Future Mineral Resource Potential of the Revell Site

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Alba Geosolutions and Consulting

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ABSTRACT

Title: **Future Mineral Resource Potential of the Revell Site**

Report No.: NWMO-TR-2024-03
Author(s): Dr. Nicholas Wilson
Company: Alba Geosolutions and Consulting
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The Initial Borehole Drilling and Testing project in the Wabigoon Lake Ojibway Nation (WLON) – Ignace Area, Ontario is part of Phase 2 Geoscientific Preliminary Field Investigations of the Nuclear Waste Management Organization's (NWMO) Adaptive Phased Management Site Selection Phase. This project involves the drilling and testing of several deep boreholes at the Revell Site, located within the northern portion of the Revell batholith. This report presents a review and interpretation of the lithogeochemical data set for 93 samples that were collected from three of these boreholes (IG_BH01, IG_BH02, and IG_BH03) in order to:

1) Evaluate the mineral resource potential of the Revell Site,
2) Evaluate the appropriateness of lithogeochemical analyses to assess mineral potential of the Revell Site, and
3) Interpret the lithogeochemistry data, to evaluate the potential prospectivity of the Revell Site for mineral resources at any point in the future based on current knowledge of minerals of economic importance.

Samples were selected for lithogeochemical analyses by NWMO from all 3 boreholes, across all rock types and alteration facies, and were submitted to Activation Laboratories Ltd. (ActLabs) for analysis using industry standard INAA, FUS-ICP/MS, and TD-ICP methods to determine element concentrations. Duplicate analyses, using different techniques, were consistent for elements over a range of concentrations.

The lithogeochemistry data set was screened by removing analyses at detection levels, averaged, and compared to published average upper crust concentrations which provided a background trend for the data. The data set was averaged for all samples, felsic samples, and for 'amphibolite' mafic samples. Only 2 out of 46 elements (Li and Cr) for the all samples data set were present at levels (only 2 - 3 times) above average upper crust values; all other elements were inconsistently detected, or at or below average upper crust background values. Only 1 element (Li) was present at levels (<3 times) above average upper crust values from the felsic data set but at concentrations orders of magnitude below economic enrichment levels. The 'amphibolite' mafic samples occur as xenoliths or dikes in the pluton, and only 3 elements (Cr, Ni, and Li) were above (up to 5 - 12 times; average 5 - 7 times) average upper crust background values. As the amphibolite units are not volumetrically significant (occur as approximately 2 % of the cored lithology), do not show significant enrichment (are orders of magnitude below economic enrichment levels), they do not have future mineral potential.

Direct comparison with adjacent plutons, of similar age and composition, indicates that the northern portion of the Revell batholith, at the Revell Site, has lower overall concentrations for almost all elements analyzed. The lack of any anomalous element concentrations, above a few times average upper crust levels, and the fact that most samples have background-level upper crust values, indicates that the Revell Site has extremely low mineral potential and that is unlikely to change even if we look tens to hundreds of thousands of years into the future.

TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

1. INTRODUCTION AND OBJECTIVES

The Initial Borehole Drilling and Testing project in the Wabigoon Lake Ojibway Nation (WLON) – Ignace Area, Ontario is part of Phase 2 Geoscientific Preliminary Field Investigations of the Nuclear Waste Management Organization's (NWMO) Adaptive Phased Management Site Selection Phase. This project includes the drilling and testing of six deep boreholes at the Revell Site, as well as additional on-going studies, located within the northern portion of the Revell batholith (Figure 1). Information from the first three boreholes (IG_BH01, IG_BH02, and IG_BH03) was available at the time of writing this report.

The first three boreholes were drilled in order to characterize the subsurface geology of the northern portion of the Revell batholith. All three were drilled to ~1000 m along their length. IG_BH01 was oriented vertically, whereas IG_BH02 and IG_BH03 were drilled at an inclination of 70° towards the southwest and south, respectively. Summary descriptions of the geological findings from each borehole are included in geological integration reports for IG_BH01 (NWMO and Golder, 2022), IG_BH02 (NWMO, 2022a), and IG_BH03 (NWMO, 2022b). An updated bedrock map and accompanying report provides supplemental geological information for the regional area surrounding the Revell Site (Parmenter et al., 2020; Figure 1).

This report focuses specifically on the future mineral potential of the Revell Site, with a forward projection of up to a million years into the future based on a current evaluation of mineral potential within the rocks. As part of the site characterization process, 93 lithogeochemical samples were collected from the borehole samples to:

1) Evaluate the mineral resource potential of the Revell Site,
2) Evaluate the appropriateness of lithogeochemical analyses to assess mineral potential of the Revell Site, and
3) Interpret the lithogeochemistry data and relevant supporting documents, to evaluate the potential prospectivity of the Revell Site for mineral resources at any point in the future based on current knowledge of minerals of economic importance.

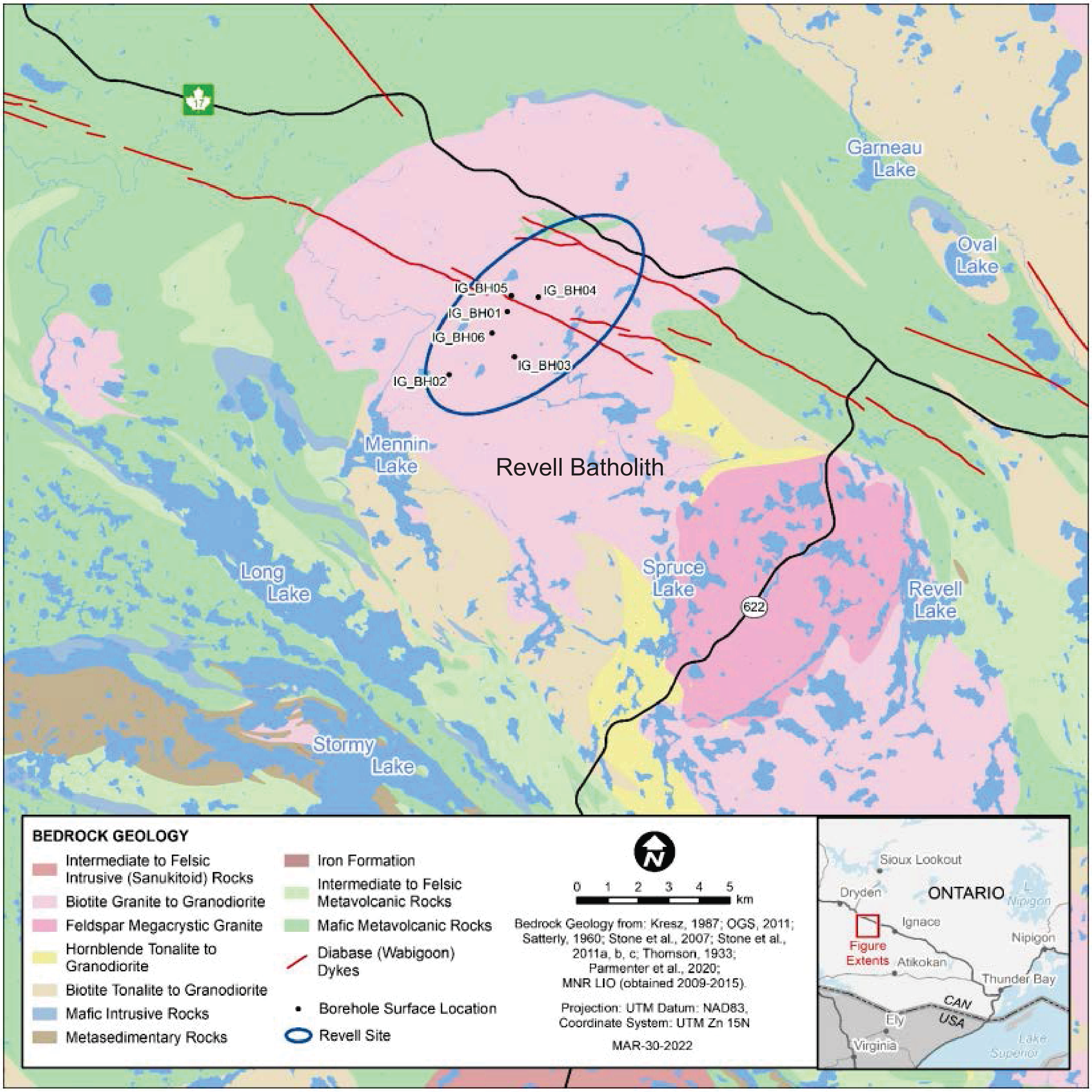

Figure 1. Location map of the Revell Site (blue oval) within the northern portion of the Revell batholith. The map also shows the surface collar locations of all six deep boreholes drilled at the site. Rocks from IG_BH01, IG_BH02, and IG_BH03 were sampled for this lithogeochemistry study (modified from Parmenter et al., 2020).

2. BACKGROUND INFORMATION

2.1 Geological Setting

The regional geological setting has been described in Parmenter et al. (2020) which covers the local and regional geology in significant detail. The summary below has been compiled from that report.

The topography of the regional area around the Revell batholith (Figure 1) is characterized by a broadly rolling surface of Canadian Shield bedrock (Thurston, 1991). Several areas along the northern and northwestern margin of the Revell batholith are covered by extensive overburden. In proximity to the boreholes at the Revell Site the bedrock is generally either exposed or covered by only a thin veneer of Quaternary cover.

The Revell batholith is situated in the northwestern part of the Superior Province of the Canadian Shield – a stable craton created from a collage of ancient plates and accreted juvenile arc terranes that were progressively amalgamated over a period of more than 2 billion years (Figure 2), and now form the core of the North American continent. The Superior Province has been divided historically into various regionally extensive east-northeast- trending subprovinces based on rock type, age, and metamorphism (Figure 2; Thurston, 1991). More recently, the Superior Province has been subdivided into lithotectonic terranes, defined as tectonically bounded regions with characteristics distinct from adjacent regions prior to their accretion into the Superior Province (Percival and Easton, 2007; Stott et al., 2010). The Revell Regional Area is situated in the south-central part of the Western Wabigoon terrane, adjacent to the boundary with the Marmion terrane (Figure 2).

A summary of the Archean and Proterozoic geological events that have shaped the bedrock in the Revell Regional Area is shown in Figure 2. The western Wabigoon terrane, interpreted to represent a volcanic island arc, is predominantly composed of two main groups of rock. This includes ca. 2.745 to 2.711 Ga supracrustal rocks, comprising Archean mafic to intermediate to felsic metavolcanic rocks and subordinate sedimentary rocks distributed in greenstone belts, and ca. 2.70 to 2.67 Ga rocks of granitoid affinity predominantly consisting of felsic plutonic rocks. These two major rock groups are a common characteristic of granite-greenstone belts and sub-provinces, across the entire western Superior Province.

The supracrustal rocks distributed to the southwest of the batholith belong to the Bending Lake greenstone belt and those distributed to the northeast of the batholith belong to the Raleigh Lake greenstone belt. These greenstone belts, as well as the additional supracrustal rocks wrapping around the northern boundary of the batholith (Figure 2), represent contiguous parts of the Kakagi Lake-Savant Lake greenstone belt that underlies the entire western Wabigoon terrane.

Four main rock units are identified in the supracrustal rock group: mafic metavolcanic rocks, intermediate to felsic metavolcanic rocks, metasedimentary rocks, and mafic intrusive rocks (Figure 1). Sedimentation within the supracrustal rock assemblage was largely synvolcanic, although sediment deposition in the Bending Lake area may have continued past the volcanic period (Stone, 2010a; Stone, 2010b; Stone et., 2011). All supracrustal rocks are affected, to varying degrees, by penetrative brittle-ductile to ductile deformation under greenschist- to amphibolite-facies metamorphic conditions (Blackburn and Hinz, 1996; Stone et al., 1998). In some locations, primary features, such as pillow basalt or bedding in sedimentary rock units are preserved, in other locations, primary relationships are completely masked by penetrative deformation. Uranium-lead (U-Pb) geochronological analysis of the supracrustal rocks produced zircon ages that range between 2734.6±1.1 Ma and 2725±5 Ma (Stone et al. 2010b).

The Revell batholith is roughly rectangular in shape, trends northwest, is approximately 40 km in length, 15 km in width, and covers an area of approximately 455 km^2 (Figure 2). Szewczyk and West (1976) interpreted this batholith to be a sheet-like intrusion that is approximately 1.6 km thick. Based on recent geophysical modelling, the batholith has a relatively flat base that extends to depths of nearly 4 km in some regions (Mushayandebvu et al., 2020).

Three main suites of plutonic rock are recognized in the Revell batholith (Figure 1), including, from oldest to youngest: a Biotite Tonalite to Granodiorite suite, a Hornblende Tonalite to Granodiorite suite, and a Biotite Granite to Granodiorite suite. Plutonic rocks of the Biotite Tonalite to Granodiorite suite occur along the southwestern and northeastern margins of the Revell batholith. The principal type of rock within this suite is a white to grey, medium-grained, variably massive to foliated or weakly gneissic, biotite tonalite to granodiorite. One sample of foliated and medium- grained biotite tonalite produced a U-Pb zircon age of 2734.2±0.8 Ma (Stone et al., 2010b). The Hornblende Tonalite to Granodiorite suite occurs in two irregularly shaped zones surrounding the central core of the Revell batholith. Rocks of the Hornblende Tonalite to Granodiorite suite range compositionally from tonalite through granodiorite to granite and include significant proportions of quartz diorite and quartz monzodiorite. One sample of coarse-grained grey mesocratic hornblende tonalite produced a U-Pb zircon age of 2732.3±0.8 Ma (Stone et al., 2010b). Rocks of the Biotite Granite to Granodiorite suite underlie most of the northern, central, and southern portions of the Revell batholith. Rocks of this suite are typically coarse-grained, massive to weakly foliated, and white to pink in colour. The Biotite Granite to Granodiorite suite ranges compositionally from granite through granodiorite to tonalite. This suite includes the oval-shaped potassium-feldspar megacrystic granite body in the central portion of the Revell batholith (Figure 1). One sample of coarse-grained, pink, massive potassium feldspar megacrystic biotite granite produced a U-Pb zircon age of 2694.0±0.9 Ma (Stone et al., 2010b).

A large west-northwest trending mafic dyke interpreted from aeromagnetic data and observed during detailed mapping to be approximately 15-20 m wide, extends across the northern portion of the Revell batholith (Figure 1; Golder and PGW, 2017). This dyke is associated with several similarly orientated mafic dykes that stretch across the northern portion of the Revell batholith and into the surrounding greenstone belts. These mafic dykes are interpreted to be part of the Wabigoon dyke swarm and produced a U-Pb age of 1887±13 Ma (Stone et al., 2010b), indicating that these mafic dykes are Proterozoic in age, and based on surface measurements, are assumed to be subvertical (Golder and PGW, 2017).

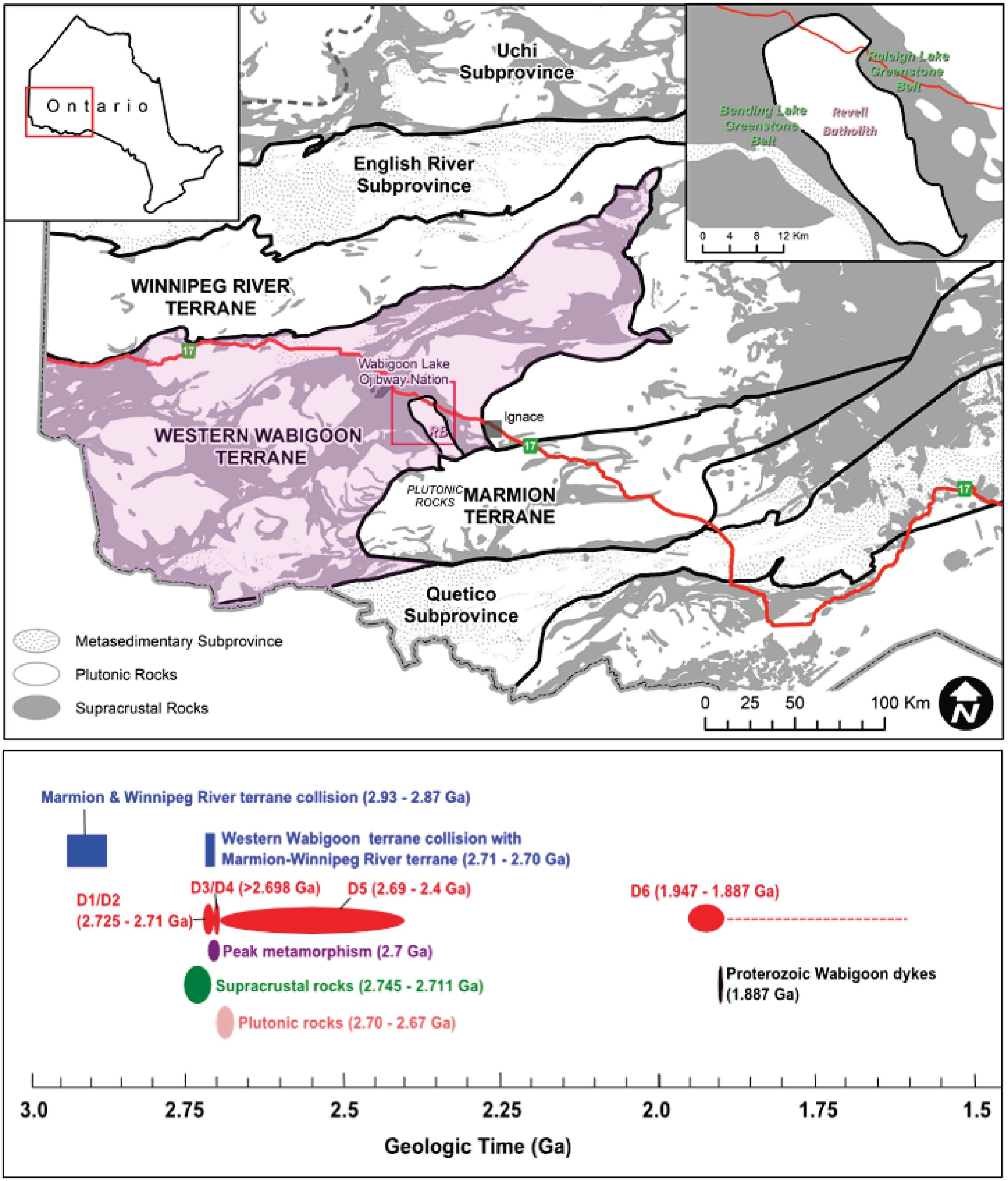

Figure 2. Upper. Geological setting of the Superior Province in northwestern Ontario (after Thurston, 1991) around the Revell Regional Area (red outline on main map and insert map) and the Revell batholith (RB). The Winnipeg River, Marmion and Western Wabigoon terranes (pink) are part of the Wabigoon subprovince. Lower. Chart summarizing the major Archean and Proterozoic geological events for the Revell Regional Area. Both figures are modified from Parmenter et al., (2020).

