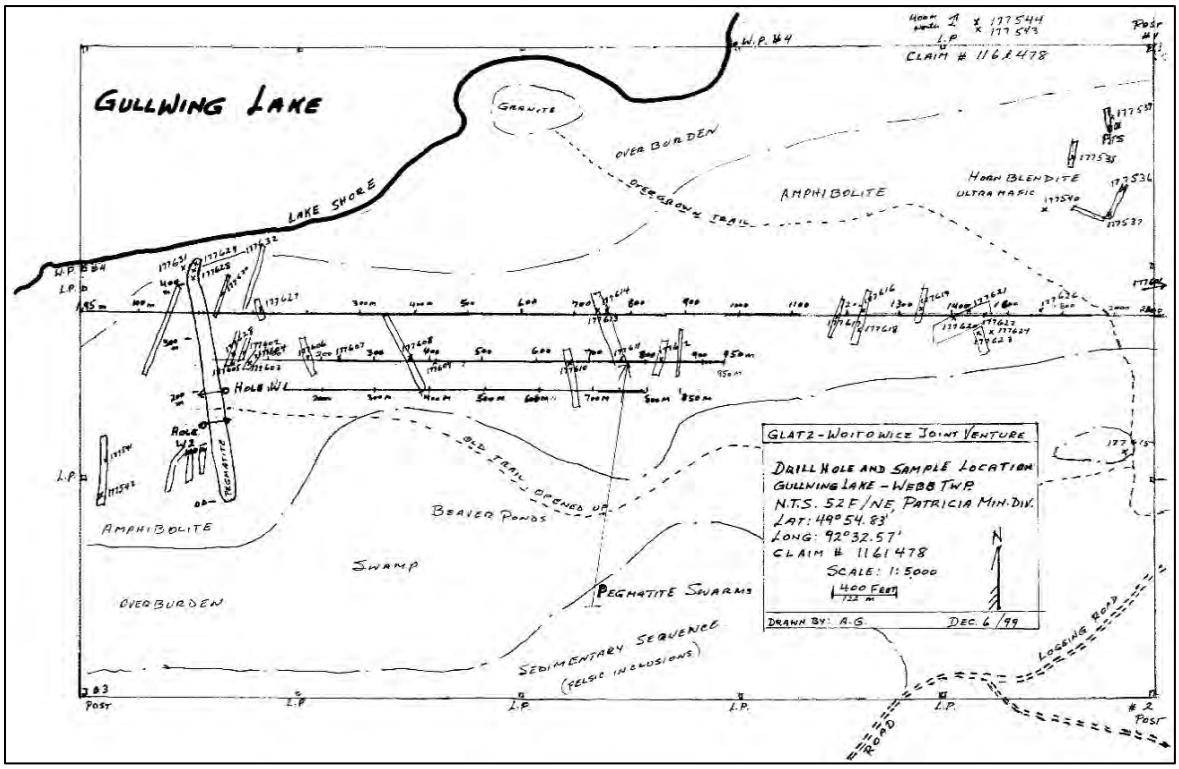

Figure 6-1. 1999 drill hole map of Sleeping Giant pegmatite and surrounding pegmatites by Alex Glatz and Mike Woitowicz. Map is taken from MENDM report 52F15NE2001.

6.11 2007 diamond drill program by Solitaire Minerals Corp.

Solitaire Minerals Corp. conducted a diamond drill program from June 16 to July 15, 2007 over the same area drilled in 1999 by Alex Glatz and Mike Woitowicz (MENDM report 20000773). A total of 7 holes totalling 717 meters were drilled (see Figure 6-2 and Figure 6-3). The goal of the program was to test the pegmatites of the 1999 diamond drill holes to see if the high cesium and rubidium values could be replicated. Drilling successfully extended the strike length and depth of the pegmatites but core assays did not indicate the same grades as the shallower 1999 holes. Pegmatite was intersected at the following intervals: within mafic flows in GW-07-01, within mafic flows and mafic gneiss in GW-07-02, within mafic flows and mafic tuffs in GW-07-03, within mafic flows and between mafic flows and biotite schist in GW-07-04 and GW-07-6, and within biotite schist in GW-07-05. All holes were assayed for base and rare metals. Lithium assay highlights included: 881 ppm Li over a 1.5 m interval in GW-07-01, and 763 ppm Li over a 1.5 m interval in GW-07-01.

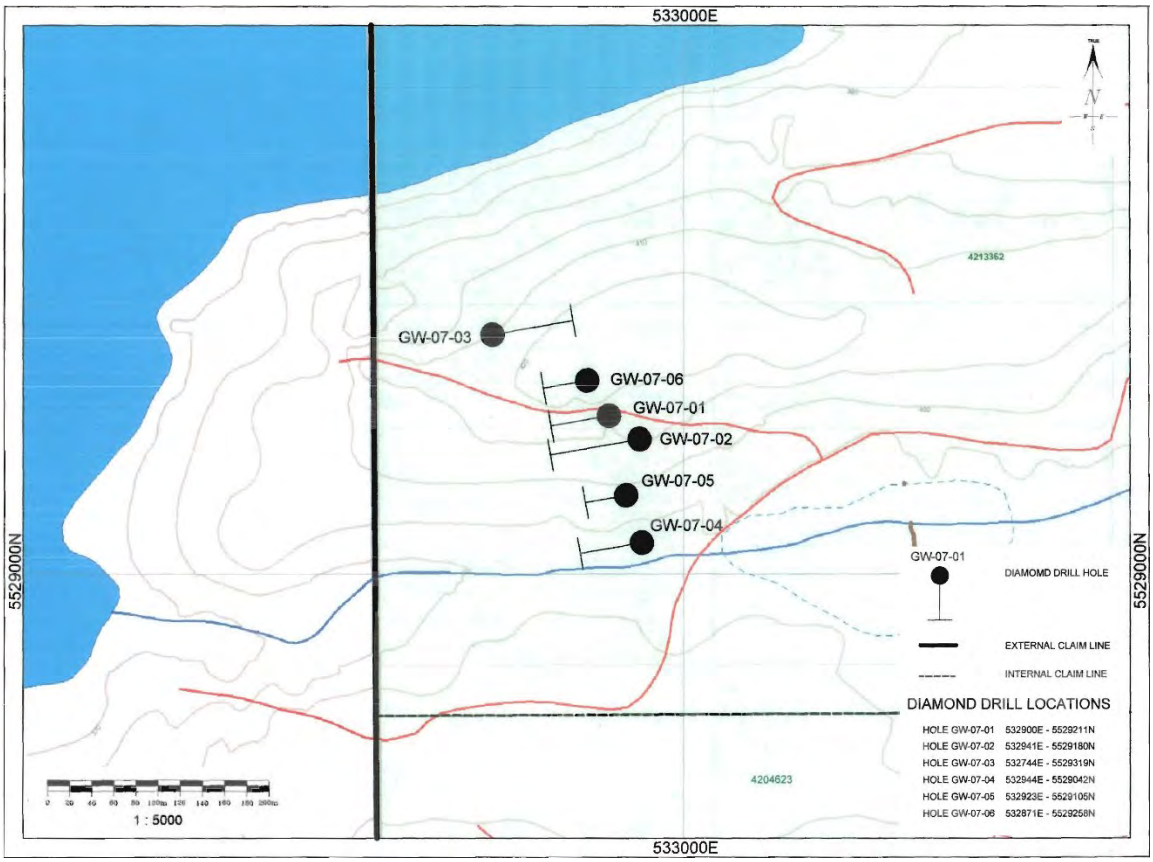

Figure 6-2. Location of drill holes from Solitaire Minerals Corp 2007 diamond drill program. Map taken and modified from MENDM report 20000773.

6.12 2010 geological mapping and geochemical sampling program by Solitaire Minerals Corp.

In early May 2010, Solitaire Minerals Corp. carried out a brief exploration program on its Lateral Lake property (MENDM report 2000006990). The program involved chip sampling along the surface expression of high-grade rubidium intercepts that were returned from 1999 drilling, further sampling of the Sleeping Giant pegmatite, and brief reconnaissance-style soil sampling. Chip sampling returned values of 1043 ppm Rb across 12 m and 887 Rb across 14 m, and largely confirmed the high-grade values of the Alex Glatz and Mike Woitowicz 1999 drill program that were not replicated in 2007 drilling by Solitaire Minerals Corp. It was interpreted that pod-like zones of high grade rubidium are present throughout the Sleeping Giant dyke, and the dyke is large enough to potentially host an economically viable rubidium-cesium deposit. The lithium, niobium, and tantalum grade were deemed not sufficient enough to represent worthwhile targets. Soil sampling identified a strong rubidium anomaly that extends for 250 m and is located ~850 m east of the Sleeping Giant Dyke.

6.13 2018 Power Metals prospecting program

Prospecting was completed by Power Metals on the Gullwing-Tot Lakes Property between June 26 and July 17, 2018 (MENDM assessment report by Power Metals, dated April 11, 2019). The prospecting was done to explore for previously undiscovered mineralized pegmatites at surface, and to perform due diligence work on known mineralized pegmatites. The prospecting approach was to target the 4 known showings on the south side of the Gullwing Lake on the Gullwing-Tot lake property (Tot Lake, Coates, Gullwing and Drope Dykes) and their host rocks for sampling. A total of 89 prospecting grab samples were collected and 29 outcrops were described but no samples were collected. During prospecting 14 historic features were located on Gullwing Lake pegmatite including: 5 drill collars, 1 legacy claim post, 4 sample locations marked by ribbons and 1 historic channel sample. Also 3 historic trenches were located on Tot Lake pegmatite.

The assay highlights from grab samples on the Gullwing North outcrop include:

- 6.78 % Li_2O from pure spodumene sample, sample 159082
- 0.73 % Li_2O from spodumene – albite – quartz sample, sample 159084
- 759 ppm Ta from large Ta-oxide crystals in albite unit, sample 159254

Assay highlights from grab samples from Tot Lake pegmatite include:

- 4.58 % Li_2O from quartz – spodumene core, sample 159056
- 2.62 % Li_2O from quartz – spodumene core, sample 159057
- 1.68 % Li_2O and 233 ppm Ta from pink spodumene zone, sample 1590235
- 498 ppm Ta from albitized K-feldspar zone, sample 159238

Molybdenite is known to occur in the pegmatites on the Gullwing-Tot Lake Property. The Drope pegmatite contains abundant molybdenite. The molybdenite was found at the Coates pegmatite as fine-grained blebs up to 0.5 cm and as stringers (samples 159052 and 159053). Sample 159232 was also from an old blast pit on the Coates pegmatite at the contact between E-W trending pink K-feldspar – quartz – molybdenite pegmatite and metasedimentary rocks. Molybdenite was also found on the south Gullwing Lake pegmatite as 1.5 cm rosettes in albite-biotite-quartz pegmatite (sample 159264).

6.14 Summary of Exploration History

A summary of the historic exploration in the Gullwing-Tot Lakes area is given in Table 6-1 and maps of historic drill hole locations are given in (Figure 6-3 and Figure 6-4).

Table 6-1 Summary of exploration in Gullwing-Tot Lake area

Assessment Report Number	Year of Report	Year of Work	Company	Type of Work	Description of Work
52F16NW0130	1964	1964	Canol Metal M.L.	Diamond drilling	Drilling of four holes totalling 732 ft (=223.11 m)
52K01SW9511	1969	1969	Oja Ltd	Airborne radiometric survey	Airborne radiometric surveys conducted over seven claimed properties in the Sioux Lookout-Dryden area
52F15NE0353	1970	1970	Canadian Nickel Company	Diamond drilling	Drilling of one hole totalling 324 ft (=98.76 m)
52F15NE0351	1972	1972	Mike Woitowicz and Alex Glatz	Diamond drilling	Drilling of four holes totalling 439 ft (=133.81 m)

Assessment Report Number	Year of Report	Year of Work	Company	Type of Work	Description of Work
52F16NW0122	1978	1978	Tantalum Mining Co.	Diamond drilling	Drilling of three drill holes totalling 512 ft (=156.06 m)
52F15NE0015	1979	1979	Rio Tinto Canadian Exploration	Diamond drilling	Drilling of four holes totalling 1337 ft (=407.52 m)
52F15NE8293	1981	1981	Patino Mines Ltd	Geophysical survey	Magnetic and electromagnetic (EM) surveying
52F16NW0008	1994	1994	Mike Woitowicz and Alex Glatz	Prospecting	Line cutting, EM survey, magneotmeter survey
52F16NW2003	1998	1998	Champion Bear Resources Ltd	Geophysical survey	Magnetometer survey over pegmatite dyke
52F15NE2001	1998	1997-1998	Mike Woitowicz and Alex Glatz	Prospecting	Reconnaissance prospecting proximal to Lateral Lake Stock
52F16NW2004	1998	1998	Mike Woitowicz and Alex Glatz	Geophysical survey	Magnetometer and EM survey proximal to Lateral Lake Stock
52F15NE2002	2000	1999	Mike Woitowicz and Alex Glatz	Prospecting, diamond drilling	Drilling of two holes totalling 102.72 m, assaying of 64 core samples and 39 grab samples for rare metals
20000773	2007	2007	Solitaire Minerals Corp.	Diamond drilling	Drilling of seven holes totalling 717 m; all holes assayed for base and rare metals
2000006990	2010	2010	Solitaire Minerals Corp.	Geological and	chip sampling, further sampling of pegmatites, soil sampling

Assessment Report Number	Year of Report	Year of Work	Company	Type of Work	Description of Work
				geochemical sampling	
20000018711	2019	2018	Power Metals Corp	prospecting	Grab sampling Gullwing Lake, Tot Lake, Coates and Drope pegmatites

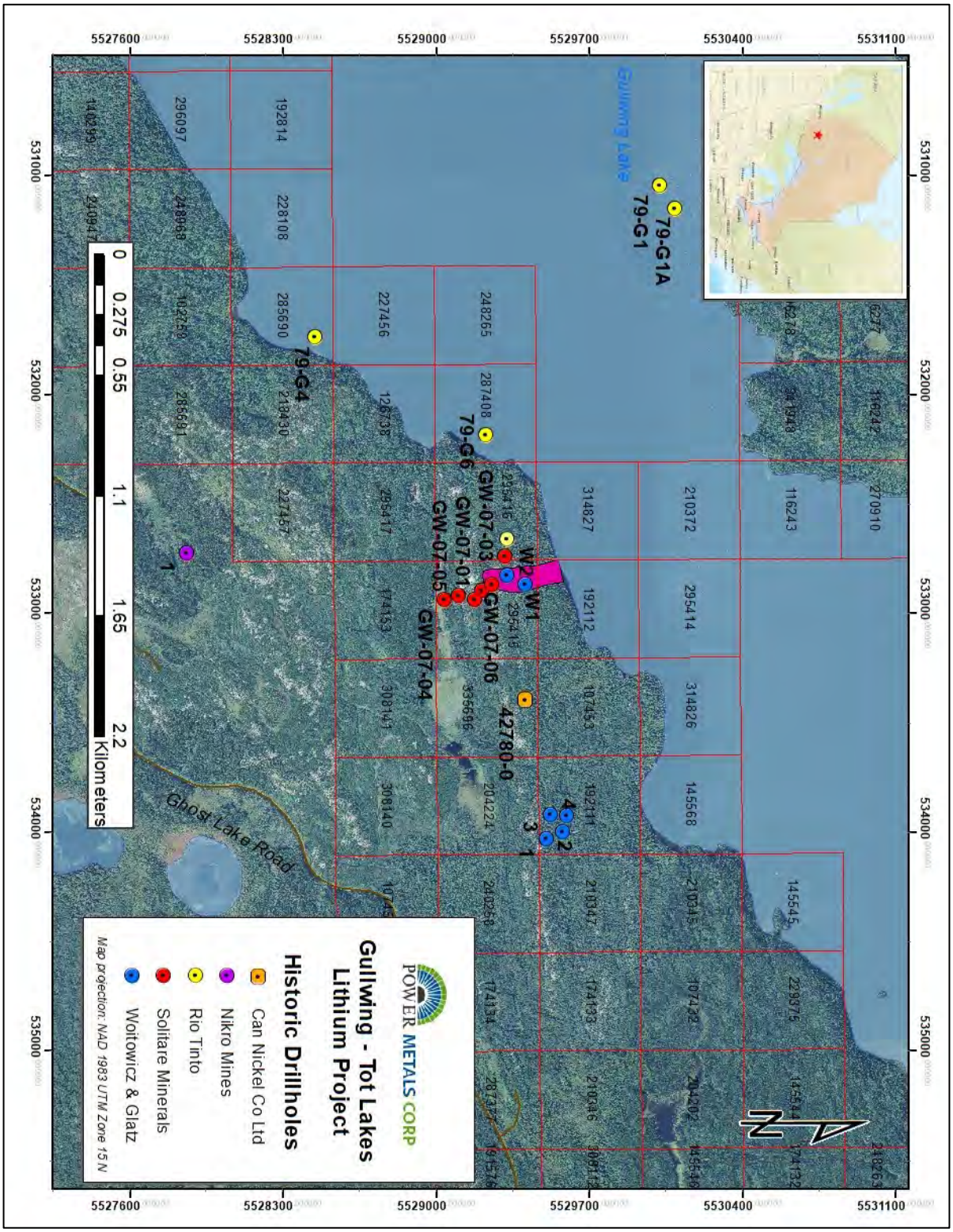

Figure 6-3. Historic drill holes in the west Gullwing-Tot Lake area

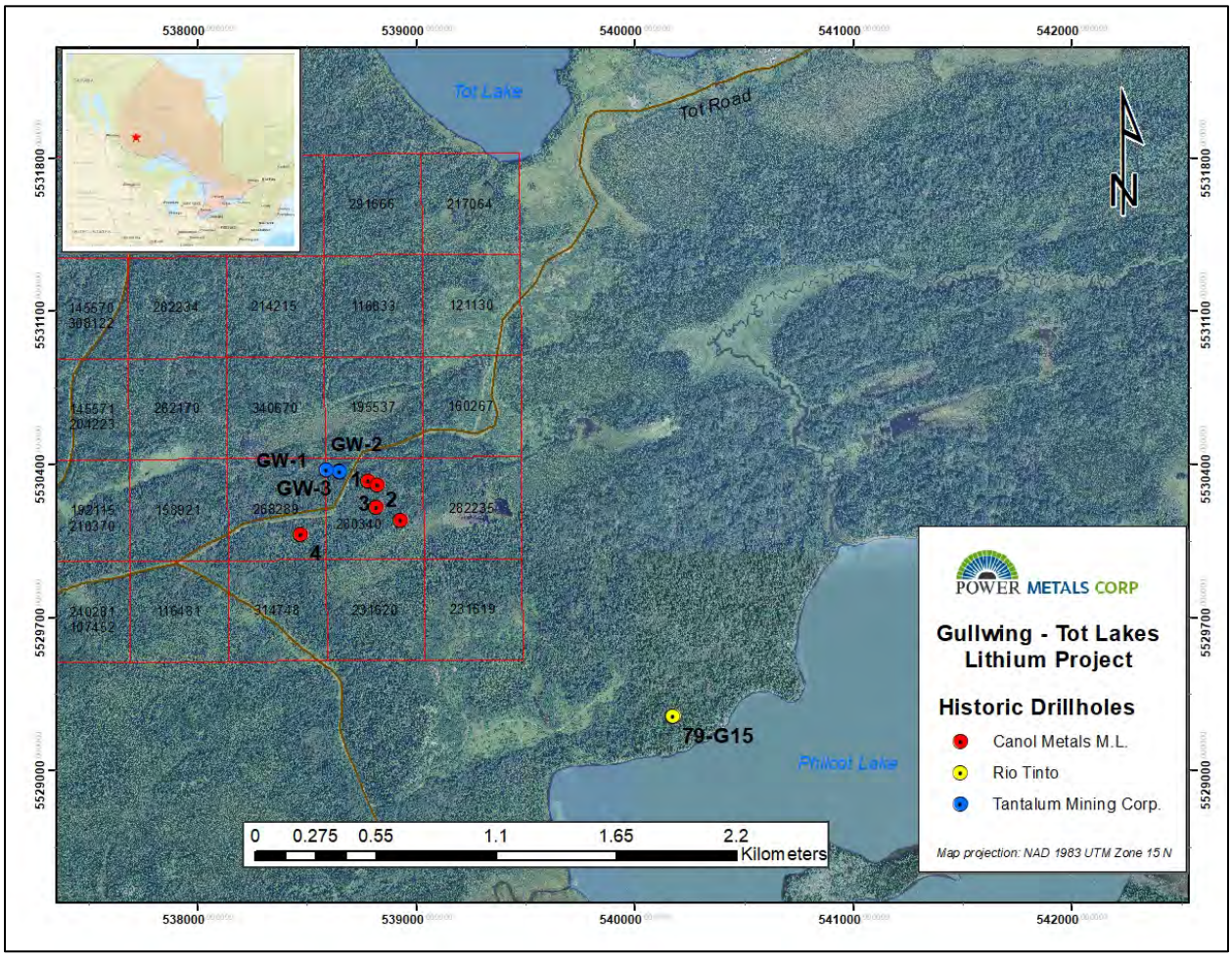

Figure 6-4. Historic drill holes in east Gullwing-Tot Lake area

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Gullwing-Tot Lake property is located within the Sioux Lookout Terrane of the Superior Province, which ranges from 15-40 km in width and is 250 km in length (Figure 7-1; Beakhouse, 1988; 1989). This Terrane makes up the boundary zone of the granitoid Winnipeg River Subprovince to the north and the granite-greenstone Wabigoon Subprovince to the south (Breaks and Janes, 1991). The Sioux Lookout Terrane is composed of mafic to intermediate metavolcanics rocks, clastic sediments, metasedimentary migmatites,-granitoid rocks and, most importantly, two-mica S-type granitoids. The Sioux Lookout Terrane is host to several rare-element mineralized pegmatites that are separated into two groups: The Mavis Lake

Pegmatite Group and the Gullwing-Tot Lake Pegmatite Group. For more information on the Mavis Lake Pegmatite Group, see Breaks and Janes, (1991).

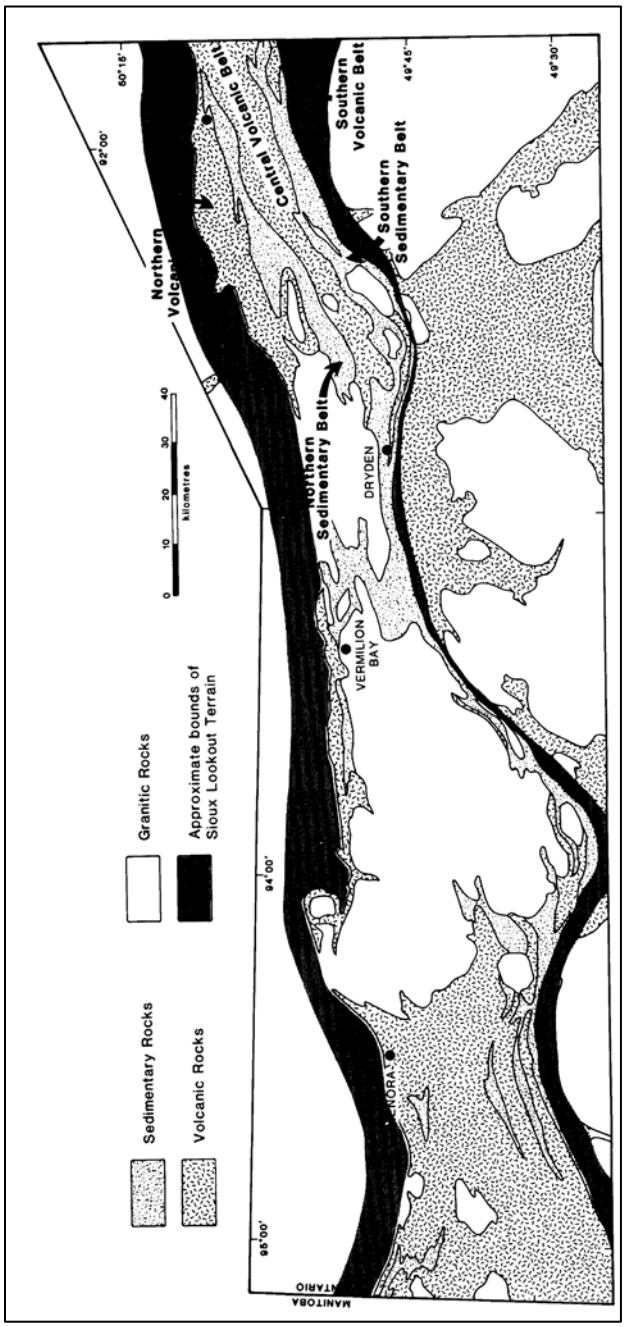

Figure 7-1. Regional Geology map of the western Superior Province showing possible extent of Sioux Lookout Terrane. Map is taken from Beakhouse, 1988.

7.2 Local and Property Geology

Pegmatites in the Gullwing-Tot Lakes Pegmatite Group are found within an E-NE trending cluster that has an approximate size of 0.8-2.2 km by 15 km. These pegmatites are typically hosted in highly deformed amphibolite facies mafic metavolcanic rocks and are less commonly hosted in clastic metasedimentary rocks (Breaks and Janes, 1991; Breaks et al, 2003). The parent granitoid to the pegmatites of the Gullwing-Tot Lakes Pegmatite Group cannot be clearly defined (Breaks et al, 2003).

The Gullwing-Tot Lake Pegmatite Group (and also the Gullwing-Tot Lake Property) contains 5 key known pegmatite occurrences which are separated into 2 groups based on metal associations: 1) a Li-Cs-Rb-Be-Ta bearing group which includes the Gullwing Lake and Tot Lake pegmatites and 2) a Mo-Bi-Cu bearing group which includes the Mica Point Pegmatite, the Coates Pegmatite and the Drope pegmatite (Figure 7-2). The most interesting of the pegmatites in the Gullwing-Tot Lake Pegmatite Group are the namesake Gullwing Lake and Tot Lake pegmatites due to the presence of Li and Ta mineralization.

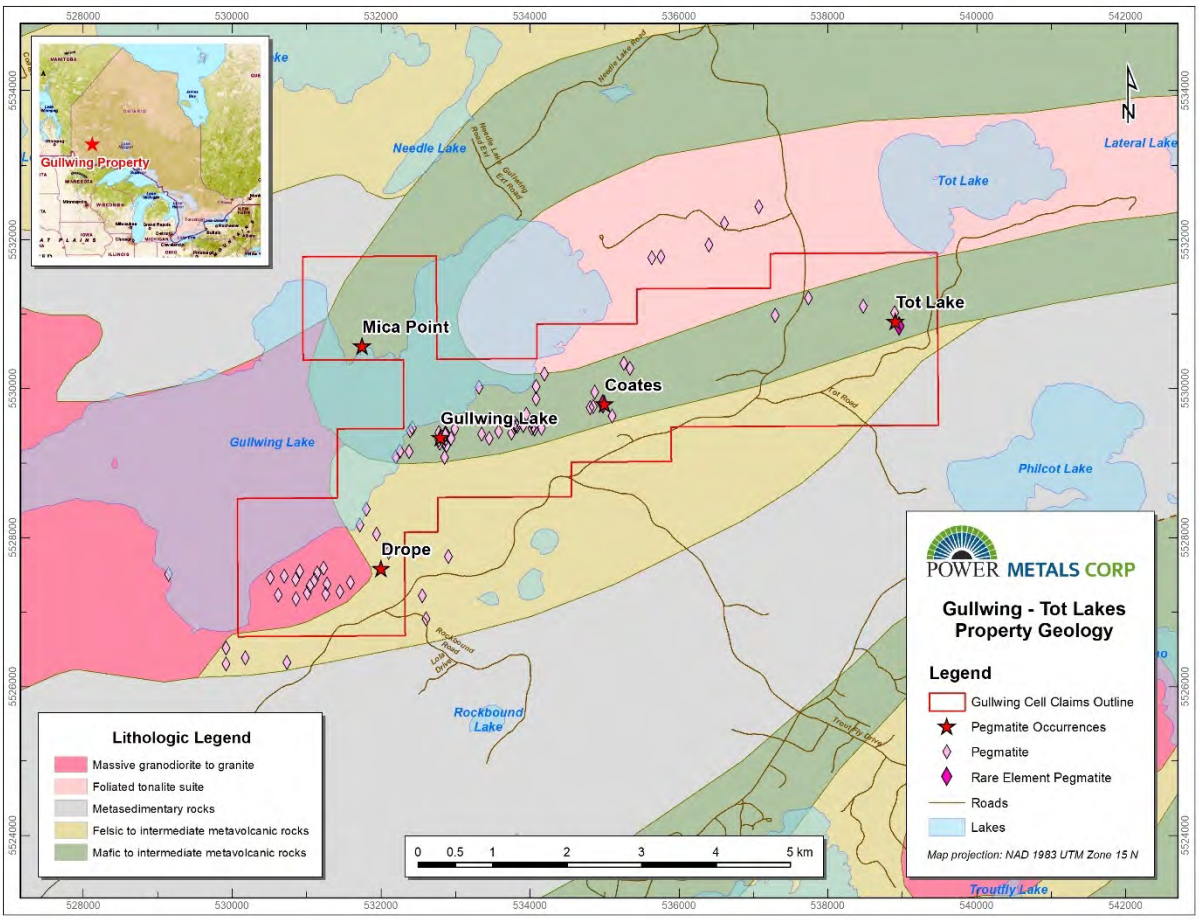

Figure 7-2 Geological map of the Gullwing-Tot Lake Property with Power Metals' claims and known pegmatite occurrences

7.2.1 Gullwing Lake Pegmatite

The Gullwing Lake pegmatite, also known as the Sleeping Giant Pegmatite (Figure 7-5) was summarized by Breaks and Janes, (1991) and Breaks et al., (2014). It is located 2on the western edge of the Gullwing-Tot Lakes Property, ranges in width from 25-80 m, is 412 m long and has Li-Nb ±Ta-Be-Mo with local REE enrichment. The dyke is separated into the south, central and north zones. The south and central zones are connected at depth and are dominantly composed of a fertile two-mica (bladed aggregates of muscovite and lithian siderophyllite) potassic pegmatite with local beryl and columbite. The pegmatite unit is enveloped by a finer-grained two-mica leucogranite. The south zone contains a 5-12 x 25 m mineralized

core-zone that is composed of perthitic blocky microcline, massive milky quartz and books of muscovite. 1 x 2 cm columbite crystals are found in the weakly-albitized periphery zone of the core.

Unlike the south zone, the central zone is Li bearing. It contains a large 7-20 x 35 m core unit composed of muscovite, albite, blocky microcline and quartz with small pockets of green mica-albite pseudomorphs after spodumene that project into the quartz core. The altered pockets are altered by the albitization II event and contain the assemblage of white to light blue cleavelandite, green muscovite, garnet, rare beryl and platy columbite.

The north zone of the Gullwing Pegmatite is seemingly unattached from the central and south zones and notably lacks the two-mica potassic pegmatite that makes up the bulk of the south and central zones. The north zone is located ~50 m north of the south and central zones is roughly 25 x 30 m in size. The north zone is predominantly composed of quartz and blocky microcline and make up some of the coarsest grained pegmatite in the Dryden Pegmatite Field. Also contained within the north zone are abundant blocks of mafic and intermediate metavolcanics rocks. The north zone contains 3 spodumene-bearing, blocky microcline, quartz, albite, muscovite pods, which comprise ~10% its total surface area. The largest pod is 3 x 8 m in size and contains faint green spodumene. The spodumene in these pods can be up to 4 x 40 cm x 100 cm in size and are intergrown with the blocky microcline, quartz, grey muscovite and albite of the quartz core (Figure 7-3). Spodumene is partially to completely replaced by mauve Li-muscovite or by fine-grained albite and green mica.

Figure 7-3. Altered spodumene in north zone of Gullwing Pegmatite

The Gullwing Lake Pegmatite has a complex alteration history including 2 albitization events. **Albitization I** corresponds to coarse grained equigranular albite that replaces the potassic pegmatite. This event is also responsible for the intense alteration of contained and adjacent mafic and intermediate metavolcanic rocks. Metasomatism is most abundant in the north zone and results in thick biotite-plagioclase-quartz aureoles 10-100 cm in diameter (Figure 7-4). Intermediate volcanic rocks have more abundant biotite in their aureoles compared to more mafic rocks.

Albitization II is late-stage and is confined to the spodumene bearing pods of the north zone. This alteration replaces all primary minerals, which are replaced by a combination of blue to white cleavelandite, minor orange garnet, green muscovite, purple lithium muscovite and minor light green beryl. A third type of albitization, **Albitization III** occurs when albitization I is overprinted by albitization II. This results in a

rock dominantly composed of fine-grained aggregates of purple Li-muscovite with minor cleavelandite and rare 1-5 mm crystals of microlite. All zones of the Gullwing Lake Pegmatite have undergone albitization with the north zone being the most affected with over 30% albitization present.

Columbite mineralization is limited to the albitized units, with the coarsest and most abundant mineralization (up to 1% of the rock and 2x5cm euhedral crystals) being present in rocks that have only undergone albitization I. Finer grained more Ta-rich oxides are present in the Li-muscovite-cleavelandite assemblages of albitization II.