2.2 Rock Types and Alteration

The location of boreholes IG_BH01, IG_BH02, and IG_BH03 are shown in Figure 1. Summary descriptions of the geological findings from each borehole are included in geological integration reports for boreholes IG_BH01 (NWMO and Golder, 2022), IG_BH02 (NWMO, 2022a), and IG_BH03 (NWMO, 2022b). These reports present lithological, geochemical, alteration, and structural descriptions of the boreholes based on the integration of information from visual core logging and borehole geophysical logging information, petrography (NWMO, 2022c; NWMO, 2022d) and lithogeochemical analyses.

The range of rock types present in the studied core samples are shown in Figure 3. The dominant rock type encountered is a biotite granodiorite-tonalite to biotite tonalite, which represents more than 97 % of the recovered core by length. Several subordinate felsic phases, and a distinct 'amphibolite' mafic rock discussed in more detail below, comprise the remainder of the recovered core. Figure 3 also illustrates the range of alteration types identified during core logging. Alteration types identified include potassic, hematization, silicification, chloritization, bleaching, sericitization, carbonatization, and argillization (i.e., formation of clay minerals).

The intensity of alteration is variable between the boreholes; most of borehole IG_BH01 is not altered, borehole IG_BH02 has up to 74.8% of the cored interval with some alteration, and borehole IG_BH03 is altered over 62.3% of the cored interval. The order of prevalence of alteration between each of the borehole is also varied but most cores show dominantly potassic, silicification, hematization and chloritization.

Alteration levels in the logging reports (NWMO and Golder, 2022; NWMO, 2022a; and NWMO, 2022b) were classified as slightly altered (A2; confined to fractures), moderately altered (A3; penetrates the wall rock and creates an alteration halo), and highly altered (A4; pervasive). In borehole IG_BH01 only 8.45% of the cored interval was considered slightly altered, 1.4% was considered moderately altered and no occurrences of highly altered samples were documented; in borehole IG_BH02, 74.8% of the cored interval was slightly altered, 32.6% was moderately altered, and 1.8% was assigned as highly altered; in borehole IG_BH03, 47.8% of the cored interval was slightly altered, 13.4% was moderately altered and 1.1% was assigned as highly altered. Overall, alteration is present at low levels across most of the cored intervals and no clearly defined 'patterns' of alteration were documented during the core logging.

This alteration is most likely related to low-level hydrothermal fluid flow during granitoid emplacement and regional deformation. In contrast, the abundance of hematization less than 50 m below the surface (e.g., NWMO and Golder, 2022) could be related to recent surficial processes; hematization is also present at higher levels in the subsurface around mafic rock samples (likely due to the elevated Fe in these samples; 9.2wt% Fe_2O_3 in mafic samples vs 2.2wt% Fe_2O_3 in felsic samples; see Appendix 2).

2.3 'Amphibolite' Mafic Rocks

The field term 'amphibolite' was used in the field mapping and during the initial visual core logging process for the small amount of mafic and related rocks found in the cores from boreholes IG_BH-01, IG_BH-02 and IG_BH-03 (Parmenter et al., 2020). For consistency with earlier NWMO reports, this term 'amphibolite' is used in this report for these mafic rocks. These amphibolite rocks are present in approximately 2 % of the recovered core, by length.

Regardless of this prior usage, these rocks are better described as mafic to ultramafic rocks and based on sample petrography (NWMO 2022c, 2022d), these amphibolites have only been affected by greenschist facies metamorphism (actinolite-albite-chlorite assemblages), like their host felsic rocks, and are not metamorphic amphibolites. Petrography indicates (NWMO, 2022d) the amphibolites are composed of dominantly amphibole (86-88%) with lesser biotite (5-10%), plagioclase (4-5%), epidote (2-4%), and minor chlorite (0.5-1%). This is different to metamorphic amphibolite that contains dominantly plagioclase and hornblende.

The amphibolite sample set can be divided (see Appendix 2) into 2 groups based on total rare earth element content, as well as P_2O_5 contents, with one group (n=7) characterized by total rare earth contents of 230 to 372 ppm and P_2O_5 contents of 0.32 to 0.49 wt.%. As well, this group typically has higher Cr, Ni and V compared to the other amphibolites, but not always.

It is unclear whether the amphibolite units are dykes or xenoliths from the surrounding greenstone belts, or a combination, because primary contact relationships such as chilled margins are obscured by penetrative deformation localized along the amphibolite contacts (NWMO and Golder, 2022).

In terms of rock classification, the amphibolites classify as tholeiitic to alkaline basalts to basaltic trachyandesites, are alkaline, and plot as high-magnesium tholeiites or komatiitic basalts on a Jensen (1976) discrimination diagram. This suggests that the amphibolite may represent mafic dykes that intruded into the granodiorite- tonalite synchronous with either granitoid emplacement or regional deformation (NWMO and Golder, 2022), but they have undergone different degrees of fractionation. A more thorough discussions of the range of encountered rock types, including classification based on major oxide data and summaries of the REE data are given in the summary reports for the three boreholes (NWMO and Golder, 2022; NWMO, 2022a; and NWMO, 2022b).

Therefore, the field, petrographic, major and REE data suggests that the amphibolites may represent mafic dykes that intruded into the granodiorite- tonalite synchronous with either granitoid emplacement or regional deformation (NWMO and Golder, 2022).

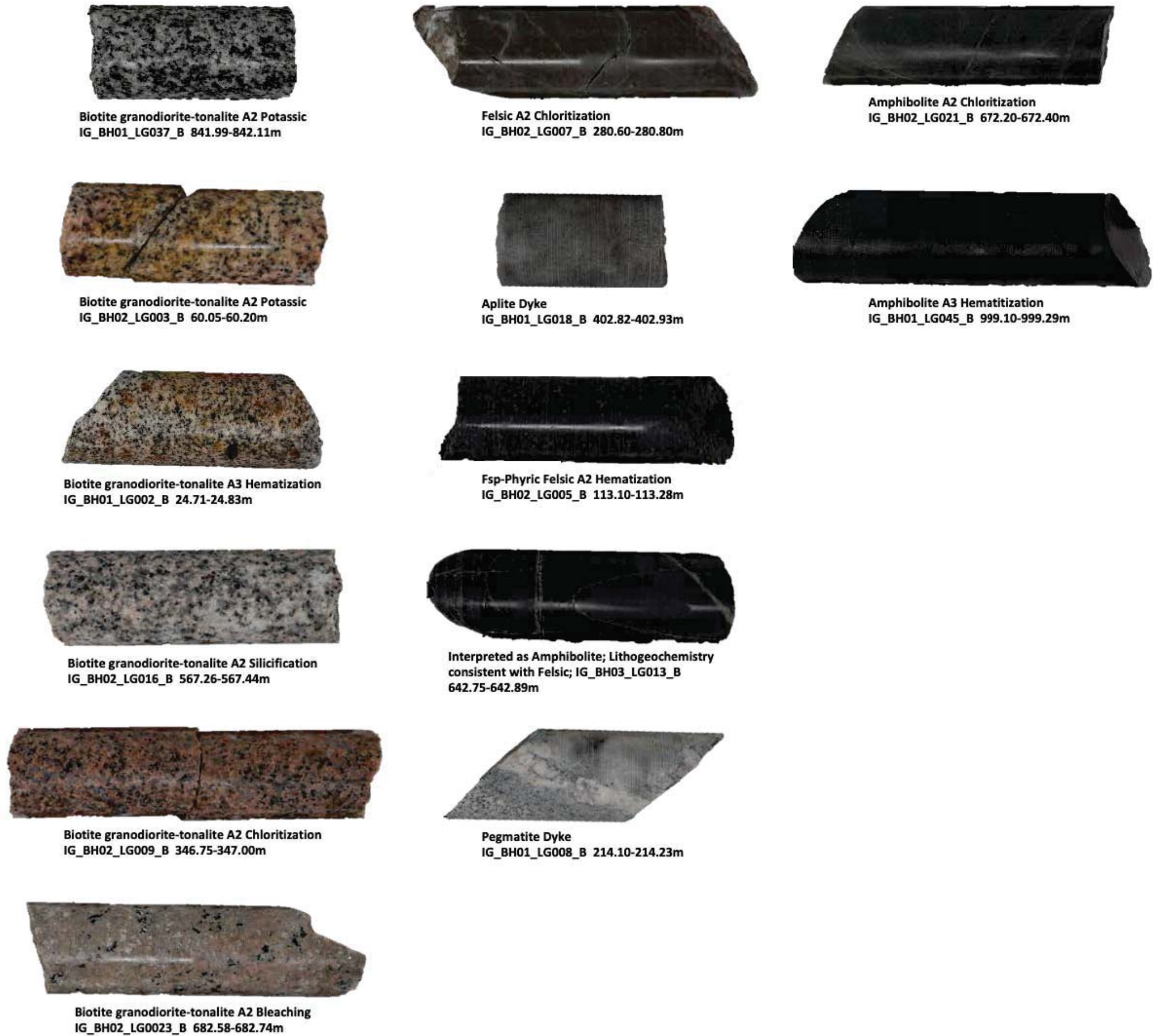

Figure 3. Examples of core sample rock and alteration types. Sample IG_BH03_LG013_B was visually identified as an amphibolite sample, but its major oxide geochemical composition is consistent with a felsic lithology and was reclassified as such in this report.

2.4 Mineral Deposits and Leases

Volcanogenic massive sulphide (VMS) deposits are common in this part of northern Ontario and mineralization is typically hosted by bimodal mafic volcanic-dominated oceanic rift arc and bimodal felsic-dominated siliciclastic rocks in continental back-arc settings (Galley et al., 2007). VMS deposits are major sources of Zn, Cu, Pb, Ag, and Au, and significant sources of Co, Sn, Se, Mn, Cd, In, Bi, Te, Ga, and Ge (Galley et al., 2007).

VMS mineralization is hosted within the greenstone belts themselves and not within intrusive rocks associated with these belts. Nonetheless, these intrusions might supply heat source and/or metals to the VMS systems, but are not mineralized (Galley et al., 2007). Due to the large-scale hydrothermal systems associated with VMS mineralization, VMS districts are commonly characterized by extensive semi-conformable zones of hydrothermal alteration that have well defined ‘mappable’ alteration patterns (Galley et al., 2007). Average grades for VMS deposits are shown in Table 1 with ore grades typical being at the percent level for most elements (Barrie and Hannington, 1997).

Table 1. Typical ore grade and tonnages for VMS deposits (Barrie and Hannington, 1997).

TABLE 2. Grade and Tonnage for VMS Types by Time Periods

	n	Total tonnes in MT	Average Tonnes in MT	Average Cu grade in wt %	Average Pb grade in wt %	Average Zn grade in wt %	Average Au grade in g/t	Average Ag grade in g/t
MAFIC								
Archean	1	1.5	1.5	(1.5)[1]		(4.15)		
Early Proterozoic	3	1.9	0.6	(4.83)		(0.34)	(1.72)	(5.23)
Middle and Late Proterozoic	0	0.0						
Early Phanerozoic	23	60.0	2.6	1.77	(0.05)	2.86	(3.02)	(18.0)
Late Phanerozoic	35	115.9	3.3	2.00	(0.10)	(1.13)	(1.74)	(25.2)
BIMODAL-MAFIC								
Archean	121[2]	606.7	0.5	1.66	0.42	5.04	1.32	38.6
Early Proterozoic	73	410.2	5.6	2.20	0.98	4.32	1.47	28.7
Middle and Late Proterozoic	17	24.5	1.4	2.06	(0.97)	2.64	(1.42)	(37.9)
Early Phanerozoic	54	278.8	5.2	1.93	(0.35)	3.02	2.40	44.4
Late Phanerozoic	19	130.6	6.9	1.74	(0.43)	2.54	(1.60)	28.4
MAFIC-SILICICLASTIC								
Archean	2	1.4	(0.7)	(1.37)		(1.46)		(42.5)
Early Proterozoic	7	159.8	(22.8)	(2.38)	(0.01)	(1.27)	(0.49)	(25.7)
Middle and Late Proterozoic	16	307.4	19.2	1.68	(2.91)	(2.44)	(0.51)	(17.4)
Early Phanerozoic	25	256.3	10.3	1.46	(1.73)	4.21	0.80	(33.2)
Late Phanerozoic	63	519.4	8.2	1.81	(0.02)	0.80	1.00	(12.4)
BIMODAL-FELSIC								
Archean	24	170.2	7.1	1.09	1.23	6.23	0.83	125.2
Early Proterozoic	42	222.9	5.3	1.05	0.72	4.45	1.65	49.3
Middle and Late Proterozoic	14	68.0	4.9	1.53	0.85	4.07	1.47	109.2
Early Phanerozoic	82	375.0	4.6	1.53	2.50	6.69	2.63	85.8
Late Phanerozoic	93	472.6	5.1	1.64	1.52	5.29	2.04	115.7
BIMODAL-SILICICLASTIC								
Archean	2	0.6	0.3	(1.23)	(1.67)	(4.60)	(1.36)	(37.7)
Early Proterozoic	9	24.6	2.7	(1.60)	(1.82)	(5.45)	(1.09)	(63.2)
Middle and Late Proterozoic	4	13.3	3.3	(1.15)	(1.61)	(5.28)	0.97	(57.1)
Early Phanerozoic	75	2451.1	32.7	0.93	1.74	3.83	0.76	54.8
Late Phanerozoic	7	14.9	2.1	(2.06)	(2.13)	(4.48)	(2.85)	(238.3)

[1]Grades in parentheses for averages based on less than 10 values
[2]Values in bold highlight data appreciably higher than other grade-tonnage data

Of more relevance to this study are mineral deposit types that are associated with intrusive rocks. In the Archean, these consist mainly of orogenic gold deposits and critical minerals (Li, Cs, Rb, Ta) associated with large pegmatite dikes associated with so-called “fertile granites” (Breaks et al., 2003).

Critical minerals may also be found in association with alkaline complexes and carbonatite complexes; however, no rocks of this type occur in the Revell Regional area. Similarly, porphyry copper deposits can be associated with intermediate to felsic composition intrusions and these large hydrothermal systems are accompanied by large well-defined alteration zones which are used in exploration for these deposits. Porphyry copper deposits, however, are rare in Archean terranes, and there is no field or geochemical evidence for any potential deposits of this sort in the Revell region.

Orogenic gold deposits are found in association with regional deformation zones and are associated with abundant quartz veining and/or host-rock alteration (e.g., Dubé et al., 2020). Such features are not present in the Revell region. Although gold occurrences are present locally in the surrounding supracrustal rocks in the Revell region, their locations have been previously documented (Ontario Geological Survey 2023a), and none are within the Revell Site.

Exploration for critical minerals associated with pegmatite dikes has increased recently because of the use of lithium in electric vehicle batteries. The rocks that form most of the Revell batholith are mostly tonalites, granodiorites and biotite granites rock types that generally do not produce large pegmatite bodies containing critical minerals, consistent with the lack of pegmatites present in the cored intervals (logged less than 0.001%; ~92cm in IG_BH02).

Pegmatite dikes containing varied quantities of Li, Cs, Rb and Ta have been documented from the Raleigh Lake area in the extreme southeastern corner of the Revell Regional Area (Breaks 1993). These pegmatite bodies are hosted in deformed mafic to intermediate composition metavolcanic rocks near the Crocker Bay and Raleigh Lake stocks (Breaks, 1993). Six occurrences and one prospect are listed in the Ontario Mineral Inventory (Ontario Geological Survey, 2023a, 2023b). There is no indication that any of these pegmatites are related to the Revell batholith.

Currently there are active mineral claims occur around the periphery of the Revell batholith, mainly to the west, north and northeast, and are associated with abandoned mines, gold ± copper ± nickel ± silver occurrences, and historical drill holes (Figure 4; Ontario Geological Survey, 2020). A molybdenum ± silica sand ± fluorite occurrence to the north of the Revell pluton was initially examined in the 1960s as a molybdenum occurrence; work in the 1990s indicates that it was predominantly a fluorite occurrence with associated quartz and sericite (MDI52F08NW00040; Ontario Geological Survey, 2023a). The veins are thin and discontinuous and are not sizable enough to meet the criteria of a Prospect (Ontario Geological Survey, 2023b). To the northeast of the Revell batholith a gold ± copper ± nickel ± silver occurrence straddles the margin of the pluton (Figure 4).

The few active claims on the batholith are close to roads or are occurrences of building stone (Figure 4). Building stone operations are typically near surface operations, and do not require deep exploration drilling or other significant site disturbances. Consequently, they are not considered an issue with respect to the Revell Site. One active claim to the northwest of the Revell Site, has no obvious association with any previously identified mineral occurrence. There is a large contiguous operational mining claim to the southeast part of the pluton, over 20 km away from the Revell Site. This claim is in part related to mineral exploration in the Raleigh Lake pegmatite field (cf. Breaks 1993).

The PETROCH lithogeochemical database (Haus and Pauk, 2010) contains geochemical information on rock samples collected by Ontario Geological Survey (OGS) staff geoscientists during field projects undertaken since the mid-1970s. Additional geochemical data can also be found in Stone (2010c). The majority of lithogeochemistry samples have been taken from the greenstone belt rocks surrounding the Revell batholith and only a very few samples have been taken from within the pluton itself (Figure 5).

Sampling for site evaluation studies was also undertaken for surface measurements for magnetic susceptibility (SRK and Golder, 2015; Golder and PGW, 2017; Biswas 2019), specific gravity (Rainsford et al. 2018) to support gravity modelling and geophysics (SGL, 2020), and for geochronology (Ontario Geological Survey, 2019, K-Ar, Rb-Sr and U-Pb ages).

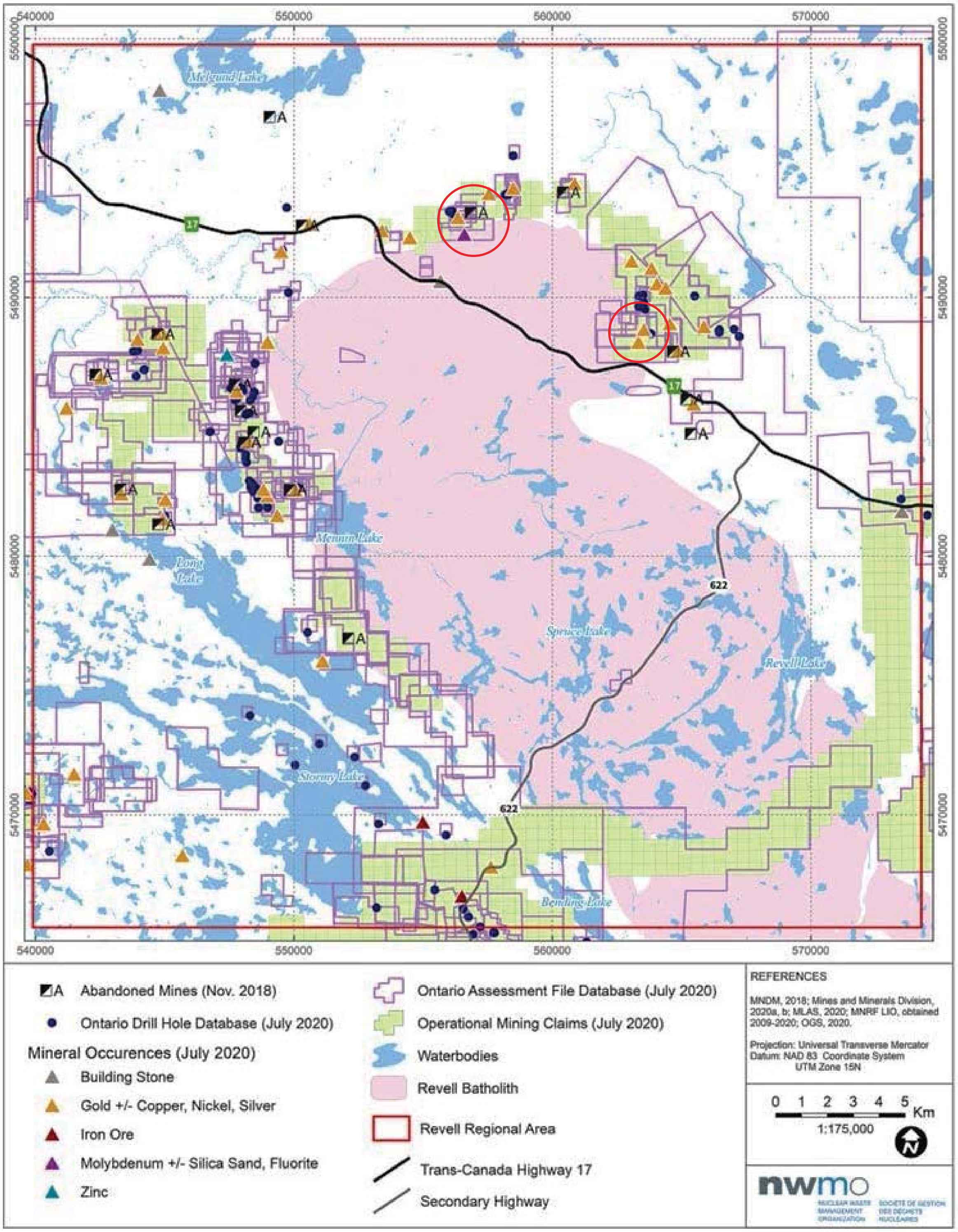

Figure 4. Current mineral claims in the area are located on the western, northern, and northeastern edges of the Revell batholith in the surrounding greenstone belts, or to the southeast, over 20 km from the Revell Site (from Parmenter et al., 2020). Red circles identify locations discussed in the text.

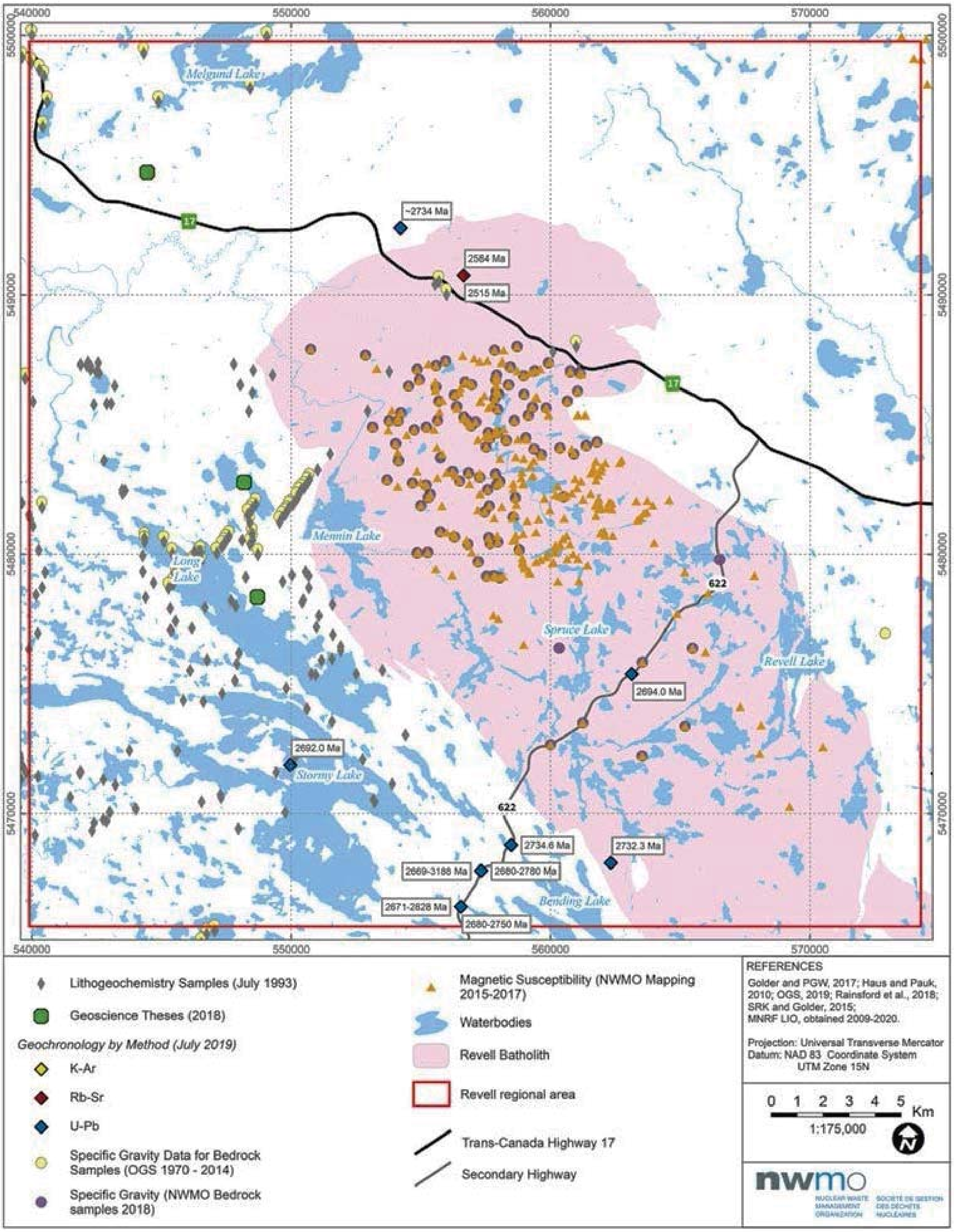

Figure 5. Geochemical samples, location of thesis studies, geochronology samples, gravity, and magnetic susceptibility measurements over the Revell batholith and surrounding area (from Parmenter et al., 2020).

3. DATA PROVIDED AND REVIEWED

To facilitate this work NWMO provided:

1. A suite of lithogeochemical data for 93 samples, as obtained by appropriate methods, including results from instrumental neutron activation analysis (INAA), fusion inductively coupled optical emission mass spectrometry (FUS-ICP/FUS-MS), and total digestion inductively coupled plasma (TD-ICP) methods from Activation Laboratories Ltd., documented in NWMO and Golder, 2022; NWMO, 2022a; NWMO, 2022b.

2. Petrographic information, including photographs and mineralogical data obtained from thin sections that were used for lithogeochemical analyses (Actlabs A19-14907 and A20-05149, 2020), documented in NWMO (2022c) and NWMO (2022d).

3. Reports for regional geology (Parmenter et al., 2020) and boreholes IG_BH01, IG_BH02, and IG_BH03 including logging and interpretation (NWMO and Golder, 2022; NWMO, 2022a; NWMO, 2022b).

Table 2 shows the suite of elements analyzed with detection limits for each method. Data interpretation was performed on the samples with the lowest detections limits and using the analytical method presented below. Lithium was included in the analyses of boreholes IG_BH02 and IG_BH03 (n = 48) but was not measured in the earlier analyses of the IG_BH01 borehole.

The data set was received in Microsoft Excel file format and data screening and interpretation was undertaken using Microsoft Excel software. The raw data set (Appendix 1) contained duplicate analyses, using different methods, for 21 elements, in addition to those shown in Table 1, which allowed comparison of different analytical techniques over a range of elements and concentrations. Duplicated samples were compared for consistency and are discussed in Section 3.2 and individual elements and screened data used in Section 4 are presented in Appendix 2.

Table 2. Suite of elements analyzed and detection limits. Lithium was only analyzed in IG_BH02 and IG_BH03 samples. There is some variation in the element suite analyzed between boreholes and the elements analyzed for each borehole are summarized in Appendix 1.

Report Number: A20-XXXXX

Report Date: dd/mm/yyyy

Analyte Symbol	Au	As	Br	Cr	Ir	Sc	Se	Sb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr
Unit Symbol	ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm
Detection Limit	2	0.5	0.5	5	5	0.1	3	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS

Analyte Symbol	Co	Ni	Cu	Zn	Cd	S	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	1	1	0.5	0.001	1	0.5	5	1	2	0.5	1	0.2	2	0.3	0.1	1	0.2	0.1	2	0.05	0.05	0.01	0.05
Analysis Method	FUS-MS	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS

Analyte Symbol	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Li	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.002	0.1	0.01	0.5	0.05	5	1	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS

3.1 Methods and Approach

The raw lithogeochemistry data set received from Activation Laboratories Ltd. is presented in Appendix 1.

The lithogeochemistry data set was initially screened to remove analyses for elements that were below the detection limit of the analytical techniques and averaged for the sample groups. Some elements were inconsistently detected (e.g., Au) and in those samples, analyses below the detection limits were removed, and averages were based on the number of analyses above the detection limit.

The average screened lithogeochemistry data were then compared to background data for average upper crust concentrations to generate a background trend for the data set. This would then identify any elements that were at expected upper crustal levels and elements that were above levels expected within the average upper crust. We used the average upper crust values proposed by Rudnick and Gao (2003), as they provide a review of all current estimates of the composition of the upper, lower and total crust and discuss the various methods used to obtain these estimates. The values of Rudnick and Gao (2003) are very similar to those proposed by McLennan (2001), providing additional confidence in the choice of the values used in this report.

This data screening was initially performed on averages of the complete data set (including both felsic and amphibolite samples), and the data set was also averaged for all felsic, tonalite, and amphibolite samples. This was necessary as certain elements are geochemically compatible with the mafic amphibolite samples (e.g., Ni, Cr, V, and platinum group elements; Cawthorn et al., 2005) and these elements would have higher concentrations than in the felsic samples. This separation by lithology produced more representative averages and ranges of data and is summarized in Appendix 2. The data set were also averaged for each lithological division based on core logging and are summarized in Appendix 2. Average element concentrations for the tonalite samples allowed direct comparison with other plutons in the region.

The major oxide data were not considered in detail in this report as potential economic minerals and are discussed in the borehole summaries (NWMO and Golder, 2022, NWMO, 2022a, and NWMO, 2022b). Major oxide data was used to correct sample rock types (Figure 3), to ensure consistent data averaging, and to confirm compatible element data to explain elevated concentrations related to specific rock types.

Prior to evaluating the lithogeochemistry data the regional geological data were reviewed as well as core study reports and petrographic studies (NWMO, 2022c; NWMO, 2022d) to ensure that the lithogeochemical data were interpreted within the correct context.

3.2 Duplicate Analyses

The received lithogeochemistry data set included duplicate analyses for 21 elements using FUS-MS and INAA analyses (As, Ce, Co, Cr, Cs, Eu, Hf, La, Lu, Mo, Nd, Rb, Sb, Sm, Ta, Tb, Th, U, W, Yb and Zn). These data were cross plotted to evaluate the consistency between the different techniques in detecting the elements over a range of concentrations (Figure 6). Overall, there is excellent correlation for the range of elements, across a range of concentrations, and gives support that the measured concentrations are consistent between analytical techniques and representative of the rocks.

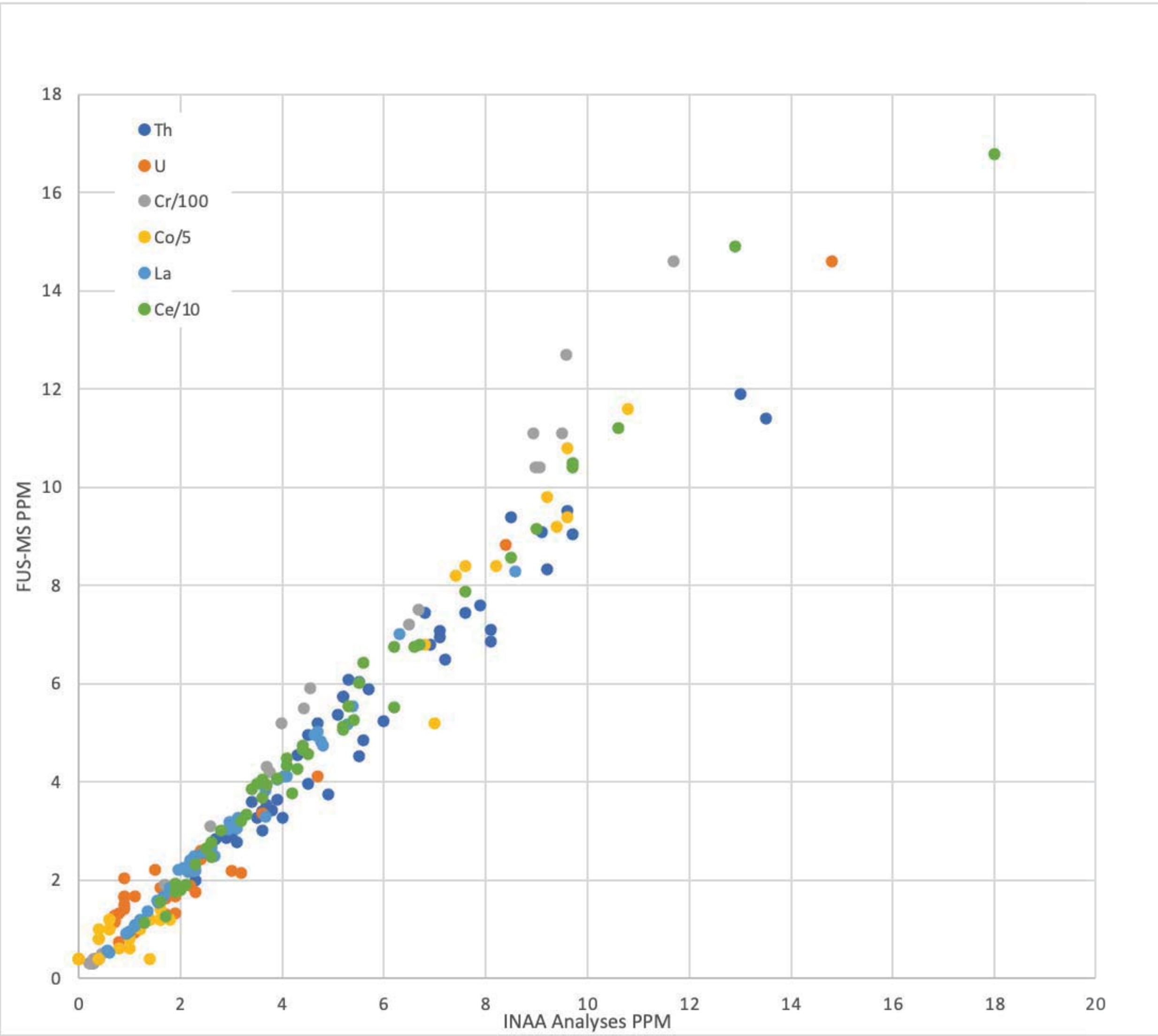

Figure 6. Cross plot of element concentrations (PPM) with duplicate analyses from INAA and FUS-MS methods. There is excellent correlation between most of the elements and data points. Elements have been scaled to fit on a single figure (Cr/100, Co/5, and Ce/30).

3.3 Mineral Potential

The determination of something having ‘mineral potential’ or something being ‘mineralized’ typically involves multiple methods from field-scale mapping to bedrock sampling and coring, integration with geophysical and surface methods, to precise laboratory analyses and interpretation. The element(s) in question would show significant enrichment levels (grade) above a background value, over a consistent area, in the required volumes (tonnage), in the right geological environment, and at the right metals price, that can be efficiently processed, to make an economic deposit. This of course depends on many other variables such as size, geographic location and political jurisdiction, whether surface of undergrounded mining, and on government and environmental regulations.

By using average upper crust concentrations to determine if something has ‘mineral potential’, if an element is at, or below, the average upper crust value, then it shows no enrichment or ‘mineral potential’. It is at background. This method would highlight anomalous data and avoid potential arguments of ‘potential’ based on the unrealistic high prices, cut-off grades, or tonnages, as any other location in the upper crust would have equally as much ‘potential’ if at similar concentrations.

If something has ‘mineral potential’ then element concentrations need to be consistently highly enriched above background levels. Table 3 summarizes typical ore grades for a range of elements; as can be seen for Ni, grades are typically around 20,000 ppm (with an upper crust background of 47 ppm) and Zn grades are 50,000 ppm (verses 67 ppm average upper crust values) so enrichment levels of over x1000 times background values are typically required to get close to an ore grade. Ontario Geological Survey cut off values for mineral occurrences are included (Ontario Geological Survey, 2023b) and are typically 1/10th of base economic grades. So significant enrichment is required to get close to economic levels.

Table 3. Typical ore grades for a range of metallic elements (Dostal, 2017; De Los Hoyos, 2022; Ontario Geological Survey, 2023b) with background values taken from Rudnick and Gao (2003).

Element	Typical Economic Grade	ON Cut Off [3]	Typical Background	Concentration Factor
Ag	1,000 ppm	35 ppm	0.05 ppm	20000 times
Au	6 ppm	0.5 ppm	3 ppb	2000 times
Cr	10% (100000 ppm)	10000 ppm	92 ppm	> 1000 times
Cu	10,000 ppm	2500 ppm	28 ppm	357 times
Li [1]	0.58 - 1.18% wt% Li	1000 ppm	21 ppm	276 - 561 times
Mo	1,000 ppm	800 ppm	1.1 ppm	909 times
Ni	20,000 ppm	800 ppm	47 ppm	426 times
Pb	50,000 ppm	10000 ppm	17 ppm	2941 times
REE [2]	>0.8-1.43 wt% TREO	1000 ppm		
U	10,000 ppm	300	2.7 ppm	3704 times
V	5,000 ppm	1000 ppm	97 ppm	52 times
W	3,000 - 5,000 ppm	1000 ppm	1.9 ppm	1578 - 2631 times
Zn	50,000 ppm	5000	67 ppm	746 times

[1] Hard rock source; [2] All REE from this data set are below background upper crust values.