Figure 7-4 North zone pegmatite with metasomatic selvedges in host mafic metavolcanics (Breaks and Janes, 1991)

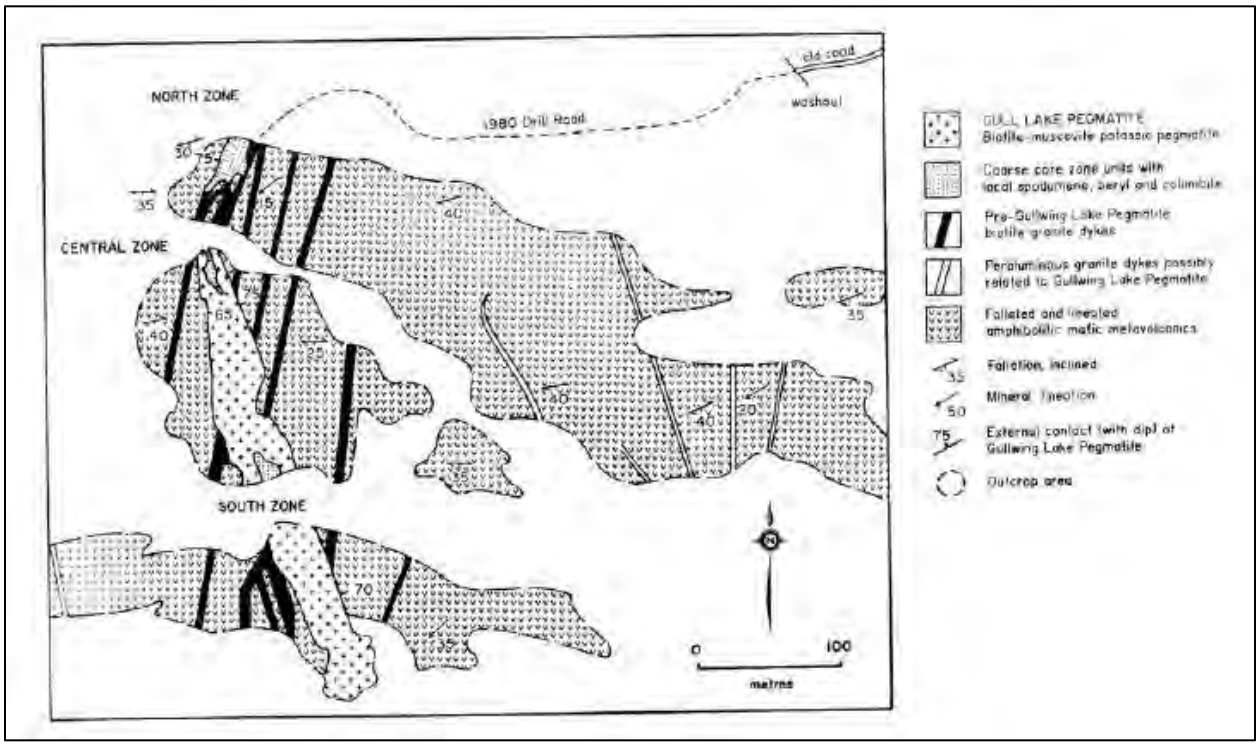

Figure 7-5 Map of the Gullwing Pegmatite from Breaks and Janes, 1991

7.2.2 Tot Lake Pegmatite

The Tot Lake Pegmatite (Figure 7-8), which was also summarized by Breaks and Janes, 1991 and Breaks et al., 2014, is the most fractionated granitic pegmatite body in the Dryden Pegmatite Field and is among the most fractionated granitic pegmatite bodies in Ontario, as evidenced by the presence of the cesium mineral pollucite, which is only found in 4 other pegmatites in Ontario. The chemical fractionation index of the Tot Lake Pegmatite is comparable to the highly evolved Tanco Pegmatite, Manitoba. The Tot Lake pegmatite strikes NW and is sharply discordant to the ~070° strike of the host mafic volcanic rocks. The pegmatite is 1-6 x >48 m in size and is complexly chemically zoned with 5 primary zones and 5 replacement zones. The primary zones include:

1. spodumene-microcline-albite-quartz zone with randomly oriented bladed pink spodumene crystals
2. spodumene-rich zone: spodumene-green muscovite-microcline-(quartz-albite) with subhorizontally aligned pink spodumene in layers oriented parallel to dike contacts (Figure 7-6)
3. spodumene-albite-green muscovite-(quartz) zone with medium-grained pink spodumene, poor

layers grading into zone (2)

4. orange potassium feldspar zone: microcline-quartz ±beryl ±spodumene potassic pegmatite

5. pollucite zone: pollucite-spodumene-microcline-quartz-albite (green muscovite-fluorapatite-tantalite)

Figure 7-6. Megacrystic spodumene located south of trench #3 at Tot Lake Pegmatite

Zone 2 contains especially abundant pink spodumene mineralization, with up to 78 volume %. Pollucite in the Tot Lake pegmatite is confined to a 1 x 5 m pollucite-spodumene pod where they fill the interstitial space between pink spodumene crystals. Pollucite makes up to 32% of the pod. Pollucite is identified by net-textured veining of fine-grained green and purple muscovite.

Alteration zones represent ~70% of the surface area of the pegmatite and include:

1. incipiently to moderately albitized spodumene zone (1) with secondary albite + green muscovite + lepidolite ± cookeite (Li-chlorite)

2. pervasively albitized spodumene zone (1) with secondary albite + green muscovite + alkali beryl
3. columbite zone: quartz-albitized potassium feldspar-spodumene (albitic + green muscovite alteration)-alkali beryl-columbite-spessartine
4. sodic aplite pods: albite-quartz-tourmaline-green muscovite-apatite
5. holmquistite veins in mafic metavolcanic and meta-ultramafic host rocks
6. quartz veins: quartz ±spodumene ±potassium feldspar ±tourmaline

Columbite within the columbite zone are typically steely-black, euhedral and up to 1cm x 2 cm in diameter. They typically form at the interface between altered blocky microcline and the quartz core (Figure 7-7).

Figure 7-7 Coarse grained columbite at the interface between altered blocky microcline and the quartz core at the Tot Lake Pegmatite

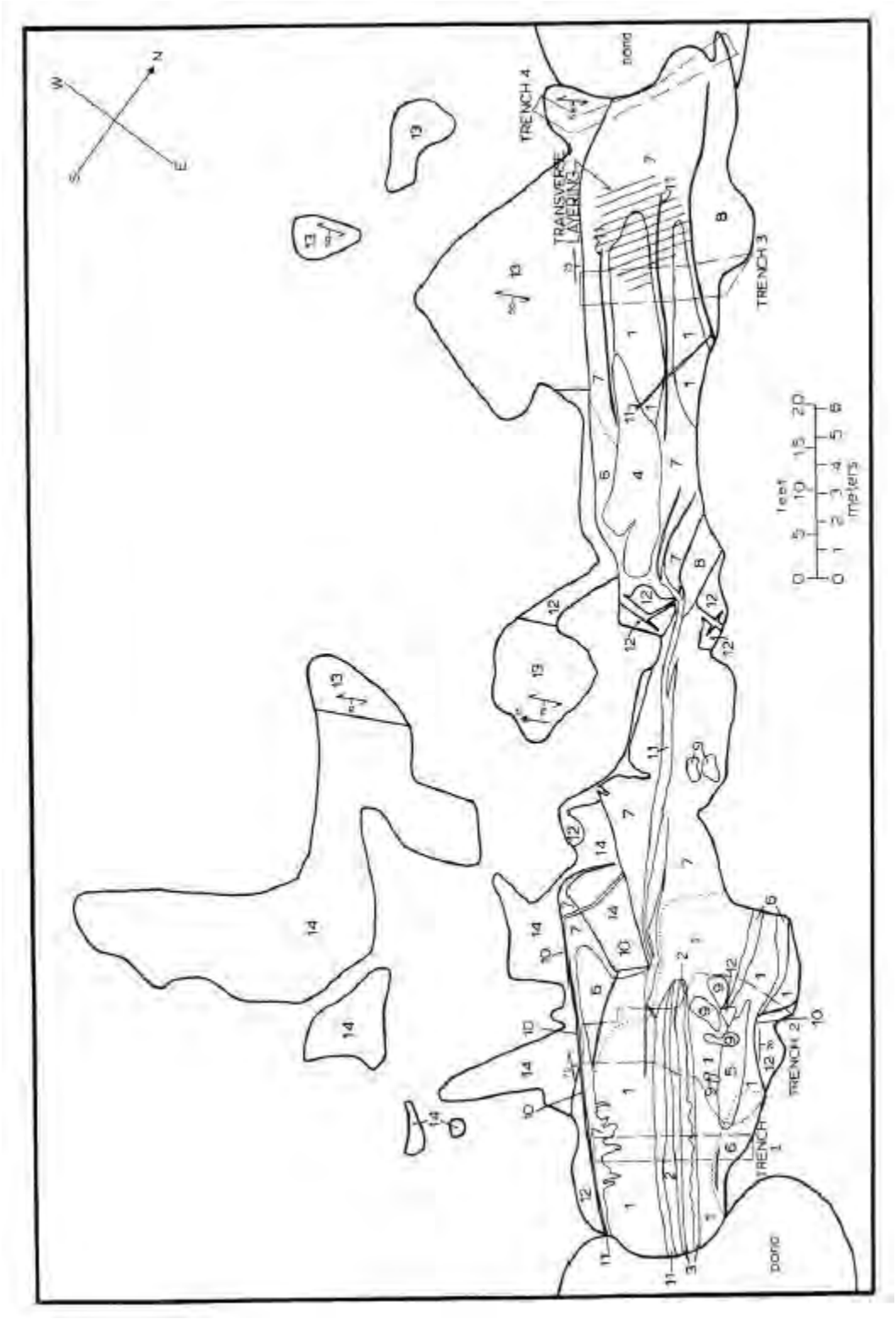

Figure 7-8 Map of the Tot Lake Pegmatite from Breaks and Janes, 1991

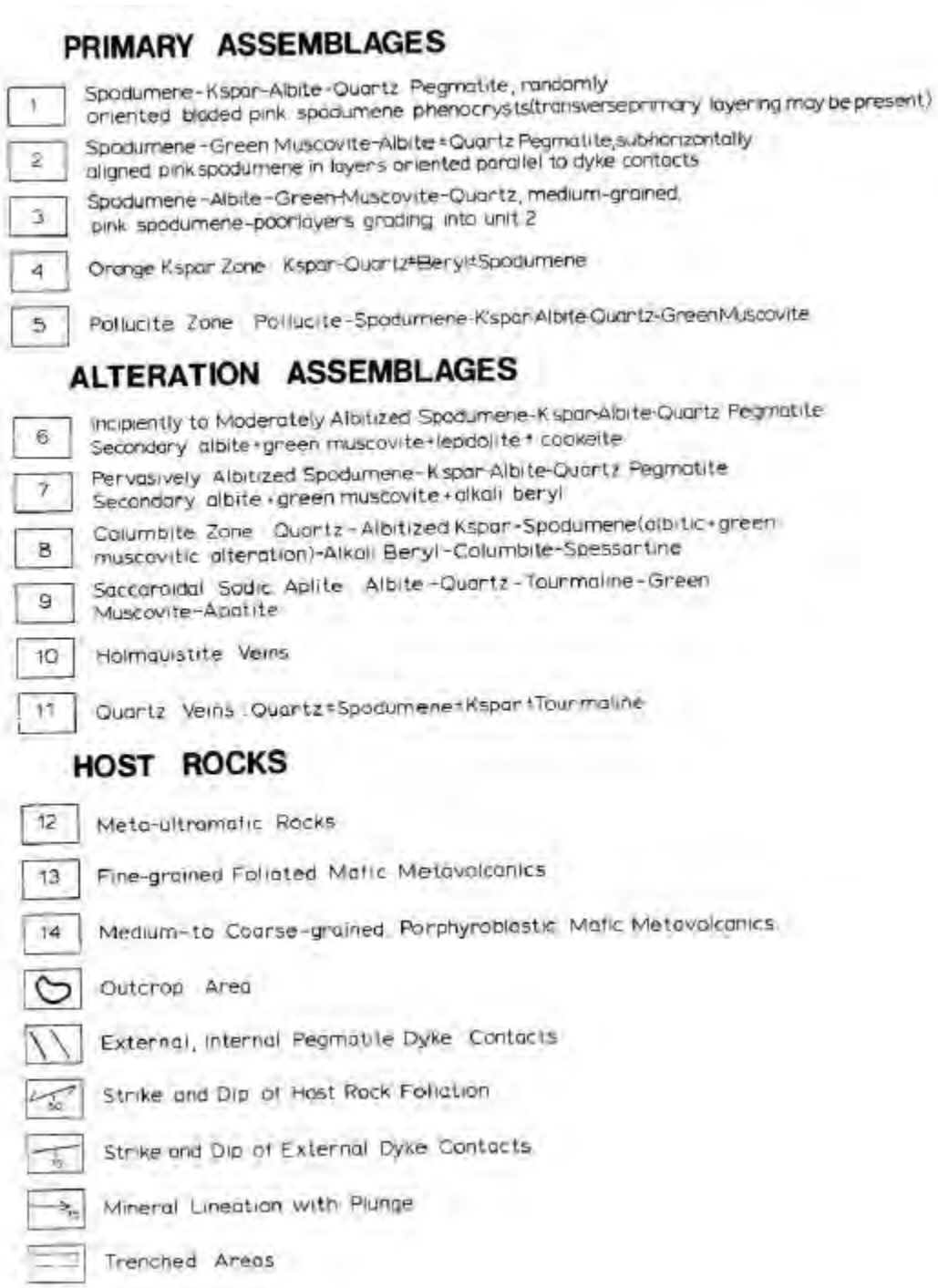

Figure 7-9 Legend for the map of the Tot Lake Pegmatite from Breaks and Janes, 1991

8.0 DEPOSIT TYPES

8.1 Rare-element pegmatites of Superior Province

Rare-element pegmatites may host several economic commodities, such as tantalum (Ta-oxide minerals), tin (cassiterite), lithium (ceramic-grade spodumene and petalite), rubidium (lepidolite and K-feldspar), and cesium (pollucite) collectively known as rare elements, and ceramic-grade feldspar and quartz (Selway *et al*., 2005). Two families of rare-element pegmatites are common in the Superior Province, Canada: Li-Cs-Ta enriched ("LCT") and Nb-Y-F enriched ("NYF"). LCT pegmatites are associated with S-type, peraluminous (Al-rich), quartz-rich granites. S-type granites crystallize from a magma produced by partial melting of preexisting sedimentary source rock. They are characterized by the presence of biotite and muscovite, and the absence of hornblende. NYF pegmatites are enriched in rare earth elements ("REE"), U, and Th in addition to Nb, Y, F, and are associated with A-type, subaluminous to metaluminous (Al-poor), quartz-poor granites or syenites (Černý, 1991a).

Rare-element pegmatites derived from a fertile granite intrusion are typically distributed over a 10 to 20 km^2 area within 10 km of the fertile granite (Breaks and Tindle, 1997). A fertile granite is the parental granite to rare-element pegmatite dykes. The granitic melt first crystallizes several different granitic units (e.g., biotite granite to two mica granite to muscovite granite), due to an evolving melt composition, within a single parental fertile granite pluton. The residual melt enriched in incompatible elements (e.g., Rb, Cs, Nb, Ta, Sn) and volatiles (e.g., H_2O, Li, F, BO_3, and PO_4) from such a pluton can then migrate into the host rock and crystallize pegmatite dykes (Figure 8-1). Volatiles promote the crystallization of a few large crystals from a melt and increase the ability of the melt to travel greater distances. This results in pegmatite dykes with coarse-grained crystals occurring in country rocks considerable distances from their parent granite intrusions.

There are several geological features that are common in rare-element pegmatites of the Superior province of Ontario (Breaks and Tindle, 2001; Breaks et al., 2003) and Manitoba (Černý et al., 1981; Černý et al., 1998) (Selway *et al.*, 2005):

1. *Subprovincial Boundaries:* The pegmatites tend to occur along subprovincial boundaries.
2. *Metasedimentary-Dominant Subprovince:* Most pegmatites in the Superior province occur along subprovince boundaries, except for those that occur within the metasedimentary Quetico subprovince.

3. *Greenschist to Amphibolite Metamorphic Grade:* Pegmatites are absent in the granulite terranes.
4. *Fertile Parent Granite:* Most pegmatites in the Superior province are genetically derived from a fertile parent granite.
5. *Host Rocks:* Highly fractionated spodumene- and petalite-subtype pegmatites are commonly hosted by mafic metavolcanic rocks (amphibolite) in contact with a fertile granite intrusion along subprovincial boundaries. Pegmatites within the Quetico subprovince are hosted by metasedimentary rocks or their fertile granitic parents.
6. *Metasomatized Host Rocks:* Biotite and tourmaline are common minerals, and holmquistite is a minor phase in metasomatic aureoles in mafic metavolcanic host rocks to spodumene- and petalite-subtype pegmatites. Tourmaline, muscovite, and biotite are common, and holmquistite is rare in metasomatic aureoles in metasedimentary rocks.
7. *Li Minerals:* Most of the complex-type pegmatites of the Superior province contain spodumene and/or petalite as the dominant Li mineral, except for a few pegmatites which have lepidolite as the dominant Li mineral.
8. *Cs Minerals:* Cesium-rich minerals only occur in the most extremely fractionated pegmatites.
9. *Ta-Sn Minerals:* Most pegmatites in the Superior province contain ferrocolumbite and manganocolumbite as the dominant Nb-Ta-bearing minerals. Some pegmatites contain manganotantalite or wodginite as the dominant Ta-oxide mineral. Tantalum-bearing cassiterite is relatively rare in pegmatites of the Superior province.
10. *Pegmatite Zone Hosting Ta Mineralization:* Fine-grained Ta-oxides (e.g., manganotantalite, wodginite, and microlite) commonly occur in the aplite, albitized K-feldspar, mica-rich, and spodumene core zones in pegmatites in the Superior province.

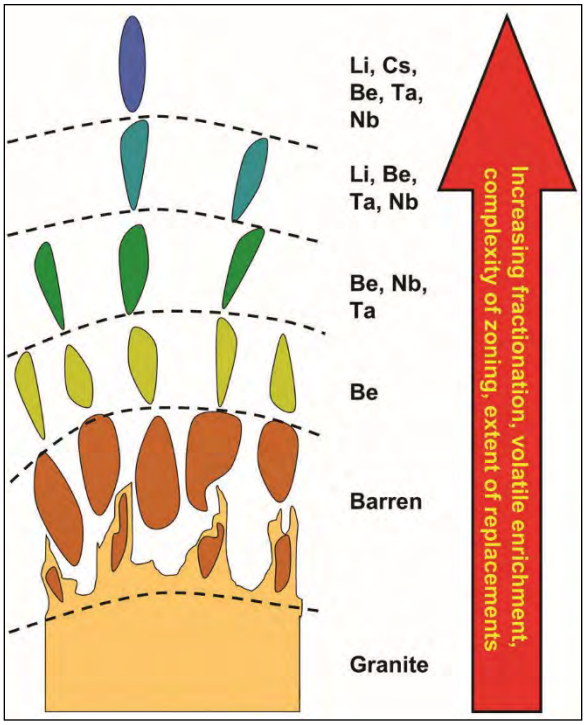

Figure 8-1 Chemical evolution of lithium-rich pegmatites with distance from the granitic source (London, 2008).

9.0 EXPLORATION

9.1 Prospecting, grab and channel sampling

Power Metals conducted a prospecting, grab and channel sampling program Aug. 28 to Sept. 18, 2020 on the Tot Lake pegmatite. A total of nine channels were cut: TL-CH-20-01, 01b, 02, 03, 03b, 04, 05, 06 and 07 (Table 9-1). The purpose of the prospecting was to collect channel samples on the Tot Lake pegmatite focussing on the Li, Ta and Cs mineralization. Grab samples were also collected of the host rocks to look for Li and Cs anomalies indicating the presence of blind pegmatites. The samples were collected on the Tot Lake pegmatite on cell claims 195537 and 116833, but descriptions were recorded along the access route on cell claims: 139610, 240281, 116481, 158921, 268289, and 160267. The field work was conducted by Alan Rich, senior geologist, and Kyle Henderson, prospector.

Table 9-1 Channel samples per cell claim.

TL-CH-20-01	195537	2.90	4
TL-CH-20-01b	195537	1.75	2
TL-CH-20-02	195537	3.05	3
TL-CH-20-03	195537	3.65	4
TL-CH-20-03b	195537	0.30	2
TL-CH-20-04	195537	0.95	1
TL-CH-20-05	195537	1.00	1
TL-CH-20-06	195537	1.30	1
TL-CH-20-07	116833	0.65	1
Total		**15.55**	**19**

The Tot Lake pegmatite was accessed via the Tot Lake Road and a walk in the bush (see Access section 5.1). The Tot Lake Road has a clay base and parts of it was flooded during the 2020 prospecting program (Figure 5-4). The truck was parked as close to the Tot Lake pegmatite as possible and the geologists continued on foot along the Tot Lake road and through the bush to the Tot Lake pegmatite. As it was hunting season and there were local hunters in the area, “Men at Work” signs were posted next to the truck parking spot and at the start of the trail in the bush to the pegmatite (Figure 9-1).

Figure 9-1 "Men at Work" sign at the start of the path north to Tot Lake pegmatite (AR-20-18).

A total of 77 observations was recorded in the prospecting table: 46 samples assayed and 31 stations described but no samples collected (Table 9-2). The total number of assays is 46 samples which consist of 22 grab samples, 19 channel samples and 5 QC samples. The samples were assayed by SGS in Burnaby, British Columbia. The 31 stations consist of 11 man-made features (i.e., road, signs, trenches) and 20 overburden descriptions (e.g., soil, clay, boulders, outcrop).

Table 9-2 Observations and samples per cell claim

Cell Claim	Samples with assays	QC	Observe Lithology	Overburden	Man-made Features
116481					2
116833	16	3		2	
139610					1
158921					1
160267				5	1
195537	25	2	5	7	5
240281					1
268289				1	
Total	**41**	**5**	**5**	**15**	**11**

Appendix 5 shows the daily log of activities, prospecting table, sample maps and GPS tracks maps. Appendix 6 contains the channel photos, maps and logs. Appendix 7 contains the assay certificates.

9.2 Sampling Methodology

The Tot Lake pegmatite was stripped and well exposed in the early 1990's when it was mapped by Breaks and Janes (1991) (Figure 7-8). The Tot Lake pegmatite has been grown over since then and the geologists spent the initial 5 days removing overburden, soil and moss from the outcrop (Figure 9-2). The outcrop was cleaned so that the outcrop could be compared with Breaks and Janes (1991) detailed pegmatite zone map.

Channel samples were cut using a STIHL TS 440 channel saw with a 14-inch blade. Channels were cut perpendicular to the strike length of the pegmatite focusing on the Li (spodumene), Cs (pollucite) and Ta (Ta-oxides) mineralization. Wherever possible, the channel cut was extended into the ultramafic host rock. Channel samples were cut approximately 1 m long and only contained one pegmatite zone. The channels were logged as horizontal drill holes so that they can be used in a 3D model for future drill targeting. Samples were placed in sample bags with the sample number written on the outside and with sample tags inside the bags. Sample bags were placed in rice bags for transportation.

The sample locations were determined using a handheld Garmin eTrex 10 GPS. Typically, the GPS accessed 7 satellites to estimate the UTM coordinates with an accuracy of 2-3 m.

Figure 9-2 Tot Lake pegmatite covered in moss before stripping on the first day of field work (Aug. 29).

9.3 Prospecting results

A total of nine channel samples were cut to represent the majority of the pegmatite zones as defined by Breaks and Janes (1991). Photos and map of the channel cuts with the sample numbers labelled are given in Appendix 6.

Assays from the Tot Lake pegmatite contained high grade Li, Ta and Cs. Assay highlights include:

- 2.89 % Li_2O, 0.81% Cs_2O, 57.8 ppm Ta over 0.95 m from channel TL-CH-20-04 from pollucite + spodumene pegmatite zone, sample 150298 (Figure 9-3 and Figure 9-4)
- 2.88 % Li_2O, 493 ppm Cs, 254 ppm Ta over 1.30 m from channel TL-CH-20-06 from blocky K-feldspar + spodumene pegmatite zone, sample 157856 (Figure 9-5)

- 2.14 % Li_2O, 486 ppm Cs, 78.6 ppm Ta over 1.0 m from channel TL-CH-20-03 from spodumene pegmatite zone, sample 150289 (Figure 9-6)
- 2.00 % Li_2O, 1086 ppm Cs, 255 ppm Ta, 2009 ppm Be over 1.0 m from channel TL-CH-20-05 from blocky K-feldspar + spodumene pegmatite zone, sample 157852 (Figure 9-7)
- 0.02 % Li_2O, 224 ppm Cs, 1062 ppm Ta, 307 ppm Nb over 0.65 m from channel TL-CH-20-07 from columbite + albitized spodumene zone, sample 157857 (Figure 9-8).

Assay highlights are given in Table 9-3, channel sample maps with Li_2O, Cs and Ta colour coded by grade and assay certificates are given in Appendix 7.

Samples from the spodumene pegmatites zones (1, 2 and 3), blocky K-feldspar + spodumene pegmatite zone (4) and pollucite + spodumene pegmatite zone (5) typically have assays > 2.0 % Li_2O. Orange spessartine garnets are common throughout the spodumene pegmatite zones (Figure 9-4). The spodumene crystals in these pegmatites tend to be white or pink in colour, unaltered and very coarse-grained (up to 50 x 20 x 2 cm in sample 157856). The pegmatite zones (6,7) in which the spodumene is albitized and altered to muscovite tend have low Li contents.

Samples from aplite zone (9), columbite-albitized spodumene pegmatite zone (8) and blocky K-feldspar + spodumene pegmatite zone (4) tend to have assays with > 200 ppm Ta. Sample 157857 from channel TL-CH-20-07 with 1062 ppm Ta has black square Ta-oxide crystals 0.5 x 0.5 cm in size and spodumene crystals strongly altered to albite.

Elevated Cs occurs in Cs-rich beryl and K-feldspar within sample 157852, TL-CH-20-05 from blocky K-feldspar + spodumene pegmatite zone (4). This sample may also contain pollucite. It is tricky to identify pollucite in the field as it looks similar to quartz and feldspar. High grade Cs mineralization occurs as pollucite in the pollucite + spodumene zone (5) (Figure 9-3). The pollucite in sample 150298, TL-CH-20-04 has pollucite interstitial to coarse-grained pink spodumene blades.

Figure 9-3 Pink spodumene blades with interstitial white pollucite and green muscovite, sample 150298, TL-CH-20-04.

Figure 9-4 Orange garnets with pink spodumene blades, sample 150298, TL-CH-20-04.

Figure 9-5 Beige blocky K-feldspar and white spodumene blades, sample 157856, TL-CH-20-06.

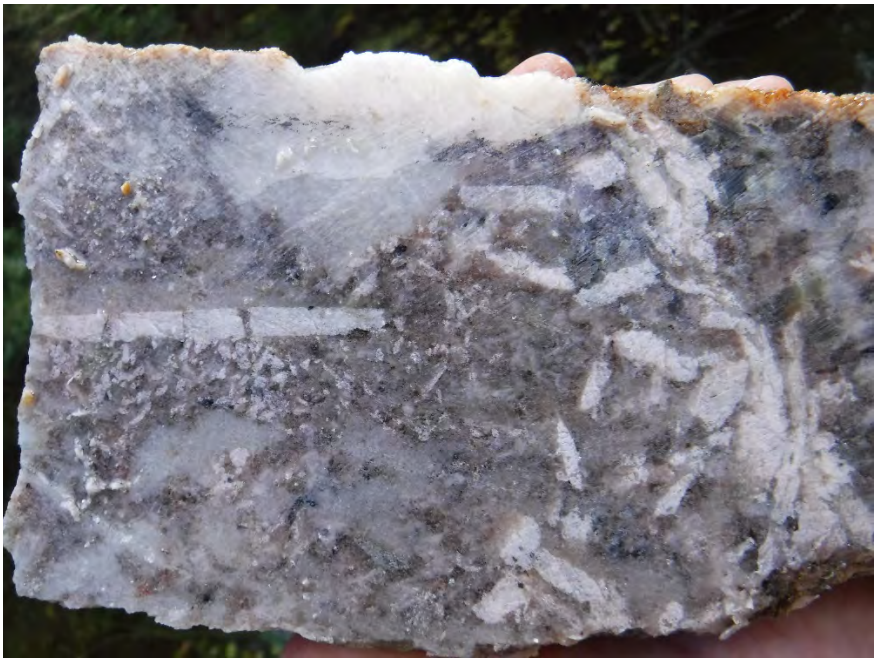

Figure 9-6 White spodumene blades in grey aplite matrix, sample 150289, TL-CH-20-03

Figure 9-7 Pinkish pollucite next to orange K-feldspar, sample 157852, TL-CH-20-05

Figure 9-8 Beige albitized K-feldspar, grey quartz, black Ta-oxide cubes, sample 157857, TL-CH-20-07.

Table 9-3 Assay highlights from Tot Lake pegmatite channel and grab sampling.

grab sample				150291	0.02	94	40.2		95	254
grab sample				150295	0.08	93	85.6		62	186
TL-CH-20-01	0.00	0.20	0.20	150285	1.34	1135	4364.0		10	0.6
TL-CH-20-01	0.20	1.20	1.00	150284	2.09	1401	544.0		28	61.1
TL-CH-20-01	1.20	1.90	0.70	150278	0.11	4292	549.0		23	47.5
TL-CH-20-01	1.90	2.90	1.00	150281	2.12	1742	369.0		30	39.4
TL-CH-20-01b	0.00	1.00	1.00	150282	0.69	2384	357.0		41	85.8
TL-CH-20-01b	1.00	1.75	0.75	150283	0.60	6033	659.0		48	113
TL-CH-20-02	0.00	1.00	1.00	150286	0.53	1189	282.0		50	90
TL-CH-20-02	1.00	2.00	1.00	150287	0.24	2457	385.0		45	83.8
TL-CH-20-02	2.00	3.05	1.05	150288	2.09	2828	380.0		29	55.2
TL-CH-20-03	0.00	1.00	1.00	150289	2.14	3962	486.0		40	78.6
TL-CH-20-03	1.00	2.00	1.00	150292	1.85	2130	339.0		34	52.2
TL-CH-20-03	2.00	3.00	1.00	150293	0.89	6494	556.0		95	94.1
TL-CH-20-03	3.00	3.65	0.65	150294	1.70	3356	409.0		32	41.6
TL-CH-20-03b	0.00	0.10	0.10	150296	0.04	1637	252.0		29	85
TL-CH-20-03b	0.10	0.30	0.20	150297	1.24	2466	5618.0		8	2
TL-CH-20-04	0.00	0.95	0.95	150298	2.89	1684	>10000	0.806	37	57.8
TL-CH-20-05	0.00	1.00	1.00	157852	2.00	4376	1086.0		133	255
TL-CH-20-06	0.00	1.30	1.30	157856	2.88	3680	493.0		60	254
TL-CH-20-07	0.00	0.65	0.65	157857	0.02	1156	224.0		307	1062

Channels were extended to sample the meta-ultramafic host rock on the north and south contacts. The meta-ultramafic host rock has elevated Fe, Mg, Cr and V as expected. The meta-ultramafic host rock has been metasomatized by an influx of Li and Cs-rich fluids at the time of the intrusion of the pegmatite melt. The elevated Li and Cs contents are likely in biotite/zinnwaldite in the host rock (Table 9-3):

- 1.34 % Li_2O and 4364 ppm Cs over 0.20 m, sample 150285, TL-CH-20-01, north contact
- 1.24 % Li_2O and 5618 ppm Cs over 0.20 m, sample 150297, TL-CH-20-03b, south contact.

Since host rocks next to the Tot Lake pegmatite is enriched in Li and Cs, this can be used as an exploration tool in search of other pegmatites which are not exposed on the surface. Grab sampling was completed on

foliated meta-ultramafic and mafic metavolcanic outcrops near the Tot Lake pegmatite. These mafic rocks are enriched in Fe, Mg, Ca, Cr and V as expected. The mafic rocks rarely contain quartz veins 1-5 cm wide.

Overburden observations were also recorded. The Tot Lake Road is clay base. The path through the bush to the Tot Lake pegmatite is soil. Then clay and soil overburden is > 30 cm thick. An angular granitic boulder was found 50 m west of the pegmatite (sample 157858) and an ultramafic boulder was found 15 m west of the pegmatite. There is 50m of bog south of the Tot Lake pegmatite along the access path, but this was the shortest access route from the Tot Lake Road to the pegmatite. There is a pond at the north end and the south end of pegmatite which is convenient for water for channel cutting. These two ponds are on Break and Janes 1991 map of the pegmatite and were likely created during historic stripping of the pegmatite.

Man-made features were also observed during the prospecting which include the Tot Lake Road, historic Trench 2 and 3 on the pegmatite, an historic drill hole on Trench 2 and a metal bed frame. The historic drill hole is vertical and was collared on spodumene-rich pegmatite zone (1) (Figure 9-9).

Figure 9-9 Historic vertical drill hole on Trench 2, south end of the Tot Lake pegmatite, AR-20-24.

10.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

10.1 Sample Security

The samples were transported from Dryden to Power Metals storage locker in Sudbury by Manitoulin Transport. The samples were transported by Dr. Selway, QP, from the storage locker to SGS preparation lab in Garson, Ontario. The samples were prepared by SGS Red Lake and analyzed by SGS Burnaby. Sample 150298 had Cs overlimit (>10,000 ppm Cs) and was then assayed for ore grade Cs_2O by SGS Lakefield.

SGS analytical labs in Burnaby and Lakefield, Ontario have ISO 17025 certification. Every 20 samples included one external quartz blank and one external lithium standard. The ore grade Li_2O% was prepared by sodium peroxide fusion with analysis by ICP-OES with a detection limit of 0.002 % Li_2O.

10.2 Sample Preparation

A total of 46 samples including QC samples were submitted to SGS for analysis by J-J Minerals which includes 22 grab samples, 2 blanks and 3 Li standards. Every 20 samples contained one blank and one Li standard, alternating OREAS 147 and OREAS 148 (See Appendix 3). The blank was ½ inch mesh coarse silica purchased from Analytical Solutions Ltd., Toronto, Ontario. The blanks are silica-rich with typically about 97% SiO_2.

Figure 10-1 Quartz blank

10.3 Sample Analyses

The samples were initially weighed and reported at SGS using the G_WGH_KG analytical code. The samples were than pulverized using analytical code PRP89. This involved weighing, drying (<1.5kg), crushing to 75%, passing 2 mm, split 250 g, and pulverize to 85% passing 75 microns.

Samples were fused using sodium peroxide fusion analytical method GE_ICP90A50 and major elements were assayed with ICP-AES. Sodium peroxide is a strong oxidized flux that is basic in nature and most refractory minerals are soluble in it. Due to the fusion temperature being lower than that of lithium metaborate fusion, the hydride elements are not volatized. Lithium was analysed in each sample with a detection limit of (10 to 50,000 ppm Li). The samples were fused using sodium peroxide fusion analytical method GE_IMS90A50 and metals were assayed with ICP-MS.

In the QP's opinion the sample preparation, security and analytical procedure was adequate and to industry standard for the prospecting program.

11.0 DATA VERIFICATION

As check the on the sample coordinates, all samples were plotted in Arc GIS to make sure that they plotted within the Property boundaries as expected. Thus, there were no errors in the sample coordinates. As part of data verification, a check was made to make sure that the number of samples submitted for assay equals the number of assays received. Also the number of grab samples assayed plus the QC samples assayed equals the total number of assays received in the database. Samples with elevated Li contents were checked to make sure that they had spodumene in the sample description and in sample photo.

11.1 Quality Control

A total of 2 quartz blanks were inserted into the sample stream with the grab samples. The pass/fail criteria for the blanks is 3 * the detection limit. All of the blanks passed which indicates that there was no contamination in the sample preparation.

A total of 2 Oreas 147 lithium standards were inserted into the sample stream with the grab samples. Oreas 147 has a certified value of 0.49 % Li_2O with a standard deviation of 0.023 % Li_2O. Oreas 147 also has a certified value of 238 ppm Cs with a standard deviation of 12 ppm. Both standard samples passed within ± 3 * standard deviation for Li and Cs indicating good accuracy of the assays.

One Oreas 148 lithium standard was inserted into the sample stream with the grab samples. Oreas 148 has a certified value of 1.03 % Li_2O with a standard deviation of 0.023 % Li_2O. Oreas 148 also has a certified value of 314 ppm Cs with a standard deviation of 16 ppm. The standard passed within ± 2 * standard deviation for Li and Cs indicating good accuracy of the assays.

The ore grade Cs contents in sample 150298 was analyzed by SGS Lakefield. The sample was analyzed twice with the original containing 0.81 % Cs_2O and the duplicate containing 0.75 % Cs_2O. The two samples have relatively similar Cs values and thus the analyses have good precision. The internal blank had Cs below detection limits indicating no contamination during sample preparation. NBS-183 lepidolite standard has the ideal Cs value and thus the analysis is accurate.

12.0 INTERPRETATION AND CONCLUSIONS

The Gullwing-Tot Lake property is located within the Sioux Lookout Terrane of the Superior Province; the Sioux Lookout Terrane makes up the boundary zone of the granitoid Winnipeg River Subprovince to the north and the granite-greenstone Wabigoon Subprovince to the south. The Sioux Lookout Terrane is the host of the Gullwing-Tot Lake Pegmatite Group. The Gullwing-Tot Lake Pegmatite group consists of multiple pegmatite dykes including: Gullwing Lake spodumene pegmatite swarm, Tot Lake spodumene pegmatite, Coates beryl-molybdenite pegmatite and about 15 Rb-Cs pegmatite dykes located in the Drope township area.

Power Metals conducted a prospecting, grab and channel sampling program Aug. 28 to Sept. 18, 2020 on the Tot Lake pegmatite. A total of nine channels were cut: TL-CH-20-01, 01b, 02, 03, 03b, 04, 05, 06 and 07 to represent the majority of the pegmatite zones as defined by Breaks and Janes (1991). The purpose of the prospecting was to collect channel samples on the Tot Lake pegmatite focussing on the Li, Ta and Cs mineralization. Grab samples were also collected of the host rocks to look for Li and Cs anomalies indicating the presence of blind pegmatites. The samples were collected on the Tot Lake pegmatite on cell claims 195537 and 116833, but descriptions were recorded along the access route on cell claims: 139610, 240281, 116481, 158921, 268289, and 160267. The field work was conducted by Alan Rich, senior geologist, and Kyle Henderson, prospector.

A total of 77 observations was recorded in the prospecting table: 46 samples assayed and 31 stations described but no samples collected. The total number of assays is 46 samples which consist of 22 grab samples, 19 channel samples and 5 QC samples. The 31 stations consist of 11 man-made features (i.e., road, signs, trenches) and 20 overburden descriptions (soil, clay, boulders, outcrop).

Assays from the Tot Lake pegmatite contained high grade Li, Ta and Cs. Assay highlights include:

- 2.89 % Li_2O, 0.81% Cs_2O, 57.8 ppm Ta over 0.95 m from channel TL-CH-20-04 from pollucite + spodumene pegmatite zone, sample 150298
- 2.88 % Li_2O, 493 ppm Cs, 254 ppm Ta over 1.30 m from channel TL-CH-20-06 from blocky K-feldspar + spodumene pegmatite zone, sample 157856
- 2.14 % Li_2O, 486 ppm Cs, 78.6 ppm Ta over 1.0 m from channel TL-CH-20-03 from spodumene pegmatite zone, sample 150289
- 2.00 % Li_2O, 1086 ppm Cs, 255 ppm Ta, 2009 ppm Be over 1.0 m from channel TL-CH-20-05 from blocky K-feldspar + spodumene pegmatite zone, sample 157852

- 0.02 % Li_2O, 224 ppm Cs, 1062 ppm Ta, 307 ppm Nb over 0.65 m from channel TL-CH-20-07 from columbite + albitized spodumene zone, sample 157857.

Samples from the spodumene pegmatites zones (1, 2 and 3), blocky K-feldspar + spodumene pegmatite zone (4) and pollucite + spodumene pegmatite zone (5) typically have assays > 2.0 % Li_2O. Samples from aplite (9), columbite-albitized spodumene pegmatite zone (8) and blocky K-feldspar + spodumene pegmatite zone (4) tend to have assays with > 200 ppm Ta. High grade Cs mineralization occurs as pollucite in the pollucite + spodumene zone (5). The pollucite in sample 150298 has pollucite interstitial to coarse-grained pink spodumene blades.

Channels were extended to sample the meta-ultramafic host rock on the north and south contacts. The meta-ultramafic host rock has elevated Fe, Mg, Cr and V as expected, but also contain elevated Li and Cs contents:

- 1.34 % Li_2O and 4364 ppm Cs over 0.20 m, TL-CH-20-01, north contact
- 1.24 % Li_2O and 5618 ppm Cs over 0.20 m, TL-CH-20-03b, south contact.

The channel sampling confirmed the presence of high-grade Li-Cs-Ta mineralization on the Tot Lake pegmatite. The Tot Lake pegmatite is one of the most fractionated pegmatites in Ontario as it contains the Cs ore mineral pollucite. The meta-ultramafic host rocks in contact with the Tot Lake pegmatite are elevated in Li and Cs due to metasomatism of the host rock during the intrusion of the pegmatite melt. This information can be used as an exploration tool in search for more Li pegmatites in the area. The channels can be plotted as horizontal drill holes in 3D modelling software to be used for future drill hole targeting.

13.0 RECOMMENDATIONS

Power Metals Corp recommends the following future exploration:

- A drill program on the Tot Lake Pegmatite to determine Li and Ta grades at depth as well as to look for an extension of the dyke
- Further prospecting on area between the Gullwing Lake Pegmatite and the Tot Lake pegmatite to find more mineralized pegmatites at surface.

The budget for the proposed exploration program is:

1000 m of drilling = $200,000

Prospecting = $50,000

Total = $250,000.

14.0 STATEMENT OF AUTHORSHIP

This Report, titled "Assessment Report – 2020 Prospecting Program, Tot Lake Pegmatite, Gullwing-Tot Lakes Property, Dryden, Northwestern Ontario, Canada, NTS Sheets: 52F15NE and 52F16NW, Townships: Webb and Drope" and dated Feb. 18, 2022, was prepared and signed by the following author and Qualified Person:

Julie Selway, Ph.D., P. Geo.
VP Exploration
Power Metals Corp.
Feb. 18, 2022
Sudbury, Ontario

15.0 REFERENCES

Beakhouse, G.P. 1988. The Wabigoon.Winnipeg River subprovince boundary problems; *in* Summary of Field Work and Other Activities 1988, Ontario Geological Survey, Miscellaneous Paper 141, p.108-115.

Breaks, F.W. and Janes, D.A. 1991. Granite-related mineralization of the Dryden area, Superior Province of northwestern Ontario; Geological Association of Canada.Mineralogical Association of Canada.Society of Economic Geologists, Joint Annual Meeting, Toronto 1991, Field Trip Guidebook B7, 71p.

Breaks, F.W., Selway, J.B. and Tindle, A.G. (2003): Fertile and peraluminous granites and related rare-element mineralization in pegmatites, Superior Province, Northwest and Northeast Ontario: Operation Treasure Hunt; Ontario Geological Survey, Open File Report 6099, 179 p.

Breaks, F.W., Selway, J.B. and Tindle, A.G. (2006): Fertile and peraluminous granites and related rare-element mineralization in pegmatites, north-central and northeastern Superior Province, Ontario; Ontario Geological Survey, Open File Report 6195, 143 p.

Breaks, F.W. and Tindle, A.G. 2001. Rare-element mineralization of the Separation Lake area, northwest Ontario: characteristics of a new discovery of complex-type, petalite-subtype, Li-Rb-Cs-Ta pegmatite; *in* Industrial minerals in Canada, Canadian Institute of Mining and Metallurgy, Special Volume 53, p.159-178.

Breaks, F.W. and Tindle, A.G 1997. Rare-element exploration potential of the Separation Lake area: an emerging target for Bikita-type mineralization in the Superior Province of north west Ontario; *in* Summary of Field Work and Other Activities 1997, Ontario Geological Survey, Miscellaneous Paper 168, p.72-88.

Černý, P., (1991): Rare element granitic pegmatites. Part I: Anatomy and internal evolution of pegmatite deposits. Geoscience Canada, 18, p. 49-67.

Černý, P. 1991a. Rare-element granitic pegmatites, part I. Anatomy and internal evolution of pegmatite deposits; Geoscience Canada, v.18, p.49-67.

Černý, P., Ercit, T.S. and Vanstone, P.J. 1998. Mineralogy and petrology of the Tanco rare-element pegmatite deposit, southeastern Manitoba; International Mineralogical Association, 17th General Meeting, Field Trip Guidebook, B6, 74p.

London, D., 2008: Pegmatites, Mineralogical Association of Canada, Special Publication 10, Quebec City.

Selway, J.B., Breaks, F.W., and Tindle, A.G. (2005): A review of rare-element (Li-Cs-Ta) pegmatite exploration techniques for the Superior Province, Canada and large worldwide Tantalum deposits, Exploration and Mining Geology, v. 14, p. 1-30.

Valvasori, A., Graham, B. and Selway, J. (2019) Assessment Report – 2018 Prospecting Program, Gullwing – Tot Lakes Property, Dryden, Northwestern Ontario, Canada, NTS Sheets: 52F15NE and 52F16NW, prepared for Power Metals Corp., April 11, 2019. File ID: 20000018711.

Appendix 1 – Certification of Qualified Person

Julie Selway
40 Mission Hill
Sudbury, Ontario, Canada, P3E 6M1
Telephone: 705-690-7996
Email: jselway@eastlink.ca

CERTIFICATE OF QUALIFIED PERSON

I, Julie Selway, do hereby certify that:

1. I am employed as VP of Exploration for Power Metals Corp, Vancouver, British Columbia and Principal Geologist for geological consulting firm J-J Minerals, Sudbury, Ontario.
2. I am the Qualified Person for this Report entitled "Assessment Report – 2020 Prospecting Program, Tot Lake Pegmatite, Gullwing-Tot Lakes Property, Dryden, Northwestern Ontario, Canada, NTS Sheets: 52F15NE and 52F16NW, Townships: Webb and Drope" and dated Feb. 18, 2022, and prepared for Power Metals Corp.
3. I hold the following academic qualifications: B.Sc. (Hons) Geology (1991) Saint Mary's University; M.Sc. Geology (1993) Lakehead University; Ph.D. Mineralogy (1999) University of Manitoba.
4. I am a member of the Association of Professional Geoscientists of Ontario (Member #0738). I am a member in good standing of the Mineralogical Association of Canada, Geological Association of Canada and Mineralogical Society of America.
5. I completed a Ph.D. on LCT granitic pegmatites in 1999 at the University of Manitoba. I worked for the Ontario Geological Survey as a pegmatite geoscientist 2001-2003. This property was included in Open File Report 6099, 2003 which I co-authored. I supervised the prospecting program at Gullwing-Tot Lakes in 2018 and in 2020.
6. I have not visited the Property.
7. As of the date of this certificate, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed to make this report not misleading.

Dated this 18th Day February 2022.

Julie Selway

Julie Selway, Ph.D., P.Geo.
VP Exploration
Power Metals Corp.

PROFESSIONAL GEOSCIENTIST
JULIE B. SELWAY
PRACTISING MEMBER
0738
ONTARIO

Appendix 2 – Summary of Cell Claims for Gullwing-Tot Lake Property

Table 15-1 Tenure table for Gullwing-Tot Lake Property.

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Anniversary Date	Work Required
4276554	DROPE	341948	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	341947	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	262949	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	234258	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	196278	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	196277	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	122424	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	116242	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE	101758	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	336399	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	336398	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	296098	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	296097	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	285690	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	248968	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	240947	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	228108	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	211061	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	211060	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	192814	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	183052	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	170252	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	140299	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	128770	Single Cell Mining Claim	2022-04-22	$ 400.00
4276555	DROPE	102759	Single Cell Mining Claim	2022-04-22	$ 400.00
4276570	DROPE	285691	Single Cell Mining Claim	2022-04-22	$ 400.00
4276570	DROPE	273609	Single Cell Mining Claim	2022-04-22	$ 400.00
4276570	DROPE	218430	Single Cell Mining Claim	2022-04-22	$ 400.00
4276570	DROPE	183051	Single Cell Mining Claim	2022-04-22	$ 400.00
4276581	DROPE	287408	Single Cell Mining Claim	2022-04-22	$ 400.00
4276581	DROPE	248265	Single Cell Mining Claim	2022-04-22	$ 400.00
4276581	DROPE	227456	Single Cell Mining Claim	2022-04-22	$ 400.00
4276581	DROPE	126738	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE,WEBB	290357	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE,WEBB	270910	Single Cell Mining Claim	2022-04-22	$ 400.00
4276554	DROPE,WEBB	116243	Single Cell Mining Claim	2022-04-22	$ 400.00
4276581	DROPE,WEBB	227457	Single Cell Mining Claim	2022-04-22	$ 400.00
4213362	DROPE,WEBB	314827	Single Cell Mining Claim	2022-08-18	$ 400.00

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Anniversary Date	Work Required
4213362	DROPE,WEBB	295417	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	DROPE,WEBB	295416	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	DROPE,WEBB	210372	Single Cell Mining Claim	2022-08-18	$ 400.00
4283563	WEBB	308122	Boundary Cell Mining Claim	2022-04-21	$ 200.00
4283563	WEBB	287379	Single Cell Mining Claim	2022-04-21	$ 400.00
4283563	WEBB	282234	Single Cell Mining Claim	2022-04-21	$ 400.00
4283563	WEBB	262170	Single Cell Mining Claim	2022-04-21	$ 400.00
4283563	WEBB	210370	Boundary Cell Mining Claim	2022-04-21	$ 200.00
4283563	WEBB	204223	Boundary Cell Mining Claim	2022-04-21	$ 200.00
4283563	WEBB	158921	Single Cell Mining Claim	2022-04-21	$ 400.00
4283563	WEBB	116481	Single Cell Mining Claim	2022-04-21	$ 400.00
4283563	WEBB	107452	Boundary Cell Mining Claim	2022-04-21	$ 200.00
4283564	WEBB	291667	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	291666	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	264285	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	217064	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	214215	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	121130	Single Cell Mining Claim	2022-04-21	$ 400.00
4283564	WEBB	116833	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	340670	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	314748	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	282235	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	280340	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	268289	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	231620	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	231619	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	195537	Single Cell Mining Claim	2022-04-21	$ 400.00
4283565	WEBB	160267	Single Cell Mining Claim	2022-04-21	$ 400.00
4276596	WEBB	287377	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	229375	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	210346	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	204202	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	191576	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	174134	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	174133	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	145545	Single Cell Mining Claim	2022-04-22	$ 400.00
4276596	WEBB	145544	Single Cell Mining Claim	2022-04-22	$ 400.00

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Anniversary Date	Work Required
4276596	WEBB	107432	Single Cell Mining Claim	2022-04-22	$ 400.00
4276578	WEBB	308112	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	295418	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	248264	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	248263	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	240281	Boundary Cell Mining Claim	2022-05-16	$ 200.00
4276578	WEBB	229404	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	229403	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	229402	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	210374	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	210373	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	192115	Boundary Cell Mining Claim	2022-05-16	$ 200.00
4276578	WEBB	192114	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	174132	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	145572	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	145571	Boundary Cell Mining Claim	2022-05-16	$ 200.00
4276578	WEBB	145570	Boundary Cell Mining Claim	2022-05-16	$ 200.00
4276578	WEBB	145546	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	139610	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	139609	Single Cell Mining Claim	2022-05-16	$ 400.00
4276578	WEBB	128065	Single Cell Mining Claim	2022-05-16	$ 400.00
4213362	WEBB	335696	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	314826	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	308141	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	308140	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	295415	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	295414	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	240258	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	210347	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	210345	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	204224	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	192112	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	192111	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	174153	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	145568	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	107454	Single Cell Mining Claim	2022-08-18	$ 400.00
4213362	WEBB	107453	Single Cell Mining Claim	2022-08-18	$ 400.00

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Anniversary Date	Work Required
				total	$ 43,200.00

Appendix 3 – Li standards OREAS 147 and OREAS 148 Certificate of Analysis

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CERTIFICATE OF ANALYSIS FOR

Pegmatitic Li-Nb-Sn ORE

CERTIFIED REFERENCE MATERIAL

OREAS 147

Summary Statistics for Key Analytes.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
Peroxide Fusion ICP						
Li, Lithium (wt.%)	0.227	0.011	0.221	0.232	0.221	0.233
Li_2O, Lithium oxide (wt.%)	0.488	0.023	0.477	0.500	0.476	0.501
Nb, Niobium (wt.%)	0.115	0.007	0.111	0.118	0.111	0.119
Sn, Tin (ppm)	699	37	676	723	659	739

Note: intervals may appear asymmetric due to rounding.

Table 1. Certified Values, SDs, 95% Confidence and Tolerance Limits for OREAS 147.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
4-Acid Digestion						
Al, Aluminium (wt.%)	4.90	0.187	4.81	5.00	4.79	5.02
As, Arsenic (ppm)	36.0	2.72	34.8	37.1	33.8	38.2
Ba, Barium (ppm)	1936	86	1896	1976	1890	1981
Be, Beryllium (ppm)	31.2	2.33	30.2	32.3	29.8	32.7
Bi, Bismuth (ppm)	12.5	1.05	12.0	13.0	12.1	12.9
Ca, Calcium (wt.%)	1.09	0.050	1.06	1.11	1.06	1.11
Ce, Cerium (ppm)	1106	90	1037	1176	1070	1143
Co, Cobalt (ppm)	6.90	0.393	6.71	7.09	6.69	7.11
Cr, Chromium (ppm)	57	8	53	61	54	59
Cs, Cesium (ppm)	238	12	231	244	231	244
Cu, Copper (ppm)	298	15	292	305	291	306
Dy, Dysprosium (ppm)	9.20	1.10	7.99	10.42	8.65	9.76
Er, Erbium (ppm)	3.00	0.38	2.58	3.43	2.81	3.20
Eu, Europium (ppm)	10.4	0.80	9.6	11.3	9.9	11.0
Fe, Iron (wt.%)	3.23	0.122	3.18	3.29	3.18	3.29
Ga, Gallium (ppm)	22.6	3.6	20.4	24.8	21.8	23.4
Gd, Gadolinium (ppm)	24.2	3.6	20.2	28.3	23.2	25.3
Ge, Germanium (ppm)	0.75	0.15	0.58	0.92	0.65	0.84
Hf, Hafnium (ppm)	2.99	0.32	2.84	3.14	2.82	3.16
In, Indium (ppm)	2.61	0.162	2.52	2.71	2.48	2.75
K, Potassium (wt.%)	1.60	0.053	1.58	1.62	1.56	1.63
La, Lanthanum (ppm)	663	47	641	685	644	682
Li, Lithium (wt.%)	0.226	0.012	0.221	0.232	0.221	0.231
Li_2O, Lithium oxide (wt.%)	0.487	0.026	0.475	0.499	0.476	0.498
Lu, Lutetium (ppm)	0.20	0.009	0.19	0.21	0.19	0.21
Mg, Magnesium (wt.%)	0.535	0.022	0.525	0.546	0.520	0.551
Mn, Manganese (wt.%)	0.039	0.002	0.038	0.040	0.038	0.040
Mo, Molybdenum (ppm)	7.99	0.296	7.87	8.11	7.68	8.30
Na, Sodium (wt.%)	0.948	0.043	0.925	0.972	0.925	0.972
Nb, Niobium (wt.%)	0.111	0.008	0.105	0.117	0.107	0.115
Ni, Nickel (ppm)	21.2	1.49	20.6	21.8	20.3	22.1
P, Phosphorus (wt.%)	0.155	0.009	0.151	0.160	0.151	0.160
Pb, Lead (ppm)	27.8	2.02	26.7	28.8	26.7	28.8
Pr, Praseodymium (ppm)	121	3	120	122	116	126
Rb, Rubidium (ppm)	1162	63	1128	1196	1129	1195
S, Sulphur (wt.%)	0.030	0.003	0.028	0.031	0.027	0.032
Sb, Antimony (ppm)	10.6	0.68	10.2	10.9	10.0	11.1
Sc, Scandium (ppm)	10.7	0.75	10.3	11.1	10.3	11.1
Sm, Samarium (ppm)	48.7	1.48	47.1	50.4	46.5	51.0
Sr, Strontium (ppm)	299	12	293	305	292	306
Ta, Tantalum (ppm)	17.8	2.3	16.3	19.3	17.1	18.5

Note: intervals may appear asymmetric due to rounding

Table 1 continued.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
4-Acid Digestion continued						
Tb, Terbium (ppm)	2.35	0.205	2.15	2.54	2.25	2.44
Th, Thorium (ppm)	93	5.5	91	96	91	96
Ti, Titanium (wt.%)	0.470	0.022	0.460	0.480	0.458	0.482
Tl, Thallium (ppm)	10.8	0.67	10.4	11.1	10.4	11.1
Tm, Thulium (ppm)	0.27	0.04	0.22	0.31	IND	IND
U, Uranium (ppm)	15.8	0.60	15.6	16.1	15.4	16.3
V, Vanadium (ppm)	60	2.5	59	62	59	62
Y, Yttrium (ppm)	26.3	1.46	25.6	27.0	25.6	27.1
Yb, Ytterbium (ppm)	1.46	0.123	1.36	1.55	1.35	1.56
Zn, Zinc (ppm)	138	5	136	141	134	143
Zr, Zirconium (ppm)	105	7	102	109	101	110
Peroxide Fusion ICP						
Al, Aluminium (wt.%)	5.04	0.111	4.98	5.09	4.93	5.14
As, Arsenic (ppm)	35.9	3.37	33.4	38.5	32.4	39.5
Ba, Barium (ppm)	1956	106	1891	2020	1904	2007
Be, Beryllium (ppm)	36.1	4.8	32.9	39.4	33.8	38.5
Bi, Bismuth (ppm)	12.6	1.00	11.7	13.5	11.8	13.4
Ca, Calcium (wt.%)	1.12	0.053	1.10	1.14	1.07	1.16
Ce, Cerium (ppm)	1198	73	1142	1253	1164	1231
Cr, Chromium (ppm)	68	7	63	74	63	74
Cs, Cesium (ppm)	234	11	226	242	227	241
Cu, Copper (ppm)	300	16	289	311	286	314
Dy, Dysprosium (ppm)	8.52	0.657	8.07	8.97	8.13	8.91
Er, Erbium (ppm)	2.79	0.276	2.60	2.98	2.58	3.00
Eu, Europium (ppm)	10.2	0.59	9.8	10.6	9.7	10.7
Fe, Iron (wt.%)	3.27	0.085	3.23	3.31	3.20	3.33
Ga, Gallium (ppm)	22.1	1.92	19.8	24.3	20.9	23.3
Gd, Gadolinium (ppm)	21.8	0.86	21.2	22.5	20.7	23.0
Hf, Hafnium (ppm)	5.45	0.84	4.54	6.35	IND	IND
Ho, Holmium (ppm)	1.33	0.18	1.20	1.46	1.29	1.38
In, Indium (ppm)	2.85	0.183	2.71	2.99	2.64	3.06
K, Potassium (wt.%)	1.64	0.059	1.62	1.66	1.58	1.70
La, Lanthanum (ppm)	698	27	676	720	684	712
Li, Lithium (wt.%)	0.227	0.011	0.221	0.232	0.221	0.233
Li_2O, Lithium oxide (wt.%)	0.488	0.023	0.477	0.500	0.476	0.501
Mg, Magnesium (wt.%)	0.549	0.024	0.538	0.560	0.537	0.561
Mn, Manganese (wt.%)	0.039	0.001	0.039	0.040	0.038	0.041
Mo, Molybdenum (ppm)	9.60	1.47	8.48	10.72	IND	IND
Nb, Niobium (wt.%)	0.115	0.007	0.111	0.118	0.111	0.119
Nd, Neodymium (ppm)	379	19	365	393	367	390

Note: intervals may appear asymmetric due to rounding.

Table 1 continued.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
Peroxide Fusion ICP continued						
P, Phosphorus (wt.%)	0.156	0.009	0.151	0.160	0.150	0.161
Pr, Praseodymium (ppm)	122	3	120	123	119	124
Rb, Rubidium (ppm)	1184	94	1109	1260	1152	1216
Sb, Antimony (ppm)	10.5	0.86	9.9	11.1	9.4	11.6
Si, Silicon (wt.%)	35.58	0.779	35.01	36.15	34.76	36.40
Sm, Samarium (ppm)	47.9	3.42	45.3	50.5	46.3	49.6
Sn, Tin (ppm)	699	37	676	723	659	739
Sr, Strontium (ppm)	302	15	293	312	290	315
Ta, Tantalum (ppm)	17.8	1.9	15.3	20.3	16.6	19.0
Tb, Terbium (ppm)	2.30	0.32	2.07	2.53	2.20	2.40
Th, Thorium (ppm)	95	3.4	93	98	92	99
Ti, Titanium (wt.%)	0.483	0.018	0.475	0.490	0.467	0.498
Tl, Thallium (ppm)	10.8	0.82	10.1	11.5	10.3	11.3
Tm, Thulium (ppm)	0.33	0.06	0.30	0.37	0.30	0.37
V, Vanadium (ppm)	64	4.0	61	67	59	68
Y, Yttrium (ppm)	27.6	1.17	26.6	28.5	26.8	28.4
Yb, Ytterbium (ppm)	1.63	0.18	1.56	1.70	IND	IND
Zn, Zinc (ppm)	142	12	135	150	133	152
Zr, Zirconium (ppm)	194	29	166	222	183	205
Borate Fusion XRF						
Al_2O_3, Aluminium(III) oxide (wt.%)	9.48	0.078	9.44	9.52	9.44	9.52
BaO, Barium oxide (ppm)	2180	40	2166	2194	2108	2252
CaO, Calcium oxide (wt.%)	1.56	0.014	1.55	1.57	1.55	1.57
Fe_2O_3, Iron(III) oxide (wt.%)	4.67	0.055	4.64	4.70	4.64	4.70
K_2O, Potassium oxide (wt.%)	1.97	0.020	1.96	1.98	1.96	1.99
MgO, Magnesium oxide (wt.%)	0.945	0.018	0.937	0.954	0.932	0.958
MnO, Manganese oxide (wt.%)	0.051	0.001	0.050	0.051	0.048	0.053
Na_2O, Sodium oxide (wt.%)	1.31	0.029	1.29	1.32	1.29	1.33
Nb_2O_5, Niobium(V) oxide (wt.%)	0.169	0.005	0.165	0.172	0.163	0.174
P_2O_5, Phosphorus(V) oxide (wt.%)	0.368	0.008	0.364	0.372	0.361	0.375
SiO_2, Silicon dioxide (wt.%)	76.34	0.491	76.11	76.57	76.10	76.57
Sn, Tin (ppm)	764	47	740	788	728	799
SO_3, Sulphur trioxide (wt.%)	0.067	0.004	0.064	0.069	0.064	0.069
SrO, Strontium oxide (ppm)	332	35	305	358	IND	IND
TiO_2, Titanium dioxide (wt.%)	0.808	0.010	0.804	0.813	0.797	0.820
Thermogravimetry						
LOI^{1000}, Loss on ignition @1000°C (wt.%)	0.919	0.048	0.893	0.946	0.874	0.964

Note: intervals may appear asymmetric due to rounding.

INTRODUCTION

OREAS reference materials are intended to provide a low cost method of evaluating and improving the quality of analysis of geological samples. To the geologist they provide a means of implementing quality control in analytical data sets generated in exploration from the grass roots level through to prospect evaluation, and in grade control at mining operations. To the analyst they provide an effective means of calibrating analytical equipment, assessing new techniques and routinely monitoring in-house procedures.

SOURCE MATERIALS

Certified Reference Material OREAS 147 has been prepared from spodumene $LiAl(Si_2O_5)$-rich pegmatite ore blended with granodiorite and with minor additions of Sn oxide ore and Nb concentrate. The pegmatite was sourced from stockpile grab samples from the Greenbushes Mine owned by Talison Lithium Ltd located just south of the town of Greenbushes in the south-western corner of Western Australia. The barren I-type hornblende-bearing granodiorite was sourced from the Late Devonian Lysterfield granodiorite complex located in eastern Melbourne, Australia. The Sn lateritic ore material was sourced from the Doradilla Project located in north central NSW and the Nb concentrate was sourced from Anglo American Brasil Catalão's niobium mine in Goiás, Brazil. The Nb concentrate was produced from niobium-rich ore developed in the saprolite zone over alkaline-carbonatite complexes.

COMMINUTION AND HOMOGENISATION PROCEDURES

The material constituting OREAS 147 was prepared in the following manner:

- Drying to constant mass at 105°C;
- Milling of Li and Nb ores to 100% minus 30 microns;
- Milling of Sn ore and granodiorite to 98% minus 75 microns;
- Preliminary homogenisation and check assaying of source materials;
- Final homogenisation by blending the source materials in specific ratios to achieve target grades;
- Packaging in 10g units in laminated foil pouches.

ANALYTICAL PROGRAM

Twenty two commercial analytical laboratories participated in the program to certify the analytes reported in Table 1. The following methods were employed:

- Four acid digestion for full ICP-OES and ICP-MS elemental suites (up to 22 laboratories depending on the element) except for one laboratory who used an AAS finish for Li only;
- Peroxide fusion for full ICP-OES and ICP-MS elemental suites (up to 21 laboratories depending on the element);
- Lithium borate fusion with XRF finish for whole rock package including Nb and Ta (up to 22 laboratories depending on the element);
- Thermogravimetry for LOI at 1000° C; (9 laboratories used a conventional muffle furnace and 6 laboratories used a thermogravimetric analyser).

For the round robin program ten test units were taken at predetermined intervals during the bagging stage, immediately following homogenisation and are considered representative of the entire batch. The six samples received by each laboratory were obtained by taking two 20g scoop splits from each of three separate 300g test units. This format enabled nested ANOVA treatment of the results to evaluate homogeneity, i.e. to ascertain whether between-unit variance is greater than within-unit variance. Table 1 presents the 114 certified values together with their associated 1SD's, 95% confidence and tolerance limits and Table 2 below shows 59 indicative values. Table 3 provides performance gate intervals for the certified values based on their associated pooled standard deviations. Tabulated results of all elements together with analytical method codes, uncorrected means, medians, standard deviations, relative standard deviations and per cent deviation of lab means from the corrected mean of means (PDM^3) are presented in the detailed certification data for this CRM (**OREAS 147 DataPack.xlsx**).

Table 2. Indicative Values for OREAS 147.

Constituent	Unit	Value	Constituent	Unit	Value	Constituent	Unit	Value
4-Acid Digestion								
Ag	ppm	*0.706*	Ho	ppm	*1.26*	Se	ppm	*2.46*
Au	ppm	*0.172*	Ir	ppm	*0.010*	Si	wt.%	*34.39*
B	ppm	*2.68*	Nd	ppm	*386*	Sn	ppm	*503*
Cd	ppm	*0.46*	Pt	ppm	*0.024*	Te	ppm	*0.077*
Hg	ppm	*0.042*	Re	ppm	*< 0.002*	W	ppm	*4.88*
Peroxide Fusion ICP								
Ag	ppm	*3.00*	Lu	ppm	*0.22*	Sc	ppm	*9.82*
B	ppm	*29.2*	Ni	ppm	*23.2*	Se	ppm	*< 20*
Cd	ppm	*< 10*	Pb	ppm	*30.0*	Te	ppm	*< 1*
Co	ppm	*7.39*	Re	ppm	*< 0.1*	U	ppm	*16.4*
Ge	ppm	*3.20*	S	wt.%	*0.024*	W	ppm	*6.46*
Borate Fusion XRF								
As	ppm	*52*	Gd_2O_3	ppm	*< 100*	Sm_2O_3	ppm	*< 100*
Bi	ppm	*< 100*	HfO_2	ppm	*< 100*	Ta_2O_5	ppm	*< 24*
CeO_2	ppm	*1417*	La_2O_3	ppm	*761*	ThO_2	ppm	*< 100*
Cl	ppm	*106*	Mo	ppm	*< 10*	U_3O_8	ppm	*15.0*
Co	ppm	*47.3*	Nd_2O_3	ppm	*583*	V_2O_5	ppm	*128*
Cr_2O_3	ppm	*104*	Ni	ppm	*38.6*	W	ppm	*19.2*
Cu	ppm	*291*	Pb	ppm	*36.1*	Y_2O_3	ppm	*150*
Dy_2O_3	ppm	*< 100*	Pr_6O_{11}	ppm	*483*	Yb_2O_3	ppm	*< 100*
Er_2O_3	ppm	*< 100*	Rb	ppm	*1219*	Zn	ppm	*139*
Ga_2O_3	ppm	*41.7*	Sb	ppm	*< 50*			

Note: the number of significant figures reported is not a reflection of the level of certainty of stated values. They are instead an artefact of ORE's in-house CRM-specific LIMS.

STATISTICAL ANALYSIS

Certified Values, Confidence Limits, Standard Deviations and Tolerance Limits (Table 1) have been determined for each analyte following removal of individual, laboratory dataset (batch) and 3SD outliers (single iteration). For individual outliers within a laboratory

batch the z-score test is used in combination with a second method that determines the per cent deviation of the individual value from the batch median. Outliers in general are selected on the basis of z-scores > 2.5 and with per cent deviations (i) > 3 and (ii) more than three times the average absolute per cent deviation for the batch. In certain instances statistician's prerogative has been employed in discriminating outliers. Each laboratory data set mean is tested for outlying status based on z-score discrimination and rejected if > 2.5. After individual and laboratory data set (batch) outliers have been eliminated a non-iterative 3 standard deviation filter is applied, with those values lying outside this window also relegated to outlying status. The Certified Values are the means of accepted laboratory means after outlier filtering.

The 95% Confidence Limits are inversely proportional to the number of participating laboratories and inter-laboratory agreement. It is a measure of the reliability of the certified value. A 95% confidence interval indicates a 95% probability that the true value of the analyte under consideration lies between the upper and lower limits. *95% Confidence Limits should not be used as control limits for laboratory performance.*

Standard Deviation values (1SDs) are reported in Table 1 and provide an indication of a level of performance that might reasonably be expected from a laboratory being monitored by this CRM in a QA/QC program. The SD's take into account errors attributable to measurement uncertainty and CRM variability. For an effective CRM the contribution of the latter should be negligible in comparison to measurement errors. The SD values thus include all sources of measurement uncertainty: between-lab variance, within-run variance (precision errors) and CRM variability. OREAS prepared reference materials have a level of homogeneity such that the observed variance from repeated analysis has its origin almost exclusively in the analytical process rather than the reference material itself.

The SD for each analyte's certified value is calculated from the same filtered data set used to determine the certified value, i.e. after removal of any individual, lab dataset (batch) and 3SD outliers (single iteration). These outliers can only be removed after the absolute homogeneity of the CRM has been independently established, i.e. the outliers must be confidently deemed to be analytical rather than arising from inhomogeneity of the CRM. **The standard deviation is then calculated for each analyte from the pooled accepted analyses generated from the certification program.**

In the application of SD's in monitoring performance it is important to note that not all laboratories function at the same level of proficiency and that different methods in use at a particular laboratory have differing levels of precision. Each laboratory has its own inherent SD (for a specific concentration level and analyte-method pair) based on the analytical process and this SD is not directly related to the round robin program.

The majority of data generated in the round robin program was produced by a selection of world class laboratories. The SD's thus generated are more constrained than those that would be produced across a randomly selected group of laboratories. To produce more generally achievable SD's the 'pooled' SD's provided in this report include inter-lab bias. This 'one size fits all' approach may require revision at the discretion of the QC manager concerned following careful scrutiny of QC control charts.