[3] Cut off requirement to be a Mineral Occurence in Ontario, OGS

4. DATA INTERPRETATION

The screened data set is shown in Table 4 and in Figure 7. Table 4 includes the analytical technique used, detection limit, upper crust average concentration, and the elemental data set as an average for all samples (n=93), for felsic samples (n=78), and for amphibolite samples (n=15). The initial spreadsheet (Appendix 1) had 16 amphibolite samples but based on the major element geochemistry data one sample was reclassified as a felsic sample (see Figure 3). During data screening some elements were at or below detection levels (Cd, In, Mo, Se, and Tb from IG_BH01; Cd, In, Ir, and Se from IG_BH02; As, Cd, Ir, Sb, Se, and Sn from IG_BH03) and were removed from the screened data set.

4.1 All Samples

Most elements are at concentrations below the average upper crust values when compared as a single data set (38 out of 46 elements). The cells in Table 4 are color filled depending on the average concentration of the Revell data set compared to the average upper crust value; green filled cells are elements that are above the average upper crust values and unfilled cells are at (e.g. Be, Ga, and Ni; n = 3), or below, the average upper crust values (n = 35).

Elements that are above average upper crust values (green filled cells), and were not consistently detected, are red filled in Table 4. As can be seen in Table 4, 6 elements have average concentrations above average upper crust values (Ag, Au, Bi, Br, Sb and W) are inconsistently analysed within the sample suite (detected in only 5 to 25 of the 93 samples); if they were averaged over all samples (n = 93) average values would be well below average upper crust concentrations. Therefore, these samples are not considered to have mineral potential as they are inconsistently measured, across a range of rock types, at concentrations only a few times above background average crust levels.

Based on screening of the ‘all data’ sample set 44 out of the 46 elements analysed are at, or below, average upper crust values, or inconsistently detected. Only Li and Cr are present at average concentrations above average upper crust values. As Cr is at higher concentrations in the amphibolite samples, averaging over the all samples data set has skewed the values; when samples are averaged for felsic or tonalite samples the Cr concentrations are below average upper crust averages (Table 4).

4.2 Felsic Samples

The average data set for felsic samples (Table 4; n = 78) is similar to the ‘all samples’ average data set with 39 of 46 elements at concentrations below the average upper crust values. Of the remaining 7 elements, only Li is detected consistently above upper crust values. The remaining elements (Ag, Au, Bi, Br, Sb and W) are not consistently detected (detected between 3 to 22 times out of 93 samples). From this sample set, only Li is present at average concentrations less than 3 times average upper crust values.

Table 4. Summary of the background average upper crust elemental concentrations, detection limits, and minimum, average, and maximum values for the single, felsic and amphibolite data set. Filled green cells (average columns) indicate elements that are above average upper crust averages; red filled cells indicate elements that have only a few analyses; orange filled cells indicate elements that are equivalent to average upper crust values, and unfilled cells are below average upper crust values.

Element	Analyses	Level	Detection Limit	Rudnick and Gao (2003) Upper Crust Average	All samples Average				At or Below Upper Crust averages	Felsic samples Average				At or Below Upper Crust averages	Amphibolite samples Average				At or Below Upper Crust averages
					Min	Average	Max	n of 93		Min	Average	Max	n of 78		Min	Average	Max	n of 15	
Ag	TD-ICP	PPM	0.3	0.053	0.4	0.4	0.6	23		0.4	0.4	0.6	22		0.4	0.4	0.4	1	
As	INAA	PPM	0.5	4.8	0.6	1.3	3.1	27	X	0.6	1.2	3.1	21	X	0.7	1.4	2.5	6	X
Au	INAA	PPB	2	1.5	2.00	3.80	6.00	5		2.0	3.8	6.0	4		4.0	4.0	4.0	1	
Ba	FUS-ICP	PPM	2	624	7	495	1606	93	X	7.0	485.5	1606.0	78	X	213	541.9	951.0	15	X
Be	FUS-ICP	PPM	1	2.1	2.0	2.1	3.0	17	X	2.0	2.0	2.0	11	X	2.0	2.3	3.0	6	X
Bi	FUS-MS	PPM	0.1	0.16	0.2	0.27	0.7	13		0.2	0.3	0.7	10		0.2	0.2	0.2	3	X
Br	INAA	PPM	0.5	1.6	1.1	8.9	18.5	23		1.1	9.5	18.5	21		1.4	2.8	4.1	2	
Ce	FUS-MS	PPM	0.05	63	6.25	42.9	168	93	X	6.25	34.8	91.5	78	X	37.6	84.8	168.0	15	
Co	FUS-MS	PPM	1	17.3	2.0	11.0	62.0	79	X	2.0	3.5	7.0	64	X	26.0	43.1	62.0	15	
Cr	INAA	PPM	5	92	7	154	1170	69		7.0	20.3	46.0	54		168.0	637.3	1170.0	15	
Cs	FUS-MS	PPM	0.1	4.9	0.3	2.37	13.7	93	X	0.6	1.8	4.5	78	X	0.3	5.2	13.7	15	X
Cu	TD-ICP	PPM	1	28	2	15	74	93	X	2.0	13.1	48.0	78	X	2.0	24.7	74.0	15	X
Dy	FUS-MS	PPM	0.01	3.9	0.45	1.3	4.36	93	X	0.5	0.9	3.1	78	X	1.7	3.1	4.4	15	X
Er	FUS-MS	PPM	0.01	2.3	0.23	0.6	2.02	93	X	0.2	0.4	1.6	78	X	1.1	1.5	2.0	15	X
Eu	FUS-MS	PPM	0.005	1	0.048	0.7	3.22	93	X	0.05	0.49	0.94	78	X	0.7	1.8	3.2	15	X
Ga	FUS-MS	PPM	1	17.5	12	17.9	25	93	X	13.0	18.5	25.0	78	X	12.0	15.0	19.0	15	X
Gd	FUS-MS	PPM	0.01	4	0.79	2.0	8.03	93	X	0.8	1.4	2.8	78	X	2.3	5.1	8.0	15	X
Ge	FUS-MS	PPM	0.5	1.4	0.7	1.1	2	85	X	0.7	1.0	2.0	71	X	1.2	1.4	1.8	14	X
Hf	FUS-MS	PPM	0.1	5.3	1.0	2.9	4.9	93	X	1.0	3.0	4.9	78	X	1.8	2.8	4.6	15	X
Ho	FUS-MS	PPM	0.01	0.83	0.08	0.2	0.8	93	X	0.1	0.2	0.6	78	X	0.4	0.6	0.8	15	X
La	FUS-MS	PPM	0.05	31	2.83	23.3	82.9	93	X	2.8	20.0	55.5	78	X	18.4	40.4	82.9	15	
Li	TD-ICP	PPM	1	21	7.0	65.3	242.0	48		7.0	55.1	93.0	43		55.0	153.2	242	5	
Lu	FUS-MS	PPM	0.002	0.31	0.031	0.1	0.276	93	X	0.03	0.06	0.19	78	X	0.2	0.2	0.3	15	X
Nb	FUS-MS	PPM	0.2	12	2.0	4.1	12.5	93	X	2.0	3.8	7.3	78	X	2.2	5.3	12.5	15	X
Nd	FUS-MS	PPM	0.05	27	2.53	15.9	69.9	93	X	2.5	11.3	25.6	78	X	16.4	39.7	69.9	15	
Ni	TD-ICP	PPM	1	47	2.0	47.4	535	80	X	2.0	6.1	175.0	65	X	75.0	226.4	535.0	15	
Pb	TD-ICP	PPM	5	17	6.0	9.7	20	67	X	6.0	9.3	20.0	59	X	7.0	13.0	20.0	8	X
Pr	FUS-MS	PPM	0.01	7.1	0.68	4.4	18.9	93	X	0.7	3.4	8.4	78	X	4.3	9.9	18.9	15	X
Rb	FUS-MS	PPM	1	84	24	77	200	93	X	24.0	77.0	200.0	78	X	28.0	76.0	145.0	15	X
S	TD-ICP	%	0.001	0.06	0.002	0.014	0.312	90	X	0.002	0.013	0.312	75	X	0.003	0.020	0.095	15	X
Sb	FUS-MS	PPM	0.2	0.4	0.3	1.3	4	4		0.3	1.6	4.0	3		0.4	0.4	0.4	1	X
Sc	FUS-ICP	PPM	1	14	2.00	7.1	39	81	X	2.0	2.6	5.0	66	X	17.0	26.6	39.0	15	
Sm	FUS-MS	PPM	0.01	4.7	0.87	2.7	11.7	93	X	0.9	1.8	3.0	78	X	3.1	7.1	11.7	15	
Sr	FUS-ICP	PPM	2	320	8.0	275.6	1429.0	93	X	8.0	209.8	411.0	78	X	138.0	617.3	1429.0	15	
Ta	FUS-MS	PPM	0.01	0.9	0.14	0.6	1.97	93	X	0.2	0.7	2.0	78	X	0.1	0.3	0.5	15	X
Tb	FUS-MS	PPM	0.01	0.7	0.09	0.3	0.93	93	X	0.1	0.2	0.5	78	X	0.3	0.6	0.9	15	X
Th	FUS-MS	PPM	0.05	10.5	1.72	5.2	11.9	93	X	1.7	5.3	11.9	78	X	2.8	5.2	11.4	15	X
Tl	FUS-MS	PPM	0.05	0.9	0.11	0.38	0.96	92	X	0.11	0.38	0.96	77	X	0.15	0.43	0.94	15	X
Tm	FUS-MS	PPM	0.005	0.3	0.03	0.1	0.278	93	X	0.030	0.061	0.217	78	X	0.2	0.2	0.3	15	X
U	FUS-MS	PPM	0.01	2.7	0.61	2.1	14.6	93	X	0.61	2.21	14.60	78	X	0.75	1.4	2.6	15	X
V	FUS-ICP	PPM	5	97	6.0	48.4	233	84	X	6.00	19.12	41.00	69	X	139.00	183.3	233.0	15	
W	FUS-MS	PPM	0.5	1.9	0.6	2.8	26.1	25		0.6	2.7	26.1	21		0.6	3.1	10.1	4	
Y	FUS-MS	PPM	0.5	21	2.5	6.6	20.8	93	X	2.5	4.9	18.8	78	X	9.4	15.4	20.8	15	X
Yb	FUS-MS	PPM	0.01	2	0.22	0.5	1.83	93	X	0.2	0.4	1.5	78	X	1.0	1.3	1.8	15	X
Zn	TD-ICP	PPM	1	67	11	53.2	121	93	X	11.0	47.1	118.0	78	X	68.0	85.0	121.0	15	
Zr	FUS-ICP	PPM	1	193	14	103.8	204	93	X	14.0	103.1	202.0	78	X	67.0	107.5	204.0	15	X

Analysis above upper crust average values; Analysis close to upper crust averages; Elements with few analyses

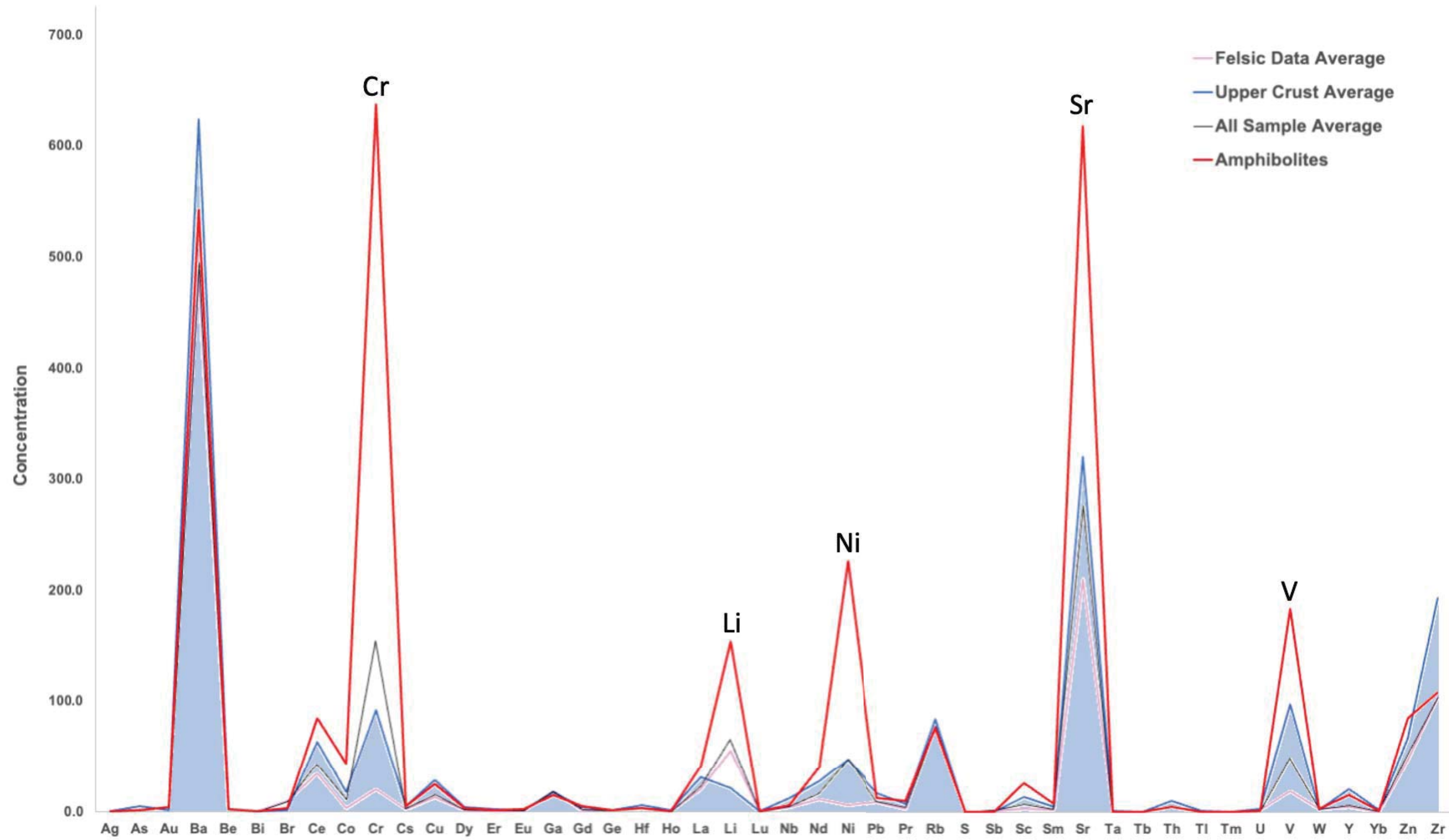

Figure 7. Comparison of lithogeochemical data with background upper crust values (blue fill; Rudnick and Gao, 2003) for felsic samples (pink), amphibolite (red), and average concentrations for the complete data set (black). Chromium, Li, Ni and Sr and V are the elements present at higher concentrations in amphibolite samples and skew the single data set averages.

The similarity of the felsic sample data set is also evident in chondrite-normalized rare earth element plots of the data (Figure 8, and shown in Figure 21 from NWMO and Golder, 2022 for all rock types). As expected, 71 of the 78 samples have nearly identical rare earth patterns that are typical of Archean tonalite-granodiorite intrusions. Seven samples are characterized by flat rare earth patterns with large negative Eu anomalies and low total rare earth element contents (17.5 ppm to 40.0 ppm), and all have SiO_2 contents greater than 74.5 wt.%. Six of these samples are aplite dikes, and one sample is logged as a silicified tonalite. The rare earth patterns in these samples can be explained by removal of a considerable amount of feldspar from the melt before emplacement. In the case of all the felsic samples, there is no suggestion of any sort of elemental enrichment that would hint at mineral potential within the Revell batholith.

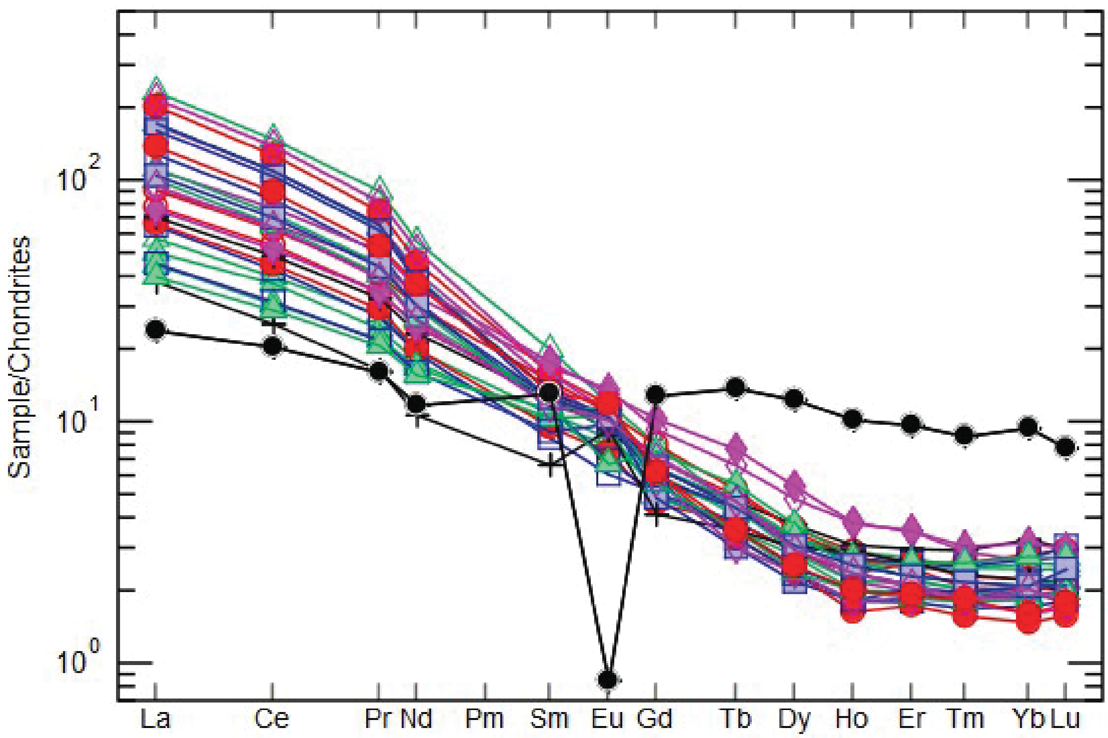

Figure 8. Chondrite normalized rare earth element plot for felsic samples from BH-01. The tonalites and granodiorites have sloping patterns and a sample (aplite dike) has low total rare earth element content and an intense Eu anomaly, likely reflecting feldspar extraction from the melt. The plots for samples from BH-02 and BH-03 (NWMO, 2022a and 2022b) show the similar overall pattern but include all rock types.