Table 3 shows **Performance Gates** calculated for two and three standard deviations. As a guide these intervals may be regarded as warning or rejection for multiple 2SD outliers, or rejection for individual 3SD outliers in QC monitoring, although their precise application should be at the discretion of the QC manager concerned. A second method utilises a 5% window calculated directly from the certified value. Standard deviation is also shown in

relative percent for one, two and three relative standard deviations (1RSD, 2RSD and 3RSD) to facilitate an appreciation of the magnitude of these numbers and a comparison with the 5% window. Caution should be exercised when concentration levels approach lower limits of detection of the analytical methods employed as performance gates calculated from standard deviations tend to be excessively wide whereas those determined by the 5% method are too narrow.

Tolerance Limits (ISO Guide 3207) were determined using an analysis of precision errors method and are considered a conservative estimate of true homogeneity. The meaning of tolerance limits may be illustrated for tin (Sn) by fusion XRF, where 99% of the time (1-α=0.99) at least 95% of subsamples (ρ=0.95) will have concentrations lying between 728 and 799 ppm. Put more precisely, this means that if the same number of subsamples were taken and analysed in the same manner repeatedly, 99% of the tolerance intervals so constructed would cover at least 95% of the total population, and 1% of the tolerance intervals would cover less than 95% of the total population (ISO Guide 35). *Please note that tolerance limits pertain to the homogeneity of the CRM only and should not be used as control limits for laboratory performance.*

The homogeneity of OREAS 147 has also been evaluated in a **nested ANOVA** of the round robin program. Each of the twenty four round robin laboratories received six samples per CRM and these samples were made up of paired samples from three different, non-adjacent sampling intervals. The purpose of the ANOVA evaluation is to test that no statistically significant difference exists in the variance between-units to that of the variance within-units. This allows an assessment of homogeneity across the entire prepared batch of OREAS 147. The test was performed using the following parameters:

- Null Hypothesis, H_0: Between-unit variance is no greater than within-unit variance (reject H_0 if *p*-value < 0.05);
- Alternative Hypothesis, H_1: Between-unit variance is greater than within-unit variance.

P-values are a measure of probability where values less than 0.05 indicate a greater than 95% probability that the observed differences in within-unit and between-unit variances are real. The datasets were filtered for both individual and laboratory data set (batch) outliers prior to the calculation of *p*-values. This process derived no significant *p*-values across the entire 114 certified values except for indium (In) by Peroxide Fusion ICP. This isolated case is most likely due to random statistical probability as there is no other supporting evidence to suspect greater between-unit variance compared with within-unit variance. The null hypothesis is therefore retained.

It is important to note that ANOVA is not an absolute measure of homogeneity. Rather, it establishes whether or not the analytes are distributed in a similar manner throughout the packaging run of OREAS 147 and whether the variance between two subsamples from the same unit is statistically distinguishable to the variance from two subsamples taken from any two separate units. A reference material therefore, can possess poor absolute homogeneity yet still pass a relative homogeneity test if the within-unit heterogeneity is large and similar across all units.

Based on the statistical analysis of the results of the inter-laboratory certification program it can be concluded that OREAS 147 is fit-for-purpose as a certified reference material (see ‘Intended Use’ below).

Table 3. Pooled-Lab Performance Gates for OREAS 147.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
4-Acid Digestion											
Al, wt.%	4.90	0.187	4.53	5.28	4.34	5.46	3.81%	7.62%	11.42%	4.66	5.15
As, ppm	36.0	2.72	30.5	41.4	27.8	44.1	7.55%	15.10%	22.65%	34.2	37.8
Ba, ppm	1936	86	1764	2107	1678	2193	4.43%	8.87%	13.30%	1839	2032
Be, ppm	31.2	2.33	26.6	35.9	24.2	38.2	7.45%	14.90%	22.35%	29.7	32.8
Bi, ppm	12.5	1.05	10.4	14.6	9.4	15.6	8.39%	16.78%	25.17%	11.9	13.1
Ca, wt.%	1.09	0.050	0.99	1.19	0.93	1.24	4.64%	9.28%	13.92%	1.03	1.14
Ce, ppm	1106	90	926	1287	836	1377	8.16%	16.32%	24.47%	1051	1162
Co, ppm	6.90	0.393	6.12	7.69	5.72	8.08	5.70%	11.40%	17.10%	6.56	7.25
Cr, ppm	57	8	41	73	32	81	14.27%	28.55%	42.82%	54	60
Cs, ppm	238	12	214	261	202	273	5.05%	10.10%	15.15%	226	249
Cu, ppm	298	15	269	327	255	342	4.86%	9.72%	14.58%	283	313
Dy, ppm	9.20	1.10	7.00	11.41	5.90	12.51	11.95%	23.91%	35.86%	8.74	9.67
Er, ppm	3.00	0.38	2.24	3.77	1.86	4.15	12.73%	25.46%	38.19%	2.85	3.15
Eu, ppm	10.4	0.80	8.8	12.1	8.0	12.9	7.67%	15.33%	23.00%	9.9	11.0
Fe, wt.%	3.23	0.122	2.99	3.48	2.87	3.60	3.77%	7.55%	11.32%	3.07	3.39
Ga, ppm	22.6	3.6	15.4	29.9	11.7	33.5	16.05%	32.10%	48.15%	21.5	23.7
Gd, ppm	24.2	3.6	17.0	31.5	13.4	35.1	14.91%	29.82%	44.73%	23.0	25.5
Ge, ppm	0.75	0.15	0.45	1.05	0.30	1.20	19.93%	39.86%	59.78%	0.71	0.79
Hf, ppm	2.99	0.32	2.36	3.63	2.04	3.94	10.62%	21.24%	31.85%	2.84	3.14
In, ppm	2.61	0.162	2.29	2.94	2.13	3.10	6.21%	12.43%	18.64%	2.48	2.74
K, wt.%	1.60	0.053	1.49	1.70	1.44	1.76	3.28%	6.57%	9.85%	1.52	1.68
La, ppm	663	47	568	758	520	805	7.16%	14.33%	21.49%	630	696
Li, wt.%	0.226	0.012	0.202	0.251	0.190	0.263	5.37%	10.75%	16.12%	0.215	0.238
Li_2O, wt.%	0.49	0.03	0.43	0.54	0.41	0.57	5.37%	10.75%	16.12%	0.463	0.512
Lu, ppm	0.20	0.009	0.18	0.22	0.17	0.23	4.71%	9.42%	14.13%	0.19	0.21
Mg, wt.%	0.535	0.022	0.491	0.580	0.469	0.602	4.13%	8.26%	12.39%	0.509	0.562
Mn, wt.%	0.039	0.002	0.035	0.044	0.033	0.046	5.63%	11.25%	16.88%	0.037	0.041
Mo, ppm	7.99	0.296	7.40	8.58	7.10	8.87	3.70%	7.40%	11.10%	7.59	8.39
Na, wt.%	0.948	0.043	0.862	1.035	0.819	1.078	4.55%	9.10%	13.66%	0.901	0.996
Nb, wt.%	0.111	0.008	0.095	0.127	0.087	0.136	7.31%	14.62%	21.94%	0.106	0.117
Ni, ppm	21.2	1.49	18.2	24.2	16.7	25.6	7.03%	14.07%	21.10%	20.1	22.2
P, wt.%	0.155	0.009	0.137	0.173	0.128	0.182	5.78%	11.55%	17.33%	0.147	0.163
Pb, ppm	27.8	2.02	23.7	31.8	21.7	33.8	7.29%	14.58%	21.88%	26.4	29.1
Pr, ppm	121	3	116	126	113	129	2.14%	4.28%	6.43%	115	127
Rb, ppm	1162	63	1035	1289	972	1352	5.46%	10.92%	16.38%	1104	1220
S, wt.%	0.030	0.003	0.024	0.035	0.021	0.038	9.91%	19.82%	29.73%	0.028	0.031
Sb, ppm	10.6	0.68	9.2	11.9	8.5	12.6	6.41%	12.82%	19.23%	10.0	11.1
Sc, ppm	10.7	0.75	9.1	12.2	8.4	12.9	7.07%	14.15%	21.22%	10.1	11.2
Sm, ppm	48.7	1.48	45.8	51.7	44.3	53.2	3.05%	6.09%	9.14%	46.3	51.2
Sr, ppm	299	12	274	324	262	336	4.15%	8.30%	12.45%	284	314
Ta, ppm	17.8	2.3	13.1	22.5	10.8	24.8	13.09%	26.17%	39.26%	16.9	18.7
Tb, ppm	2.35	0.205	1.93	2.76	1.73	2.96	8.75%	17.51%	26.26%	2.23	2.46

Note: intervals may appear asymmetric due to rounding.

Table 3 continued.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
4-Acid Digestion continued											
Th, ppm	93	5.5	82	104	77	110	5.89%	11.79%	17.68%	89	98
Ti, wt.%	0.470	0.022	0.426	0.513	0.405	0.535	4.63%	9.26%	13.88%	0.446	0.493
Tl, ppm	10.8	0.67	9.4	12.1	8.8	12.8	6.26%	12.52%	18.78%	10.2	11.3
Tm, ppm	0.27	0.04	0.19	0.34	0.16	0.37	13.79%	27.59%	41.38%	0.25	0.28
U, ppm	15.8	0.60	14.7	17.0	14.1	17.6	3.76%	7.51%	11.27%	15.1	16.6
V, ppm	60	2.5	55	66	53	68	4.20%	8.41%	12.61%	57	64
Y, ppm	26.3	1.46	23.4	29.2	21.9	30.7	5.54%	11.07%	16.61%	25.0	27.6
Yb, ppm	1.46	0.123	1.21	1.70	1.09	1.83	8.47%	16.95%	25.42%	1.38	1.53
Zn, ppm	138	5	129	148	124	153	3.39%	6.77%	10.16%	132	145
Zr, ppm	105	7	92	118	86	125	6.26%	12.52%	18.78%	100	111
Peroxide Fusion ICP											
Al, wt.%	5.04	0.111	4.81	5.26	4.70	5.37	2.20%	4.40%	6.59%	4.78	5.29
As, ppm	35.9	3.37	29.2	42.7	25.8	46.0	9.37%	18.73%	28.10%	34.1	37.7
Ba, ppm	1956	106	1744	2167	1639	2273	5.40%	10.81%	16.21%	1858	2053
Be, ppm	36.1	4.8	26.5	45.8	21.7	50.6	13.31%	26.63%	39.94%	34.3	37.9
Bi, ppm	12.6	1.00	10.6	14.6	9.6	15.6	7.92%	15.84%	23.76%	11.9	13.2
Ca, wt.%	1.12	0.053	1.01	1.22	0.96	1.28	4.72%	9.44%	14.15%	1.06	1.17
Ce, ppm	1198	73	1051	1344	978	1417	6.11%	12.22%	18.33%	1138	1257
Cr, ppm	68	7	54	83	47	90	10.37%	20.73%	31.10%	65	72
Cs, ppm	234	11	211	257	200	269	4.88%	9.76%	14.65%	223	246
Cu, ppm	300	16	268	332	252	348	5.32%	10.65%	15.97%	285	315
Dy, ppm	8.52	0.657	7.21	9.83	6.55	10.49	7.71%	15.42%	23.13%	8.09	8.95
Er, ppm	2.79	0.276	2.24	3.35	1.96	3.62	9.89%	19.78%	29.67%	2.65	2.93
Eu, ppm	10.2	0.59	9.0	11.4	8.4	12.0	5.82%	11.64%	17.46%	9.7	10.7
Fe, wt.%	3.27	0.085	3.10	3.44	3.01	3.52	2.60%	5.20%	7.81%	3.10	3.43
Ga, ppm	22.1	1.92	18.2	25.9	16.3	27.8	8.72%	17.44%	26.16%	20.9	23.2
Gd, ppm	21.8	0.86	20.1	23.6	19.2	24.4	3.95%	7.91%	11.86%	20.7	22.9
Hf, ppm	5.45	0.84	3.77	7.12	2.94	7.96	15.37%	30.73%	46.10%	5.17	5.72
Ho, ppm	1.33	0.18	0.97	1.69	0.79	1.87	13.45%	26.91%	40.36%	1.27	1.40
In, ppm	2.85	0.183	2.48	3.22	2.30	3.40	6.43%	12.85%	19.28%	2.71	2.99
K, wt.%	1.64	0.059	1.52	1.76	1.46	1.82	3.59%	7.18%	10.77%	1.56	1.72
La, ppm	698	27	645	752	618	779	3.83%	7.66%	11.49%	663	733
Li, wt.%	0.227	0.011	0.206	0.248	0.195	0.259	4.69%	9.37%	14.06%	0.215	0.238
Li_2O, wt.%	0.49	0.02	0.44	0.53	0.42	0.56	4.69%	9.37%	14.06%	0.464	0.513
Mg, wt.%	0.549	0.024	0.502	0.596	0.478	0.620	4.29%	8.57%	12.86%	0.522	0.576
Mn, wt.%	0.039	0.001	0.037	0.041	0.036	0.042	2.77%	5.53%	8.30%	0.037	0.041
Mo, ppm	9.60	1.47	6.67	12.54	5.20	14.00	15.28%	30.56%	45.84%	9.12	10.08
Nb, wt.%	0.115	0.007	0.101	0.128	0.094	0.135	5.93%	11.85%	17.78%	0.109	0.120
Nd, ppm	379	19	341	416	322	435	4.98%	9.96%	14.94%	360	398
P, wt.%	0.156	0.009	0.137	0.174	0.128	0.183	5.79%	11.59%	17.38%	0.148	0.163
Pr, ppm	122	3	116	127	114	130	2.19%	4.37%	6.56%	116	128
Rb, ppm	1184	94	996	1372	902	1466	7.94%	15.88%	23.82%	1125	1243
Sb, ppm	10.5	0.86	8.8	12.2	7.9	13.1	8.21%	16.43%	24.64%	10.0	11.0

Note: intervals may appear asymmetric due to rounding.

Table 3 continued.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
Peroxide Fusion ICP continued											
Si, wt.%	35.58	0.779	34.02	37.14	33.25	37.92	2.19%	4.38%	6.57%	33.80	37.36
Sm, ppm	47.9	3.42	41.1	54.8	37.7	58.2	7.15%	14.29%	21.44%	45.5	50.3
Sn, ppm	699	37	626	773	589	810	5.28%	10.55%	15.83%	664	734
Sr, ppm	302	15	273	332	259	346	4.82%	9.65%	14.47%	287	318
Ta, ppm	17.8	1.9	14.0	21.7	12.1	23.6	10.78%	21.57%	32.35%	16.9	18.7
Tb, ppm	2.30	0.32	1.65	2.95	1.33	3.27	14.10%	28.19%	42.29%	2.19	2.42
Th, ppm	95	3.4	89	102	85	106	3.54%	7.07%	10.61%	91	100
Ti, wt.%	0.483	0.018	0.446	0.519	0.428	0.537	3.79%	7.57%	11.36%	0.459	0.507
Tl, ppm	10.8	0.82	9.2	12.4	8.3	13.3	7.59%	15.18%	22.77%	10.3	11.3
Tm, ppm	0.33	0.06	0.22	0.44	0.16	0.50	17.15%	34.30%	51.44%	0.31	0.35
V, ppm	64	4.0	56	72	52	76	6.26%	12.52%	18.78%	61	67
Y, ppm	27.6	1.17	25.2	29.9	24.1	31.1	4.23%	8.47%	12.70%	26.2	28.9
Yb, ppm	1.63	0.18	1.26	2.00	1.08	2.18	11.31%	22.62%	33.93%	1.55	1.71
Zn, ppm	142	12	119	166	107	177	8.26%	16.52%	24.78%	135	149
Zr, ppm	194	29	136	252	107	281	14.92%	29.84%	44.75%	184	204
Borate Fusion XRF											
Al_2O_3, wt.%	9.48	0.078	9.32	9.63	9.24	9.71	0.82%	1.64%	2.46%	9.00	9.95
BaO, ppm	2180	40	2100	2259	2061	2299	1.82%	3.65%	5.47%	2071	2289
CaO, wt.%	1.56	0.014	1.53	1.59	1.52	1.60	0.91%	1.81%	2.72%	1.48	1.64
Fe_2O_3, wt.%	4.67	0.055	4.56	4.78	4.50	4.83	1.17%	2.35%	3.52%	4.43	4.90
K_2O, wt.%	1.97	0.020	1.93	2.01	1.91	2.03	1.01%	2.02%	3.04%	1.87	2.07
MgO, wt.%	0.945	0.018	0.908	0.982	0.890	1.000	1.94%	3.89%	5.83%	0.898	0.993
MnO, wt.%	0.051	0.001	0.048	0.053	0.047	0.054	2.02%	4.04%	6.05%	0.048	0.053
Na_2O, wt.%	1.31	0.029	1.25	1.37	1.22	1.40	2.23%	4.46%	6.68%	1.24	1.37
Nb_2O_5, wt.%	0.169	0.005	0.159	0.179	0.154	0.183	2.94%	5.88%	8.81%	0.160	0.177
P_2O_5, wt.%	0.368	0.008	0.352	0.384	0.344	0.392	2.18%	4.37%	6.55%	0.350	0.386
SiO_2, wt.%	76.34	0.491	75.36	77.32	74.86	77.81	0.64%	1.29%	1.93%	72.52	80.15
Sn, ppm	764	47	670	858	623	904	6.15%	12.29%	18.44%	725	802
SO_3, wt.%	0.067	0.004	0.058	0.075	0.054	0.079	6.36%	12.72%	19.07%	0.063	0.070
SrO, ppm	332	35	263	401	228	435	10.41%	20.81%	31.22%	315	348
TiO_2, wt.%	0.808	0.010	0.789	0.828	0.779	0.837	1.20%	2.40%	3.59%	0.768	0.849
Zr, ppm	200	35	130	271	95	306	17.56%	35.13%	52.69%	190	210
Thermogravimetry											
LOI^{1000}, wt.%	0.919	0.048	0.823	1.016	0.774	1.064	5.25%	10.50%	15.74%	0.873	0.965

Note: intervals may appear asymmetric due to rounding.

PARTICIPATING LABORATORIES

1. Actlabs, Ancaster, Ontario, Canada
2. ALS, Brisbane, QLD, Australia
3. ALS, Lima, Peru
4. ALS, Loughrea, Galway, Ireland

5. ALS, Perth, WA, Australia
6. ALS, Vancouver, BC, Canada
7. Bureau Veritas Commodities Canada Ltd, Vancouver, BC, Canada
8. Bureau Veritas Geoanalytical, Adelaide, SA, Australia
9. Bureau Veritas Geoanalytical, Perth, WA, Australia
10. Intertek Genalysis, Perth, WA, Australia
11. Intertek Testing Services Philippines, Cupang, Muntinlupa, Philippines
12. MinAnalytical Services, Perth, WA, Australia
13. Nagrom, Perth, WA, Australia
14. PT Geoservices Ltd, Cikarang, Jakarta Raya, Indonesia
15. SGS Australia Mineral Services, Perth, WA, Australia
16. SGS Canada Inc., Vancouver, BC, Canada
17. SGS del Peru, Lima, Peru
18. SGS Geosol Laboratorios Ltda, Vespasiano, Minas Gerais, Brazil
19. SGS Lakefield Research Ltd, Lakefield, Ontario, Canada
20. UIS Analytical Services, Centurion , South Africa
21. Zarazma Mahan Company, Mahan, Kerrman, Iran
22. Zarazma Mineral Studies Company, Tehran, Iran

PREPARER AND SUPPLIER

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It is packaged in 10g units in robust single-use laminated foil pouches.

INTENDED USE

OREAS 147 is intended for the following uses:

- for the monitoring of laboratory performance in the analysis of analytes reported in Table 1 in geological samples;
- for the verification of analytical methods for analytes reported in Table 1;
- for the calibration of instruments used in the determination of the concentration of analytes reported in Table 1.

STABILITY AND STORAGE INSTRUCTIONS

OREAS 149 has been prepared from spodumene $LiAl(Si_2O_5)$-rich pegmatite ore with minor additions of Sn oxide ore and Nb concentrate. It contains very little reactive sulphide and in its unopened state and under normal conditions of storage it has a shelf life beyond ten

years. Its stability will be monitored at regular intervals and purchasers notified if any changes are observed.

INSTRUCTIONS FOR CORRECT USE

The certified values determined by 4-acid digestion and peroxide fusion ICP refer to the concentration levels in the packaged state. There is no need for drying prior to weighing and analysis.

In contrast the certified values determined by borate fusion XRF and for LOI at 1000° C are on a dry basis. This requires the removal of hygroscopic moisture by drying in air to constant mass at 105° C. If the reference material is not dried prior to analysis, the certified values should be corrected to the moisture-bearing basis.

HANDLING INSTRUCTIONS

Fine powders pose a risk to eyes and lungs and therefore standard precautions such as the use of safety glasses and dust masks are advised.

TRACEABILITY

The analytical samples were selected in a manner to represent the entire batch of prepared CRM. This ‘representivity’ was maintained in each submitted laboratory sample batch and ensures the user that the data is traceable from sample selection through to the analytical results that underlie the consensus values. Each analytical data set has been validated by its assayer through the inclusion of internal reference materials and QC checks during analysis.

The laboratories were chosen on the basis of their competence (from past performance in inter-laboratory programs) for a particular analytical method, analyte or analyte suite, and sample matrix. Most of these laboratories have and maintain ISO 17025 accreditation. The certified values presented in this report are calculated from the means of accepted data following robust statistical treatment as detailed in this report.

LEGAL NOTICE

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QMS ACCREDITED

ORE Pty Ltd is accredited to ISO 9001:2015 by Lloyd's Register Quality Assurance Ltd for its quality management system including development, manufacturing, certification and supply of CRMs.

CERTIFYING OFFICER

Craig Hamlyn (B.Sc. Hons - Geology), Technical Manager - ORE P/L

REFERENCES

ISO Guide 30 (1992), Terms and definitions used in connection with reference materials.
ISO Guide 31 (2000), Reference materials – Contents of certificates and labels.
ISO Guide 3207 (1975), Statistical interpretation of data - Determination of a statistical tolerance interval.
ISO Guide 35 (2006), Certification of reference materials - General and statistical principals.

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CERTIFICATE OF ANALYSIS FOR

Pegmatitic Li-Nb-Sn ORE

CERTIFIED REFERENCE MATERIAL

OREAS 148

Summary Statistics for Key Analytes.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
Peroxide Fusion ICP						
Li, Lithium (wt.%)	0.476	0.011	0.472	0.481	0.462	0.491
Li_2O, Lithium oxide (wt.%)	1.03	0.023	1.02	1.04	0.996	1.06
Nb, Niobium (wt.%)	0.168	0.011	0.161	0.174	0.162	0.174
Sn, Tin (ppm)	1157	80	1108	1206	1100	1215

Note: intervals may appear asymmetric due to rounding.

Table 1. Certified Values, SDs, 95% Confidence and Tolerance Limits for OREAS 148.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
4-Acid Digestion						
Al, Aluminium (wt.%)	5.27	0.170	5.18	5.35	5.15	5.38
As, Arsenic (ppm)	58	3.2	56	59	55	60
Ba, Barium (ppm)	1000	36	980	1019	975	1024
Be, Beryllium (ppm)	36.2	2.53	35.1	37.3	34.8	37.7
Bi, Bismuth (ppm)	18.9	1.17	18.3	19.5	18.4	19.5
Ca, Calcium (wt.%)	0.872	0.037	0.855	0.888	0.851	0.892
Ce, Cerium (ppm)	725	64	684	766	704	747
Co, Cobalt (ppm)	6.31	0.403	6.12	6.49	6.07	6.54
Cr, Chromium (ppm)	60	9	55	64	57	62
Cs, Cesium (ppm)	314	16	306	322	307	321
Cu, Copper (ppm)	338	16	331	345	328	347
Dy, Dysprosium (ppm)	6.66	0.93	5.65	7.68	6.36	6.97
Er, Erbium (ppm)	2.20	0.26	1.92	2.48	2.05	2.34
Eu, Europium (ppm)	7.54	0.458	6.95	8.13	7.20	7.87
Fe, Iron (wt.%)	3.02	0.132	2.96	3.08	2.95	3.09
Ga, Gallium (ppm)	29.2	2.32	27.7	30.7	28.5	29.9
Gd, Gadolinium (ppm)	17.1	2.2	14.6	19.6	16.4	17.8
Ge, Germanium (ppm)	0.55	0.10	0.44	0.67	0.50	0.60
Hf, Hafnium (ppm)	2.16	0.22	2.07	2.25	1.98	2.33
Ho, Holmium (ppm)	0.84	0.09	0.72	0.97	0.76	0.93
In, Indium (ppm)	3.98	0.202	3.86	4.10	3.84	4.12
K, Potassium (wt.%)	1.47	0.041	1.45	1.49	1.43	1.51
La, Lanthanum (ppm)	446	28	432	461	429	464
Li, Lithium (wt.%)	0.465	0.009	0.461	0.470	0.454	0.477
Li_2O, Lithium oxide (wt.%)	1.00	0.020	0.993	1.01	0.978	1.03
Lu, Lutetium (ppm)	0.17	0.02	0.15	0.19	0.16	0.18
Mg, Magnesium (wt.%)	0.454	0.020	0.445	0.463	0.440	0.468
Mn, Manganese (wt.%)	0.037	0.002	0.036	0.038	0.036	0.038
Mo, Molybdenum (ppm)	8.86	0.344	8.72	9.00	8.51	9.21
Na, Sodium (wt.%)	0.860	0.039	0.839	0.881	0.841	0.879
Nb, Niobium (wt.%)	0.169	0.010	0.162	0.176	0.165	0.173
Nd, Neodymium (ppm)	267	11	253	281	254	279
Ni, Nickel (ppm)	22.2	0.98	21.8	22.6	21.4	22.9
P, Phosphorus (wt.%)	0.131	0.005	0.128	0.134	0.127	0.134
Pb, Lead (ppm)	24.9	2.20	23.9	26.0	23.7	26.2
Pr, Praseodymium (ppm)	82	2.0	80	84	79	84
Rb, Rubidium (ppm)	1324	41	1306	1341	1290	1358
Sb, Antimony (ppm)	16.2	0.78	15.9	16.5	15.6	16.8
Sc, Scandium (ppm)	8.23	0.554	7.91	8.56	7.92	8.54
Sm, Samarium (ppm)	34.2	0.94	33.4	35.0	33.0	35.4
Sr, Strontium (ppm)	204	16	197	212	199	210

Note: intervals may appear asymmetric due to rounding

Table 1 continued.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
4-Acid Digestion continued						
Ta, Tantalum (ppm)	23.1	2.9	21.2	24.9	22.1	24.0
Tb, Terbium (ppm)	1.71	0.145	1.59	1.83	1.63	1.79
Th, Thorium (ppm)	48.2	3.62	46.3	50.1	46.7	49.8
Ti, Titanium (wt.%)	0.345	0.015	0.338	0.352	0.336	0.353
Tl, Thallium (ppm)	12.2	0.59	11.9	12.5	11.9	12.4
Tm, Thulium (ppm)	0.20	0.03	0.16	0.24	IND	IND
U, Uranium (ppm)	8.10	0.332	7.95	8.25	7.82	8.39
V, Vanadium (ppm)	54	3.1	53	56	52	56
W, Tungsten (ppm)	6.45	0.373	6.31	6.59	5.92	6.98
Y, Yttrium (ppm)	18.5	2.0	17.6	19.4	17.9	19.1
Yb, Ytterbium (ppm)	1.15	0.12	1.06	1.23	1.01	1.28
Zn, Zinc (ppm)	162	5	160	164	156	169
Zr, Zirconium (ppm)	79	4.8	76	81	76	81
Peroxide Fusion ICP						
Al, Aluminium (wt.%)	5.37	0.148	5.30	5.44	5.22	5.52
As, Arsenic (ppm)	59	4.0	56	62	54	64
Ba, Barium (ppm)	1009	26	991	1027	976	1042
Be, Beryllium (ppm)	38.8	2.00	37.5	40.0	37.0	40.6
Bi, Bismuth (ppm)	19.3	1.31	18.3	20.2	18.3	20.2
Ca, Calcium (wt.%)	0.903	0.048	0.881	0.925	0.866	0.940
Ce, Cerium (ppm)	795	53	754	836	758	832
Cr, Chromium (ppm)	69	5.8	64	74	64	73
Cs, Cesium (ppm)	311	13	303	320	299	324
Cu, Copper (ppm)	351	35	328	373	334	367
Dy, Dysprosium (ppm)	6.06	0.492	5.70	6.41	5.74	6.37
Er, Erbium (ppm)	2.00	0.121	1.96	2.04	1.82	2.18
Eu, Europium (ppm)	7.22	0.425	6.93	7.52	6.82	7.62
Fe, Iron (wt.%)	3.06	0.083	3.02	3.09	2.98	3.13
Ga, Gallium (ppm)	29.2	1.50	27.9	30.6	26.7	31.8
Gd, Gadolinium (ppm)	15.8	1.34	14.9	16.6	15.0	16.6
Hf, Hafnium (ppm)	4.15	0.53	3.74	4.55	IND	IND
Ho, Holmium (ppm)	0.94	0.12	0.84	1.04	0.86	1.03
In, Indium (ppm)	4.22	0.299	3.96	4.47	3.81	4.62
K, Potassium (wt.%)	1.50	0.050	1.48	1.53	1.47	1.54
La, Lanthanum (ppm)	478	15	466	489	459	496
Li, Lithium (wt.%)	0.476	0.011	0.472	0.481	0.462	0.491
Li_2O, Lithium oxide (wt.%)	1.03	0.023	1.02	1.04	0.996	1.06
Mg, Magnesium (wt.%)	0.469	0.016	0.462	0.475	0.453	0.484
Mn, Manganese (wt.%)	0.038	0.002	0.037	0.039	0.036	0.040
Mo, Molybdenum (ppm)	10.1	0.59	9.7	10.5	IND	IND
Nb, Niobium (wt.%)	0.168	0.011	0.161	0.174	0.162	0.174
Nd, Neodymium (ppm)	260	12	251	268	248	271

Note: intervals may appear asymmetric due to rounding

Table 1 continued.

Constituent	Certified Value	1SD	95% Confidence Limits		95% Tolerance Limits	
			Low	High	Low	High
Peroxide Fusion ICP continued						
P, Phosphorus (wt.%)	0.129	0.008	0.125	0.133	0.122	0.137
Pr, Praseodymium (ppm)	82	1.9	81	83	80	84
Rb, Rubidium (ppm)	1362	79	1303	1421	1321	1403
Sb, Antimony (ppm)	16.3	0.96	15.3	17.3	15.1	17.5
Sc, Scandium (ppm)	8.64	1.43	6.86	10.42	IND	IND
Si, Silicon (wt.%)	36.00	1.065	35.36	36.63	35.11	36.88
Sm, Samarium (ppm)	34.3	3.16	32.2	36.4	33.0	35.6
Sn, Tin (ppm)	1157	80	1108	1206	1100	1215
Sr, Strontium (ppm)	209	11	204	214	198	220
Tb, Terbium (ppm)	1.58	0.141	1.47	1.69	1.45	1.71
Th, Thorium (ppm)	51	2.0	49	52	49	52
Ti, Titanium (wt.%)	0.352	0.011	0.347	0.357	0.342	0.362
Tl, Thallium (ppm)	12.3	0.73	11.6	12.9	11.6	12.9
Tm, Thulium (ppm)	0.24	0.04	0.22	0.27	0.21	0.28
U, Uranium (ppm)	8.55	0.448	8.34	8.76	7.90	9.21
V, Vanadium (ppm)	56	3.1	55	58	52	60
W, Tungsten (ppm)	6.42	1.32	5.27	7.56	IND	IND
Y, Yttrium (ppm)	19.4	1.47	18.3	20.6	18.9	20.0
Yb, Ytterbium (ppm)	1.37	0.18	1.32	1.43	IND	IND
Zn, Zinc (ppm)	159	11	153	164	149	169
Zr, Zirconium (ppm)	153	25	130	177	135	172
Borate Fusion XRF						
Al_2O_3, Aluminium(III) oxide (wt.%)	10.20	0.096	10.14	10.25	10.14	10.25
BaO, Barium oxide (ppm)	1152	55	1122	1181	IND	IND
CaO, Calcium oxide (wt.%)	1.24	0.014	1.23	1.24	1.23	1.25
Fe_2O_3, Iron(III) oxide (wt.%)	4.35	0.055	4.32	4.38	4.32	4.38
K_2O, Potassium oxide (wt.%)	1.81	0.022	1.79	1.82	1.79	1.82
MgO, Magnesium oxide (wt.%)	0.797	0.015	0.790	0.804	0.785	0.809
MnO, Manganese oxide (wt.%)	0.050	0.001	0.049	0.050	0.047	0.053
Na_2O, Sodium oxide (wt.%)	1.19	0.018	1.18	1.20	1.17	1.21
Nb_2O_5, Niobium(V) oxide (wt.%)	0.245	0.009	0.240	0.250	0.239	0.251
P_2O_5, Phosphorus(V) oxide (wt.%)	0.302	0.008	0.298	0.305	0.296	0.307
SiO_2, Silicon dioxide (wt.%)	76.59	0.399	76.40	76.78	76.34	76.84
Sn, Tin (ppm)	1181	72	1140	1223	1150	1213
SO_3, Sulphur trioxide (wt.%)	0.057	0.005	0.054	0.060	0.052	0.063
SrO, Strontium oxide (ppm)	223	29	204	243	IND	IND
TiO_2, Titanium dioxide (wt.%)	0.584	0.008	0.581	0.587	0.574	0.594
Thermogravimetry						
LOI^{1000}, Loss on ignition @1000°C (wt.%)	0.887	0.060	0.852	0.922	0.861	0.914

Note: intervals may appear asymmetric due to rounding

INTRODUCTION

OREAS reference materials are intended to provide a low cost method of evaluating and improving the quality of analysis of geological samples. To the geologist they provide a means of implementing quality control in analytical data sets generated in exploration from the grass roots level through to prospect evaluation, and in grade control at mining operations. To the analyst they provide an effective means of calibrating analytical equipment, assessing new techniques and routinely monitoring in-house procedures.

SOURCE MATERIALS

Certified Reference Material OREAS 148 has been prepared from spodumene $LiAl(Si_2O_5)$-rich pegmatite ore blended with granodiorite and with minor additions of Sn oxide ore and Nb concentrate. The pegmatite was sourced from stockpile grab samples from the Greenbushes Mine owned by Talison Lithium Ltd located just south of the town of Greenbushes in the south-western corner of Western Australia. The barren I-type hornblende-bearing granodiorite was sourced from the Late Devonian Lysterfield granodiorite complex located in eastern Melbourne, Australia. The Sn lateritic ore material was sourced from the Doradilla Project located in north central NSW and the Nb concentrate was sourced from Anglo American Brasil Catalão's niobium mine in Goiás, Brazil. The Nb concentrate was produced from niobium-rich ore developed in the saprolite zone over alkaline-carbonatite complexes.

COMMINUTION AND HOMOGENISATION PROCEDURES

The material constituting OREAS 148 was prepared in the following manner:

- Drying to constant mass at 105°C;
- Milling of Li and Nb ores to 100% minus 30 microns;
- Milling of Sn ore and granodiorite to 98% minus 75 microns;
- Preliminary homogenisation and check assaying of source materials;
- Final homogenisation by blending the source materials in specific ratios to achieve target grades;
- Packaging in 10g units in laminated foil pouches.

ANALYTICAL PROGRAM

Twenty two commercial analytical laboratories participated in the program to certify the analytes reported in Table 1. The following methods were employed:

- Four acid digestion for full ICP-OES and ICP-MS elemental suites (up to 22 laboratories depending on the element) except for one laboratory who used an AAS finish for Li only;
- Peroxide fusion for full ICP-OES and ICP-MS elemental suites (up to 21 laboratories depending on the element);
- Lithium borate fusion with XRF finish for whole rock package including Nb and Ta (up to 22 laboratories depending on the element);

- Thermogravimetry for LOI at 1000° C; (9 laboratories used a conventional muffle furnace and 6 laboratories used a thermogravimetric analyser).

For the round robin program ten test units were taken at predetermined intervals during the bagging stage, immediately following homogenisation and are considered representative of the entire batch. The six samples received by each laboratory were obtained by taking two 20g scoop splits from each of three separate 300g test units. This format enabled nested ANOVA treatment of the results to evaluate homogeneity, i.e. to ascertain whether between-unit variance is greater than within-unit variance. Table 1 presents the 117 certified values together with their associated 1SD's, 95% confidence and tolerance limits and Table 2 below shows 56 indicative values. Table 3 provides performance gate intervals for the certified values based on their associated pooled standard deviations. Tabulated results of all elements together with analytical method codes, uncorrected means, medians, standard deviations, relative standard deviations and per cent deviation of lab means from the corrected mean of means (PDM[3]) are presented in the detailed certification data for this CRM (**OREAS 148 DataPack.xlsx**).

Table 2. Indicative Values for OREAS 148.

Constituent	Unit	Value	Constituent	Unit	Value	Constituent	Unit	Value
4-Acid Digestion								
Ag	ppm	*0.649*	Ir	ppm	*0.007*	Si	wt.%	*34.98*
Au	ppm	*0.098*	Pt	ppm	*0.018*	Sn	ppm	*837*
B	ppm	*3.23*	Re	ppm	*< 0.002*	Te	ppm	*0.21*
Cd	ppm	*0.48*	S	wt.%	*0.024*			
Hg	ppm	*0.030*	Se	ppm	*2.20*			
Peroxide Fusion ICP								
Ag	ppm	*5.08*	Lu	ppm	*0.17*	Se	ppm	*< 20*
B	ppm	*27.5*	Ni	ppm	*26.9*	Ta	ppm	*22.2*
Cd	ppm	*< 10*	Pb	ppm	*28.4*	Te	ppm	*< 1*
Co	ppm	*< 20*	Re	ppm	*< 0.1*			
Ge	ppm	*4.27*	S	wt.%	*0.020*			
Borate Fusion XRF								
As	ppm	*81*	Gd_2O_3	ppm	*< 100*	Sm_2O_3	ppm	*< 100*
Bi	ppm	*< 100*	HfO_2	ppm	*< 100*	Ta_2O_5	ppm	*< 100*
CeO_2	ppm	*975*	La_2O_3	ppm	*613*	ThO_2	ppm	*< 100*
Cl	ppm	*107*	Mo	ppm	*< 10*	U_3O_8	ppm	*< 100*
Co	ppm	*29.2*	Nd_2O_3	ppm	*450*	V_2O_5	ppm	*121*
Cr_2O_3	ppm	*100*	Ni	ppm	*35.2*	W	ppm	*21.7*
Cu	ppm	*326*	Pb	ppm	*43.7*	Y_2O_3	ppm	*117*
Dy_2O_3	ppm	*< 100*	Pr_6O_{11}	ppm	*400*	Yb_2O_3	ppm	*< 100*
Er_2O_3	ppm	*< 100*	Rb	ppm	*1365*	Zn	ppm	*160*
Ga_2O_3	ppm	*46.7*	Sb	ppm	*18.3*	Zr	ppm	*167*

Note: the number of significant figures reported is not a reflection of the level of certainty of stated values. They are instead an artefact of ORE's in-house CRM-specific LIMS.

STATISTICAL ANALYSIS

Certified Values, Confidence Limits, Standard Deviations and Tolerance Limits (Table 1) have been determined for each analyte following removal of individual, laboratory dataset (batch) and 3SD outliers (single iteration). For individual outliers within a laboratory batch the z-score test is used in combination with a second method that determines the per cent deviation of the individual value from the batch median. Outliers in general are selected on the basis of z-scores > 2.5 and with per cent deviations (i) > 3 and (ii) more than three times the average absolute per cent deviation for the batch. In certain instances statistician's prerogative has been employed in discriminating outliers. Each laboratory data set mean is tested for outlying status based on z-score discrimination and rejected if > 2.5. After individual and laboratory data set (batch) outliers have been eliminated a non-iterative 3 standard deviation filter is applied, with those values lying outside this window also relegated to outlying status. The Certified Values are the means of accepted laboratory means after outlier filtering.

The 95% Confidence Limits are inversely proportional to the number of participating laboratories and inter-laboratory agreement. It is a measure of the reliability of the certified value. A 95% confidence interval indicates a 95% probability that the true value of the analyte under consideration lies between the upper and lower limits. *95% Confidence Limits should not be used as control limits for laboratory performance.*

Standard Deviation values (1SDs) are reported in Table 1 and provide an indication of a level of performance that might reasonably be expected from a laboratory being monitored by this CRM in a QA/QC program. The SD's take into account errors attributable to measurement uncertainty and CRM variability. For an effective CRM the contribution of the latter should be negligible in comparison to measurement errors. The SD values thus include all sources of measurement uncertainty: between-lab variance, within-run variance (precision errors) and CRM variability. OREAS prepared reference materials have a level of homogeneity such that the observed variance from repeated analysis has its origin almost exclusively in the analytical process rather than the reference material itself.

The SD for each analyte's certified value is calculated from the same filtered data set used to determine the certified value, i.e. after removal of any individual, lab dataset (batch) and 3SD outliers (single iteration). These outliers can only be removed after the absolute homogeneity of the CRM has been independently established, i.e. the outliers must be confidently deemed to be analytical rather than arising from inhomogeneity of the CRM. **The standard deviation is then calculated for each analyte from the pooled accepted analyses generated from the certification program.**

In the application of SD's in monitoring performance it is important to note that not all laboratories function at the same level of proficiency and that different methods in use at a particular laboratory have differing levels of precision. Each laboratory has its own inherent SD (for a specific concentration level and analyte-method pair) based on the analytical process and this SD is not directly related to the round robin program.

The majority of data generated in the round robin program was produced by a selection of world class laboratories. The SD's thus generated are more constrained than those that would be produced across a randomly selected group of laboratories. To produce more generally achievable SD's the 'pooled' SD's provided in this report include inter-lab bias. This 'one size fits all' approach may require revision at the discretion of the QC manager concerned following careful scrutiny of QC control charts.

Table 3 shows **Performance Gates** calculated for two and three standard deviations. As a guide these intervals may be regarded as warning or rejection for multiple 2SD outliers, or rejection for individual 3SD outliers in QC monitoring, although their precise application should be at the discretion of the QC manager concerned. A second method utilises a 5% window calculated directly from the certified value. Standard deviation is also shown in relative percent for one, two and three relative standard deviations (1RSD, 2RSD and 3RSD) to facilitate an appreciation of the magnitude of these numbers and a comparison with the 5% window. Caution should be exercised when concentration levels approach lower limits of detection of the analytical methods employed as performance gates calculated from standard deviations tend to be excessively wide whereas those determined by the 5% method are too narrow.

Tolerance Limits (ISO Guide 3207) were determined using an analysis of precision errors method and are considered a conservative estimate of true homogeneity. The meaning of tolerance limits may be illustrated for tin (Sn) by fusion XRF, where 99% of the time (1-α=0.99) at least 95% of subsamples (ρ=0.95) will have concentrations lying between 1150 and 1213 ppm. Put more precisely, this means that if the same number of subsamples were taken and analysed in the same manner repeatedly, 99% of the tolerance intervals so constructed would cover at least 95% of the total population, and 1% of the tolerance intervals would cover less than 95% of the total population (ISO Guide 35). *Please note that tolerance limits pertain to the homogeneity of the CRM only and should not be used as control limits for laboratory performance.*

The homogeneity of OREAS 148 has also been evaluated in a **nested ANOVA** of the round robin program. Each of the twenty four round robin laboratories received six samples per CRM and these samples were made up of paired samples from three different, non-adjacent sampling intervals. The purpose of the ANOVA evaluation is to test that no statistically significant difference exists in the variance between-units to that of the variance within-units. This allows an assessment of homogeneity across the entire prepared batch of OREAS 148. The test was performed using the following parameters:

- Null Hypothesis, H_0: Between-unit variance is no greater than within-unit variance (reject H_0 if *p*-value < 0.05);
- Alternative Hypothesis, H_1: Between-unit variance is greater than within-unit variance.

P-values are a measure of probability where values less than 0.05 indicate a greater than 95% probability that the observed differences in within-unit and between-unit variances are real. The datasets were filtered for both individual and laboratory data set (batch) outliers prior to the calculation of *p*-values. This process derived no significant *p*-values across the entire 113 certified values except for neodymium (Nd) by 4-acid digest. This isolated case is most likely due to random statistical probability as there is no other supporting evidence to suspect greater between-unit variance compared with within-unit variance. The null hypothesis is therefore retained.

It is important to note that ANOVA is not an absolute measure of homogeneity. Rather, it establishes whether or not the analytes are distributed in a similar manner throughout the packaging run of OREAS 148 and whether the variance between two subsamples from the same unit is statistically distinguishable to the variance from two subsamples taken from any two separate units. A reference material therefore, can possess poor absolute homogeneity yet still pass a relative homogeneity test if the within-unit heterogeneity is large and similar across all units.

Based on the statistical analysis of the results of the inter-laboratory certification program it can be concluded that OREAS 148 is fit-for-purpose as a certified reference material (see 'Intended Use' below).

Table 3. Pooled-Lab Performance Gates for OREAS 148.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
4-Acid Digestion											
Al, wt.%	5.27	0.170	4.93	5.61	4.76	5.78	3.23%	6.47%	9.70%	5.00	5.53
As, ppm	58	3.2	51	64	48	67	5.60%	11.20%	16.80%	55	60
Ba, ppm	1000	36	927	1072	891	1109	3.64%	7.27%	10.91%	950	1050
Be, ppm	36.2	2.53	31.2	41.3	28.6	43.8	6.98%	13.97%	20.95%	34.4	38.0
Bi, ppm	18.9	1.17	16.6	21.3	15.4	22.4	6.21%	12.41%	18.62%	18.0	19.9
Ca, wt.%	0.872	0.037	0.798	0.945	0.761	0.982	4.23%	8.47%	12.70%	0.828	0.915
Ce, ppm	725	64	597	853	534	917	8.81%	17.63%	26.44%	689	762
Co, ppm	6.31	0.403	5.50	7.11	5.10	7.51	6.39%	12.79%	19.18%	5.99	6.62
Cr, ppm	60	9	42	77	34	85	14.41%	28.82%	43.23%	57	63
Cs, ppm	314	16	283	345	267	361	5.01%	10.01%	15.02%	298	330
Cu, ppm	338	16	305	370	289	386	4.78%	9.55%	14.33%	321	355
Dy, ppm	6.66	0.93	4.81	8.52	3.88	9.44	13.91%	27.82%	41.73%	6.33	7.00
Er, ppm	2.20	0.26	1.68	2.72	1.42	2.98	11.78%	23.57%	35.35%	2.09	2.31
Eu, ppm	7.54	0.458	6.62	8.46	6.17	8.91	6.07%	12.15%	18.22%	7.16	7.92
Fe, wt.%	3.02	0.132	2.76	3.29	2.63	3.42	4.37%	8.74%	13.10%	2.87	3.17
Ga, ppm	29.2	2.32	24.6	33.8	22.2	36.2	7.95%	15.90%	23.85%	27.7	30.7
Gd, ppm	17.1	2.2	12.6	21.5	10.4	23.8	13.08%	26.16%	39.24%	16.2	17.9
Ge, ppm	0.55	0.10	0.35	0.76	0.25	0.86	18.51%	37.02%	55.53%	0.53	0.58
Hf, ppm	2.16	0.22	1.72	2.59	1.51	2.81	10.08%	20.16%	30.24%	2.05	2.27
Ho, ppm	0.84	0.09	0.65	1.03	0.56	1.13	11.25%	22.50%	33.75%	0.80	0.89
In, ppm	3.98	0.202	3.57	4.38	3.37	4.58	5.08%	10.15%	15.23%	3.78	4.18
K, wt.%	1.47	0.041	1.39	1.55	1.35	1.60	2.82%	5.64%	8.46%	1.40	1.54
La, ppm	446	28	390	503	362	531	6.31%	12.62%	18.94%	424	469
Li, wt.%	0.465	0.009	0.447	0.484	0.438	0.493	1.96%	3.93%	5.89%	0.442	0.489
Li_2O, wt.%	1.00	0.020	0.963	1.04	0.943	1.06	1.96%	3.93%	5.89%	0.952	1.05
Lu, ppm	0.17	0.02	0.12	0.22	0.10	0.24	14.47%	28.93%	43.40%	0.16	0.18
Mg, wt.%	0.454	0.020	0.414	0.493	0.395	0.513	4.35%	8.70%	13.05%	0.431	0.477
Mn, wt.%	0.037	0.002	0.034	0.041	0.032	0.042	4.77%	9.54%	14.30%	0.035	0.039
Mo, ppm	8.86	0.344	8.17	9.55	7.83	9.89	3.88%	7.77%	11.65%	8.42	9.30
Na, wt.%	0.860	0.039	0.783	0.937	0.744	0.976	4.49%	8.98%	13.47%	0.817	0.903
Nb, wt.%	0.169	0.010	0.150	0.188	0.140	0.198	5.72%	11.45%	17.17%	0.160	0.177
Nd, ppm	267	11	244	289	233	300	4.19%	8.37%	12.56%	253	280
Ni, ppm	22.2	0.98	20.2	24.1	19.2	25.1	4.42%	8.85%	13.27%	21.1	23.3
P, wt.%	0.131	0.005	0.120	0.141	0.115	0.146	4.00%	7.99%	11.99%	0.124	0.137
Pb, ppm	24.9	2.20	20.5	29.3	18.3	31.5	8.85%	17.70%	26.54%	23.7	26.2
Pr, ppm	82	2.0	78	86	76	88	2.39%	4.79%	7.18%	78	86
Rb, ppm	1324	41	1242	1405	1202	1446	3.08%	6.16%	9.24%	1258	1390
Sb, ppm	16.2	0.78	14.6	17.8	13.9	18.5	4.81%	9.61%	14.42%	15.4	17.0
Sc, ppm	8.23	0.554	7.13	9.34	6.57	9.90	6.73%	13.46%	20.19%	7.82	8.65

Note: intervals may appear asymmetric due to rounding.

Table 3 continued.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
4-Acid Digestion continued											
Sm, ppm	34.2	0.94	32.3	36.1	31.4	37.0	2.75%	5.51%	8.26%	32.5	35.9
Sr, ppm	204	16	173	236	158	251	7.62%	15.25%	22.87%	194	215
Ta, ppm	23.1	2.9	17.3	28.9	14.4	31.8	12.52%	25.04%	37.57%	21.9	24.2
Tb, ppm	1.71	0.145	1.42	2.00	1.28	2.14	8.47%	16.93%	25.40%	1.62	1.80
Th, ppm	48.2	3.62	41.0	55.5	37.4	59.1	7.51%	15.03%	22.54%	45.8	50.6
Ti, wt.%	0.345	0.015	0.314	0.376	0.299	0.391	4.47%	8.94%	13.41%	0.328	0.362
Tl, ppm	12.2	0.59	11.0	13.4	10.4	13.9	4.84%	9.67%	14.51%	11.6	12.8
Tm, ppm	0.20	0.03	0.14	0.26	0.11	0.29	14.91%	29.83%	44.74%	0.19	0.21
U, ppm	8.10	0.332	7.44	8.77	7.10	9.10	4.10%	8.20%	12.30%	7.70	8.51
V, ppm	54	3.1	48	61	45	64	5.72%	11.45%	17.17%	52	57
W, ppm	6.45	0.373	5.70	7.20	5.33	7.57	5.79%	11.58%	17.36%	6.13	6.77
Y, ppm	18.5	2.0	14.5	22.5	12.6	24.4	10.71%	21.41%	32.12%	17.6	19.4
Yb, ppm	1.15	0.12	0.91	1.38	0.79	1.50	10.30%	20.60%	30.90%	1.09	1.20
Zn, ppm	162	5	151	173	146	178	3.34%	6.68%	10.03%	154	170
Zr, ppm	79	4.8	69	88	64	93	6.07%	12.14%	18.21%	75	82
Peroxide Fusion ICP											
Al, wt.%	5.37	0.148	5.07	5.66	4.92	5.81	2.77%	5.53%	8.30%	5.10	5.64
As, ppm	59	4.0	51	67	47	71	6.75%	13.51%	20.26%	56	62
Ba, ppm	1009	26	956	1062	930	1088	2.62%	5.24%	7.86%	959	1060
Be, ppm	38.8	2.00	34.8	42.8	32.8	44.8	5.15%	10.30%	15.45%	36.8	40.7
Bi, ppm	19.3	1.31	16.6	21.9	15.3	23.2	6.81%	13.63%	20.44%	18.3	20.2
Ca, wt.%	0.903	0.048	0.807	0.999	0.758	1.048	5.34%	10.68%	16.01%	0.858	0.948
Ce, ppm	795	53	689	901	636	955	6.68%	13.36%	20.03%	755	835
Cr, ppm	69	5.8	57	80	51	86	8.38%	16.76%	25.13%	65	72
Cs, ppm	311	13	286	337	273	350	4.11%	8.22%	12.32%	296	327
Cu, ppm	351	35	280	421	245	456	10.05%	20.10%	30.15%	333	368
Dy, ppm	6.06	0.492	5.07	7.04	4.58	7.53	8.12%	16.25%	24.37%	5.75	6.36
Er, ppm	2.00	0.121	1.76	2.24	1.63	2.36	6.07%	12.13%	18.20%	1.90	2.10
Eu, ppm	7.22	0.425	6.37	8.07	5.95	8.50	5.88%	11.77%	17.65%	6.86	7.58
Fe, wt.%	3.06	0.083	2.89	3.22	2.81	3.30	2.71%	5.42%	8.13%	2.90	3.21
Ga, ppm	29.2	1.50	26.2	32.3	24.7	33.8	5.14%	10.29%	15.43%	27.8	30.7
Gd, ppm	15.8	1.34	13.1	18.5	11.8	19.8	8.48%	16.96%	25.43%	15.0	16.6
Hf, ppm	4.15	0.53	3.09	5.20	2.56	5.73	12.77%	25.54%	38.31%	3.94	4.35
Ho, ppm	0.94	0.12	0.69	1.19	0.57	1.31	13.11%	26.22%	39.33%	0.89	0.99
In, ppm	4.22	0.299	3.62	4.81	3.32	5.11	7.08%	14.17%	21.25%	4.00	4.43
K, wt.%	1.50	0.050	1.40	1.60	1.35	1.65	3.30%	6.61%	9.91%	1.43	1.58
La, ppm	478	15	448	507	434	521	3.05%	6.10%	9.15%	454	501
Li, wt.%	0.476	0.011	0.455	0.498	0.444	0.509	2.26%	4.52%	6.78%	0.453	0.500
Li_2O, wt.%	1.03	0.023	0.980	1.07	0.956	1.10	2.26%	4.52%	6.78%	0.975	1.08
Mg, wt.%	0.469	0.016	0.436	0.501	0.420	0.518	3.48%	6.96%	10.44%	0.445	0.492
Mn, wt.%	0.038	0.002	0.034	0.041	0.032	0.043	4.80%	9.60%	14.41%	0.036	0.040
Mo, ppm	10.1	0.59	8.9	11.2	8.3	11.8	5.82%	11.63%	17.45%	9.6	10.6
Nb, wt.%	0.168	0.011	0.145	0.191	0.134	0.202	6.76%	13.52%	20.28%	0.160	0.176

Note: intervals may appear asymmetric due to rounding.

Table 3 continued.

Constituent	Certified Value	Absolute Standard Deviations					Relative Standard Deviations			5% window	
		1SD	2SD Low	2SD High	3SD Low	3SD High	1RSD	2RSD	3RSD	Low	High
Peroxide Fusion ICP continued											
Nd, ppm	260	12	236	284	224	296	4.64%	9.28%	13.93%	247	273
P, wt.%	0.129	0.008	0.114	0.145	0.106	0.153	6.08%	12.15%	18.23%	0.123	0.136
Pr, ppm	82	1.9	78	86	76	88	2.36%	4.72%	7.08%	78	86
Rb, ppm	1362	79	1204	1520	1125	1599	5.80%	11.61%	17.41%	1294	1430
Sb, ppm	16.3	0.96	14.4	18.2	13.5	19.2	5.86%	11.72%	17.57%	15.5	17.1
Sc, ppm	8.64	1.43	5.79	11.49	4.36	12.92	16.51%	33.03%	49.54%	8.21	9.07
Si, wt.%	36.00	1.065	33.87	38.13	32.80	39.19	2.96%	5.91%	8.87%	34.20	37.80
Sm, ppm	34.3	3.16	28.0	40.6	24.8	43.8	9.20%	18.40%	27.60%	32.6	36.0
Sn, ppm	1157	80	997	1317	917	1397	6.92%	13.84%	20.76%	1099	1215
Sr, ppm	209	11	186	232	174	243	5.49%	10.99%	16.48%	198	219
Tb, ppm	1.58	0.141	1.30	1.86	1.16	2.01	8.92%	17.85%	26.77%	1.50	1.66
Th, ppm	51	2.0	47	55	44	57	4.01%	8.02%	12.03%	48	53
Ti, wt.%	0.352	0.011	0.329	0.375	0.318	0.386	3.24%	6.47%	9.71%	0.335	0.370
Tl, ppm	12.3	0.73	10.8	13.7	10.1	14.4	5.96%	11.92%	17.88%	11.6	12.9
Tm, ppm	0.24	0.04	0.17	0.31	0.13	0.35	14.89%	29.78%	44.66%	0.23	0.25
U, ppm	8.55	0.448	7.66	9.45	7.21	9.90	5.24%	10.48%	15.72%	8.13	8.98
V, ppm	56	3.1	50	62	47	66	5.42%	10.84%	16.25%	54	59
W, ppm	6.42	1.32	3.78	9.05	2.47	10.37	20.53%	41.06%	61.59%	6.10	6.74
Y, ppm	19.4	1.47	16.5	22.4	15.0	23.8	7.55%	15.10%	22.64%	18.5	20.4
Yb, ppm	1.37	0.18	1.00	1.74	0.82	1.93	13.45%	26.91%	40.36%	1.30	1.44
Zn, ppm	159	11	137	181	126	192	6.94%	13.88%	20.83%	151	167
Zr, ppm	153	25	104	203	79	227	16.12%	32.24%	48.36%	146	161
Borate Fusion XRF											
Al_2O_3, wt.%	10.20	0.096	10.00	10.39	9.91	10.48	0.94%	1.88%	2.82%	9.69	10.71
BaO, ppm	1152	55	1041	1262	986	1317	4.79%	9.57%	14.36%	1094	1209
CaO, wt.%	1.24	0.014	1.21	1.26	1.19	1.28	1.11%	2.23%	3.34%	1.17	1.30
Fe_2O_3, wt.%	4.35	0.055	4.24	4.46	4.19	4.51	1.26%	2.52%	3.77%	4.13	4.57
K_2O, wt.%	1.81	0.022	1.76	1.85	1.74	1.87	1.21%	2.42%	3.64%	1.72	1.90
MgO, wt.%	0.797	0.015	0.768	0.826	0.754	0.841	1.83%	3.66%	5.49%	0.757	0.837
MnO, wt.%	0.050	0.001	0.048	0.052	0.047	0.053	1.94%	3.88%	5.82%	0.047	0.052
Na_2O, wt.%	1.19	0.018	1.15	1.22	1.14	1.24	1.49%	2.98%	4.47%	1.13	1.25
Nb_2O_5, wt.%	0.245	0.009	0.228	0.262	0.219	0.271	3.53%	7.06%	10.59%	0.233	0.257
P_2O_5, wt.%	0.302	0.008	0.286	0.317	0.278	0.325	2.58%	5.16%	7.74%	0.286	0.317
SiO_2, wt.%	76.59	0.399	75.79	77.38	75.39	77.78	0.52%	1.04%	1.56%	72.76	80.42
Sn, ppm	1181	72	1038	1325	966	1396	6.06%	12.12%	18.19%	1122	1240
SO_3, wt.%	0.057	0.005	0.048	0.067	0.043	0.072	8.43%	16.86%	25.29%	0.054	0.060
SrO, ppm	223	29	166	280	137	309	12.81%	25.63%	38.44%	212	234
TiO_2, wt.%	0.584	0.008	0.569	0.599	0.561	0.607	1.31%	2.61%	3.92%	0.555	0.613
Thermogravimetry											
LOI^{1000}, wt.%	0.887	0.060	0.767	1.007	0.707	1.067	6.77%	13.53%	20.30%	0.843	0.932

Note: intervals may appear asymmetric due to rounding.

PARTICIPATING LABORATORIES

1. Actlabs, Ancaster, Ontario, Canada
2. ALS, Brisbane, QLD, Australia
3. ALS, Lima, Peru
4. ALS, Loughrea, Galway, Ireland
5. ALS, Perth, WA, Australia
6. ALS, Vancouver, BC, Canada
7. Bureau Veritas Commodities Canada Ltd, Vancouver, BC, Canada
8. Bureau Veritas Geoanalytical, Adelaide, SA, Australia
9. Bureau Veritas Geoanalytical, Perth, WA, Australia
10. Intertek Genalysis, Perth, WA, Australia
11. Intertek Testing Services Philippines, Cupang, Muntinlupa, Philippines
12. MinAnalytical Services, Perth, WA, Australia
13. Nagrom, Perth, WA, Australia
14. PT Geoservices Ltd, Cikarang, Jakarta Raya, Indonesia
15. SGS Australia Mineral Services, Perth, WA, Australia
16. SGS Canada Inc., Vancouver, BC, Canada
17. SGS del Peru, Lima, Peru
18. SGS Geosol Laboratorios Ltda, Vespasiano, Minas Gerais, Brazil
19. SGS Lakefield Research Ltd, Lakefield, Ontario, Canada
20. UIS Analytical Services, Centurion , South Africa
21. Zarazma Mahan Company, Mahan, Kerrman, Iran
22. Zarazma Mineral Studies Company, Tehran, Iran

PREPARER AND SUPPLIER

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It is packaged in 10g units in robust single-use laminated foil pouches.

INTENDED USE

OREAS 148 is intended for the following uses:

- for the monitoring of laboratory performance in the analysis of analytes reported in Table 1 in geological samples;
- for the verification of analytical methods for analytes reported in Table 1;
- for the calibration of instruments used in the determination of the concentration of analytes reported in Table 1.

STABILITY AND STORAGE INSTRUCTIONS

OREAS 149 has been prepared from spodumene $LiAl(Si_2O_5)$-rich pegmatite ore with minor additions of Sn oxide ore and Nb concentrate. It contains very little reactive sulphide and in its unopened state and under normal conditions of storage it has a shelf life beyond ten years. Its stability will be monitored at regular intervals and purchasers notified if any changes are observed.

INSTRUCTIONS FOR CORRECT USE

The certified values determined by 4-acid digestion and peroxide fusion ICP refer to the concentration levels in the packaged state. There is no need for drying prior to weighing and analysis.

In contrast the certified values determined by borate fusion XRF and for LOI at 1000° C are on a dry basis. This requires the removal of hygroscopic moisture by drying in air to constant mass at 105° C. If the reference material is not dried prior to analysis, the certified values should be corrected to the moisture-bearing basis.

HANDLING INSTRUCTIONS

Fine powders pose a risk to eyes and lungs and therefore standard precautions such as the use of safety glasses and dust masks are advised.

TRACEABILITY

The analytical samples were selected in a manner to represent the entire batch of prepared CRM. This ‘representivity’ was maintained in each submitted laboratory sample batch and ensures the user that the data is traceable from sample selection through to the analytical results that underlie the consensus values. Each analytical data set has been validated by its assayer through the inclusion of internal reference materials and QC checks during analysis. The laboratories were chosen on the basis of their competence (from past performance in inter-laboratory programs) for a particular analytical method, analyte or analyte suite, and sample matrix. Most of these laboratories have and maintain ISO 17025 accreditation. The certified values presented in this report are calculated from the means of accepted data following robust statistical treatment as detailed in this report.

LEGAL NOTICE

Ore Research & Exploration Pty Ltd has prepared and statistically evaluated the property values of this reference material to the best of its ability. The Purchaser by receipt hereof releases and indemnifies Ore Research & Exploration Pty Ltd from and against all liability and costs arising from the use of this material and information.

QMS ACCREDITED

ORE Pty Ltd is accredited to ISO 9001:2015 by Lloyd's Register Quality Assurance Ltd for its quality management system including development, manufacturing, certification and supply of CRMs.

CERTIFYING OFFICER

Craig Hamlyn (B.Sc. Hons - Geology), Technical Manager - ORE P/L

REFERENCES

ISO Guide 30 (1992), Terms and definitions used in connection with reference materials.
ISO Guide 31 (2000), Reference materials – Contents of certificates and labels.
ISO Guide 3207 (1975), Statistical interpretation of data - Determination of a statistical tolerance interval.
ISO Guide 35 (2006), Certification of reference materials - General and statistical principals.

Appendix 4 – Assessment files used in this report

Table 15-2 Assessment reports used in this report.

Assessment Report Number	Year of Report	Year of Work	Company	Type of Work	Description of Work
52F16NW0130	1964	1964	Canol Metal M.L.	Diamond drilling	Drilling of four holes totalling 732 ft (223.11 m)
52K01SW9511	1969	1969	Oja Ltd	Airborne radiometric survey	Airborne radiometric surveys conducted over seven claimed properties in the Sioux Lookout-Dryden area
52F15NE0353	1970	1970	Canadian Nickel Company	Diamond drilling	Drilling of one hole totalling 324 ft (98.76 m)
52F15NE0351	1972	1972	Mike Woitowicz and Alex Glatz	Diamond drilling	Drilling of four holes totalling 439 ft (133.81 m)
52F16NW0122	1978	1978	Tantalum Mining Co.	Diamond drilling	Drilling of three drill holes totalling 512 ft (156.06 m)
52F15NE0015	1979	1979	Rio Tinto Canadian Exploration	Diamond drilling	Drilling of four holes totalling 1337 ft (407.52 m)
52F15NE8293	1981	1981	Patino Mines Ltd	Geophysical survey	Magnetic and electromagnetic (EM) surveying
52F16NW0008	1994	1994	Mike Woitowicz and Alex Glatz	Prospecting	Line cutting, EM survey, magneotmeter survey
52F16NW2003	1998	1998	Champion Bear Resources Ltd	Geophysical survey	Magnetometer survey over pegmatite dyke
52F15NE2001	1998	1997-1998	Mike Woitowicz	Prospecting	Reconnaissance prospecting proximal to Lateral Lake Stock

Assessment Report Number	Year of Report	Year of Work	Company	Type of Work	Description of Work
			and Alex Glatz		
52F16NW2004	1998	1998	Mike Woitowicz and Alex Glatz	Geophysical survey	Magnetometer and EM survey proximal to Lateral Lake Stock
52F15NE2002	2000	1999	Mike Woitowicz and Alex Glatz	Prospecting, diamond drilling	Drilling of two holes totalling 102.72 m, assaying of 64 core samples and 39 grab samples for rare metals
20000773	2007	2007	Solitaire Minerals Corp.	Diamond drilling	Drilling of seven holes totalling 717 m; all holes assayed for base and rare metals
2000006990	2010	2010	Solitaire Minerals Corp.	Geological and geochemical sampling	chip sampling, further sampling of pegmatites, soil sampling
20000018711	2019	2018	Power Metals Corp	prospecting	Grab sampling Gullwing Lake, Tot Lake, Coates and Drope pegmatites

Appendix 5 – Daily prospecting table and log,

GPS track maps and sample maps

Table 15-3 Daily prospecting log for Tot Lake pegmatite.

Date	Part of Property	Pegmatites	Host rocks	Mineralization	Exploration Activity
Aug. 28 2020	Tot Lake				geologists travel from home to Dryden
Aug. 29 2020	Tot Lake	spod peg	mafic metavolcanics	spodumene	investigated access to the Tot Lake pegmatite, began removing soil and overburden from the pegmatite, focusing on trench 2, at 538940E 5530871N.
Aug. 30 2020	Tot Lake	spod peg	mafic metavolcanics	spodumene	removed overburden, soil, and moss from Tot Pegmatite. Carried sampling supplies to pegmatite, focused on trench 2 area.
Aug. 31 2020	Tot Lake	spod peg		spodumene	removed overburden, soil and moss from northern half of Tot Pegmatite. Found old trench #3, and blocky K spar zone.
Sept. 1 2020	Tot Lake	spod peg		spodumene	removed overburden from trench 3, prospected the area around the Tot Pegmatite, started channel sampling from trench 2.
Sept. 2 2020	Tot Lake	spod peg		spodumene	removed overburden from trench 2 and 3. Collected channel sample from trench 2.
Sept. 3 2020	Tot Lake	spod peg		spodumene	continued channel sample across trench 2. Removed soil and rubble from area to be channel cut and sampled.
Sept. 4 2020	Tot Lake	spod peg		spodumene	continued channel sample across trench 2. Removed debris and soil to extend the channel sample to the eastern contact with the host rock.
Sept. 5 2020	Tot Lake	spod peg		spodumene	continued to channel sample across trench 2. Cleaned areas for next channel cuts.