4.3 'Amphibolite' Mafic Samples

In the amphibolite sample set (n = 15) 30 out of 46 elements are at, or below, average upper crust values (Table 4). Four of the elements, Ag, Au, Br and W were only detected in a single sample (Au and Ag) or a few samples (Br and W; n = 2-4), and after removing samples with only a few analyses there are 12 elements that are above average upper crust concentrations (Ce, Co, Cr, La, Li, Nd, Ni, Sc, Sm, Sr, V, and Zn). The higher number of samples with concentrations above average upper crust values is somewhat expected as the upper crust averages would be from rocks with a bulk geochemistry closer to a felsic sample rather than the mafic amphibolite samples. Many of these elements (e.g. Ce, Cr, Ni, Sr, V, and Zn) are geochemically compatible elements with the mafic compositions of the amphibolite (Deer et al., 1992), and therefore would be expected at high concentrations in the amphibolite samples. These elevated concentrations in the amphibolites would skew the 'all samples' data set averages (e.g. Cr).

As has been showing in Table 3, economic ore grades are typically concentrated 1000s of times greater than background values; of these 12 elements, only 3 elements are at concentrations above 3 times the upper crust backgrounds (Cr, Li and Ni; Figure 9), and the other elements (Ce, Co, La, Nd, Sc, Sm, Sr, V, and Zn) are only at levels of 1.5 – 2 times upper crust averages.

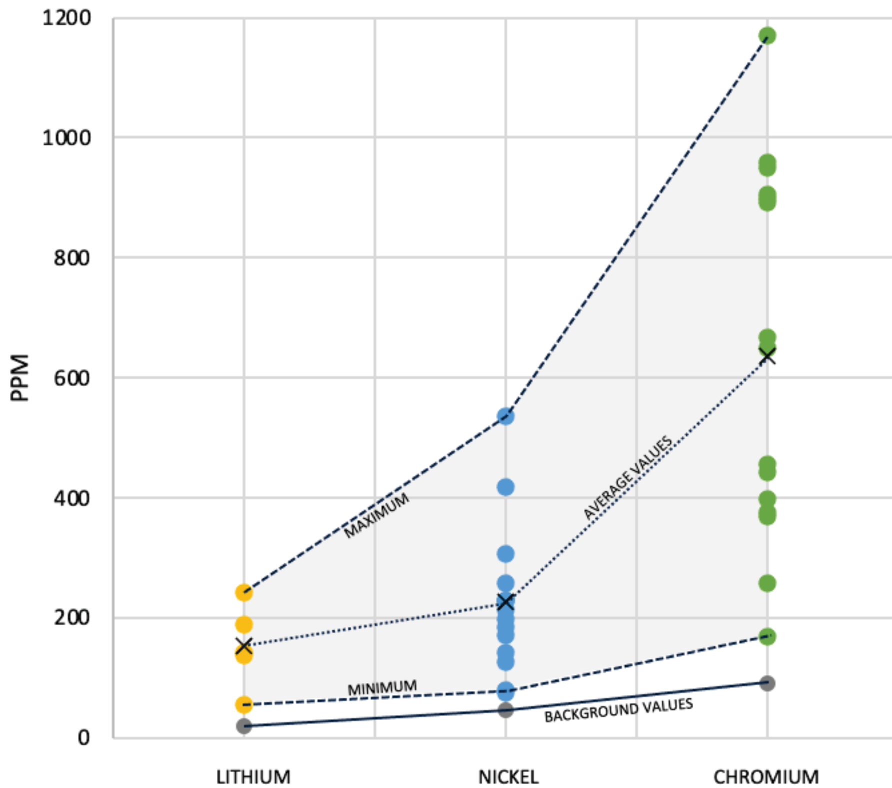

Figure 9. Cross plot of elements detected above background values (Li, Ni, and Cr) verses ppm concentrations. Minimum and maximum values are marked by the dashed lines and average of the amphibolite samples is shown by the dotted line. The range of data points that makes up the average analyses is shown by the points.

Chromium occurs at concentrations from 1.8 to 12.7 times background (168 - 1170 ppm; background of 92 ppm) with an average value of 637 ppm (6.9 times background average upper crust values). For reference average concentrations for ultramafic rocks, which are major sources of Cr, are 2700 ppm (dunite and peridotite; Whittaker, 1986), and the average concentration of Cr in the amphibolite samples of 637 ppm are significantly lower than the values for ultramafic rocks, below OGS mineral occurrences levels (10000 ppm cut off; Ontario Geological Survey, 2023b) and orders of magnitude below levels that would be considered ore grades.

Nickel occurs at concentrations from 1.6 to 11.4 times background (75 - 535ppm; background of 47 ppm) with average values of 226 ppm, around 4.8 times background upper crust values. Typical ore grades for Ni would be around 20000 ppm (Table 3), therefore an average concentration of 226 ppm would be 100 times below ore grade.

In the case of both Cr and Ni, the higher values are correlated with each other, suggesting that they might be related to the presence of typical magmatic mineral phases such as olivine, and is consistent with the mafic to ultramafic character of the amphibolites.

Average lithium concentrations are above average upper crust values in all data sets and range from around 3 times average upper crust background values in the all data and felsic sample data sets, to around 7 times upper crust background values in the amphibolite samples. The maximum concentration is around 12 times average upper crust values in a single sample (242 ppm; see Figure 9). Typical hard rock ore grades for Lithium are around 10000 - 15000 ppm (Ontario Geological Survey, 2023b; De Los Hoyos, 2022). Therefore, the values are not significant and do not indicate any Li mineral potential at the Revell Site.

As these amphibolite samples make up a very small proportion of the rock volume (around 1% of logged rock types; see Section 2.2), these above background elevated concentrations in Cr, Ni or Li do not show significantly high enough enrichment above background values, and would be volumetrically insignificant within the larger pluton, and therefore have no economic mineral potential.

4.4 Alteration

In reviewing the core logged data for alteration in bore holes IG_BH01, IG_BH02 and IG_BH03 there is significant variation between each borehole and nothing was noted that was consistent and could be related to intrusion-related mineralization. This is consistent with almost all elements at average upper crust background values and alteration being related to hydrothermal fluid flow during granite emplacement and related immediate post-emplacement alteration, or later surficial alteration (e.g., hematization). The generally low levels of alteration will have slightly altered the original compositions of the bedrock, but we do not see any patterns or concentrations of any elements with specific alteration facies.

4.5 Comparison to other Plutons

The lithogeochemistry data set was also averaged from the biotite granodiorite-tonalite and biotite tonalite samples (n = 52) to allow comparison to plutonic samples from the Marmion Terrane just to the south of the Revell Site (Figure 2; data from Stone, 2010c). A comparison between the plutons is shown in Table 5.

The data indicates that elemental concentrations of the Revell Site lithogeochemistry data set are at similar levels (orange filled cells in Table 5) or below levels (green filled cells in Table 5) of the adjacent equivalent age plutons. Out of the 36 elements that were analysed in Stone (2010c), 15 elements are at similar levels to the Revell batholith, 20 elements are below concentrations in the adjacent plutons, and only Li is at slightly elevated values. The similarity in the lithogeochemical data sets between the Revell pluton and the adjacent plutons supports the lack of any elevated element concentrations and mineral potential within the Revell batholith.

Element	Analyses	Level	Detection Limit	Rudnick and Gao (2003) Upper	Revell Biotite Tonalite Samples Average				Wabigoon subprovince	
					Min	Average	Max	n	Biotite Tonalite Al-rich	Biotite Tonalite Al-poor
Ag	TD-ICP	PPM	0.3	0.053	0.4	0.4	0.6	12		
As	INAA	PPM	0.5	4.8	0.6	1.4	3.1	15		
Au	INAA	PPB	2	1.5	3.0	4.3	6.0	3		
Ba	FUS-ICP	PPM	2	624	7.0	497.3	988.0	52	407	677
Be	FUS-ICP	PPM	1	2.1	2.0	2.0	2.0	8	1	
Bi	FUS-MS	PPM	0.1	0.16	0.2	0.2	0.4	7		
Br	INAA	PPM	0.5	1.6	1.2	10.7	18.5	16		
Ce	FUS-MS	PPM	0.05	63	9.9	37.6	91.5	52	42.4	48.6
Co	FUS-MS	PPM	1	17.3	2.0	3.0	7.0	45	10	
Cr	INAA	PPM	5	92	7.0	19.8	35.0	33	23	22
Cs	FUS-MS	PPM	0.1	4.9	0.6	1.7	3.8	52	1.2	2.2
Cu	TD-ICP	PPM	1	28	3.0	13.1	48.0	52	17	10
Dy	FUS-MS	PPM	0.01	3.9	0.5	0.8	2.6	52	1.3	1.6
Er	FUS-MS	PPM	0.01	2.3	0.2	0.4	1.4	52	0.7	0.8
Eu	FUS-MS	PPM	0.005	1	0.1	0.5	0.9	52	0.8	0.6
Ga	FUS-MS	PPM	1	17.5	13.0	18.3	23.0	52	19	16
Gd	FUS-MS	PPM	0.01	4	0.8	1.3	2.8	52	1.9	2.2
Ge	FUS-MS	PPM	0.5	1.4	0.7	0.9	1.8	47		
Hf	FUS-MS	PPM	0.1	5.3	1.6	3.0	4.9	52	3.4	3.5
Ho	FUS-MS	PPM	0.01	0.83	0.08	0.14	0.49	52	0.2	0.3
La	FUS-MS	PPM	0.05	31	4.4	21.9	55.5	52	22.1	25.2
Li	TD-ICP	PPM	1	21	7.0	51.6	86.0	27	34	41
Lu	FUS-MS	PPM	0.002	0.31	0.03	0.06	0.18	52	0.1	0.1
Nb	FUS-MS	PPM	0.2	12	2.0	3.7	7.3	52	5.6	6.5
Nd	FUS-MS	PPM	0.05	27	4.0	11.9	25.6	52	15.4	17.1
Ni	TD-ICP	PPM	1	47	2.0	6.8	175.0	45	11	7
Pb	TD-ICP	PPM	5	17	6.0	8.2	16.0	39	9	15
Pr	FUS-MS	PPM	0.01	7.1	1.1	3.6	8.4	52	4.5	5.2
Rb	FUS-MS	PPM	1	84	24.0	74.0	200.0	52	45	93
S	TD-ICP	%	0.001	0.06	0.002	0.017	0.312	50		
Sc	FUS-ICP	PPM	1	14	2.0	2.4	5.0	45	4	2
Sm	FUS-MS	PPM	0.01	4.7	1.0	1.8	3.0	52	2.5	2.7
Sr	FUS-ICP	PPM	2	320	8.0	220.2	411.0	52	371	241
Ta	FUS-MS	PPM	0.01	0.9	0.2	0.7	2.0	52	0.5	1
Tb	FUS-MS	PPM	0.01	0.7	0.1	0.2	0.4	52	0.3	0.3
Th	FUS-MS	PPM	0.05	10.5	1.8	5.7	11.9	52	4.1	10.1
Tl	FUS-MS	PPM	0.05	0.9	0.11	0.40	0.80	51		
Tm	FUS-MS	PPM	0.005	0.3	0.03	0.06	0.20	52	0.1	0.1
U	FUS-MS	PPM	0.01	2.7	0.6	2.0	12.9	52	0.7	2.4
V	FUS-ICP	PPM	5	97	6.0	16.7	41.0	48	40	14
W	FUS-MS	PPM	0.5	1.9	0.6	3.3	26.1	14		
Y	FUS-MS	PPM	0.5	21	2.5	4.5	16.2	52	7	8
Yb	FUS-MS	PPM	0.01	2	0.2	0.4	1.3	52	0.6	0.8
Zn	TD-ICP	PPM	1	67	12.0	46.7	118.0	52	64	45
Zr	FUS-ICP	PPM	1	193	23.0	102.8	202.0	52	147	113

Revell Pluton values below Wabigoon Tonalites (green)

Revell Pluton values between Al-rich and Al-poor Tonalites (yellow)

Values above Wabigoon Tonalites (red)

No equivalent data (white)

Table 5. Average chemical analyses of biotite tonalite (including biotite granodiorite-tonalite and biotite-tonalite endmembers) samples (n=52) for the Revell Site compared with average chemical analyses of plutonic suites from the central Wabigoon subprovince areas (two right-most columns; from Stone, 2010c). The Revell Site biotite tonalite contains an average of 13.9 % Al_2O_3 (up to 18.7%; Appendix 2) and would range between the Al-rich (15.9 weight percent) and the Al-poor (13.97 weight percent) samples from Stone (2010c). The cell shading indicates whether the Revell Site average data is below the plutonic suite averages (green), within the range of the Al-rich to Al-poor plutonic suites (orange), or above the plutonic suite averages (red). Samples with a low number of analyses are marked in red but were not analyzed by Stone (2010c).

5. DISCUSSION AND CONCLUSIONS

Evaluation of the Revell Site lithogeochemistry data indicates that almost all elements, from an average of the single data set (n = 93), have concentrations below average upper crust levels. Of those elements that are above background upper crust values (Cr and Li) they are at values 2 - 3 times greater than background upper crust values. This is consistent for the felsic sample data set where Li is the only element consistently detected at up to 3 times average upper crust values, but still orders of magnitude below potential economic concentrations. For the amphibolite samples only Cr, Ni, and Li are present at greater than average upper crust background values. Importantly, amphibolite occurrences represent only approximately 2 % of the logged rock types by length of recovered core, with average values at levels 5 - 7 times greater than background upper crust values, and therefore this rock type is present at levels far below the enrichment necessary to have any mineral potential.

Direct comparison of the Revell Site data set to adjacent plutons, of similar age and composition, indicates that the granitoid rock of the Revell Site has lower overall concentrations for all elements that were measured and does not show evidence of mineral potential based on our current understanding.

Reviews of the core logging and petrographic data supports this conclusion:

- The petrographic reports supplied (NWMO, 2022c; NWMO, 2022d) are consistent with the lithogeochemical analyses with only sulfide and opaque minerals observed at trace levels in some samples and absent in the majority of the samples. Sulfide minerals are dominantly pyrite, with minor pyrrhotite, chalcopyrite, and sphalerite as sub-mm scale grains as inclusions in quartz and biotite and are consistent with primary igneous processes and do not show any concentration. Only trace levels of sulfur were measured in the lithogeochemical data set and consistent with the petrographic data suggest a lack of sulfide mineral potential at the Revell Site.
- The level of alteration identified was generally quite low during core logging, was sporadic and varied, was not pervasive and no discernable alteration zoning patterns were identified in the recovered core. Alteration types did not coincide with enrichment in any elements nor in any clearly ‘mappable’ alteration zones, that would be expected from mineralizing systems if they were present. These alteration textures are consistent with low level hydrothermal fluid flow during granite emplacement and related immediate post-emplacement alteration, or later surficial alteration (e.g., hematization).
- In the core log photos that were reviewed there is no evidence of any additional phases or episodes of mineralization. Cross-cutting fractures, veins, and textures (sample and petrographic) are consistent with barren primary igneous textures and alteration types that would be expected during emplacement of the intrusion.

When the Revell Site lithogeochemistry data is compared to background upper crust levels, it is at or below average upper crust concentrations, and indicates that the Revell Site is mineralogically incredibly homogeneous with only minor variations due to the presence of amphibolite. It also suggests that many other areas of Archean crust in northwestern Ontario would have significantly more mineral potential than the Revell Site. This is important as based on current understanding, it is very unlikely upon projecting a million years into the future, that the Revell Site would be a focus for mineral exploration.

Some key questions were included in the work scope for this project and answers are summarized below:

1. *Are there any quality issues with the collected data? Are collected data sufficient to answer key questions, or are further analyses recommended?*

As the data were collect by qualified laboratories using accepted world-wide standards (ISO 9001:2015 and ISO 9002), quality assurance and quality control procedures, and calibration, it is highly unlikely that there are any quality issues with the collected data. Blank and duplicate samples were run during the analyses and these data were included within the results. These data were reviewed, and the analysis were repeatable and precise. The duplicate data (Figure 6) showed excellent consistency between the elements analysed at a range of concentrations, using different techniques.

The data set for the Revell Site is also very similar to the average elemental values from Marmion Terrane plutons (Stone, 2010a, 2010c) and independently supports the validity of the collected data. The lithogeochemistry data are also consistent with the findings of prior geological and core studies that did not document evidence of mineralization within the core samples, and which indirectly supports the quality of the lithogeochemistry data.

The consistency of the lithogeochemical data set suggests that the current data set is adequate for assessing the mineral resource potential of the Revell Site. It does not seem necessary to collect additional lithogeochemical data as it is expected to be almost identical to the current data set, and the analyses already completed are likely representative of the rock types encountered at the site.

If additional boreholes are drilled, there may be some value in additional lithogeochemistry sampling; not to evaluate mineral potential, but to ensure that there is lithological consistency across the Revell Site for complimentary and engineering studies.

The lithogeochemistry study, integrated with the previous coring and geological studies, are consistent with the understanding that there is limited existing or future mineral potential at the Revell Site and therefore further analyses to evaluate the mineral potential of the Revell Site are not considered to be necessary.

2. *Is the mineral resource potential of the study area different from nearby regions, or from geologically-similar regions worldwide?*

The lithogeochemistry data set indicates that there is limited future mineral potential at the Revell Site. Current exploration licenses are located at the contact of the Revell batholith and the greenstone belts to the west, north and northeast and mineralization is within the mafic metavolcanic rocks and other, older, host rocks. Genetic models for VMS deposits have focused on the surrounding greenstone belts and are constantly evolving, but the plutons have not been an exploration target in the past, and based on the lithogeochemical data, are unlikely to hold future potential.

In terms of intrusion-hosted mineralization, as outlined in Section 2.3, the tonalite and granodiorite rocks of the Revell batholith contain typical elemental values for these rock types, either below or at background upper crust levels. These includes elements such as Cs, Nb, Rb, and Ta, which are of current exploration interest, but are all at or below average upper crust concentrations; Li would also be a target but only shows enrichment to less than 3 times average upper crust values at levels far below economic concentrations. Therefore, the mineral potential of the Revell batholith is very low.

Pegmatites containing Cs, Li, Nb, Rb, and Ta do occur approximately 22 km southeast of the Revell site but are hosted in supracrustal rocks away from the margins of the Revell batholith. The lithogeochemistry data for the Revell Site pegmatite samples are shown in Appendix 2 and show no enrichment in these elements (only 2 pegmatite samples were logged in the IG_BH01 borehole and absent in the other boreholes, therefore, Li concentrations were not analysed.)

Therefore, the mineral resource potential of the Revell Site is very low and is supported by the background values for almost every element in the lithogeochemical data set and lack of evidence of mineralization or enrichment within the cored intervals. These background values as consistent with and almost identical to other plutons in the area (Stone, 2010a, 2010c).

3. *How robust is any answer to the question of potential future mineral resource prospectivity on the timescales in question? Can uncertainties be defined?*

In terms of answering the question based on the lithogeochemistry data set alone, it is very clear that there is little to no mineral potential at the Revell Site. The data set indicates almost every element is at a background level or lower, show no elemental concentration to ore grade levels, and elements at concentrations above background (Cr, Ni, and Li) occur in volumetrically insignificant amphibolite occurrences. So, this is a very robust assessment. This low to no mineral potential is clearly supported by the lithogeochemical data set, and there are few uncertainties regarding this interpretation.

Exploration models and potential resources do evolve through time, but as there is no evidence of any significant element concentrations in the lithogeochemistry data set, the potential mineral prospectivity of the Revell Site is unlikely to change tens to hundreds of thousands of years into the future.

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Appendix 1

Lithogeochemistry Data for IG_BH01, IG_BH02, and IG_BH03

Lithogeochemistry Data – IG_BH01

All analyses performed by Activation Laboratories Ltd. in Thunder Bay or Ancaster, Ontario. In addition to the results included below, 28 certified reference materials (to measure accuracy), 7 duplicates (to measure precision), and 8 method blanks (to monitor contamination) were analysed by Actlabs to ensure overall quality control in the lithogeochemical analyses. Certified reference material measurements averaged within 10% of certified values (>90% accuracy). Duplicate sample measurements averaged within 7% of original measured values (>93% precision), and the method blanks all returned measurements below detection limit (no discernable contamination).

Samples BH-01_LG-038 and BH-01_LG-39 have been flipped in this raw data table. BH-01_LG-038 is an amphibolite (low silica) and 039 is a tonalite (high silica), but table shows the opposite. The data are correct in NWMO (2022c).

Lithogeochemical results of various tests carried out by Activation Laboratories (NWMO, 2022c).

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Analyte Symbol	From (position along borehole; m)	To (position along borehole; m)	Au	As	Br	Cr	Cs	Co	Ce	Eu	Hf	Ir	La	Lu	Mo	Nd	Rb	Sb	Se	Sm	Ta	Th
Unit Symbol			ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit			2	0.5	0.5	5	1	1	3	0.2	1	5	0.5	0.05	5	5	20	0.2	3	0.1	0.5	0.2
Analysis Method			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
IG_BH01_LG001	1.6	1.82	< 2	< 0.5	< 0.5	< 5	< 1	3	26	0.2	4	< 5	13.5	< 0.05	< 5	< 5	50	< 0.2	< 3	1.4	< 0.5	3.6
IG_BH01_LG002	24.71	24.83	< 2	< 0.5	< 0.5	< 5	< 1	5	23	0.3	3	< 5	12.1	< 0.05	< 5	< 5	< 20	0.4	< 3	1.3	< 0.5	3.5
IG_BH01_LG003	67.1	67.33	< 2	< 0.5	< 0.5	< 5	< 1	1	25	< 0.2	3	< 5	15.6	< 0.05	< 5	8	100	< 0.2	< 3	1.2	< 0.5	4.5
IG_BH01_LG004	80.77	80.9	6	0.9	< 0.5	< 5	3	< 1	35	< 0.2	3	< 5	21.4	< 0.05	< 5	9	80	< 0.2	< 3	1.5	< 0.5	9.2
IG_BH01_LG005	131.88	131.97	< 2	0.6	< 0.5	< 5	< 1	< 1	52	< 0.2	2	< 5	29.5	< 0.05	< 5	10	50	< 0.2	< 3	1.5	< 0.5	6.9
IG_BH01_LG006	170.1	170.29	< 2	3.1	< 0.5	< 5	1	2	62	< 0.2	3	< 5	39	< 0.05	< 5	14	50	< 0.2	< 3	2	< 0.5	9.7
IG_BH01_LG007	201.6	201.73	4	2	< 0.5	8	< 1	7	33	< 0.2	3	< 5	17.9	< 0.05	< 5	6	50	< 0.2	< 3	1.7	< 0.5	3.7
IG_BH01_LG008	214.1	214.23	< 2	1	< 0.5	< 5	2	2	26	< 0.2	4	< 5	15.4	< 0.05	< 5	6	70	< 0.2	< 3	1.1	< 0.5	3.8
IG_BH01_LG009	227.27	227.35	< 2	2.3	< 0.5	< 5	4	7	28	< 0.2	4	< 5	16.6	< 0.05	< 5	< 5	< 20	< 0.2	< 3	1.5	< 0.5	3.6
IG_BH01_LG010	234.07	234.22	< 2	0.8	< 0.5	< 5	1	< 1	90	0.6	4	< 5	53.9	< 0.05	< 5	20	100	< 0.2	< 3	2.7	< 0.5	13
IG_BH01_LG011	287.97	288.27	< 2	0.9	< 0.5	< 5	< 1	1	43	< 0.2	2	< 5	24.5	< 0.05	< 5	14	20	< 0.2	< 3	1.4	< 0.5	7.2
IG_BH01_LG012	298.11	298.32	< 2	0.9	< 0.5	7	3	2	52	< 0.2	3	< 5	31	< 0.05	< 5	11	100	< 0.2	< 3	1.5	< 0.5	7.6
IG_BH01_LG013	299.95	300.13	< 2	< 0.5	< 0.5	< 5	2	2	36	< 0.2	2	< 5	23	< 0.05	< 5	10	80	< 0.2	< 3	1.2	< 0.5	6
IG_BH01_LG014	315.04	315.12	< 2	< 0.5	< 0.5	258	< 1	35	180	2.6	3	< 5	85.8	< 0.05	< 5	62	< 20	< 0.2	< 3	11.1	< 0.5	13.5
IG_BH01_LG015	335.11	335.3	< 2	< 0.5	< 0.5	< 5	2	< 1	53	< 0.2	3	< 5	31.3	< 0.05	< 5	12	70	< 0.2	< 3	1.6	< 0.5	7.9

IG_BH01_LG016	394.98	395.13	< 2	< 0.5	< 0.5	< 5	3	< 1	19	< 0.2	3	< 5	9.4	< 0.05	< 5	8	120	< 0.2	< 3	1.3	< 0.5	5.6
IG_BH01_LG017	400.37	400.53	< 2	< 0.5	< 0.5	< 5	< 1	< 1	13	< 0.2	2	< 5	6.1	0.07	6	< 5	160	< 0.2	< 3	1.3	< 0.5	4.9
IG_BH01_LG018	402.82	402.93	< 2	< 0.5	< 0.5	< 5	4	< 1	17	< 0.2	4	< 5	5.7	0.15	8	< 5	200	< 0.2	< 3	1.7	1.1	5.5
IG_BH01_LG019	443.22	443.3	< 2	1.4	< 0.5	< 5	3	< 1	67	0.3	3	< 5	40.3	< 0.05	< 5	10	100	0.3	< 3	1.7	< 0.5	7.1
IG_BH01_LG020	452.16	452.28	< 2	< 0.5	< 0.5	< 5	< 1	9	21	< 0.2	4	< 5	11	< 0.05	< 5	< 5	< 20	< 0.2	< 3	1.4	< 0.5	1.8
IG_BH01_LG021	470.11	470.22	< 2	< 0.5	< 0.5	< 5	1	8	19	< 0.2	4	< 5	11.1	< 0.05	< 5	8	< 20	< 0.2	< 3	1.3	< 0.5	2.3
IG_BH01_LG022	529.93	530.02	< 2	0.7	4.4	< 5	< 1	5	66	0.3	5	< 5	41	< 0.05	< 5	19	40	< 0.2	< 3	1.7	< 0.5	8.1
IG_BH01_LG023	549.15	549.33	< 2	0.8	< 0.5	10	3	8	39	0.4	4	< 5	22.5	< 0.05	< 5	12	60	< 0.2	< 3	2.3	< 0.5	4.5
IG_BH01_LG024	560.64	560.78	< 2	< 0.5	< 0.5	7	4	2	32	0.5	4	< 5	18.6	< 0.05	< 5	12	< 20	< 0.2	< 3	1.7	< 0.5	3.9
IG_BH01_LG025	587.04	587.2	< 2	< 0.5	< 0.5	15	< 1	8	34	0.5	3	< 5	21.4	< 0.05	< 5	12	< 20	< 0.2	< 3	1.9	< 0.5	4.3
IG_BH01_LG026	593.12	593.27	< 2	< 0.5	< 0.5	< 5	1	3	76	0.5	3	< 5	47.5	< 0.05	< 5	17	30	< 0.2	< 3	2.1	< 0.5	9.6
IG_BH01_LG027	636.09	636.2	< 2	< 0.5	< 0.5	< 5	< 1	< 1	16	< 0.2	3	< 5	9.4	< 0.05	< 5	< 5	< 20	0.2	< 3	0.9	< 0.5	3.1
IG_BH01_LG028	656.32	656.48	< 2	0.7	< 0.5	168	3	34	97	2.4	4	< 5	48	< 0.05	< 5	35	40	< 0.2	< 3	8.6	< 0.5	7.1
IG_BH01_LG029	659.05	659.25	< 2	< 0.5	< 0.5	< 5	< 1	< 1	20	< 0.2	2	< 5	10	< 0.05	< 5	< 5	40	0.3	< 3	1.4	< 0.5	4.7
IG_BH01_LG030	701.13	701.25	< 2	2.1	< 0.5	< 5	2	2	56	0.4	4	< 5	36.8	< 0.05	< 5	12	< 20	< 0.2	< 3	1.7	< 0.5	6.8
IG_BH01_LG031	735.09	735.33	< 2	2.5	< 0.5	898	15	48	42	0.7	2	< 5	19.5	< 0.05	< 5	16	190	< 0.2	< 3	3	< 0.5	2.9
IG_BH01_LG032	752.3	752.35	< 2	1	< 0.5	11	1	3	85	0.6	5	< 5	52.9	< 0.05	< 5	17	100	< 0.2	< 3	2.3	< 0.5	9.1
IG_BH01_LG033	776.2	776.28	< 2	0.7	< 0.5	13	3	3	44	0.5	4	< 5	25.2	< 0.05	< 5	9	< 20	< 0.2	< 3	2.5	< 0.5	5.2
IG_BH01_LG034	792.92	793.03	4	< 0.5	< 0.5	893	5	46	45	0.7	2	< 5	21.2	< 0.05	< 5	18	130	< 0.2	< 3	4.1	< 0.5	2.7
IG_BH01_LG035	795.65	795.75	< 2	< 0.5	< 0.5	455	3	38	55	1.1	2	< 5	29.6	< 0.05	< 5	24	60	0.3	< 3	5.1	< 0.5	3.4
IG_BH01_LG036	797.48	797.62	< 2	< 0.5	< 0.5	959	5	48	44	0.8	1	< 5	19.5	< 0.05	< 5	15	170	< 0.2	< 3	4	< 0.5	3.6
IG_BH01_LG037	841.99	842.11	< 2	< 0.5	18.4	13	< 1	3	41	0.3	4	< 5	26.1	< 0.05	< 5	9	20	< 0.2	< 3	1.7	< 0.5	5.1
IG_BH01_LG038	895.67	895.97	< 2	< 0.5	< 0.5	8	< 1	6	36	0.4	4	< 5	21.8	< 0.05	< 5	8	30	< 0.2	< 3	1.5	< 0.5	5.3
IG_BH01_LG039	901.98	902.16	< 2	< 0.5	< 0.5	399	2	37	129	2	3	< 5	63	< 0.05	< 5	53	50	< 0.2	< 3	10.6	< 0.5	8.5
IG_BH01_LG040	950.02	950.13	< 2	< 0.5	< 0.5	9	< 1	7	41	0.4	4	< 5	22.7	< 0.05	< 5	7	30	< 0.2	< 3	1.8	< 0.5	5.2
IG_BH01_LG041	953.41	953.62	< 2	< 0.5	< 0.5	8	< 1	< 1	37	0.3	3	< 5	20.7	< 0.05	< 5	9	50	< 0.2	< 3	1.8	< 0.5	5.7
IG_BH01_LG042	968.28	968.44	< 2	1.5	< 0.5	1170	13	54	106	1.9	2	< 5	46.3	< 0.05	< 5	49	110	< 0.2	< 3	9.3	< 0.5	5.5
IG_BH01_LG043	978.81	978.9	< 2	1.9	4.1	443	< 1	41	97	1	< 1	< 5	46.9	< 0.05	< 5	34	30	< 0.2	< 3	6.9	< 0.5	3
IG_BH01_LG044	995.04	995.15	< 2	< 0.5	< 0.5	18	< 1	4	62	0.7	4	< 5	36.8	< 0.05	< 5	15	110	< 0.2	< 3	2.4	< 0.5	8.1
IG_BH01_LG045	999.1	999.29	< 2	< 0.5	< 0.5	905	6	47	54	0.9	2	< 5	26.8	< 0.05	< 5	16	< 20	< 0.2	< 3	5.4	< 0.5	4

Analyte Symbol	Tb	U	W	Yb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Total	Sc	Be	V	Cr	Co	Ga	Ge
Unit Symbol	ppm	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.5	1	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	1	1	5	20	1	1	0.5
Analysis Method	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
IG_BH01_LG001	< 0.5	< 0.5	< 1	< 0.2	30.9	70.18	15.35	2.69	0.04	0.62	2.6	4.72	2.37	0.268	0.06	99.39	3	1	27	< 20	5	20	0.8
IG_BH01_LG002	< 0.5	0.7	< 1	0.4	30	71	15.84	2.69	0.037	0.59	2.6	4.75	2.26	0.269	0.07	100.8	4	1	26	< 20	4	21	0.8
IG_BH01_LG003	< 0.5	0.9	< 1	< 0.2	29.4	68.7	15.07	2.34	0.028	0.5	1.25	3.89	5.55	0.204	0.05	98.64	2	< 1	17	< 20	4	18	0.9
IG_BH01_LG004	< 0.5	0.9	< 1	< 0.2	28.7	75.67	12.53	1.61	0.027	0.23	1.62	4.11	2.29	0.098	0.04	98.61	2	2	< 5	< 20	1	17	1.1
IG_BH01_LG005	< 0.5	2.6	< 1	< 0.2	31.9	75.89	13.46	2.04	0.032	0.29	1.85	4.24	2.13	0.142	0.02	100.6	1	2	7	< 20	< 1	16	< 0.5
IG_BH01_LG006	< 0.5	< 0.5	< 1	< 0.2	28.7	74.16	13.3	2.12	0.031	0.37	2.06	4.23	1.95	0.158	0.03	98.89	2	1	7	< 20	2	18	0.8
IG_BH01_LG007	< 0.5	< 0.5	< 1	< 0.2	29.4	69.39	15.2	3.29	0.046	0.78	3.07	4.44	1.94	0.336	0.1	99	5	2	32	< 20	2	22	< 0.5
IG_BH01_LG008	< 0.5	1.9	< 1	0.4	29.7	67.04	17.28	2.85	0.04	0.6	2.56	5.43	3.15	0.269	0.04	100.7	3	2	25	< 20	4	23	0.8
IG_BH01_LG009	< 0.5	< 0.5	< 1	< 0.2	27.8	68.81	16.03	3.31	0.042	0.7	3.25	5.04	1.49	0.328	0.1	99.64	4	2	29	< 20	6	23	0.8
IG_BH01_LG010	< 0.5	1.1	< 1	< 0.2	28.6	69.37	15.63	2.33	0.03	0.38	2.09	4.42	3.74	0.175	0.06	98.71	2	< 1	12	< 20	2	19	1
IG_BH01_LG011	< 0.5	0.9	< 1	< 0.2	29.6	78.11	11.05	2.19	0.025	0.22	1.52	3.5	1.9	0.11	0.02	99.58	1	1	< 5	< 20	2	14	0.9
IG_BH01_LG012	< 0.5	3	< 1	< 0.2	29.3	74.13	12.63	1.84	0.027	0.26	1.84	4.05	2.09	0.124	0.03	98.93	1	1	6	< 20	2	18	0.9
IG_BH01_LG013	< 0.5	2.2	< 1	< 0.2	30.2	81.66	8.74	1.56	0.02	0.18	1.26	2.71	1.44	0.092	0.03	99.19	1	< 1	7	< 20	2	13	1
IG_BH01_LG014	< 0.5	2.4	< 1	1.3	29.3	52.38	14.85	7.75	0.14	8.51	8.04	4.07	0.89	0.672	0.49	100.5	17	3	140	310	26	17	< 0.5
IG_BH01_LG015	< 0.5	2.4	< 1	< 0.2	30.8	75.04	13.03	2.13	0.03	0.33	1.99	4.15	2.07	0.14	0.03	99.35	2	1	7	< 20	2	18	0.9
IG_BH01_LG016	< 0.5	4.7	< 1	< 0.2	30.8	75.5	13.49	0.95	0.014	0.08	0.69	3.36	5.71	0.036	0.01	100	< 1	1	< 5	< 20	1	19	1.2
IG_BH01_LG017	< 0.5	8.4	< 1	0.6	30.2	76.51	13.16	1.04	0.02	0.06	0.75	3.97	4.81	0.039	< 0.01	100.7	< 1	2	6	< 20	< 1	20	< 0.5
IG_BH01_LG018	< 0.5	14.8	< 1	1.4	31.6	73.94	13.51	0.94	0.087	0.05	0.43	4.12	5.2	0.03	0.02	98.52	3	1	< 5	< 20	< 1	25	2
IG_BH01_LG019	< 0.5	3.6	< 1	< 0.2	31.5	73.92	13.37	2.05	0.027	0.33	2.12	4.24	2.03	0.165	0.04	98.67	2	1	9	< 20	2	18	1
IG_BH01_LG020	< 0.5	< 0.5	< 1	0.2	33.1	68.39	15.97	3.41	0.038	0.84	3.72	4.8	1.25	0.384	0.09	99.41	5	1	37	< 20	6	21	0.7
IG_BH01_LG021	< 0.5	< 0.5	< 1	0.4	34.6	69.44	15.57	3.41	0.038	0.88	3.69	4.84	1.3	0.372	0.1	100.1	5	1	41	< 20	7	22	0.7
IG_BH01_LG022	< 0.5	1.6	< 1	< 0.2	33.9	73.89	13.05	2.34	0.028	0.45	2.45	4.1	1.67	0.223	0.06	98.6	2	1	14	< 20	3	18	0.8
IG_BH01_LG023	< 0.5	0.7	< 1	0.5	29.9	69.79	15.07	3.3	0.039	0.81	3.14	4.32	2.06	0.447	0.12	100.7	4	1	31	< 20	6	20	0.8
IG_BH01_LG024	< 0.5	< 0.5	< 1	< 0.2	31.4	71.63	15.47	2.57	0.031	0.61	3.22	4.42	1.6	0.293	0.08	100.2	3	1	23	< 20	4	20	0.8
IG_BH01_LG025	< 0.5	0.7	< 1	< 0.2	31.2	70.2	15.15	3.1	0.038	0.89	3.34	4.49	1.76	0.33	0.09	99.75	4	1	33	20	6	21	0.9
IG_BH01_LG026	< 0.5	1.7	< 1	< 0.2	30.7	75.11	13.35	2.59	0.034	0.48	2.36	4.01	1.92	0.24	0.08	100.6	2	2	16	< 20	< 1	16	< 0.5
IG_BH01_LG027	< 0.5	1.9	< 1	0.3	30.4	74.6	13.68	1.41	0.025	0.29	1.94	4.66	1.96	0.11	0.05	99.14	1	2	11	< 20	< 1	18	< 0.5