Date	Part of Property	Pegmatites	Host rocks	Mineralization	Exploration Activity
Sept. 6 2020	Tot Lake	spod peg		spodumene	started cutting channel 2. TL-CH-20-02. Removed one channel sample, cut 3.
Sept. 7 2020	Tot Lake	spod peg		spodumene	finished cutting channel 2, chipped out channel samples. Began cutting channel 3.
Sept. 8 2020	Tot Lake	spod peg		spodumene	cut channel 3, chipped on one sample from the channel. Sample # 150289.
Sept. 9 2020	Tot Lake	spod peg		spodumene	chipped out three sample from channel cut TL-CH-20-03.
Sept. 10 2020	Tot Lake	spod peg		spodumene	cut channel samples from channel 3 and near channel 1. Prospected, removed overburden and took samples north-west of the Tot Pegmatite.
Sept. 11 2020	Tot Lake	spod peg		spodumene	cut and chipped out a channel sample from the Tot Lake Pegmatite. Prospected to the north-west of the Tot Pegmatite.
Sept. 12 2020	Tot Lake	spod peg		spodumene	removed debris and cut channel sample from near orange Kspar zone on Tot Pegmatite. Sample 157856.
Sept. 13 2020	Tot Lake				updated data and sample tables. Sorted samples into rice bags for shipping.
Sept. 14 2020	Tot Lake	spod peg		spodumene	cut and chipped out a channel sample from the northern lobe of the Tot Pegmatite.
Sept. 15 2020	Tot Lake	spod peg	meta ultramafic	spodumene	prospected, uncovered and sampled outcrops to the north west of the Tot Pegmatite.
Sept. 16 2020	Tot Lake	spod peg	meta ultramafic	spodumene	prospected, uncovered and sampled outcrops to the north west of the Tot Pegmatite.
Sept. 17 2020	Tot Lake	spod peg	meta ultramafic	spodumene	prospected, uncovered and sampled outcrops to the north-east and north-west of the Tot Pegmatite.
Sept. 18 2020	Tot Lake				geologists ship samples and field gear to Sudbury, travel from Dryden to home

Date	Part of Property	Pegmatites	Host rocks	Mineralization	Exploration Activity

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Aug. 29 2020	AR-20-12	537919	5529963	382		116481	Clay				Old road with a clay base. Parked here and continued on foot, road is clay and not driveable, many deep ruts.	Clay, at least 6 inches.	road			
Aug. 29 2020	AR-20-13	538940	5530871	399		195537	Pegmatite				Tot Lake Pegmatite, trench 2. partially soil covered.	Thick (30cm) soil cover has been removed from the outcrop.	Trench 2			
Aug. 30 2020	AR-20-14	537261	5529811	383		240281	Clay				Series of low and wet areas on the road with standing water and deep ruts. Potential areas on the road that are wet and clay rich. 4x4 and careful driving recommended.	30cm + of clay	road			
Aug. 30 2020	AR-20-15	538936	5530872	394		195537	Pegmatite		spodumeme		Spodumene pegmatite. Relatively flat and unfractured area of the Tot pegmatite.	Removed soil and moss overburden to reveal spodumene pegmatite.				
Aug. 31 2020	AR-20-16	537916	5529950	398		116481	Clay				Truck parking location, put up a MEN AT WORK sign, because of hunters in the area. Clay immediately adjacent to road, use caution when driving here.	Clay	Men at work sign			
Aug. 31 2020	AR-20-17	538111	5530065	387		158921	Soil				Heavy rain flooded this location. Standing water on trail	30cm + of mud and clay mixture	trail			
Aug. 31 2020	AR-20-18	538931	5530490	394		195537	trail				Trail north towards Tot Pegmatite. Set up a MEN AT WORK SIGN		Men at work sign			
Aug. 31 2020	AR-20-19	538932	5530876	397		195537	Pegmatite		spodumene		Began to remove overburden and debris from northern half of Tot Pegmatite. slippery when wet.	Soil, Moss, Trees				
Aug. 31 2020	AR-20-20	538918	5530894	395		195537	Pegmatite		spodumene		Historic Trench 3. Several zones apparent: Columbite zone, thin megacrystic spodumene zone, zone of transverse layering.		Trench 3			
Aug. 31 2020	AR-20-21	538917	5530888	394		195537	Pegmatite		spodumene		Blocky K spar and Spod Zone. Orange Kspar zone with megacrystic spodumene.					
Sept. 1 2020	AR-20-22	539055	5530576	392		160267	Soil				Forested area a few meters north of clay trail. Flat area without outcrops.	Overburden appears to be very thick. 30+cm of organics and soil.				
Sept. 1 2020	AR-20-23	538940	5530870	396		195537	Pegmatite		spodumene, pollucite		First channel sample location through pollucite zone. Cutting is very slow, no teeth left on blade.	Removed overburden				
Sept. 1 2020	AR-20-24	538935	5530871	393		195537	Pegmatite				Old drill hole, possibly used to blast trench #2.		historic drill hole on Trench 2			
Sept. 1 2020	AR-20-25	539011	5530895	379		195537	Soil				Old drill pad? Clearning in the forest, almost no bush. Small 1 meter hills of clay. No outcrop	clay				
Sept. 1 2020	AR-20-26	538907	5530900	385	150279	116833	Metaseds			grab sample	Boulder or outcrop of foliated metasediments. Sample taken on September 2nd			0.02	34.5	0.25
	AR-20-26b				150280	116833		low standard								

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 2 2020	AR-20-27	539059	5530733	396		160267	Bog				Bog area for 50 meters. Low wetland with uneven surface. Wet soil 30cm+ thick.	bog				
Sept. 2 2020	AR-20-28	538935	5530867	400	150278	195537	Pegmatite		pollucite, spodumene.	TL-CH-20-01	70cm channel sample cut through aplite (pollucite possibly?) pod. 0-5cm aplite. 5-70cm pollucite zone. 80-85% pollucite, 10% quartz, 3% yellow muscovite, 2-3% orange stained spodumene, trace oxides. Upper contact into coarse grained spodumene zone. Slight green tint on pollucite from 5-20cm, and 50-70cm			0.11	549.0	47.5
Sept. 3 2020	AR-20-29	538194	5530087	410		268289	Soil				Soil and organics 30cm + deep. Flat area, may be good for area for soil survey.	soil				
Sept. 3 2020	AR-20-30	538937	5530876	398	150281	195537	Pegmatite		spodumene	TL-CH-20-01	Channel cut 2, continuation of first cut. Sample is 1 meter long. 70-85% very coarse grained pink spod. 5% aplite (pollucite?) from 0 to 8cm. 5% quartz, 2-3% green muscovite, trace oxides observed with some oxide blebs up to 1.5cm in size. From 8-70cm is very cg pink spod. 70-100cm grain size is generally medium and smaller, with abundant green muscovite and some green altered spodumene			2.12	369.0	39.4
Sept. 4 2020	AR-20-31	539050	5530539	396		160267	Soil				Alder bush,flat and undisturbed area.	30cm + of soil.				
Sept. 4 2020	AR-20-32	538937	5530869	396	150282	195537	Pegmatite		spodumene, pollucite	TL-CH-20-01b	Channel 1.b. 10-20% spod overall. 100cm channel cut. 0-30cm coarse grained white and pink spod zone. 50-65cm very coarse grained dark green spod, with possible pollucite. 65-95cm quartz core. 95-100 aplite.			0.69	357.0	85.8
Sept. 5 2020	AR-20-33	538939	5530874	390	150283	195537	Pegmatite		spodumene	TL-CH-20-01b	Channel 1.b continued. 75cm in length. Coarse grained to very coarse grained green + white + grey spodumene, with white albite-quartz-green muscovite. 10-20% spod. Spod larger than 5x10cm. Oxides present on spod surfaces.			0.60	659.0	113
Sept. 5 2020	AR-20-34	538939	5530874	390	150284	195537	Pegmatite		spodumene	TL-CH-20-01	1 meter channel sample from contact with meta-ultramafic. 0-20 cm white albite with comb texture. 20-80cm cg-vcg pink spodumene. 80-100 cm aplite zone with orange mineral(garnet)?			2.09	544.0	61.1

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 5 2020	AR-20-35	538942	5530881	396	150285	195537	Ultramafic			TL-CH-20-01	20cm channel sample. Meta-Ultramafic.			1.34	4364.0	0.6
Sept. 5 2020	AR-20-36	538917	5530872	398		195537	Soil				Small rise 1 meter tall, no outcrop.	Brown clay.				
Sept. 6 2020	AR-20-37	539053	559053	389		195537	Soil				Flat forested area.	Black soil 20cm+.				
Sept. 6 2020	AR-20-38	538936	5530870	400	150286	195537	Pegmatite		spodumene	TL-CH-20-02	TL-CH-20-02. 1 meter sample length. 0-22 cm grey quartz core. Minor albite + spod. 22-50 cm Aplite zone with deformed fine grained mafic country rock, Minor quartz ,spod, green muscoivite. Red garnets. Possible pollucite? 50-100cm: Mixed zone of aplite+green and grey spod, green muscovite spod alteration. Some spod is weathered orange			0.53	282.0	90
Sept. 7 2020	AR-20-39	539081	5530688	398		160267	Soil				Small rise in flat forested area.	Organics + 20cm + of black soil.				
Sept. 7 2020	AR-20-40	538936	5530870	400	150287	195537	Pegmatite		spodumene	TL-CH-20-02	TC-CH-20-02. 1 meter sample length. Mixed zone of aplite and cg spodumene pegmatite. 0-20cm possible pollucite mineralization 10-20%. 0-100cm white and grey spod moderately to strongly altered to green and dark green muscovite. Red and orange garnets. 80-100 cm oxidized or weathered orange spodumene. Overall up to 20% spod			0.24	385.0	83.8
Sept. 7 2020	AR-20-41	538936	5530870	400	150288	195537	Pegmatite		spodumene	TL-CH-20-02	1.05 meter sample length. Zone of abundant white and grey spodumene which has been weakly to moderately altered to green muscovite. Orange staining is common as small 1-2mm blebs. Weathered garnets? Up to 65% spod locally, Very difficult to remove channel sample			2.09	380.0	55.2
Sept. 8 2020	AR-20-42	538950	5530862	398	150289	195537	Pegmatite		spodumene	TL-CH-20-03	TL-CH-20-03. South Pond channel cut. 1 meter sample length. 0-15cm. Vcg feld-qtz- light pink colored spod. 15-45cm. Mixed medium grained zone of aplite and qtz-feld-pink spod. 45-100 cg-vcg pink spod-qtz-feld-green muscovite(golden). Oxide dendrites on spod crystal surfaces. 15-20% spod overall			2.14	486.0	78.6
	AR-20-42b				150290	195537		blank								
Sept. 8 2020	AR-20-43	538937	5530846	391		195537	Pegmatite		spodumene		Spodumene pegmatite boulder, from the south pond trench?					

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 9 2020	AR-20-44	538944	5530864	396	150291	195537	Pegmatite			grab sample	Aplite? White, very fine grained, with sugar like texture on weathered surface. Trace accessory black minerals (schorl). Sample zone is in contact with xenolith + coarse grained orange spodumene. Void space filled with pollucite?			0.02	40.2	254
Sept. 9 2020	AR-20-45	538943	5530863	396	150292	195537	Pegmatite		spodumene	TL-CH-20-03	TL-CH-20-03. 1 meter sample length, from 1 to 2 meters. 10-15% grey spod with abundant oxides on crystal surfaces. 65% grey quartz, esp from 30-60cm. (1.3-1.6m.) Minor aplite and green muscovite.			1.85	339.0	52.2
Sept. 9 2020	AR-20-46	538942	5530872	396	150293	195537	Pegmatite		spodumene, pollucite	TL-CH-20-03	TL-CH-20-03. 1 meter channel length, from 2-3 meters. Coarse grained grey quartz + coarse grained white K-feldspar. 5% white spodumene overall. Pollucite mineralization at 80-90cm.			0.89	556.0	94.1
Sept. 9 2020	AR-20-47	538942	5530872	396	150294	195537	Pegmatite		spodumene, pollucite	TL-CH-20-03	TL-CH-20-03. 65cm channel length. 2-3% pollucite from 0-10cm. 15-20% spod overall. Cg qtz-feld-spod-green muscovite.			1.70	409.0	41.6
Sept. 9 2020	AR-20-48	538941	5530872	396	150295	195537	Pegmatite		pollucite	grab sample	Weather aplite or pollucite pod? Grey to blue on weathered surfaces, coloration due to black needle like crystals(schorl?). White very fine grained on fresh surface. Trace light blue colored accessory mineral(apatite?).			0.08	85.6	186
Sept. 9 2020	AR-20-49	537044	5529876	385		139610	Clay				Turn off onto Tot Lake road. Exposed culvert at beginning of road.	Clay 20cm + deep.	road			
Sept. 10 2020	AR-20-50	539083	5530689	396		160267	Soil				Small rise before bog area to the north. Light forest cover. High ground	Black soil and organics 20+ cm.				
Sept. 10 2020	AR-20-51	538942	5530869	393	150296	195537	Pegmatite			TL-CH-20-03b	10cm of pegmatite at contact. Fine grained aplite with orange and red garnets and 1cm of mafic wall rock. Minor green muscovite, no spodumene observed.			0.04	252.0	85
Sept. 10 2020	AR-20-52	538942	5530869	393	150297	195537	Ultramafic			TL-CH-20-03b	20cm of foliated meta-ultramafic.			1.24	5618.0	2

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 10 2020	AR-20-53	538938	5530871	394	150298	195537	Pegmatite		spodumene, pollucite	TL-CH-20-04	95cm sample length. Sample cut through boxwork of very fine grained grey + pink spodumene. 65%+ spod overall. 10% grey quartz. Orange garnets up to 5mm in size. 5-10% white pollucite in spod boxwork from 0-20cm. Green muscovite veins at pollucite crystal faces. Orange garnets from 75-85cm. Aplite zone from 85-95cm.			2.89	0.806 % Cs2O	57.8
Sept. 10 2020	AR-20-54	538749	5531083	397	150299	116833	Pegmatite			grab sample	Outcrop is weathered white. Possibly aplite? Tourmaline and blocky Kspar in sample.			0.01	64.4	0.25
	AR-20-54b				150300	116833		high standard								
Sept. 10 2020	AR-20-55	538702	5531064	399	157851	116833	Mafic			grab sample	Fine grained foliated mafic. Small hill.			0.01	40.4	0.25
Sept. 10 2020	AR-20-56	538744	5531047	402	157853	116833	Pegmatite			grab sample	Uncovered a outcrop of possibly aplite? Quartz veining and mafic xenolith in outcrop, possible contact? Abundant large, up to 2 cm quartz crystals in outcrop. Foliated granite with elongated biotite? Outcrop Az 270.			0.02	23.3	1.1
Sept. 11 2020	AR-20-57	538926	5530890	397	157852	195537	Pegmatite		spodmene, pollucite	TL-CH-20-05	1 meter channel sample. Sample is rich in blocky orange Kspar. White and rust colored spod is 5-10% of sample. Abundant oxide mineralization on spod crystal surfaces. From 55-65cm is possible pollucite pod. 90-100cm dark green spod, muscovite altered.			2.00	1086.0	255
Sept. 11 2020	AR-20-58	538916	5530880	399		195537	Soil				Old rusted bed frame in the bush near the north pool.	Soil 20cm+ deep.	bed frame			
Sept. 11 2020	AR-20-59	538745	5531056	396	157854	116833	Mafic			grab sample	Mafic xenolith. Fine grained, rusty colored, trace rusty colored sulfides.			0.03	23.0	2.2
Sept. 11 2020	AR-20-60	538745	5531057	396	157855	116833	Quartz Vein			grab sample	Quartz vein 8-10cm in width, white and grey in color.			0.01	9.0	0.6
Sept. 12 2020	AR-20-61	538919	5530888	405	157856	195537	Pegmatite		spodumene	TL-CH-20-06	Channel sample, near orange blocky Kspar and spod zone. 1.3m sample length, Megacrystic spodumene, up to 50x20cm, are abundant. Spod up to 2 cm thick. 10% spod overall. Sample is Kspar rich.			2.88	493.0	254
Sept. 12 2020	AR-20-62	538957	5530842	395		195537	Soil				Moderate dense forest, flat area.	Black soil 20+cm thick.				

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 13 2020	AR-20-63	538917	5530890	403	157857	116833	Pegmatite		altered spodumene	TL-CH-20-07	Channel sample in albitized spodumene zone. Several .5 x .5 cm square oxide crystals present. Sample is 65cm. Channel is in a zone of albite alteration. Quartz and white albite rich, with minor green muscovite alteration. 5-10% spodumene, strongly altered to albite. Oxide minerals are rare			0.02	224.0	1062
Sept. 13 2020	AR-20-64	538933	5530845	391		195537	Soil				Uneven ground, could be debris from trenching.	Organics + 20cm + of black soil.				
Sept. 14 2020	AR-20-65	538908	5530878	397		195537	Boulder				Fallen tree with ultramafic boulder under roots. No pematite rubble.	30+cm of brown clay.				
Sept. 14 2020	AR-20-66	538885	5530869	398	157858	195537	Boulder			grab sample	Angular granitic boulder. Kspar and quartz rich.			0.01	16.7	0.7
Sept. 14 2020	AR-20-67	538810	5530842	394	157859	195537	Ultramafic			grab sample	Meta ultramafic outcrop revealed by fallen tree.			0.01	8.4	1.4
Sept. 14 2020	AR-20-67b				157860	195537		blank								
Sept. 14 2020	AR-20-68	538777	5530827	394	157861	195537	Ultramafic			grab sample	Foliated ultramafic outcrop. Foliation at Az 280, with white quartz veins. Sample is of the mafic meta-ultramafic.			0.01	18.3	0.25
Sept. 14 2020	AR-20-69	538778	5530830	392	157862	195537	Quartz Vein			grab sample	3-8cm white quartz vein in foliated mafic outcrop.			0.00	7.0	0.25
Sept. 14 2020	AR-20-70	538750	5530844	394	157863	195537	Ultramafic			grab sample	Medium sized rise, foliated meta-ultramafic uncovered with thin, 1-2cm, quartz veins. Sample if of quartz veins and host mafic.			0.00	3.5	0.25
Sept. 16 2020	AR-20-71	538922	5530889	403		195537	water				North Pond at Tot Pegmatite	North Pond				
Sept. 16 2020	AR-20-72	538925	5531187	390		116833	Soil				Low bog area, no outcrop, wet ground.	30cm + black soil. Bog				
Sept. 16 2020	AR-20-73	538838	5531114	393	157864	116833	Ultramafic			grab sample	Boulder field of meta-ultramafic rocks. 20cm+ of roots and soil. Rusty boulder. Diss sulfides- up to 5%. Pyrite, asenopyrite, trace calcite. Possible bands of semi massive sulfide? Sulfides appear to be associated with quartz veining.			0.00	1.7	0.25
Sept. 16 2020	AR-20-74	538723	5531104	397	157865	116833	Quartz Vein			grab sample	Sample of quartz vein and medium grained granitic unit. Quartz vein is orange and rust colored.			0.00	9.7	0.25
Sept. 16 2020	AR-20-75	538722	5531104	397	157866	116833	Ultramafic			grab sample	Fine grained foliated mafic with rare quartz veining. Contact at Az 280, 35 W.			0.00	8.3	0.25
Sept. 16 2020	AR-20-76	539045	5530575	391		160267	road				Old road, very grown in, but may be the best access for a drill program. No giant trees.		road			
Sept. 17 2020	AR-20-76	538809	5531164	384		116833	Soil				Dense forest, 30cm+ of organics and soil. Abundant moose tracks.	30cm black soil.				

Date	Station	Easting (m)	Northing (m)	Elev (m)	Sample No	Cell Claim	Lithology	QC sample	Mineralization	Channel No	Description	Overburden	Man made features	Li2O (%)	Cs (ppm)	Ta (ppm)
Sept. 17 2020	AR-20-77	538678	5531096	384	157867	116833	Ultramafic			grab sample	Fine grained foliated ultramafic. Minor quartz veining, <1cm, rusty weathered surface. 5 meter tall ridge at Az 86. Foliation at 86.			0.00	10.5	0.25
Sept. 17 2020	AR-20-78	538649	5531065	396	157868	116833	Ultramafic			grab sample	Fine grained foliated ultramafic. With folded quartz veins from 1-5cm wide.			0.00	2.3	0.25
Sept. 17 2020	AR-20-79	538668	5531038	400	157869	116833	Ultramafic			grab sample	Fine grained foliated mafic. Angular contact with granitic dyke unit. Contacts at Az 290, Az 194.			0.00	3.7	0.25
	AR-20-79b				157870	116833		low standard								
Sept. 17 2020	AR-20-80	538668	5531039	400	157871	116833	Pegmatite			grab sample	Beige medium grained feldspar-quartz-biotite granitic unit.			0.00	6.4	0.25
Sept. 17 2020	AR-20-81	538753	5530957	391	157872	116833	Quartz Vein			grab sample	Grey quartz vein from 5-8cm wide. Az 62.			0.00	7.5	0.25
Sept. 17 2020	AR-20-82	538753	5530957	391	157873	116833	Ultramafic			grab sample	Fine grained foliated meta ultramafic.			0.01	5.8	0.25

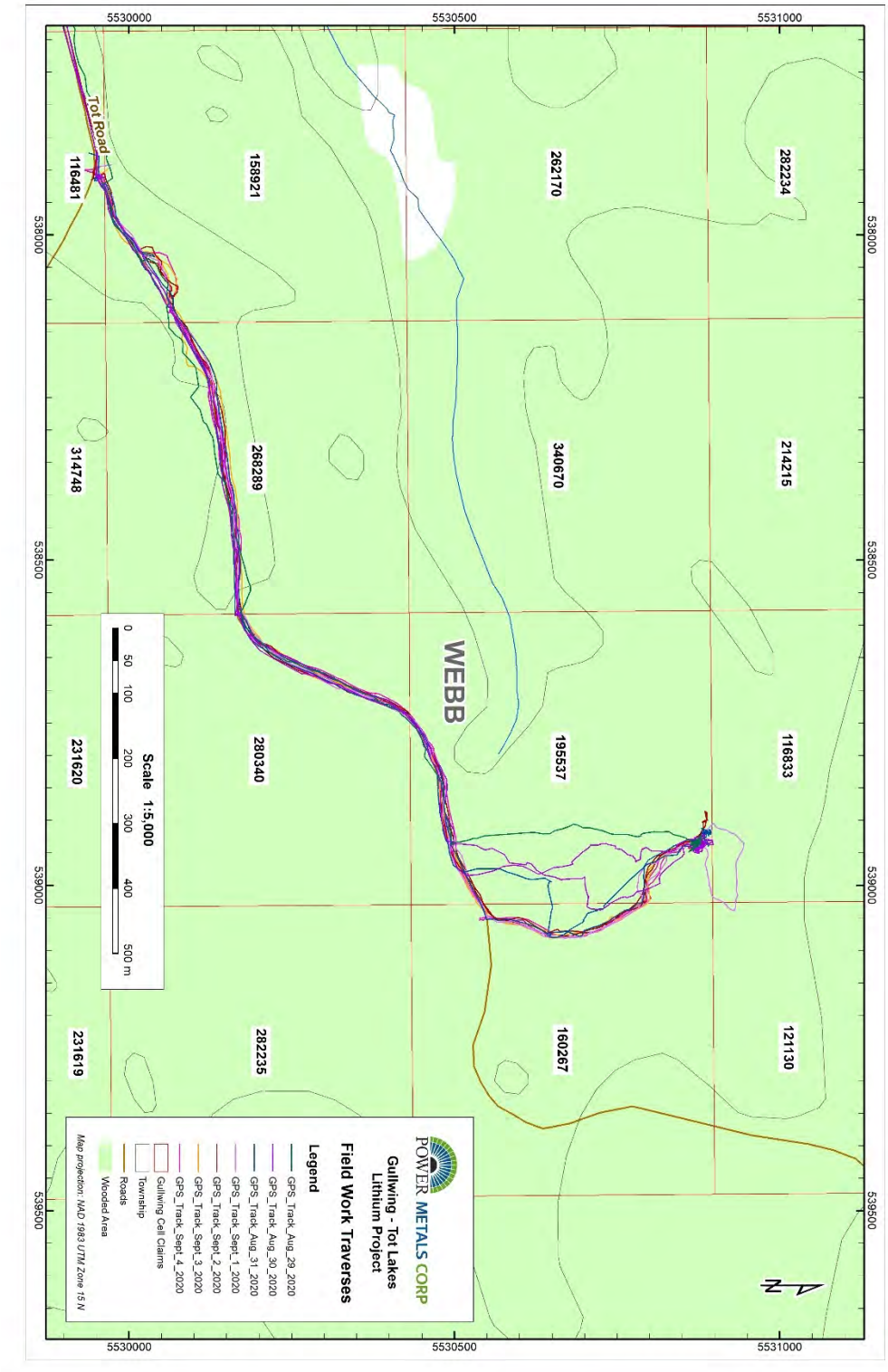

Figure 15-1 GPS tracks map Aug. 29 to Sept. 4, 2020 from Tot Lake road to Tot Lake pegmatite.

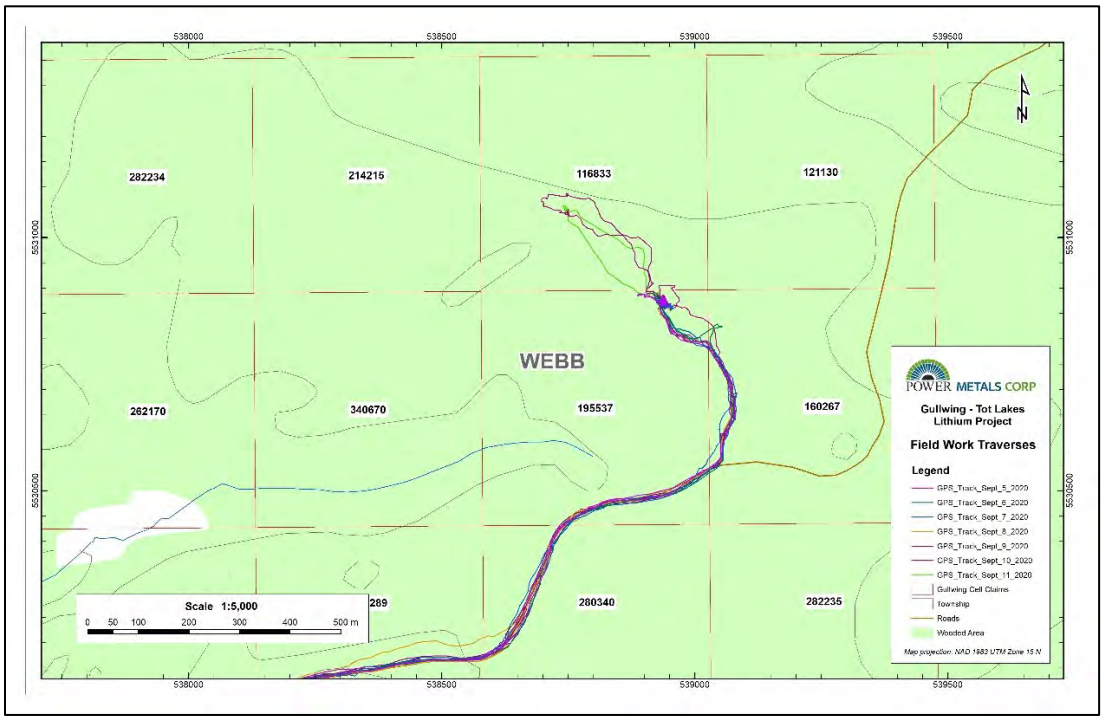

Figure 15-2 GPS tracks map Sept. 5 to 11, 2020 from Tot Lake Road to Tot Lake pegmatite.

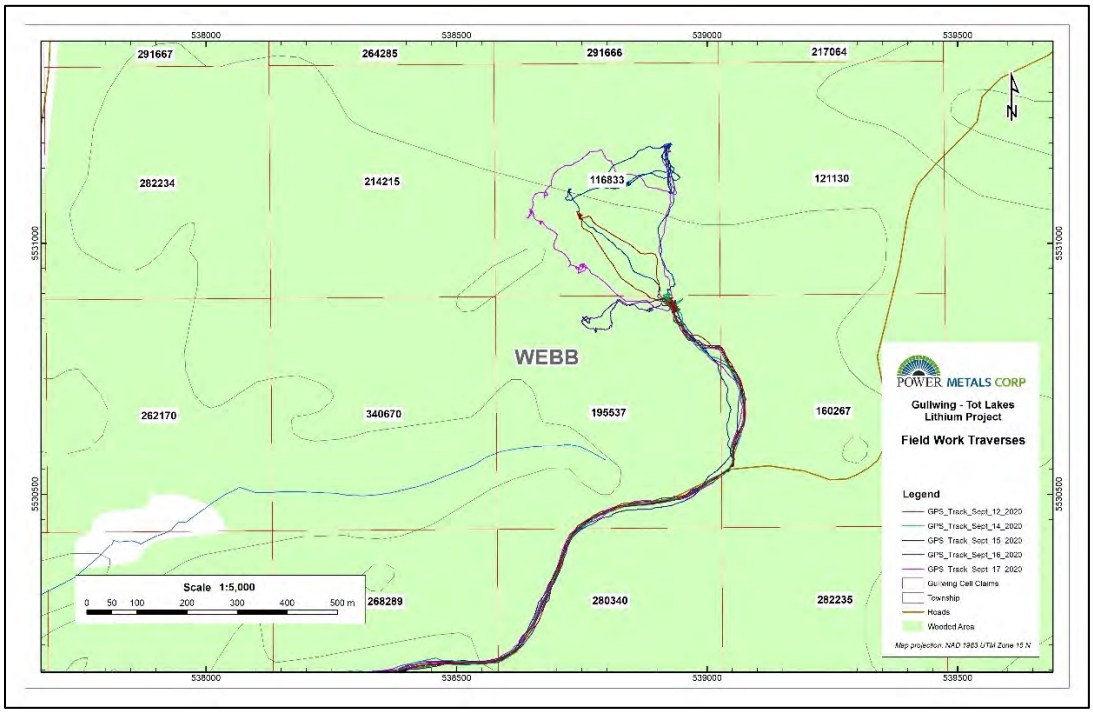

Figure 15-3 GPS tracks map Sept. 12 to 17, 2020 from Tot Lake Road to Tot Lake pegmatite.

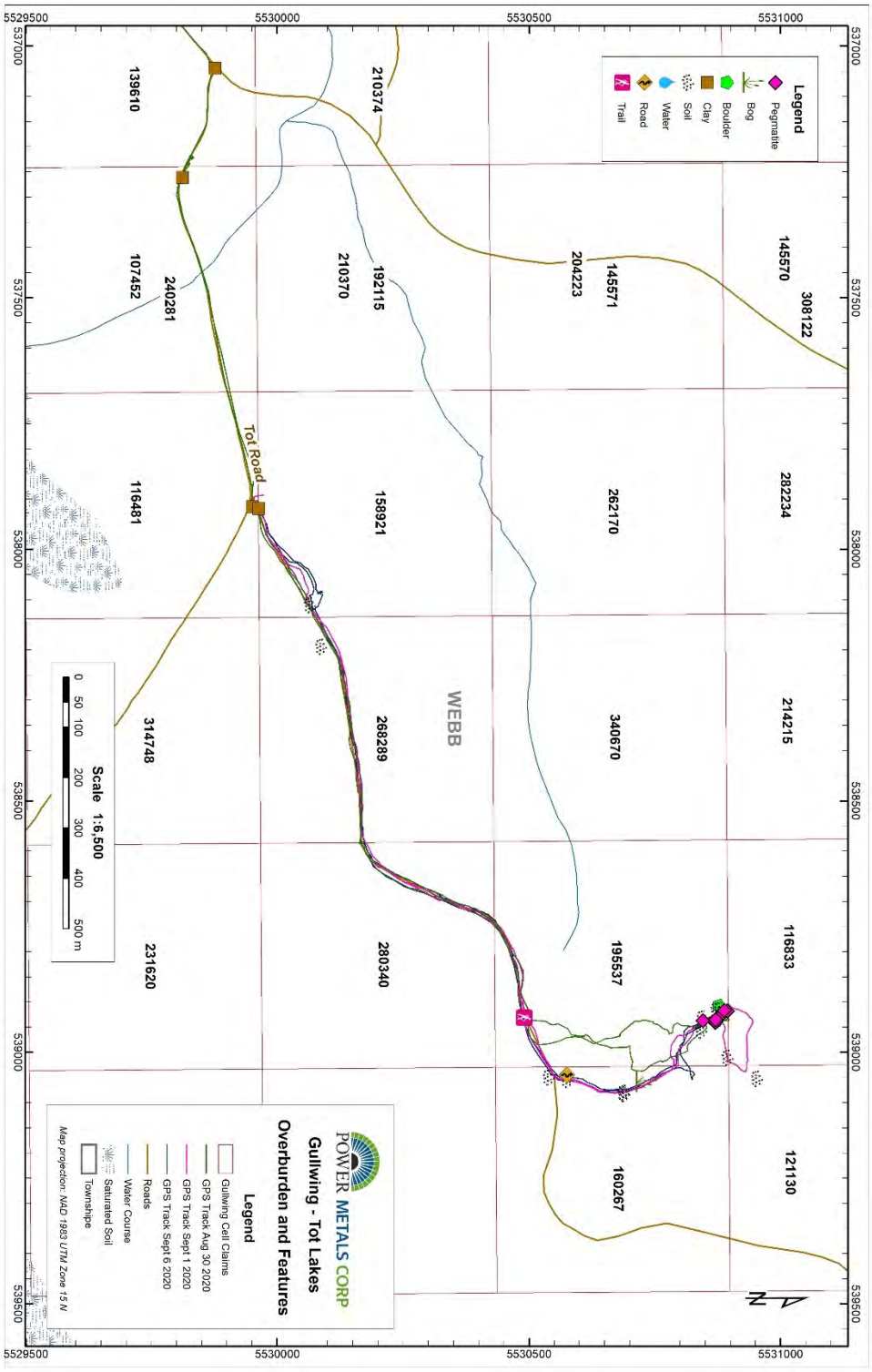

Figure 15-4 Overburden and man-made features map, Tot Lake pegmatite.

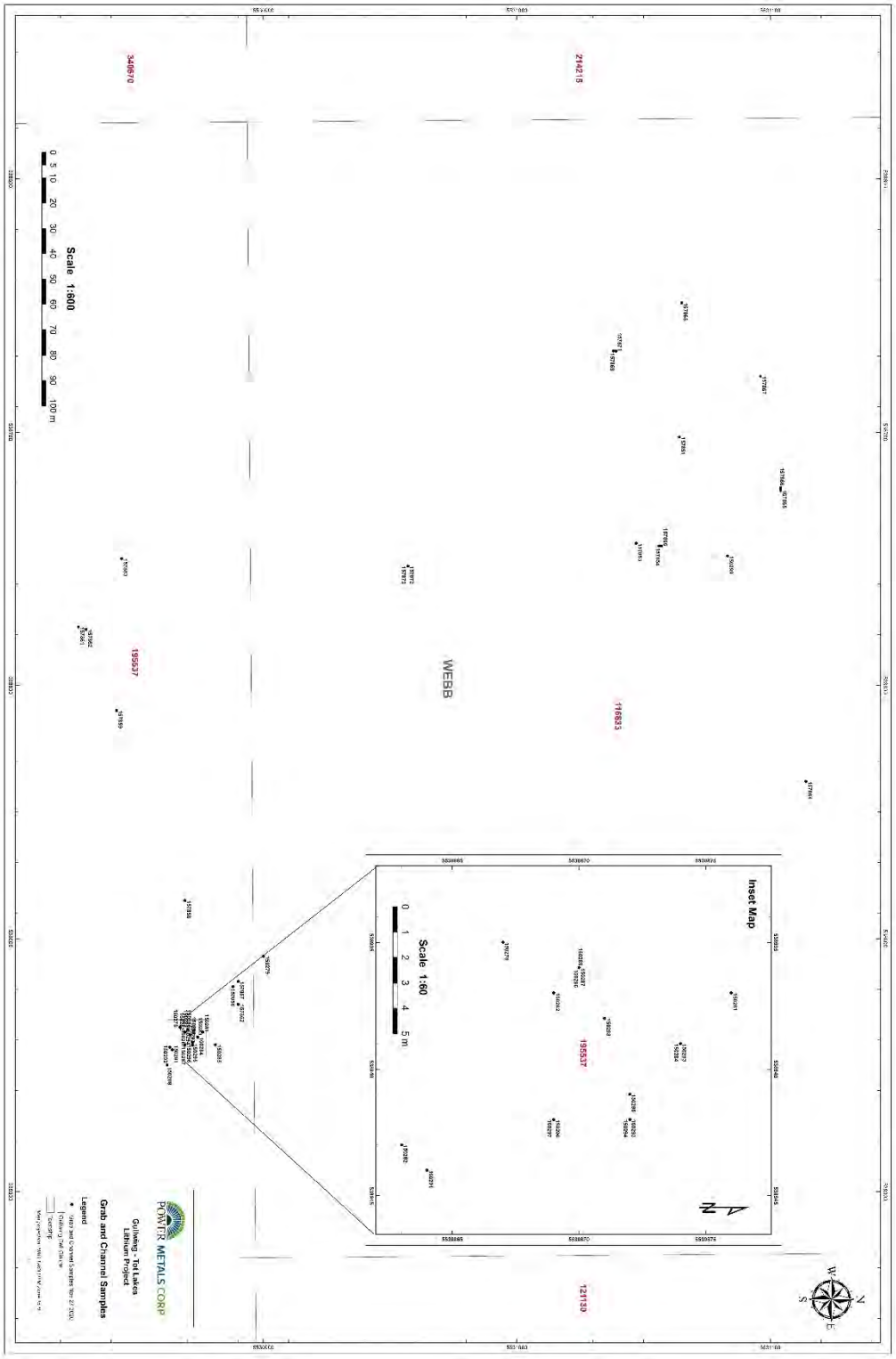

Figure 15-5 Grab and Channel samples location map, Tot Lake pegmatite.