IG_BH01_LG028	< 0.5	0.9	< 1	1.5	31.3	54.05	14.02	8.69	0.117	6.6	7.64	2.87	2.68	0.978	0.38	99.99	19	2	168	190	34	19	1.2
IG_BH01_LG029	< 0.5	0.9	< 1	< 0.2	30.5	74	14.19	1.29	0.023	0.22	1.91	4.71	2.28	0.088	0.03	99.2	2	1	9	< 20	1	19	1
IG_BH01_LG030	< 0.5	< 0.5	< 1	< 0.2	28.9	73.29	13.73	3.09	0.038	0.67	2.76	3.96	1.72	0.317	0.09	100.2	2	1	24	< 20	5	18	0.7
IG_BH01_LG031	< 0.5	< 0.5	< 1	1.1	22.8	47.18	10.22	9.22	0.156	10.98	9.14	0.17	5.38	0.557	0.17	99.81	30	1	193	1040	47	12	1.6
IG_BH01_LG032	< 0.5	1.7	< 1	< 0.2	27.1	72.67	13.38	3.33	0.039	0.71	2.65	3.91	1.76	0.32	0.08	99.24	2	1	24	< 20	5	19	0.9
IG_BH01_LG033	< 0.5	< 0.5	< 1	0.5	29.8	70.34	14.61	3.31	0.039	0.82	3.06	4.59	1.65	0.443	0.12	100.2	4	2	34	< 20	6	21	0.9
IG_BH01_LG034	< 0.5	0.8	< 1	1.1	28.6	47.66	10.63	9.64	0.168	12.04	9.53	0.89	4	0.577	0.16	99.74	33	1	203	1110	49	14	1.6
IG_BH01_LG035	< 0.5	< 0.5	< 1	1.3	29.3	49.87	13.68	9.93	0.154	8.53	9.96	2.91	1.87	0.732	0.22	100.4	27	1	227	590	42	17	1.6
IG_BH01_LG036	< 0.5	< 0.5	< 1	0.9	26	46.08	11.07	10.94	0.175	13.09	8.62	1.13	3.58	0.582	0.17	98.12	35	1	206	1270	54	17	1.5
IG_BH01_LG037	< 0.5	< 0.5	< 1	< 0.2	27.2	70.24	14.09	3.49	0.043	0.86	3.07	4.17	1.67	0.337	0.1	98.49	3	1	29	< 20	6	19	0.8
IG_BH01_LG038	< 0.5	3.2	< 1	0.3	29.9	72.22	13.47	3.15	0.042	0.69	2.68	4.1	1.8	0.299	0.07	98.89	2	1	23	< 20	5	19	1
IG_BH01_LG039	< 0.5	1.5	< 1	1.2	25.2	49.84	13.3	8.05	0.127	10.93	9.37	2.87	2.22	0.649	0.48	100.3	21	2	139	520	41	17	1.2
IG_BH01_LG040	< 0.5	< 0.5	< 1	< 0.2	30.7	70.83	13.81	3.56	0.044	0.86	2.93	4.04	1.68	0.335	0.1	98.52	3	1	29	< 20	6	18	0.7
IG_BH01_LG041	< 0.5	0.8	< 1	< 0.2	29.8	74.68	13.46	2.49	0.039	0.45	2.18	4.1	2.32	0.201	0.06	100.2	2	1	26	< 20	< 1	17	< 0.5
IG_BH01_LG042	< 0.5	2.3	< 1	1	25.5	43.91	9.2	9.43	0.169	16.82	9.47	0.64	3.49	0.636	0.37	98.66	26	2	139	1460	58	13	1.4
IG_BH01_LG043	< 0.5	< 0.5	< 1	1	24.6	41.51	9.69	9.45	0.152	9.12	14.39	1.69	2.41	0.627	0.32	99.9	26	3	179	550	42	12	1.2
IG_BH01_LG044	< 0.5	< 0.5	< 1	0.3	25.1	72.51	13.07	3.67	0.05	0.95	2.8	3.63	1.66	0.377	0.12	99.38	3	2	29	< 20	3	19	< 0.5
IG_BH01_LG045	< 0.5	1.1	< 1	1.2	29	49.1	11.13	9.76	0.164	11.03	10.47	2.71	1.53	0.607	0.19	99.87	33	2	223	1040	46	13	1.4

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	1	2	0.5	1	0.2	2	0.1	1	0.2	0.1	2	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
IG_BH01_LG001	< 5	60	297	4.3	95	2	< 2	< 0.1	1	< 0.2	1.6	556	13.7	24.6	2.61	9.1	1.61	0.486	1.18	0.16	0.81	0.16	0.44	0.062
IG_BH01_LG002	< 5	55	312	4.3	100	2.1	< 2	< 0.1	1	< 0.2	1.4	513	12	23.1	2.27	8.1	1.48	0.452	1.12	0.16	0.83	0.15	0.4	0.062
IG_BH01_LG003	< 5	93	206	3.6	60	2.5	< 2	< 0.1	1	< 0.2	1	1606	15.5	26.4	2.54	8.88	1.28	0.344	1.02	0.14	0.72	0.13	0.34	0.047
IG_BH01_LG004	< 5	71	161	3.6	58	3.3	< 2	< 0.1	1	< 0.2	2.3	405	22.8	39.7	3.72	12.1	1.74	0.455	1.09	0.13	0.62	0.11	0.35	0.05
IG_BH01_LG005	< 5	64	187	3.3	84	3.8	< 2	< 0.1	1	< 0.2	1.6	424	30.3	50.7	4.49	13.3	1.7	0.546	0.99	0.12	0.6	0.11	0.3	0.05
IG_BH01_LG006	< 5	62	197	3.5	83	3.6	< 2	< 0.1	1	< 0.2	1.2	403	40.5	67.6	6.13	19.1	2.17	0.553	1.31	0.16	0.74	0.12	0.32	0.045
IG_BH01_LG007	< 5	52	356	4.4	126	2	< 2	< 0.1	1	< 0.2	1.2	583	18.5	33.3	3.22	11.5	1.93	0.61	1.4	0.18	0.9	0.16	0.42	0.057
IG_BH01_LG008	< 5	102	253	4.1	114	3.9	< 2	< 0.1	1	< 0.2	2.5	582	15.8	27.7	2.74	9.19	1.42	0.425	0.92	0.14	0.72	0.13	0.42	0.065
IG_BH01_LG009	< 5	63	357	4.9	127	5.8	< 2	< 0.1	1	< 0.2	2.9	441	16.8	30.1	3.04	10.7	1.87	0.525	1.27	0.17	0.93	0.17	0.48	0.073
IG_BH01_LG010	< 5	82	243	3.5	82	3.3	< 2	< 0.1	1	< 0.2	1	988	55.5	91.5	8.43	25.6	2.97	0.677	1.62	0.16	0.71	0.12	0.35	0.051
IG_BH01_LG011	< 5	56	160	3.3	56	2.5	< 2	< 0.1	1	< 0.2	1.5	390	25.6	42.7	3.99	12.5	1.54	0.422	0.99	0.12	0.59	0.11	0.31	0.048
IG_BH01_LG012	< 5	70	223	3.4	71	3.1	< 2	< 0.1	1	< 0.2	2.2	434	30.6	51.4	4.67	14.5	1.7	0.393	1	0.13	0.62	0.11	0.32	0.045
IG_BH01_LG013	< 5	47	114	2.5	49	2.1	< 2	< 0.1	1	< 0.2	1.4	339	21.9	36.9	3.32	10.7	1.26	0.265	0.79	0.09	0.45	0.08	0.23	0.03
IG_BH01_LG014	< 5	28	1429	18.9	204	6.2	2	< 0.1	1	< 0.2	1.3	216	82.9	168	18.9	69.9	11.7	3.22	7.96	0.88	4.06	0.64	1.65	0.197
IG_BH01_LG015	< 5	70	189	3.5	77	3.7	< 2	< 0.1	1	< 0.2	1.8	392	32.6	55.4	4.95	15.4	1.85	0.521	1.02	0.13	0.63	0.11	0.31	0.047
IG_BH01_LG016	< 5	135	98	3.9	25	2.5	< 2	< 0.1	< 1	< 0.2	2.3	1434	9.12	17.5	1.85	6.75	1.43	0.38	1.19	0.17	0.75	0.13	0.33	0.053
IG_BH01_LG017	< 5	121	66	7.9	36	3	< 2	< 0.1	< 1	< 0.2	1.1	185	5.24	11.3	1.21	4.1	1.28	0.201	1.49	0.24	1.44	0.26	0.8	0.112
IG_BH01_LG018	< 5	179	15	18.8	32	5.8	< 2	< 0.1	1	< 0.2	2.5	50	5.7	12.6	1.5	5.4	1.95	0.048	2.57	0.5	3.06	0.56	1.56	0.217
IG_BH01_LG019	< 5	66	205	3.6	83	3	< 2	< 0.1	1	< 0.2	1.9	377	41.1	67.9	6	18.2	1.97	0.521	0.99	0.13	0.69	0.11	0.32	0.05
IG_BH01_LG020	< 5	44	411	4	132	2.1	< 2	< 0.1	< 1	< 0.2	0.8	447	10.7	19	2.06	7.75	1.54	0.604	1.22	0.15	0.84	0.14	0.37	0.054
IG_BH01_LG021	< 5	47	403	4.2	138	2.3	< 2	< 0.1	1	< 0.2	0.9	467	10.8	19.4	2.03	7.4	1.36	0.555	1.17	0.16	0.78	0.15	0.42	0.063
IG_BH01_LG022	< 5	54	228	3	143	3.3	< 2	< 0.1	1	< 0.2	1.2	423	41.1	67.5	6.09	18	1.83	0.604	0.97	0.11	0.54	0.1	0.29	0.042
IG_BH01_LG023	< 5	60	273	5.6	150	5.3	< 2	< 0.1	1	< 0.2	2.3	466	21.8	40.7	4.24	15.2	2.53	0.773	1.86	0.24	1.19	0.21	0.57	0.072
IG_BH01_LG024	< 5	40	249	3.6	127	3.8	< 2	< 0.1	1	< 0.2	4.5	363	18	32.1	3.22	11.4	1.88	0.563	1.45	0.17	0.78	0.13	0.33	0.045
IG_BH01_LG025	< 5	48	259	4.4	129	3.9	< 2	< 0.1	1	< 0.2	1.2	436	21.7	38.6	3.8	13.8	2.21	0.62	1.61	0.19	0.87	0.15	0.4	0.051
IG_BH01_LG026	< 5	55	224	3	158	3.5	< 2	< 0.1	1	< 0.2	1.4	528	48.3	78.7	6.95	21	2.37	0.67	1.22	0.12	0.59	0.09	0.28	0.039
IG_BH01_LG027	< 5	53	167	4.5	81	2.4	< 2	< 0.1	< 1	< 0.2	1.2	410	9.07	15.7	1.53	4.9	0.99	0.528	0.83	0.13	0.75	0.16	0.42	0.058
IG_BH01_LG028	< 5	68	936	20.8	157	4.9	< 2	0.1	1	< 0.2	2.8	951	47.4	105	12.7	52.6	9.85	2.47	6.96	0.93	4.36	0.8	2.02	0.278

IG_BH01_LG029	< 5	49	168	4.5	62	2.3	< 2	< 0.1	1	< 0.2	1.1	446	9.52	17.9	1.93	7.19	1.7	0.38	1.51	0.2	0.93	0.15	0.36	0.05
IG_BH01_LG030	< 5	56	242	3.1	153	4	< 2	< 0.1	1	< 0.2	1.8	403	38.4	64.2	5.79	17.5	1.99	0.599	1.15	0.12	0.58	0.1	0.33	0.049
IG_BH01_LG031	< 5	145	138	9.4	67	2.2	< 2	< 0.1	1	< 0.2	13	648	18.4	37.6	4.31	16.4	3.05	0.748	2.29	0.31	1.7	0.35	1.07	0.166
IG_BH01_LG032	< 5	59	236	3.2	165	4.2	< 2	< 0.1	1	< 0.2	1.8	447	51.8	85.7	7.61	23.6	2.38	0.623	1.15	0.11	0.59	0.1	0.3	0.046
IG_BH01_LG033	< 5	49	265	6	153	6.3	< 2	< 0.1	1	< 0.2	2.6	414	26.4	47.4	4.77	16.6	2.64	0.741	2.06	0.28	1.34	0.21	0.57	0.076
IG_BH01_LG034	< 5	113	206	12.4	68	2.5	< 2	< 0.1	1	< 0.2	4.8	656	22.1	45.7	5.67	23.6	4.48	1.14	3.49	0.47	2.54	0.47	1.32	0.188
IG_BH01_LG035	< 5	51	653	16.4	87	3.5	< 2	< 0.1	1	0.2	2.8	406	31.9	60.1	7.33	29.8	5.5	1.55	4.2	0.59	3.06	0.59	1.7	0.239
IG_BH01_LG036	< 5	101	200	12	69	2.7	< 2	< 0.1	1	< 0.2	5.4	591	22.1	46.6	5.65	23.6	4.47	1.23	3.47	0.45	2.5	0.47	1.32	0.183
IG_BH01_LG037	< 5	51	258	3.2	170	4.3	< 2	< 0.1	1	< 0.2	1.3	431	26.8	44.8	4.22	13.6	1.71	0.649	1.11	0.13	0.59	0.11	0.3	0.045
IG_BH01_LG038	< 5	59	225	4.5	145	4.7	< 2	< 0.1	1	< 0.2	1.3	387	24	40.4	3.82	12.3	1.87	0.592	1.3	0.17	0.83	0.14	0.42	0.065
IG_BH01_LG039	< 5	52	1137	17.8	154	6.4	< 2	< 0.1	1	< 0.2	3.2	870	70.1	149	17.4	68.7	11.7	3.01	8.03	0.89	4.02	0.65	1.68	0.226
IG_BH01_LG040	< 5	50	250	3.9	185	4.4	< 2	< 0.1	1	< 0.2	1.5	403	25	43.2	4.1	13.9	1.87	0.592	1.3	0.16	0.76	0.14	0.37	0.054
IG_BH01_LG041	< 5	59	194	3.6	135	3.6	< 2	< 0.1	1	< 0.2	1.3	710	22.6	39.4	3.68	12.1	1.73	0.577	1.41	0.17	0.73	0.13	0.34	0.046
IG_BH01_LG042	< 5	94	266	14.6	118	9.3	< 2	< 0.1	1	< 0.2	13.7	622	49.6	112	13.7	56.5	9.76	2.53	6.69	0.74	3.28	0.53	1.32	0.171
IG_BH01_LG043	< 5	71	241	14.7	68	12.5	< 2	< 0.1	< 1	< 0.2	0.5	254	50.3	104	10.8	43.5	7.63	1.67	4.85	0.66	3.09	0.52	1.36	0.187
IG_BH01_LG044	< 5	50	242	3.5	202	4.4	< 2	< 0.1	1	< 0.2	1.2	434	33	55.2	4.98	17	1.99	0.673	1.24	0.13	0.63	0.11	0.31	0.046
IG_BH01_LG045	< 5	43	529	13.7	74	2.7	< 2	< 0.1	1	< 0.2	4.9	344	25	52.5	6.46	26.9	5.29	1.38	4.01	0.53	2.61	0.5	1.41	0.212

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Bi	Th	U	Ni	Cu	Zn	Cd	S	Ag	Pb	LOI
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%
Detection Limit	0.01	0.002	0.1	0.01	0.5	0.05	0.1	0.05	0.01	1	1	1	0.5	0.001	0.3	3	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	GRAV
IG_BH01_LG001	0.42	0.064	2.6	0.3	< 0.5	0.36	< 0.1	3.41	0.61	4	31	54	< 0.5	0.005	< 0.3	8	0.48
IG_BH01_LG002	0.4	0.061	2.7	0.25	< 0.5	0.34	< 0.1	3.28	1.15	3	17	53	< 0.5	0.002	0.4	6	0.71
IG_BH01_LG003	0.31	0.047	1.7	0.46	0.6	0.51	< 0.1	3.96	1.65	2	46	47	< 0.5	0.004	0.4	19	1.06
IG_BH01_LG004	0.33	0.049	2	0.88	< 0.5	0.42	0.2	8.34	1.66	2	13	38	< 0.5	0.001	< 0.3	8	0.39
IG_BH01_LG005	0.34	0.052	2.3	0.52	< 0.5	0.28	0.1	6.8	2.63	1	10	44	< 0.5	0.002	0.4	8	0.46
IG_BH01_LG006	0.3	0.049	2.6	0.64	< 0.5	0.39	< 0.1	9.04	0.98	2	8	47	< 0.5	0.002	< 0.3	6	0.47
IG_BH01_LG007	0.36	0.054	3.5	0.22	< 0.5	< 0.05	< 0.1	3.53	0.68	3	37	61	< 0.5	0.003	0.3	4	0.4
IG_BH01_LG008	0.46	0.073	3.3	0.72	< 0.5	0.55	< 0.1	3.43	1.67	2	8	66	< 0.5	0.003	0.5	8	1.46
IG_BH01_LG009	0.53	0.074	3.7	1.16	< 0.5	0.44	< 0.1	3.4	0.93	3	18	72	< 0.5	0.004	0.4	5	0.54
IG_BH01_LG010	0.31	0.046	2.5	0.43	< 0.5	0.42	< 0.1	11.9	1.66	2	7	49	< 0.5	0.003	< 0.3	11	0.48
IG_BH01_LG011	0.32	0.048	1.7	0.44	1.2	0.35	0.4	6.5	1.42	2	8	33	< 0.5	0.312	0.4	7	0.93
IG_BH01_LG012	0.35	0.055	2.2	0.72	0.7	0.42	< 0.1	7.44	2.18	1	6	40	< 0.5	0.047	< 0.3	6	1.92
IG_BH01_LG013	0.22	0.038	1.6	0.5	2.9	0.26	0.2	5.23	1.89	1	6	85	< 0.5	0.225	< 0.3	6	1.48
IG_BH01_LG014	1.32	0.216	4.6	0.28	10.1	0.15	0.2	11.4	2.59	171	12	86	< 0.5	0.006	0.4	12	2.72
IG_BH01_LG015	0.32	0.052	2.4	0.62	< 0.5	0.43	0.2	7.6	2.43	2	20	44	< 0.5	0.003	< 0.3	8	0.41
IG_BH01_LG016	0.34	0.046	1.9	0.75	< 0.5	0.72	< 0.1	4.86	4.12	2	3	11	< 0.5	0.009	< 0.3	20	0.17
IG_BH01_LG017	0.77	0.12	2.3	0.4	< 0.5	0.54	< 0.1	3.75	8.83	1	6	14	< 0.5	0.03	< 0.3	18	0.31
IG_BH01_LG018	1.53	0.193	3.3	1.21	2.5	0.96	0.1	4.53	14.6	< 1	5	15	< 0.5	0.006	< 0.3	16	0.19
IG_BH01_LG019	0.33	0.054	2.5	0.55	< 0.5	0.39	0.2	6.94	3.35	2	18	42	< 0.5	0.003	0.4	7	0.38
IG_BH01_LG020	0.34	0.055	3.3	0.2	< 0.5	0.28	< 0.1	1.81	0.68	3	10	60	< 0.5	0.003	< 0.3	3	0.5
IG_BH01_LG021	0.44	0.076	3.3	0.21	< 0.5	0.29	< 0.1	2	1.25	4	7	61	< 0.5	0.003	< 0.3	4	0.4
IG_BH01_LG022	0.28	0.045	3.9	0.58	< 0.5	0.34	< 0.1	7.1	1.85	2	6	47	< 0.5	0.003	0.4	5	0.34
IG_BH01_LG023	0.43	0.069	3.9	0.6	< 0.5	0.38	< 0.1	4.95	1.28	6	4	61	< 0.5	0.002	0.4	7	1.61
IG_BH01_LG024	0.26	0.042	3.4	0.45	< 0.5	0.26	< 0.1	3.63	1.05	3	10	54	< 0.5	0.003	< 0.3	4	0.24
IG_BH01_LG025	0.33	0.051	3.4	0.48	< 0.5	0.29	< 0.1	4.55	1.15	8	17	56	< 0.5	0.004	0.4	5	0.34
IG_BH01_LG026	0.24	0.039	3.8	0.36	< 0.5	0.37	< 0.1	9.53	1.3	3	9	49	< 0.5	0.004	0.3	6	0.42
IG_BH01_LG027	0.36	0.048	3.1	0.44	< 0.5	0.28	< 0.1	2.77	1.32	2	8	25	< 0.5	0.003	< 0.3	9	0.43
IG_BH01_LG028	1.83	0.276	4.6	0.34	< 0.5	0.46	< 0.1	7.07	2.04	143	74	86	< 0.5	0.095	0.3	8	1.97