Appendix 6 – Photos of channel samples, maps and logs

Figure 15-6 Tot Lake pegmatite looking towards south pond with channel samples labelled.
TL-CH-20-01 – sample numbers 150281 to 150285
TL-CH-20-01b – sample numbers 150282 and 150283
TL-CH-20-04 – sample number 150298 (pollucite)
TL-CH-20-02 – sample numbers 150286 to 150288

Figure 15-7 Tot Lake pegmatite channel TL-CH-20-03 next to south pond.

Figure 15-8 Tot Lake pegmatite looking towards north pond with channel samples labelled.
TL-CH-20-05 – sample number 157852
TL-CH-20-06 – sample number 157856
TL-CH-20-07 – sample number 157857

538900 538910 538920 538930 538940 538950

5530900 5530890 5530880 5530870 5530860 5530850

N W E S

Trench 4

TL-CH-20-07

157857

Trench 3

TL-CH-20-06

157856

TL-CH-20-05

157852

TL-CH-20-01

150285 150284 150298

Trench 2

TL-CH-20-04

150296 150287 150282 150281

TL-CH-20-02

150288 150283

Trench 1

TL-CH-20-01b

TL-CH-20-03

150289 150292 150293 150294 150296 150297

TL-CH-20-03b

58 75 50 50 75 35 70 75

Geological Legend

- Channel Samples
- Channel Lines
- Spodumene-Kspar-Albite-Quartz Pegmatite. randomly oriented bladed pink spodumene phenocrysts (transverse primary layering may be present)
- Spodumene-Green Muscovite-Albite ± Quartz Pegmatite, subhorizontally aligned pink spodumene in layers oriented parallel to dyke contacts
- Spodumene-Albite-Green-Muscovte-Quartz, medium-groined, pink spodumene-poor layers grading into unit 2
- Orange Kspar Zone: Kspar-Quartz ± Beryl ± Spodumene
- Pollucite Zone: Pollucite - Spodumene-Kspar-Albite-Quartz-Green Muscovite
- Incipiently to Moderately Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + lepidolite ± cookeite
- Pervasively Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + alkali beryl
- Columbite Zone: Quartz-Albitized Kspar-Spodumene(albitic + green muscovitic alteration)-Alkali Beryl-Columbite-Spessartine
- Saccaroidal Sodic Aplite: Albite - Quartz -Tourmaline - Green Muscovite - Apatite
- Holmquistite Veins
- Quartz Veins : Quartz ± Spodumene ± Kspar ± Tourmaline
- Meta- ultramafic Rocks
- Fine-grained Foliated Mafic Metavolcanics
- Medium- to Coarse-grained Porphyroblastic Mafic Metavolcanics
- Transverse Layering
- Trenched
- Pond
- Gullwing Cell Claims

Scale 1:100

0 1 2 3 4 5 6 7 8 9 10 m

POWER METALS CORP

Gullwing - Tot Lakes Lithium Project

2020 Channel Samples

Map projection: NAD 1983 UTM Zone 15 N

538900 538910 538920 538930 538940 538950

5530900 5530890 5530880 5530870 5530860 5530850

N W E S

Trench 4

TL-CH-20-07

Trench 3

TL-CH-20-06

TL-CH-20-05

TL-CH-20-01

Trench 2

TL-CH-20-04

TL-CH-20-02

Trench 1

TL-CH-20-01b

TL-CH-20-03

TL-CH-20-03b

157857 157856 157852 150285 150294 150295 150298 150286 150287 150292 150291 150288 150283 150289 150292 150293 150294 150296 150297

58 75 50 50 75 35 70 75

Li2O (%) Assay

- 0.0 - 0.5
- 0.6 - 1.0
- 1.1 - 1.5
- 1.6 - 2.0
- 2.1 - 3.0

Geological Legend

- Channel Lines
- Spodumene-Kspar-Albite-Quartz Pegmatite. randomly oriented bladed pink spodumene phenocrysts (transverse primary layering may be present)
- Spodumene-Green Muscovite-Albite ± Quartz Pegmatite, subhorizontally aligned pink spodumene in layers oriented parallel to dyke contacts
- Spodumene-Albite-Green-Muscovte-Quartz, medium-groined, pink spodumene-poor layers grading into unit 2
- Orange Kspar Zone: Kspar-Quartz ± Beryl ± Spodumene
- Pollucite Zone: Pollucite - Spodumene-Kspar-Albite-Quartz-Green Muscovite
- Incipiently to Moderately Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + lepidolite ± cookeite
- Pervasively Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + alkali beryl
- Columbite Zone: Quartz-Albitized Kspar-Spodumene(albitic + green muscovitic alteration)-Alkali Beryl-Columbite-Spessartine
- Saccaroidal Sodic Aplite: Albite - Quartz -Tourmaline - Green Muscovite - Apatite
- Holmquistite Veins
- Quartz Veins : Quartz ± Spodumene ± Kspar ± Tourmaline
- Meta- ultramafic Rocks
- Fine-grained Foliated Mafic Metavolcanics
- Medium- to Coarse-grained Porphyroblastic Mafic Metavolcanics
- Transverse Layering
- Trenched
- Pond
- Gullwing Cell Claims

Scale 1:100

0 1 2 3 4 5 6 7 8 9 10 m

POWER METALS CORP

Gullwing - Tot Lakes Lithium Project

2020 Channel Samples

Map projection: NAD 1983 UTM Zone 15 N

538900 538910 538920 538930 538940

5530900 5530890 5530880 5530870 5530860

N W E S

Trench 4

TL-CH-20-07

Trench 3

TL-CH-20-06

TL-CH-20-05

TL-CH-20-01

Trench 2

TL-CH-20-04

TL-CH-20-02

Trench 1

TL-CH-20-01b

TL-CH-20-03

TL-CH-20-03b

58 75 50 50 75 35 70 75

157857 157856 157852 150285 150284 150298 150291 150282 150283 150286 150287 150288 150289 150292 150293 150294 150296 150297

Cs (ppm) Assay

- 224 - 282
- 283 - 409
- 410 - 659
- 660 - 1086
- 1087 - 7602

Geological Legend

- Channel_Samples
- Channel Lines
- Spodumene-Kspar-Albite-Quartz Pegmatite. randomly oriented bladed pink spodumene phenocrysts (transverse primary layering may be present)
- Spodumene-Green Muscovite-Albite ± Quartz Pegmatite, subhorizontally aligned pink spodumene in layers oriented parallel to dyke contacts
- Spodumene-Albite-Green-Muscovte-Quartz, medium-groined, pink spodumene-poor layers grading into unit 2
- Orange Kspar Zone: Kspar-Quartz ± Beryl ± Spodumene
- Pollucite Zone: Pollucite - Spodumene-Kspar-Albite-Quartz-Green Muscovite
- Incipiently to Moderately Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + lepidolite ± cookeite
- Pervasively Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + alkali beryl
- Columbite Zone: Quartz-Albitized Kspar-Spodumene(albitic + green muscovitic alteration)-Alkali Beryl-Columbite-Spessartine
- Saccaroidal Sodic Aplite: Albite - Quartz -Tourmaline - Green Muscovite - Apatite
- Holmquistite Veins
- Quartz Veins : Quartz ± Spodumene ± Kspar ± Tourmaline
- Meta- ultramafic Rocks
- Fine-grained Foliated Mafic Metavolcanics
- Medium- to Coarse-grained Porphyroblastic Mafic Metavolcanics
- Transverse Layering
- Trenched Areas
- Pond
- Gullwing Cell Claims

Scale 1:100

0 1 2 3 4 5 6 7 8 9 10 m

POWER METALS CORP

Gullwing - Tot Lakes Lithium Project

2020 Channel Samples

Map projection: NAD 1983 UTM Zone 15 N

538900 538910 538920 538930 538940

5530900 5530890 5530880 5530870 5530860

N W E S

Trench 4

TL-CH-20-07

Trench 3

TL-CH-20-06

TL-CH-20-05

TL-CH-20-01

Trench 2

TL-CH-20-04

TL-CH-20-02

Trench 1

TL-CH-20-01b

TL-CH-20-03

TL-CH-20-03b

58 75 50 50 75 35 70 75

157857 157856 157852 150285 150284 150298 150291 150282 150283 150286 150287 150288 150289 150292 150293 150294 150296 150297

Cs (ppm) Assay

- 224 - 282
- 283 - 409
- 410 - 659
- 660 - 1086
- 1087 - 7602

Geological Legend

- Channel_Samples
- Channel Lines
- Spodumene-Kspar-Albite-Quartz Pegmatite. randomly oriented bladed pink spodumene phenocrysts (transverse primary layering may be present)
- Spodumene-Green Muscovite-Albite ± Quartz Pegmatite, subhorizontally aligned pink spodumene in layers oriented parallel to dyke contacts
- Spodumene-Albite-Green-Muscovte-Quartz, medium-groined, pink spodumene-poor layers grading into unit 2
- Orange Kspar Zone: Kspar-Quartz ± Beryl ± Spodumene
- Pollucite Zone: Pollucite - Spodumene-Kspar-Albite-Quartz-Green Muscovite
- Incipiently to Moderately Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + lepidolite ± cookeite
- Pervasively Albitized Spodumene-Kspar-Albite-Quartz Pegmatite Secondary albite + green muscovite + alkali beryl
- Columbite Zone: Quartz-Albitized Kspar-Spodumene(albitic + green muscovitic alteration)-Alkali Beryl-Columbite-Spessartine
- Saccaroidal Sodic Aplite: Albite - Quartz -Tourmaline - Green Muscovite - Apatite
- Holmquistite Veins
- Quartz Veins : Quartz ± Spodumene ± Kspar ± Tourmaline
- Meta- ultramafic Rocks
- Fine-grained Foliated Mafic Metavolcanics
- Medium- to Coarse-grained Porphyroblastic Mafic Metavolcanics
- Transverse Layering
- Trenched Areas
- Pond
- Gullwing Cell Claims

Scale 1:100

0 1 2 3 4 5 6 7 8 9 10 m

POWER METALS CORP

Gullwing - Tot Lakes Lithium Project

2020 Channel Samples

Map projection: NAD 1983 UTM Zone 15 N

Hole Number:	**TL-CH-20-01**	**Property:** Gullwing-Tot Lakes	**Area:** Tot Lake Pegmatite

Drilling

Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	2.9	**Storage:**	100% assayed	**NTS:**	52F16
Started:	04-Sep-20				
Completed:	05-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	05-Sep-20			**Easting:**	538942
Logged By:	A. Rich			**Northing:**	5530881
Drill Contractor:	JJ Minerals			**Elevation:**	400

Location

Reflex Tests:

Depth (m)	Azimuth corrected	Dip	Mag Sus(nT)

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: pink spodumene zone, north contact

Hole No: **TL-CH-20-01** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0	0.2	0.20	Meta-Ultramafic	Fine grained black colored meta-ultramafic. 1-2mm pyroxene crystals are abundant. North contact	0	0
0.20	1.20	1.00	Spodumene pegmatite	1 meter channel sample from contact with meta-ultramafic. 0-20 cm white albite with comb texture. 20-80cm cg-vcg pink spodumene. 80-100 cm aplite zone with orange mineral(garnet)?	65	0.1
1.20	1.90	0.70	Aplite	70cm channel sample cut through aplite (pollucite possibly?) pod. 0-5cm aplite. 5-70cm aplite zone. 80-85% aplite, 10% quartz, 3% yellow muscovite, 2-3% orange stained spodumene, trace oxides. Upper contact into coarse grained spodumene zone. Slight green tint on aplite from 5-20cm, and 50-70cm.	3	0
1.90	2.90	1.00	Spodumene pegmatite	Channel cut 2, continuation of first cut. Sample is 1 meter long. 70-85% very coarse grained pink spod. 5% aplite (pollucite?) from 0 to 8cm. 5% quartz, 2-3% green muscovite, trace oxides observed with some oxide blebs up to 1.5cm in size. From 8-70cm is very cg pink spod. 70-100cm grain size is generally medium and smaller, with abundant green muscovite and some green altered spodumene.	70	0.1

Hole No:	**TL-CH-20-01**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-01	0	0.2	150285		Meta-ultramafic	1.34	1135	4364.0		10	0.6
TL-CH-20-01	0.2	1.2	150284		Spod boxwork	2.09	1401	544.0		28	61.1
TL-CH-20-01	1.2	1.9	150278		Aplite pod?	0.11	4292	549.0		23	47.5
TL-CH-20-01	1.9	2.9	150281		Cg spod boxwork	2.12	1742	369.0		30	39.4

Hole Number:	**TL-CH-20-01b**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	1.75	**Storage:**	100% assayed	**NTS:**	52F16
Started:	05-Sep-20				
Completed:	05-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	05-Sep-20			**Easting:**	538937
Logged By:	A. Rich			**Northing:**	5530869
Drill Contractor:	JJ Minerals			**Elevation:**	396

Location

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:

Comments: coarse-grained spodumene, Ta-oxides

Hole No: **TL-CH-20-01b** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0.00	1.00	1.00	Spodumene pegmatite	Channel 1.b. 10-20% spod overall. 100cm channel cut. 0-30cm coarse grained white and pink spod zone. 50-65cm very coarse grained dark green spod, with possible pollucite. 65-95cm quartz core. 95-100 aplite.	15	0.1
1.00	1.75	0.75	Spodumene pegmatite	Channel 1.b continued. 75cm in length. Coarse grained to very coarse grained green + white + grey spodumene, with white albite-quartz-green muscovite. 10-20% spod. Spod larger than 5x10cm. Oxides present on spod surfaces.	15	trace

Hole No: **TL-CH-20-01b** **Property:** Gullwing-Tot Lakes **Area:** Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-01b	0	1	150282		pink spodumene	0.69	2384	357.0		41	85.8
TL-CH-20-01b	1	1.75	150283		coarse-grained spod	0.60	6033	659.0		48	113

Hole Number:	**TL-CH-20-02**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

				Location	
Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	3.05	**Storage:**	100% assayed	**NTS:**	52F16
Started:	06-Sep-20				
Completed:	06-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	06-Sep-20			**Easting:**	538936
Logged By:	A. Rich			**Northing:**	5530870
Drill Contractor:	JJ Minerals			**Elevation:**	400

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: albitized spodumene zone

Hole No: **TL-CH-20-02** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0	1	1.00	quartz core, albitized spodumene zone	TL-CH-20-02. 1 meter sample length. 0-22 cm grey quartz core. Minor albite + spod. 22-50 cm Aplite zone with deformed fine grained mafic country rock, Minor quartz ,spod, green muscovite. Red garnets. Possible pollucite? 50-100cm: Mixed zone of aplite+green and grey spod, green muscovite spod alteration. Some spod is weathered orange.	trace	trace
1.00	2.00	1.00	albitized spodumene zone	TC-CH-20-02. 1 meter sample length. Mixed zone of aplite and cg spodumene pegmatite. 0-20cm possible pollucite mineralization 10-20%. 0-100cm white and grey spod moderately to strongly altered to green and dark green muscovite. Red and orange garnets. 80-100 cm oxidized or weathered orange spodumene. Overall up to 20% spod.	20	
2.00	3.05	1.05	albitized spodumene zone	1.05 meter sample length. Zone of abundant white and grey spodumene which has been weakly to moderately altered to green muscovite. Orange staining is common as small 1-2mm blebs. Weathered garnets? Up to 65% spod locally, Very difficult to remove channel sample.	20	

Hole No: **TL-CH-20-02** **Property:** Gullwing-Tot Lakes **Area:** Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-02	0	1	150286		albitized spod	0.53	1189	282.0		50	90
TL-CH-20-02	1	2	150287		albitized spod	0.24	2457	385.0		45	83.8
TL-CH-20-02	2	3.05	150288		albitized spod	2.09	2828	380.0		29	55.2

Hole Number:	**TL-CH-20-03**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

				Location	
Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	3.65	**Storage:**	100% assayed	**NTS:**	52F16
Started:	07-Sep-20				
Completed:	09-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	09-Sep-20			**Easting:**	538950
Logged By:	A. Rich			**Northing:**	5530862
Drill Contractor:	JJ Minerals			**Elevation:**	398

Reflex Tests:

Depth (m)	Azimuth corrected	Dip	Mag Sus(nT)

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: near south pond, spodumene pegmatite

Hole No: **TL-CH-20-03** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0	1	1.00	spodumene pegmatite	TL-CH-20-03. South Pond channel cut. 1 meter sample length. 0-15cm. Vcg feld-qtz- light pink colored spod. 15-45cm. Mixed medium grained zone of aplite and qtz-feld-pink spod. 45-100 cm cg-vcg pink spod-qtz-feld-green muscovite(golden). Oxide dendrites on spod crystal surfaces. 15-20% spod overall.	20	trace
1.00	2.00	1.00	spodumene pegmatite	TL-CH-20-03. 1 meter sample length, from 1 to 2 meters. 10-15% grey spod with abundant oxides on crystal surfaces. 65% grey quartz, esp from 30-60cm. (1.3-1.6m.) Minor aplite and green muscovite.	10	trace
2.00	3.00	1.00	spodumene pegmatite	TL-CH-20-03. 1 meter channel length, from 2-3 meters. Coarse grained grey quartz + coarse grained white K-feldspar. 5% white spodumene overall. Aplite(Pollucite?) mineralization at 80-90cm.	5	trace
3.00	3.65	0.65	spodumene pegmatite	TL-CH-20-03. 65cm channel length. 2-3% aplite (pollucite?) from 0-10cm. 15-20% spod overall. Cg qtz-feld-spod-green muscovite.	15	

Hole No:	**TL-CH-20-03**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-03	0	1	150289		spodumene pegmatite	2.14	3962	486.0		40	78.6
TL-CH-20-03	1	2	150292		spodumene pegmatite	1.85	2130	339.0		34	52.2
TL-CH-20-03	2	3	150293		spodumene pegmatite	0.89	6494	556.0		95	94.1
TL-CH-20-03	3	3.65	150294		spodumene pegmatite	1.70	3356	409.0		32	41.6

Hole Number:	**TL-CH-20-03b**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	0.3	**Storage:**	100% assayed	**NTS:**	52F16
Started:	10-Sep-20				
Completed:	10-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	10-Sep-20			**Easting:**	538942
Logged By:	A. Rich			**Northing:**	5530869
Drill Contractor:	JJ Minerals			**Elevation:**	393

Location

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: near South pond, aplite and south contact

Hole No: **TL-CH-20-03b** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0	0.1	0.10	Aplite	10cm of pegmatite at contact. Fine grained aplite with orange and red garnets and 1cm of mafic wall rock. Minor green muscovite, no spodumene observed.	0	0
0.10	0.30	0.20	Ultramafic	20cm of foliated meta-ultramafic.		

Hole No:	**TL-CH-20-03b**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-03b	0	0.1	150296		aplite	0.04	1637	252.0		29	85
TL-CH-20-03b	0.1	0.3	150297		meta-ultramafic	1.24	2466	5618.0		8	2

Hole Number:	**TL-CH-20-04**	**Property:** Gullwing-Tot Lakes		**Area:**	Tot Lake Pegmatite
Drilling				**Location**	
Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	0.95	**Storage:**	100% assayed	**NTS:**	52F16
Started:	10-Sep-20				
Completed:	10-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	10-Sep-20			**Easting:**	538938
Logged By:	A. Rich			**Northing:**	5530871
Drill Contractor:	JJ Minerals			**Elevation:**	394

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: spodumene, pollucite

Hole No: **TL-CH-20-04** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN	Other mineralization
0	0.95	0.95	pollucite zone	95cm sample length. Sample cut through boxwork of very fine grained grey + pink spodumene. 65%+ spod overall. 10% grey quartz. Orange garnets up to 5mm in size. 5-10% white pollucite in spod boxwork from 0-20cm. Green muscovite veins at pollucite crystal faces. Orange garnets from 75-85cm. Aplite zone from 85-95cm.	65	0	pollucite

Hole No:	TL-CH-20-04	Property:	Gullwing-Tot Lakes	Area:	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-04	0	0.95	150298		cg spod boxwork	2.89	1684	>10000	0.806	37	57.8

Hole Number:	**TL-CH-20-05**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

				Location	
Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	1	**Storage:**	100% assayed	**NTS:**	52F16
Started:	11-Sep-20				
Completed:	11-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	11-Sep-20			**Easting:**	538926
Logged By:	A. Rich			**Northing:**	5530890
Drill Contractor:	JJ Minerals			**Elevation:**	397

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: blocky K-feldspar + spod zone with beryl, possible pollucite

Hole No: **TL-CH-20-05** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN	Other mineralization
0	1	1.00	blocky K-feldspar + spod zone	1 meter channel sample. Sample is rich is blocky orange Kspar. White and rust colored spod is 5-10% of sample. Abundant oxide mineralization on spod crystal surfaces. From 55-65cm is possible pollucite pod. 90-100cm dark green spod, muscovite altered.	10	trace	beryl

Hole No: **TL-CH-20-05** **Property:** Gullwing-Tot Lakes **Area:** Tot Lake Pegmatite

Sample Intervals

Hole-ID	From	To	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs_overlir Cs2O (%)	Nb (ppm)	Ta (ppm)	Be (ppm)
TL-CH-20-05	0	1	157852		Blocky Kspar+Spod	2.00	4376	1086.0		133	255	2009

Hole Number:	**TL-CH-20-06**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	195537
Length (m):	1.3	**Storage:**	100% assayed	**NTS:**	52F16
Started:	12-Sep-20				
Completed:	12-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	12-Sep-20			**Easting:**	538919
Logged By:	A. Rich			**Northing:**	5530888
Drill Contractor:	JJ Minerals			**Elevation:**	405

Location

Reflex Tests:

Depth (m)	Azimuth corrected	Dip	Mag Sus(nT)

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: blocky K-feldspar + spodumene zone

Hole No: **TL-CH-20-06** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0.00	1.30	1.30	blocky K-feldspar + spodumene zone	Channel sample, near orange blocky Kspar and spod zone. 1.3m sample length, Megacrystic spodumene, up to 50x20cm, are abundant. Spod up to 2 cm thick. 10% spod overall. Sample is Kspar rich.	10	trace

Hole No:	**TL-CH-20-06**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From (m)	To (m)	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs_overlir Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-06	0	1.3	157856		Blocky Kspar + Mega Spod	2.88	3680	493.0		60	254

Hole Number:	**TL-CH-20-07**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Drilling

				Location	
Azimuth:	250	**Casing length (m):**	0	**Township:**	Webb
Dip:	0	**Core diameter:**		**Claim No:**	116833
Length (m):	0.65	**Storage:**	100% assayed	**NTS:**	52F16
Started:	13-Sep-20				
Completed:	13-Sep-20			**UTM:**	NAD 83, Zone 15U
Logged:	13-Sep-20			**Easting:**	538917
Logged By:	A. Rich			**Northing:**	5530890
Drill Contractor:	JJ Minerals			**Elevation:**	403

Reflex Tests:

Depth (m)	**Azimuth corrected**	**Dip**	**Mag Sus(nT)**

Purpose of hole:
Test Tot Pegmatite for Li,Cs,Ta.

Comments: columbite zone + albitized spodumene

Hole No: **TL-CH-20-07** **Property:** Gullwing-Tot Lake **Area:** Tot Lake Pegmatite

Lithological Logging

FROM (m)	TO (m)	INTERVAL (m)	LITHOLOGY	DESCRIPTION	% SPOD	%COL-TAN
0.00	0.65	0.65	columbite zone + albitized spodumene	Channel sample in albitized spodumene zone. Several .5 x .5 cm square oxide crystals present. Sample is 65cm. Channel is in a zone of albite alteration. Quartz and white albite rich, with minor green muscovite alteration. 5-10% spodumene, strongly altered to albite. Oxide minerals are rare.	3	trace

Hole No:	**TL-CH-20-07**	**Property:**	Gullwing-Tot Lakes	**Area:**	Tot Lake Pegmatite

Sample Intervals

Hole-ID	From	To	Sample ID	QA/QC	Comments	Li2O (%)	Rb (ppm)	Cs (ppm)	Cs2O (%)	Nb (ppm)	Ta (ppm)
TL-CH-20-06	0	0.65	157857		Altered Spod + columbite	0.02	1156	224.0		307	1062

Appendix 7 – Grab Sample and Channel Sample Assay Certificates

ANALYSIS REPORT YRL20-00312

To POWER METALS CORP
JULIE SELWAY
300-1055 WEST HASTINGS STREET
VANCOUVER V6E 2E9
BC
CANADA

Order Number	Tot Lake	Date Received	21-Sep-2020
Submission Number	*BBY* Power Metals Corp/Tot Lake/46	Date Analysed	06-Oct-2020 - 25-Oct-2020
Pulps		Date Completed	17-Nov-2020
Number of Samples	46	SGS Order Number	YRL20-00312

Methods Summary

Number of Sample	Method Code	Description
46	G_WGH_KG	Weight of samples received
46	GE_ICP90A50	Na2O2 Fusion, ICPAES, 0.1g-50ml
46	GE_IMS90A50	Na2O2 Fusion, HNO3, ICP-MS, 0.1g-50ml

Comments

Preparation of samples was performed at the SGS Red Lake site
Analysis of samples was performed at the SGS Burnaby site
Ag may be subject to analytical interference by GE_ICM90A50

Authorised Signatory

John Chiang
Laboratory Operations Manager

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Wtkg	Al	Ba	Be	Ca	Cr
Method	G_WGH_KG	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	0.01	0.01	10	5	0.1	10
Upper Limit	--	25	50,000	25,000	25	50,000
Unit	kg	%	ppm m / m	ppm m / m	%	ppm m / m
150278	3.28	7.98	11	142	0.2	<10
150279	3.00	6.91	151	<5	8.1	643
150280	0.01	4.78	1703	32	1.1	64
150281	5.66	8.45	17	313	0.1	14
150282	5.80	7.54	11	118	0.2	13
150283	4.07	9.86	18	172	0.1	11
150284	5.63	9.74	17	507	0.2	22
150285	1.29	8.13	975	<5	6.4	533
150286	7.43	8.26	11	189	0.2	14
150287	2.01	11.96	100	209	0.3	11
150288	4.52	12.29	63	8	0.2	<10
150289	7.67	9.07	16	142	0.2	14
150290	0.05	0.16	10	<5	<0.1	19
150291	0.09	9.00	<10	66	0.3	<10
150292	7.49	5.86	<10	116	<0.1	18
150293	5.61	7.67	11	70	0.1	14
150294	3.97	7.77	15	11	0.1	11
150295	0.76	8.37	<10	143	0.3	<10
150296	0.67	7.85	151	160	0.4	16
150297	1.32	7.55	709	<5	5.5	460
150298	6.20	9.18	<10	124	0.2	16
150299	0.41	9.38	2190	<5	4.0	17
150300	0.01	5.05	988	36	0.9	77
B00157851	0.62	7.60	43	<5	8.5	223
B00157852	5.96	10.37	21	2009	0.1	<10
B00157853	0.56	7.67	396	6	1.9	12
B00157854	0.19	7.00	511	12	7.3	301
B00157855	0.09	0.80	16	<5	0.3	22
B00157856	3.94	11.49	16	90	0.2	<10

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Wtkg	Al	Ba	Be	Ca	Cr
Method	G_WGH_KG	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	0.01	0.01	10	5	0.1	10
Upper Limit	--	25	50,000	25,000	25	50,000
Unit	kg	%	ppm m / m	ppm m / m	%	ppm m / m
B00157857	3.78	6.59	15	<5	0.1	<10
B00157858	1.13	7.60	737	<5	1.8	13
B00157859	0.51	7.45	90	<5	7.5	634
B00157860	0.07	0.26	14	<5	<0.1	<10
B00157861	0.43	8.00	140	<5	7.4	756
B00157862	0.22	0.06	<10	<5	<0.1	21
B00157863	0.56	5.77	19	<5	10.2	409
B00157864	2.22	2.44	<10	<5	8.9	81
B00157865	0.59	5.75	169	<5	1.8	17
B00157866	0.15	8.18	47	<5	9.0	282
B00157867	0.52	7.14	66	<5	9.5	220
B00157868	0.29	8.46	31	<5	11.5	233
B00157869	0.69	7.72	61	<5	10.3	371
B00157870	0.01	4.74	2124	32	1.1	68
B00157871	0.09	6.89	73	<5	1.4	12
B00157872	0.20	3.82	96	<5	3.8	77
B00157873	0.41	7.17	112	<5	5.9	186
*Dup B00157864	NR	2.46	<10	<5	8.9	75
*Blk BLANK	-	<0.01	<10	<5	<0.1	<10
*Std OREAS148	-	5.25	1027	37	1.0	77
*Std OREAS 149	-	7.35	2631	27	1.0	105
*Std OREAS750	-	5.40	438	38	0.8	32

Element	Cu	Fe	K	Li	Mg	Mn
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.01	0.1	10	0.01	10
Upper Limit	50,000	25	25	50,000	25	100,000
Unit	ppm m / m	%	%	ppm m / m	%	ppm m / m
150278	<10	0.39	3.2	507	0.02	184

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Cu	Fe	K	Li	Mg	Mn
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.01	0.1	10	0.01	10
Upper Limit	50,000	25	25	50,000	25	100,000
Unit	ppm m / m	%	%	ppm m / m	%	ppm m / m
150279	15	9.45	0.4	95	4.22	1810
150280	257	2.87	1.4	2003	0.55	386
150281	<10	0.76	1.2	10077	0.02	1212
150282	<10	0.55	1.8	3281	0.02	538
150283	<10	0.43	4.1	2854	0.02	554
150284	<10	0.66	1.0	9949	0.03	7554
150285	147	6.77	1.3	6403	3.86	1327
150286	<10	0.65	0.8	2516	0.03	636
150287	<10	0.50	2.4	1155	0.05	524
150288	<10	0.71	2.0	9970	0.04	1395
150289	<10	0.59	2.4	10202	0.02	941
150290	<10	1.17	<0.1	22	0.01	131
150291	<10	0.73	0.1	82	<0.01	298
150292	<10	0.67	1.3	8792	0.02	572
150293	<10	0.49	3.9	4247	0.02	695
150294	<10	0.54	2.2	8115	0.02	471
150295	<10	0.41	0.1	378	<0.01	1815
150296	<10	0.52	1.4	203	0.09	460
150297	194	7.40	1.7	5899	4.17	1470
150298	<10	0.58	0.8	13766	0.02	4008
150299	15	2.43	3.5	58	1.01	501
150300	318	2.84	1.5	4936	0.45	409
B00157851	<10	8.64	0.4	26	3.58	1546
B00157852	<10	0.55	2.7	9542	0.02	921
B00157853	<10	1.34	0.9	97	0.30	240
B00157854	<10	6.69	1.1	151	3.78	1493
B00157855	<10	1.02	<0.1	27	0.04	135
B00157856	<10	0.51	2.5	13692	0.02	944
B00157857	<10	0.36	0.9	103	0.01	440

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Cu	Fe	K	Li	Mg	Mn
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.01	0.1	10	0.01	10
Upper Limit	50,000	25	25	50,000	25	100,000
Unit	ppm m / m	%	%	ppm m / m	%	ppm m / m
B00157858	<10	1.54	1.6	48	0.39	220
B00157859	101	7.47	0.2	29	4.28	1417
B00157860	<10	1.13	<0.1	29	0.02	132
B00157861	50	7.56	0.3	43	4.82	1350
B00157862	<10	0.68	<0.1	10	0.02	86
B00157863	64	7.36	<0.1	<10	3.08	2023
B00157864	1721	12.19	<0.1	<10	3.18	1449
B00157865	34	1.52	0.6	<10	0.36	167
B00157866	241	9.98	0.6	16	4.39	1634
B00157867	79	8.78	0.6	<10	4.58	1809
B00157868	<10	8.63	0.2	<10	2.57	1456
B00157869	73	7.04	0.3	14	2.68	1256
B00157870	302	3.07	1.6	2373	0.56	412
B00157871	43	1.49	0.4	13	0.27	184
B00157872	18	5.47	0.4	22	1.96	1203
B00157873	71	10.51	0.4	56	4.01	2321
*Dup B00157864	1709	12.19	<0.1	<10	3.15	1400
*Blk BLANK	<10	<0.01	<0.1	<10	<0.01	<10
*Std OREAS148	326	2.94	1.5	4853	0.48	405
*Std OREAS 149	319	3.92	1.4	10475	0.52	494
*Std OREAS750	20	1.63	1.7	2474	0.32	431

Element	P	Sc	Si	Sr	Ti	V
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	0.01	5	0.1	10	0.01	10
Upper Limit	25	50,000	30	5,000	25	50,000
Unit	%	ppm m / m	%	ppm m / m	%	ppm m / m
150278	0.03	<5	>30.0	63	<0.01	<10
150279	0.04	38	21.8	163	0.44	231

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	P	Sc	Si	Sr	Ti	V
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	0.01	5	0.1	10	0.01	10
Upper Limit	25	50,000	30	5,000	25	50,000
Unit	%	ppm m / m	%	ppm m / m	%	ppm m / m
150280	0.13	9	>30.0	259	0.44	51
150281	0.03	<5	>30.0	26	<0.01	<10
150282	0.03	<5	>30.0	41	<0.01	<10
150283	0.03	<5	29.6	83	<0.01	<10
150284	0.02	<5	>30.0	29	<0.01	<10
150285	0.03	36	19.8	138	0.37	208
150286	0.04	<5	>30.0	30	<0.01	<10
150287	0.03	<5	28.2	75	<0.01	<10
150288	0.01	<5	26.1	58	<0.01	<10
150289	0.05	<5	30.0	52	<0.01	<10
150290	<0.01	<5	>30.0	<10	0.01	<10
150291	0.06	<5	>30.0	13	<0.01	<10
150292	0.02	<5	>30.0	29	<0.01	<10
150293	0.03	<5	>30.0	78	<0.01	<10
150294	0.02	<5	>30.0	50	<0.01	<10
150295	0.10	<5	>30.0	<10	<0.01	<10
150296	0.03	<5	>30.0	53	<0.01	<10
150297	0.02	43	20.7	139	0.40	222
150298	0.03	<5	29.9	25	<0.01	<10
150299	0.04	<5	27.1	563	0.18	48
150300	0.13	7	>30.0	212	0.33	47
B00157851	0.03	40	22.9	93	0.52	269
B00157852	0.03	<5	>30.0	60	<0.01	<10
B00157853	0.03	<5	>30.0	414	0.13	21
B00157854	0.02	33	25.0	299	0.34	189
B00157855	<0.01	<5	>30.0	41	<0.01	<10
B00157856	0.04	<5	29.9	60	<0.01	<10
B00157857	0.02	<5	>30.0	32	<0.01	<10
B00157858	0.02	<5	>30.0	637	0.13	23

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	P	Sc	Si	Sr	Ti	V
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	0.01	5	0.1	10	0.01	10
Upper Limit	25	50,000	30	5,000	25	50,000
Unit	%	ppm m / m	%	ppm m / m	%	ppm m / m
B00157859	0.02	43	23.1	134	0.39	237
B00157860	<0.01	<5	>30.0	<10	0.01	<10
B00157861	0.02	41	21.0	186	0.38	217
B00157862	<0.01	<5	>30.0	<10	<0.01	<10
B00157863	0.01	28	24.3	185	0.30	179
B00157864	0.05	10	23.6	124	0.12	96
B00157865	0.02	<5	>30.0	269	0.12	24
B00157866	0.02	50	20.6	134	0.55	319
B00157867	0.04	37	21.9	166	0.44	299
B00157868	0.02	31	21.6	317	0.45	279
B00157869	0.02	29	23.4	200	0.23	250
B00157870	0.15	9	>30.0	301	0.46	60
B00157871	0.03	<5	>30.0	138	0.12	21
B00157872	0.02	18	>30.0	56	0.25	133
B00157873	0.03	46	20.7	95	0.68	300
*Dup B00157864	0.05	9	23.4	125	0.12	99
*Blk BLANK	<0.01	<5	<0.1	<10	<0.01	<10
*Std OREAS148	0.13	7	>30.0	209	0.34	49
*Std OREAS 149	0.10	7	29.5	224	0.34	64
*Std OREAS750	0.07	<5	>30.0	78	0.15	24

Element	Zn	Al2O3	CaO	Cr2O3	Fe2O3	K2O
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.02	0.14	15	0.01	0.12
Upper Limit	50,000	47.24	34.98	73,075	35.74	30.11
Unit	ppm m / m	%	%	ppm m / m	%	%
150278	57	15.08	0.3	<15	0.56	3.9
150279	169	13.06	11.4	940	13.51	0.5
150280	128	9.03	1.6	94	4.10	1.7

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Zn	Al2O3	CaO	Cr2O3	Fe2O3	K2O
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.02	0.14	15	0.01	0.12
Upper Limit	50,000	47.24	34.98	73,075	35.74	30.11
Unit	ppm m / m	%	%	ppm m / m	%	%
150281	68	15.98	0.2	20	1.09	1.4
150282	57	14.25	0.2	18	0.79	2.1
150283	36	18.64	0.2	16	0.62	5.0
150284	53	18.40	0.2	32	0.95	1.2
150285	99	15.36	9.0	779	9.68	1.6
150286	122	15.62	0.3	21	0.92	0.9
150287	45	22.60	0.5	16	0.72	2.9
150288	54	23.23	0.3	<15	1.01	2.5
150289	63	17.13	0.2	20	0.85	2.9
150290	<10	0.30	<0.1	28	1.67	<0.1
150291	49	17.01	0.4	<15	1.04	0.2
150292	32	11.07	<0.1	26	0.96	1.5
150293	53	14.50	0.2	20	0.71	4.6
150294	39	14.68	0.2	16	0.77	2.6
150295	412	15.82	0.4	<15	0.58	0.1
150296	33	14.83	0.5	24	0.75	1.6
150297	197	14.27	7.7	672	10.58	2.1
150298	47	17.34	0.2	24	0.82	0.9
150299	49	17.73	5.6	25	3.48	4.2
150300	153	9.54	1.2	113	4.06	1.8
B00157851	81	14.37	11.8	326	12.35	0.4
B00157852	36	19.58	0.2	<15	0.78	3.2
B00157853	23	14.50	2.7	17	1.92	1.1
B00157854	121	13.23	10.3	440	9.56	1.3
B00157855	<10	1.51	0.4	32	1.46	<0.1
B00157856	25	21.72	0.3	<15	0.74	3.0
B00157857	24	12.45	0.2	<15	0.51	1.1
B00157858	39	14.37	2.6	18	2.20	1.9
B00157859	82	14.08	10.5	927	10.68	0.3

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Element	Zn	Al2O3	CaO	Cr2O3	Fe2O3	K2O
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	10	0.02	0.14	15	0.01	0.12
Upper Limit	50,000	47.24	34.98	73,075	35.74	30.11
Unit	ppm m / m	%	%	ppm m / m	%	%
B00157860	<10	0.49	<0.1	<15	1.62	<0.1
B00157861	75	15.12	10.3	1105	10.81	0.4
B00157862	<10	0.11	<0.1	31	0.97	<0.1
B00157863	77	10.91	14.2	598	10.52	<0.1
B00157864	362	4.60	12.4	118	17.44	<0.1
B00157865	16	10.87	2.5	25	2.17	0.7
B00157866	106	15.45	12.6	412	14.27	0.7
B00157867	206	13.49	13.3	321	12.56	0.7
B00157868	86	15.99	16.1	340	12.34	0.2
B00157869	89	14.58	14.5	542	10.06	0.4
B00157870	134	8.95	1.5	100	4.39	1.9
B00157871	13	13.01	2.0	17	2.14	0.5
B00157872	61	7.22	5.3	112	7.81	0.4
B00157873	113	13.54	8.3	272	15.02	0.5
*Dup B00157864	355	4.65	12.5	110	17.42	<0.1
*Blk BLANK	<10	<0.02	<0.1	<15	<0.01	<0.1
*Std OREAS148	160	9.93	1.3	112	4.20	1.8
*Std OREAS 149	321	13.89	1.4	154	5.60	1.7
*Std OREAS750	62	10.20	1.2	47	2.33	2.1

Element	Li2O	MgO	MnO	P2O5	SiO2	TiO2
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	22	0.02	13	0.02	0.2	0.02
Upper Limit	107,635	41.46	129,120	57.29	64.2	41.7
Unit	ppm m / m	%	ppm m / m	%	%	%
150278	1065	0.03	238	0.07	>64.2	<0.02
150279	200	6.99	2337	0.08	46.6	0.73
150280	4206	0.92	499	0.30	>64.2	0.74
150281	21164	0.04	1565	0.07	>64.2	<0.02

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
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Element	Li2O	MgO	MnO	P2O5	SiO2	TiO2
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	22	0.02	13	0.02	0.2	0.02
Upper Limit	107,635	41.46	129,120	57.29	64.2	41.7
Unit	ppm m / m	%	ppm m / m	%	%	%
150282	6891	0.03	695	0.07	>64.2	<0.02
150283	5994	0.03	715	0.08	63.4	<0.02
150284	20895	0.05	9753	0.05	>64.2	<0.02
150285	13448	6.40	1714	0.07	42.4	0.61
150286	5284	0.05	821	0.09	>64.2	<0.02
150287	2426	0.09	677	0.08	60.2	<0.02
150288	20939	0.06	1801	0.03	55.9	<0.02
150289	21425	0.03	1215	0.11	64.1	<0.02
150290	46	0.02	170	<0.02	>64.2	0.02
150291	172	<0.02	385	0.13	>64.2	<0.02
150292	18466	0.03	738	0.05	>64.2	<0.02
150293	8919	0.03	898	0.06	>64.2	<0.02
150294	17044	0.04	608	0.04	>64.2	<0.02
150295	793	<0.02	2343	0.23	>64.2	<0.02
150296	426	0.15	594	0.07	>64.2	<0.02
150297	12390	6.92	1898	0.06	44.3	0.66
150298	28911	0.04	5176	0.07	63.9	<0.02
150299	121	1.68	647	0.09	58.0	0.30
150300	10366	0.75	528	0.29	>64.2	0.55
B00157851	56	5.94	1996	0.07	48.9	0.87
B00157852	20040	0.03	1189	0.06	>64.2	<0.02
B00157853	204	0.50	310	0.06	>64.2	0.21
B00157854	317	6.27	1928	0.05	53.4	0.56
B00157855	57	0.06	174	<0.02	>64.2	<0.02
B00157856	28756	0.04	1219	0.09	63.9	<0.02
B00157857	217	0.02	569	0.04	>64.2	<0.02
B00157858	100	0.64	284	0.05	>64.2	0.22
B00157859	61	7.09	1830	0.04	49.3	0.65
B00157860	61	0.03	170	0.02	>64.2	0.02

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Element	Li2O	MgO	MnO	P2O5	SiO2	TiO2
Method	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50	GE_ICP90A50
Lower Limit	22	0.02	13	0.02	0.2	0.02
Upper Limit	107,635	41.46	129,120	57.29	64.2	41.7
Unit	ppm m / m	%	ppm m / m	%	%	%
B00157861	90	8.00	1744	0.05	44.8	0.63
B00157862	<22	0.03	111	<0.02	>64.2	<0.02
B00157863	<22	5.10	2612	0.03	52.0	0.49
B00157864	<22	5.27	1871	0.11	50.5	0.21
B00157865	<22	0.59	216	0.05	>64.2	0.20
B00157866	34	7.28	2110	0.06	44.0	0.92
B00157867	<22	7.60	2336	0.08	46.8	0.73
B00157868	<22	4.26	1879	0.05	46.2	0.76
B00157869	30	4.45	1622	0.05	50.1	0.38
B00157870	4984	0.92	532	0.35	>64.2	0.76
B00157871	27	0.46	237	0.07	>64.2	0.20
B00157872	46	3.25	1553	0.05	>64.2	0.41
B00157873	117	6.65	2997	0.07	44.4	1.14
*Dup B00157864	<22	5.22	1807	0.12	50.0	0.20
*Blk BLANK	<22	<0.02	<13	<0.02	<0.2	<0.02
*Std OREAS148	10192	0.79	522	0.29	>64.2	0.57
*Std OREAS 149	21999	0.87	638	0.23	63.1	0.57
*Std OREAS750	5195	0.53	557	0.16	>64.2	0.25

Element	V2O5	Ag	As	Bi	Cd	Ce
Method	GE_ICP90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	18	1	3	0.1	0.2	0.1
Upper Limit	89,260	200	10,000	1,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	<18	<1	<3	0.1	0.5	0.4
150279	413	<1	<3	0.7	0.4	7.6
150280	91	<1	35	13.6	1.3	1197
150281	<18	<1	<3	0.1	<0.2	0.9
150282	<18	<1	<3	1.3	<0.2	0.8

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Element	V2O5	Ag	As	Bi	Cd	Ce
Method	GE_ICP90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	18	1	3	0.1	0.2	0.1
Upper Limit	89,260	200	10,000	1,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	<18	<1	<3	2.1	<0.2	0.8
150284	<18	<1	<3	0.6	0.3	0.4
150285	372	<1	13	0.2	0.8	4.7
150286	<18	<1	<3	3.0	<0.2	1.2
150287	<18	<1	<3	3.1	<0.2	1.2
150288	<18	<1	<3	1.4	<0.2	0.4
150289	<18	<1	<3	0.8	<0.2	2.4
150290	<18	18	<3	<0.1	<0.2	4.1
150291	<18	31	<3	0.4	<0.2	1.6
150292	<18	<1	<3	3.7	<0.2	0.9
150293	<18	<1	<3	8.3	0.2	1.8
150294	<18	<1	<3	1.4	<0.2	2.0
150295	<18	2	<3	0.2	0.4	1.2
150296	<18	3	<3	2.2	<0.2	3.3
150297	396	22	21	0.1	0.6	8.3
150298	<18	9	<3	0.1	0.6	0.3
150299	86	10	<3	1.5	<0.2	31.9
150300	84	26	56	20.3	6.7	823
B00157851	480	<1	<3	0.2	<0.2	7.8
B00157852	<18	<1	<3	0.8	0.3	1.1
B00157853	38	3	<3	0.4	<0.2	13.3
B00157854	337	2	<3	2.0	0.3	7.7
B00157855	<18	6	<3	0.2	<0.2	1.9
B00157856	<18	<1	<3	0.3	<0.2	1.4
B00157857	<18	<1	<3	0.3	<0.2	0.6
B00157858	41	1	<3	0.3	<0.2	13.9
B00157859	423	<1	<3	<0.1	<0.2	4.4
B00157860	<18	<1	<3	<0.1	<0.2	4.7
B00157861	388	<1	<3	<0.1	0.2	5.1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Element	V2O5	Ag	As	Bi	Cd	Ce
Method	GE_ICP90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	18	1	3	0.1	0.2	0.1
Upper Limit	89,260	200	10,000	1,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	<18	<1	<3	<0.1	<0.2	<0.1
B00157863	319	<1	<3	2.3	0.4	4.9
B00157864	171	<1	4	4.8	2.3	6.9
B00157865	43	<1	<3	0.2	<0.2	12.2
B00157866	569	<1	<3	1.2	0.2	8.1
B00157867	533	<1	<3	6.5	0.6	5.5
B00157868	498	<1	<3	1.1	0.3	9.6
B00157869	447	<1	<3	7.6	0.4	3.9
B00157870	106	3	33	13.4	0.9	1185
B00157871	37	<1	<3	0.3	<0.2	7.6
B00157872	238	<1	<3	0.9	0.2	3.9
B00157873	535	<1	<3	0.3	0.2	5.5
*Dup B00157864	176	2	3	5.1	2.2	6.7
*Blk BLANK	<18	<1	<3	<0.1	<0.2	<0.1
*Std OREAS148	87	2	56	19.1	<0.2	683
*Std OREAS 149	114	10	165	50.2	4.5	436
*Std OREAS750	43	<1	14	1.0	0.4	32.2
*Blk BLANK	-	<1	<3	0.2	0.2	<0.1

Element	Co	Cs	Dy	Er	Eu	Ga
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.5	0.1	0.05	0.05	0.05	1
Upper Limit	10,000	10,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	<0.5	549	0.08	<0.05	<0.05	34
150279	68.1	34.5	2.59	1.66	0.67	15
150280	6.9	206	8.95	2.86	10.26	22
150281	<0.5	369	0.64	0.05	<0.05	66
150282	<0.5	357	0.29	<0.05	<0.05	58

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Element	Co	Cs	Dy	Er	Eu	Ga
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.5	0.1	0.05	0.05	0.05	1
Upper Limit	10,000	10,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	<0.5	659	0.19	<0.05	<0.05	66
150284	<0.5	544	0.78	0.08	<0.05	74
150285	44.8	4364	2.14	1.40	0.46	16
150286	1.6	282	0.21	0.07	<0.05	63
150287	1.6	385	0.26	0.05	<0.05	95
150288	1.5	380	0.30	0.06	<0.05	125
150289	0.5	486	0.98	0.10	<0.05	93
150290	0.7	3.0	0.38	0.22	0.07	1
150291	<0.5	40.2	0.69	0.07	<0.05	71
150292	1.7	339	0.21	<0.05	<0.05	56
150293	1.0	556	0.26	<0.05	<0.05	60
150294	1.3	409	0.21	<0.05	<0.05	67
150295	<0.5	85.6	0.28	<0.05	<0.05	57
150296	1.5	252	0.49	0.12	<0.05	62
150297	55.7	5618	2.31	1.58	0.48	19
150298	0.6	>10000	0.34	<0.05	<0.05	68
150299	8.4	64.4	0.95	0.53	0.56	18
150300	7.4	341	6.47	2.13	7.38	30
B00157851	44.4	40.4	3.41	2.37	0.75	18
B00157852	1.5	1086	0.26	<0.05	<0.05	89
B00157853	3.1	23.3	0.50	0.26	0.36	22
B00157854	33.2	23.0	2.06	1.40	0.49	19
B00157855	0.8	9.0	0.07	0.07	<0.05	3
B00157856	2.8	493	0.13	0.05	<0.05	93
B00157857	2.0	224	0.06	<0.05	<0.05	40
B00157858	5.0	16.7	0.57	0.26	0.45	22
B00157859	43.8	8.4	2.57	1.66	0.61	15
B00157860	1.2	5.3	0.50	0.37	0.06	1
B00157861	58.7	18.3	2.32	1.61	0.56	16

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Lake/46 Pulps
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Element	Co	Cs	Dy	Er	Eu	Ga
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.5	0.1	0.05	0.05	0.05	1
Upper Limit	10,000	10,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	0.6	7.0	<0.05	<0.05	<0.05	<1
B00157863	38.0	3.5	2.15	1.51	0.44	19
B00157864	136	1.7	1.63	1.05	0.65	9
B00157865	6.6	9.7	0.37	0.21	0.24	14
B00157866	52.5	8.3	3.77	2.66	0.97	20
B00157867	26.8	10.5	1.89	1.51	0.38	23
B00157868	24.9	2.3	3.14	2.23	0.77	27
B00157869	26.4	3.7	1.83	1.67	0.38	26
B00157870	7.8	247	8.76	2.82	10.29	22
B00157871	3.6	6.4	0.36	0.20	0.25	16
B00157872	28.9	7.5	1.97	1.51	0.54	11
B00157873	46.7	5.8	4.30	2.70	0.91	19
*Dup B00157864	147	1.5	1.64	1.02	0.63	9
*Blk BLANK	<0.5	0.1	<0.05	<0.05	<0.05	<1
*Std OREAS148	6.7	315	6.11	2.00	6.82	27
*Std OREAS 149	9.3	367	4.75	1.84	4.19	52
*Std OREAS750	4.5	24.2	2.58	1.39	0.63	14
*Blk BLANK	<0.5	0.4	<0.05	<0.05	<0.05	<1

Element	Gd	Ge	Ho	In	La	Lu
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.05	1	0.05	0.2	0.1	0.05
Upper Limit	1,000	1,000	1,000	1,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	0.15	8	<0.05	<0.2	0.3	<0.05
150279	2.25	2	0.59	<0.2	2.9	0.26
150280	22.27	4	1.26	2.7	690	0.22
150281	1.11	7	<0.05	<0.2	0.3	<0.05
150282	0.43	6	<0.05	<0.2	0.3	<0.05

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Gd	Ge	Ho	In	La	Lu
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.05	1	0.05	0.2	0.1	0.05
Upper Limit	1,000	1,000	1,000	1,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	0.23	8	<0.05	<0.2	0.4	<0.05
150284	0.77	12	<0.05	<0.2	0.2	<0.05
150285	1.61	3	0.48	<0.2	1.8	0.21
150286	0.49	7	<0.05	<0.2	0.5	<0.05
150287	0.45	6	<0.05	<0.2	0.4	<0.05
150288	0.28	7	<0.05	<0.2	0.1	<0.05
150289	1.69	8	0.06	<0.2	1.0	<0.05
150290	0.38	2	0.07	<0.2	2.0	<0.05
150291	1.15	9	<0.05	<0.2	0.7	<0.05
150292	0.35	7	<0.05	<0.2	0.3	<0.05
150293	0.37	8	<0.05	<0.2	0.4	<0.05
150294	0.39	7	<0.05	<0.2	0.3	<0.05
150295	0.40	11	<0.05	<0.2	0.5	<0.05
150296	0.79	6	0.05	<0.2	0.9	<0.05
150297	1.79	3	0.51	<0.2	3.9	0.21
150298	0.52	10	<0.05	<0.2	0.1	<0.05
150299	1.27	2	0.19	<0.2	14.7	0.08
150300	15.41	5	0.93	4.7	479	0.17
B00157851	2.95	2	0.75	<0.2	3.0	0.36
B00157852	0.36	10	<0.05	<0.2	0.4	<0.05
B00157853	0.86	1	0.08	<0.2	6.1	<0.05
B00157854	1.55	3	0.46	<0.2	4.7	0.23
B00157855	0.08	1	<0.05	<0.2	1.0	<0.05
B00157856	0.19	12	<0.05	<0.2	0.5	<0.05
B00157857	0.08	7	<0.05	<0.2	0.2	<0.05
B00157858	0.96	<1	0.11	<0.2	4.6	<0.05
B00157859	1.80	2	0.53	<0.2	1.5	0.24
B00157860	0.45	1	0.12	<0.2	2.4	0.07
B00157861	1.80	2	0.52	<0.2	1.8	0.25

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Gd	Ge	Ho	In	La	Lu
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.05	1	0.05	0.2	0.1	0.05
Upper Limit	1,000	1,000	1,000	1,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	<0.05	2	<0.05	<0.2	<0.1	<0.05
B00157863	1.70	3	0.52	<0.2	2.2	0.22
B00157864	1.68	4	0.35	<0.2	2.7	0.15
B00157865	0.42	<1	0.07	<0.2	5.1	<0.05
B00157866	2.97	3	0.87	<0.2	3.1	0.37
B00157867	1.62	3	0.45	<0.2	2.3	0.27
B00157868	2.44	4	0.69	<0.2	4.3	0.32
B00157869	1.39	4	0.48	<0.2	2.0	0.34
B00157870	21.65	4	1.25	2.6	695	0.21
B00157871	0.58	<1	0.06	<0.2	3.2	<0.05
B00157872	1.62	2	0.48	<0.2	1.6	0.27
B00157873	3.45	2	0.92	<0.2	1.6	0.36
*Dup B00157864	1.54	3	0.33	<0.2	2.8	0.16
*Blk BLANK	<0.05	<1	<0.05	<0.2	<0.1	<0.05
*Std OREAS148	15.00	5	0.92	3.7	410	0.17
*Std OREAS 149	9.16	8	0.76	13.0	260	0.21
*Std OREAS750	3.06	3	0.52	<0.2	15.8	0.19
*Blk BLANK	<0.05	<1	<0.05	<0.2	<0.1	<0.05

Element	Mo	Nb	Nd	Ni	Pb	Pr
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	2	0.1	5	2	0.05
Upper Limit	10,000	10,000	10,000	50,000	50,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	<2	23	0.2	6	24	0.06
150279	<2	7	5.8	218	6	1.13
150280	7	1127	393	27	38	126
150281	<2	30	0.5	5	10	0.14
150282	<2	41	0.4	16	17	0.12

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
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Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Mo	Nb	Nd	Ni	Pb	Pr
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	2	0.1	5	2	0.05
Upper Limit	10,000	10,000	10,000	50,000	50,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	<2	48	0.4	5	30	0.09
150284	<2	28	0.2	8	12	0.06
150285	<2	10	3.3	101	20	0.68
150286	<2	50	0.6	6	13	0.17
150287	<2	45	0.6	12	21	0.19
150288	<2	29	0.2	7	12	0.06
150289	<2	40	1.3	11	17	0.33
150290	<2	4	1.6	6	<2	0.44
150291	<2	95	0.9	<5	13	0.23
150292	<2	34	0.4	<5	12	0.10
150293	<2	95	0.5	6	32	0.13
150294	<2	32	0.5	<5	17	0.12
150295	<2	62	0.3	<5	12	0.13
150296	<2	29	1.2	6	20	0.34
150297	<2	8	4.3	110	19	0.95
150298	<2	37	<0.1	6	7	<0.05
150299	<2	4	10.5	28	25	2.94
150300	9	1671	276	35	33	87.18
B00157851	5	4	6.2	107	4	1.23
B00157852	<2	133	0.5	<5	28	0.12
B00157853	<2	3	5.2	10	6	1.41
B00157854	<2	5	4.0	115	12	0.90
B00157855	<2	3	0.6	7	<2	0.19
B00157856	<2	60	0.4	<5	28	0.12
B00157857	<2	307	0.2	11	8	<0.05
B00157858	<2	3	6.6	8	13	1.58
B00157859	<2	4	4.1	105	4	0.71
B00157860	<2	7	2.3	5	2	0.61
B00157861	<2	<2	4.0	173	9	0.82

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Mo	Nb	Nd	Ni	Pb	Pr
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	2	0.1	5	2	0.05
Upper Limit	10,000	10,000	10,000	50,000	50,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	<2	3	<0.1	6	<2	<0.05
B00157863	6	5	4.0	131	9	0.75
B00157864	<2	2	4.3	108	23	0.98
B00157865	<2	<2	4.1	12	12	1.15
B00157866	<2	3	6.7	141	9	1.32
B00157867	53	3	3.9	77	30	0.81
B00157868	2	2	6.2	92	15	1.35
B00157869	77	4	3.2	895	16	0.60
B00157870	8	1147	393	29	37	126
B00157871	3	4	3.5	8	8	0.90
B00157872	4	<2	3.2	49	3	0.61
B00157873	7	4	5.9	69	4	1.03
*Dup B00157864	<2	<2	4.3	110	24	0.99
*Blk BLANK	<2	3	<0.1	6	<2	<0.05
*Std OREAS148	8	1500	255	26	28	80.54
*Std OREAS 149	11	5829	150	41	41	49.51
*Std OREAS750	2	25	15.1	17	16	4.01
*Blk BLANK	<2	2	<0.1	7	<2	<0.05

Element	Rb	Sb	Sm	Sn	Ta	Tb
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	1	0.1	1	0.5	0.05
Upper Limit	10,000	10,000	1,000	10,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	4292	<1	0.1	7	47.5	<0.05
150279	52	<1	1.8	1	<0.5	0.41
150280	1197	10	48.5	724	17.0	2.29
150281	1742	<1	0.8	42	39.4	0.22
150282	2384	<1	0.4	34	85.8	0.08

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
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Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Rb	Sb	Sm	Sn	Ta	Tb
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	1	0.1	1	0.5	0.05
Upper Limit	10,000	10,000	1,000	10,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	6033	<1	0.3	46	113	<0.05
150284	1401	<1	0.3	63	61.1	0.18
150285	1135	<1	1.1	16	0.6	0.30
150286	1189	<1	0.6	44	90.0	0.07
150287	2457	<1	0.5	49	83.8	0.07
150288	2828	<1	0.2	75	55.2	0.06
150289	3962	<1	1.4	110	78.6	0.30
150290	13	<1	0.3	<1	<0.5	0.05
150291	94	<1	1.1	2	254	0.18
150292	2130	<1	0.3	42	52.2	0.06
150293	6494	<1	0.3	32	94.1	0.06
150294	3356	<1	0.3	33	41.6	0.06
150295	93	<1	0.4	10	186	0.09
150296	1637	<1	0.8	25	85.0	0.13
150297	2466	<1	1.3	5	2.0	0.35
150298	1684	<1	0.2	42	57.8	0.10
150299	104	<1	1.7	<1	<0.5	0.17
150300	1327	15	34.8	1228	21.2	1.63
B00157851	14	<1	2.1	1	<0.5	0.51
B00157852	4376	<1	0.3	130	255	0.06
B00157853	73	<1	1.0	2	1.1	0.10
B00157854	91	<1	1.1	11	2.2	0.31
B00157855	23	<1	<0.1	<1	0.6	<0.05
B00157856	3680	<1	0.2	122	254	<0.05
B00157857	1156	<1	<0.1	21	1062	<0.05
B00157858	84	<1	1.4	2	0.7	0.11
B00157859	13	<1	1.4	7	1.4	0.39
B00157860	12	<1	0.5	9	12.4	0.08
B00157861	18	<1	1.5	<1	<0.5	0.35

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Rb	Sb	Sm	Sn	Ta	Tb
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	2	1	0.1	1	0.5	0.05
Upper Limit	10,000	10,000	1,000	10,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	6	<1	<0.1	9	<0.5	<0.05
B00157863	6	<1	1.3	2	<0.5	0.32
B00157864	3	<1	1.2	1	<0.5	0.24
B00157865	39	<1	0.7	<1	<0.5	0.07
B00157866	21	<1	2.2	<1	<0.5	0.54
B00157867	29	<1	1.1	1	<0.5	0.26
B00157868	5	1	2.0	1	<0.5	0.46
B00157869	21	<1	0.9	13	<0.5	0.25
B00157870	1188	10	48.2	833	15.7	2.28
B00157871	27	<1	0.7	8	<0.5	0.07
B00157872	35	<1	1.2	<1	<0.5	0.31
B00157873	30	<1	2.5	<1	<0.5	0.63
*Dup B00157864	3	<1	1.2	<1	<0.5	0.24
*Blk BLANK	<2	<1	<0.1	<1	<0.5	<0.05
*Std OREAS148	1168	17	32.2	1213	21.2	1.50
*Std OREAS 149	744	30	18.9	3094	28.6	1.04
*Std OREAS750	265	<1	3.3	50	9.0	0.46
*Blk BLANK	<2	<1	<0.1	2	<0.5	<0.05

Element	Th	Tl	Tm	U	W	Y
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.1	0.5	0.05	0.05	5	0.5
Upper Limit	1,000	1,000	1,000	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150278	1.3	48.0	<0.05	1.12	<5	0.5
150279	0.5	0.5	0.26	0.13	<5	16.3
150280	96.5	11.6	0.30	16.15	6	27.1
150281	2.7	15.3	<0.05	2.42	<5	3.2
150282	2.6	22.4	<0.05	2.01	<5	1.7

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Th	Tl	Tm	U	W	Y
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.1	0.5	0.05	0.05	5	0.5
Upper Limit	1,000	1,000	1,000	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
150283	2.8	61.3	<0.05	1.52	<5	1.5
150284	1.8	11.8	<0.05	0.82	<5	4.4
150285	0.2	14.3	0.21	0.63	7	13.0
150286	1.6	9.8	<0.05	1.24	<5	1.3
150287	2.6	18.5	<0.05	1.85	<5	1.7
150288	0.9	20.3	<0.05	1.60	<5	2.0
150289	1.6	39.9	<0.05	2.05	<5	5.1
150290	1.0	<0.5	<0.05	0.32	<5	2.5
150291	1.5	0.7	<0.05	3.45	<5	3.4
150292	0.8	22.9	<0.05	0.76	<5	1.2
150293	0.9	68.8	<0.05	1.29	<5	1.6
150294	0.7	34.0	<0.05	0.38	<5	1.2
150295	2.9	0.7	<0.05	1.48	<5	2.0
150296	1.8	12.8	<0.05	2.80	<5	2.8
150297	0.2	28.4	0.23	1.95	23	12.4
150298	1.0	15.0	<0.05	1.01	<5	2.1
150299	4.0	0.6	0.07	1.02	<5	4.9
150300	49.2	13.1	0.24	8.21	6	19.9
B00157851	0.4	<0.5	0.34	0.09	<5	21.3
B00157852	2.3	42.5	<0.05	1.61	<5	1.7
B00157853	3.2	0.5	<0.05	1.12	<5	2.9
B00157854	0.7	0.7	0.21	0.70	<5	13.7
B00157855	0.5	<0.5	<0.05	0.11	<5	0.6
B00157856	6.5	38.6	<0.05	3.41	<5	1.2
B00157857	1.4	8.7	<0.05	3.88	<5	0.5
B00157858	3.3	0.6	<0.05	0.91	<5	2.9
B00157859	0.1	<0.5	0.25	0.08	<5	14.0
B00157860	1.8	<0.5	0.05	0.46	<5	3.6
B00157861	0.1	<0.5	0.25	0.05	<5	14.3

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot
Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Th	Tl	Tm	U	W	Y
Method	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50	GE_IMS90A50
Lower Limit	0.1	0.5	0.05	0.05	5	0.5
Upper Limit	1,000	1,000	1,000	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
B00157862	<0.1	<0.5	<0.05	<0.05	<5	<0.5
B00157863	0.3	<0.5	0.22	0.11	13	16.2
B00157864	0.2	<0.5	0.14	0.08	5	9.9
B00157865	3.1	<0.5	<0.05	0.79	<5	2.2
B00157866	0.3	<0.5	0.39	0.12	<5	24.3
B00157867	0.2	<0.5	0.23	0.28	6	11.3
B00157868	0.4	<0.5	0.32	0.18	<5	17.6
B00157869	0.1	<0.5	0.28	0.26	<5	12.1
B00157870	92.3	11.5	0.29	15.76	5	26.7
B00157871	2.9	<0.5	<0.05	1.34	<5	2.1
B00157872	0.2	<0.5	0.23	0.07	<5	12.7
B00157873	0.5	<0.5	0.39	0.14	<5	22.3
*Dup B00157864	0.2	<0.5	0.15	0.07	6	9.8
*Blk BLANK	<0.1	<0.5	<0.05	<0.05	<5	<0.5
*Std OREAS148	48.4	12.6	0.24	8.29	8	20.3
*Std OREAS 149	118	7.4	0.23	26.06	14	19.6
*Std OREAS750	6.8	1.6	0.21	4.78	6	15.2
*Blk BLANK	<0.1	<0.5	<0.05	0.64	<5	0.6

Element	Yb
Method	GE_IMS90A50
Lower Limit	0.1
Upper Limit	1,000
Unit	ppm m / m
150278	<0.1
150279	1.6
150280	1.7
150281	<0.1
150282	<0.1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Yb
Method	GE_IMS90A50
Lower Limit	0.1
Upper Limit	1,000
Unit	ppm m / m
150283	<0.1
150284	<0.1
150285	1.3
150286	<0.1
150287	<0.1
150288	<0.1
150289	<0.1
150290	0.2
150291	<0.1
150292	<0.1
150293	<0.1
150294	<0.1
150295	<0.1
150296	<0.1
150297	1.6
150298	<0.1
150299	0.5
150300	1.3
B00157851	2.2
B00157852	<0.1
B00157853	0.2
B00157854	1.4
B00157855	<0.1
B00157856	<0.1
B00157857	<0.1
B00157858	0.3
B00157859	1.6
B00157860	0.3
B00157861	1.6
B00157862	<0.1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Order Number Tot Lake
Submission Number *BBY* Power Metals Corp/Tot Lake/46 Pulps
Number of Samples 46

ANALYSIS REPORT YRL20-00312

Element	Yb
Method	GE_IMS90A50
Lower Limit	0.1
Upper Limit	1,000
Unit	ppm m / m
B00157863	1.2
B00157864	1.0
B00157865	0.2
B00157866	2.4
B00157867	1.5
B00157868	2.0
B00157869	2.0
B00157870	1.7
B00157871	0.2
B00157872	1.5
B00157873	2.4
*Dup B00157864	1.0
*Blk BLANK	<0.1
*Std OREAS148	1.3
*Std OREAS 149	1.4
*Std OREAS750	1.2
*Blk BLANK	<0.1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Power Metals Corp.
Attn : Julie Selway

Suite 545-999 Canada Place
Vancouver, Britsh Columbia
V6C 3E1, Canada

Phone: 604 684 6264
Fax:

06-November-2020

Date Rec. : 23 October 2020
LR Report : **CA02669-OCT20**
Client Ref : Power Metals

CERTIFICATE OF ANALYSIS

Final Report - Revised

Sample ID	Cs %
1: YRL20-00312.022	0.76
2-DUP: YRL20-00312.022	0.71
3-BLK: blank	< 0.002
4-STD: NBS-183 AAS	0.32

Control Quality Analysis - not suitable for commercial exchange

This report supersedes CA02669-OCT20 sent Nov. 5. Report now includes the QC data

Debbie Waldon
Project Coordinator,
Minerals Services, Analytical

Email: jselway@eastlink.ca;jmorefinance@gmail.com

OnLine LIMS

0002313230