IG_BH01_LG029	0.3	0.049	2.3	0.36	< 0.5	0.26	< 0.1	5.19	1.49	3	7	23	< 0.5	0.003	< 0.3	10	0.46
IG_BH01_LG030	0.34	0.052	3.9	0.7	< 0.5	0.34	< 0.1	7.44	1.51	4	12	58	< 0.5	0.005	0.4	5	0.52
IG_BH01_LG031	1.14	0.191	1.9	0.14	< 0.5	0.94	< 0.1	2.85	0.75	213	2	84	< 0.5	0.003	< 0.3	< 3	6.64
IG_BH01_LG032	0.31	0.05	4.3	0.57	< 0.5	0.37	< 0.1	9.08	1.62	5	12	62	< 0.5	0.004	0.3	7	0.39
IG_BH01_LG033	0.51	0.074	4	0.68	0.9	0.3	< 0.1	5.74	1.32	6	8	65	< 0.5	0.006	0.3	7	1.24
IG_BH01_LG034	1.26	0.195	1.9	0.14	< 0.5	0.77	0.1	2.84	0.75	229	3	84	< 0.5	0.003	< 0.3	< 3	4.44
IG_BH01_LG035	1.54	0.238	2.4	0.19	0.5	0.32	0.2	3.59	1.17	127	8	75	< 0.5	0.005	< 0.3	19	2.54
IG_BH01_LG036	1.16	0.179	2	0.14	< 0.5	0.7	< 0.1	3.01	0.8	258	4	121	< 0.5	0.003	< 0.3	< 3	2.7
IG_BH01_LG037	0.3	0.049	4.2	0.41	< 0.5	0.32	< 0.1	5.37	0.99	175	20	118	< 0.5	0.006	0.3	8	0.42
IG_BH01_LG038	0.45	0.068	3.8	0.82	< 0.5	0.35	< 0.1	6.09	2.14	7	11	58	< 0.5	0.003	0.3	9	0.38
IG_BH01_LG039	1.33	0.191	3.8	0.3	0.6	0.34	0.1	9.39	2.22	306	60	68	< 0.5	0.071	0.3	8	2.43
IG_BH01_LG040	0.34	0.061	4.7	0.52	< 0.5	0.31	0.1	5.73	1.55	7	18	69	< 0.5	0.005	< 0.3	5	0.33
IG_BH01_LG041	0.33	0.043	3.5	0.38	< 0.5	0.29	< 0.1	5.88	1.32	4	6	46	< 0.5	0.003	0.4	7	0.24
IG_BH01_LG042	1.02	0.156	3.2	0.39	0.6	0.56	0.2	6.03	1.75	419	16	87	< 0.5	0.006	0.3	< 3	4.54
IG_BH01_LG043	1.2	0.182	1.8	0.51	1.2	0.32	< 0.1	2.9	0.77	81	22	91	< 0.5	0.003	< 0.3	< 3	10.54
IG_BH01_LG044	0.26	0.044	4.9	0.32	< 0.5	0.13	< 0.1	6.86	0.83	6	7	68	< 0.5	0.003	0.3	3	0.54
IG_BH01_LG045	1.34	0.203	2.1	0.15	0.5	0.26	0.1	3.26	0.94	185	8	69	< 0.5	0.005	< 0.3	4	3.17

Lithogeochemistry – IG_BH02

All analyses performed by Activation Laboratories Ltd. in Thunder Bay or Ancaster, Ontario. In addition to the results included below, 63 certified reference materials (to measure accuracy), 7 duplicates (to measure precision), and 18 method blanks (to monitor contamination) were analysed by Actlabs to ensure overall quality control in the lithogeochemical analyses. Certified reference material (CRM) measurements averaged within 0.1 % of certified values (>99 % accuracy). There were a few CRM samples that were >10% off their certified values in one element, but other elements in the material were within an acceptable range of > 90% accuracy so these discrepancies were deemed insignificant. Duplicate sample measurements averaged within 7 % of original measured values (>93% precision), and the method blanks all returned measurements below, or within an acceptable range of, detection limit (no discernable contamination).

Lithogeochemical results of various tests carried out by Activation Laboratories (NWMO, 2022d).

Report Number: A20-05149

Report Date: 18/6/2020

Analyte Symbol	From (position along borehole; m)	To (position along borehole; m)	Au	As	Br	Cr	Ir	Sc	Se	Sb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
Unit Symbol			ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			2	0.5	0.5	5	5	0.1	3	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01
Analysis Method			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP
IG_BH02_LG001	15.29	15.41	< 2	< 0.5	< 0.5	17	< 5	2.7	< 3	< 0.2	32.3	70.95	14.65	2.7	0.035	0.68	2.93	4.42	1.66	0.296	0.09	0.48	98.89
IG_BH02_LG002	15.75	15.9	< 2	< 0.5	< 0.5	28	< 5	1.9	< 3	1	31.2	72.86	13.56	2.11	0.036	0.33	1.86	4.2	2.58	0.22	0.07	0.58	98.41
IG_BH02_LG003	60.05	60.2	< 2	< 0.5	< 0.5	17	< 5	2	< 3	< 0.2	30.8	72.33	14.43	1.91	0.025	0.34	1.24	4.5	2.73	0.175	0.05	0.8	98.54
IG_BH02_LG004	73.47	73.68	< 2	< 0.5	< 0.5	19	< 5	1.9	< 3	< 0.2	1.07	74.01	14.09	1.73	0.033	0.32	1.74	4.39	3.01	0.16	0.03	0.45	99.96
IG_BH02_LG005	113.1	113.28	< 2	< 0.5	< 0.5	22	< 5	2.8	< 3	7.1	31.1	71.59	14.6	2.96	0.039	0.71	3.06	4.34	1.75	0.308	0.1	0.5	99.95
IG_BH02_LG006	132.25	132.4	< 2	0.5	< 0.5	22	< 5	2	< 3	< 0.2	1.03	74.22	14.18	1.86	0.036	0.37	2.02	4.53	2.47	0.174	0.04	0.68	100.6
IG_BH02_LG007	280.6	280.8	< 2	< 0.5	18.1	14	< 5	2.9	< 3	< 0.2	32.3	70.15	14.51	2.92	0.049	0.75	1.91	5.54	1.22	0.315	0.09	1.39	98.85
IG_BH02_LG008	284.5	284.7	< 2	< 0.5	1.2	20	< 5	1.8	< 3	< 0.2	29.6	72.63	14.02	1.7	0.028	0.32	1.58	4.47	2.9	0.154	0.04	1.65	99.49
IG_BH02_LG009	346.75	347	< 2	< 0.5	11.7	35	< 5	2.1	< 3	< 0.2	28.1	72.64	13.75	1.81	0.034	0.38	1.42	4.52	2.91	0.164	0.05	0.93	98.61
IG_BH02_LG010	368.5	368.65	< 2	0.5	< 0.5	23	< 5	2.9	< 3	< 0.2	31.1	71.82	14.62	2.74	0.032	0.65	3.09	4.5	1.71	0.306	0.1	0.37	99.92
IG_BH02_LG011	372.24	372.44	< 2	< 0.5	< 0.5	29	< 5	1.8	< 3	0.4	30.7	73.51	13.5	1.55	0.031	0.27	1.53	4.38	3.24	0.131	0.04	0.48	98.66
IG_BH02_LG012	381.03	381.2	< 2	< 0.5	1.1	30	< 5	2.2	< 3	< 0.2	30.4	73.34	13.55	1.88	0.037	0.42	1.56	4.4	2.81	0.16	0.05	0.87	99.06
IG_BH02_LG013	478.22	478.44	< 2	< 0.5	< 0.5	22	< 5	2.2	< 3	< 0.2	30.5	73.13	13.74	1.84	0.033	0.31	1.78	4.38	2.84	0.167	0.04	1.92	100.2
IG_BH02_LG014	531.25	531.47	< 2	< 0.5	< 0.5	22	< 5	1	< 3	< 0.2	32.5	75.78	13.04	0.78	0.015	0.06	0.59	4.3	4.59	0.038	0.01	0.19	99.41
IG_BH02_LG015	536.48	536.82	< 2	< 0.5	< 0.5	668	< 5	34.5	< 3	< 0.2	30.2	42.77	12	10.3	0.159	10.24	11.38	1.99	3.26	0.94	0.47	5.72	99.24

IG_BH02_LG016	567.26	567.44	< 2	< 0.5	11.2	13	< 5	2.1	< 3	< 0.2	1.04	74.5	14.07	1.88	0.034	0.34	1.84	4.47	2.97	0.165	0.04	0.46	100.8
IG_BH02_LG017	573.51	573.68	< 2	< 0.5	18.5	21	< 5	2.9	< 3	0.3	31.7	72.59	14.75	2.59	0.045	0.55	2.63	4.68	1.75	0.25	0.06	0.56	100.5
IG_BH02_LG018	600.43	600.62	< 2	< 0.5	4	24	< 5	1.6	< 3	< 0.2	30.5	74.38	13.74	1.43	0.026	0.32	1.06	4.11	4.51	0.13	0.04	0.68	100.4
IG_BH02_LG019	632.98	633.26	< 2	< 0.5	< 0.5	23	< 5	1.9	< 3	< 0.2	1.05	73.68	14.16	1.8	0.033	0.33	1.75	4.36	3.09	0.163	0.05	0.43	99.85
IG_BH02_LG020	668.29	668.44	2	< 0.5	1.7	23	< 5	3.8	< 3	< 0.2	30	72.9	13.25	2.65	0.037	0.68	2.7	3.93	1.75	0.26	0.07	1.13	99.37
IG_BH02_LG021	672.2	672.4	< 2	1	1.4	376	< 5	19	< 3	0.4	33.1	55.35	14.26	7.12	0.133	5.49	9.57	3.46	1.02	0.574	0.18	3.11	100.3
IG_BH02_LG022	680.74	680.91	3	1.7	6.8	22	< 5	2	< 3	< 0.2	30.3	74.15	13.99	1.82	0.033	0.36	1.86	4.46	2.63	0.167	0.04	0.66	100.2
IG_BH02_LG023	682.58	682.74	< 2	< 0.5	14.3	< 5	< 5	2.3	< 3	0.2	30.8	58.9	18.74	1.97	0.037	0.53	4.01	8.61	1.27	0.249	0.06	4.12	98.49
IG_BH02_LG024	702.01	702.19	< 2	< 0.5	5.1	21	< 5	1.7	< 3	< 0.2	31.2	75.04	13.86	1.62	0.029	0.25	1.62	4.64	2.93	0.13	0.03	0.47	100.6
IG_BH02_LG025	777.49	777.75	< 2	< 0.5	13.6	24	< 5	1.9	< 3	< 0.2	32	72.74	14.3	1.85	0.031	0.32	1.99	4.97	3.1	0.166	0.05	1.05	100.6
IG_BH02_LG026	904.5	904.74	< 2	< 0.5	13.7	21	< 5	1.9	< 3	< 0.2	29.2	73.11	14.25	1.97	0.027	0.42	1.44	4.7	2.69	0.188	0.05	1.66	100.5

Analyte Symbol	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Cd	S	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	20	1	1	1	1	0.5	0.001	1	0.5	5	1	2	0.5	1	0.2	2	0.3	0.1	1	0.2	0.1	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
IG_BH02_LG001	3	1	25	< 20	4	4	13	66	< 0.5	0.003	19	1	< 5	50	258	4.2	145	4	< 2	< 0.3	< 0.1	1	0.3	2.4	390
IG_BH02_LG002	2	1	14	30	2	4	10	57	< 0.5	0.003	18	1	< 5	91	161	4.9	112	3.6	3	0.3	< 0.1	1	0.6	1.9	555
IG_BH02_LG003	2	1	12	20	2	3	12	46	< 0.5	0.003	19	1	< 5	87	198	5.3	88	3.8	< 2	< 0.3	< 0.1	1	< 0.2	2.6	505
IG_BH02_LG004	2	1	10	20	2	2	7	44	< 0.5	0.003	18	1	< 5	99	181	4.7	85	3.8	< 2	< 0.3	< 0.1	1	< 0.2	3.3	522
IG_BH02_LG005	3	1	26	30	5	4	7	67	< 0.5	0.004	18	1	< 5	52	244	4.3	134	4.2	< 2	< 0.3	< 0.1	1	4	2.3	419
IG_BH02_LG006	2	2	12	20	2	1	12	48	< 0.5	0.002	18	1.1	< 5	88	194	5.2	93	4.3	< 2	< 0.3	< 0.1	1	< 0.2	3.8	466
IG_BH02_LG007	3	1	29	20	5	5	21	39	< 0.5	0.003	20	1	< 5	58	238	5.5	152	4	< 2	0.4	< 0.1	1	< 0.2	1.3	348
IG_BH02_LG008	2	1	10	< 20	2	2	9	39	< 0.5	0.003	18	1.1	< 5	86	182	4.8	79	4.1	< 2	0.3	< 0.1	1	< 0.2	1.8	529
IG_BH02_LG009	2	1	11	40	2	2	8	38	< 0.5	0.002	18	1.1	< 5	86	163	5	86	4.1	2	< 0.3	< 0.1	1	< 0.2	1.5	603
IG_BH02_LG010	3	< 1	24	20	5	4	15	64	< 0.5	0.004	18	0.9	< 5	49	253	3.6	143	3.6	2	0.5	< 0.1	1	< 0.2	1	396
IG_BH02_LG011	2	1	9	40	2	2	7	37	< 0.5	0.003	18	1.1	< 5	105	155	6	74	3.4	< 2	< 0.3	< 0.1	1	< 0.2	2.2	481
IG_BH02_LG012	2	1	12	30	2	2	8	39	< 0.5	0.002	18	1	< 5	81	180	5.3	88	4.1	2	0.3	< 0.1	1	< 0.2	1.7	507
IG_BH02_LG013	2	1	12	30	2	4	7	43	< 0.5	0.014	18	1.1	< 5	90	222	5.2	88	4.3	< 2	< 0.3	< 0.1	1	< 0.2	1.9	565
IG_BH02_LG014	1	1	< 5	< 20	< 1	< 1	2	14	< 0.5	0.001	19	1.8	< 5	126	16	9.4	15	3.5	< 2	< 0.3	< 0.1	< 1	< 0.2	1.3	14
IG_BH02_LG015	39	1	233	750	45	197	71	79	< 0.5	0.067	14	1.4	< 5	104	789	20.2	125	6.4	< 2	< 0.3	< 0.1	1	< 0.2	6.4	655
IG_BH02_LG016	2	1	13	< 20	2	2	6	42	< 0.5	0.003	18	1	< 5	93	192	4.9	91	3.9	< 2	< 0.3	< 0.1	1	< 0.2	2.6	570
IG_BH02_LG017	3	1	23	20	4	2	9	58	< 0.5	0.003	19	0.8	< 5	73	307	5.6	105	4.7	< 2	< 0.3	< 0.1	1	< 0.2	2.9	330
IG_BH02_LG018	2	< 1	10	30	2	2	25	21	< 0.5	0.003	15	0.8	< 5	134	136	3.3	66	2.3	< 2	< 0.3	< 0.1	1	< 0.2	0.7	919
IG_BH02_LG019	2	1	12	20	2	2	8	42	< 0.5	0.003	18	1	< 5	98	193	4.5	89	4.1	< 2	< 0.3	< 0.1	1	< 0.2	2.1	668
IG_BH02_LG020	4	< 1	29	20	5	6	15	48	< 0.5	0.002	16	0.8	< 5	70	236	4.3	119	3.3	< 2	0.3	< 0.1	1	< 0.2	2.3	471
IG_BH02_LG021	20	1	140	420	26	75	43	81	< 0.5	0.004	17	1.8	< 5	37	1226	14.5	109	5.2	< 2	< 0.3	< 0.1	1	0.4	0.3	213
IG_BH02_LG022	2	1	14	20	2	2	9	48	< 0.5	0.002	18	0.9	< 5	83	206	4.4	93	4.1	< 2	< 0.3	< 0.1	1	< 0.2	1.6	561
IG_BH02_LG023	2	1	21	< 20	2	4	37	48	< 0.5	0.003	19	1	< 5	34	310	9	125	7.3	< 2	0.3	< 0.1	1	< 0.2	0.6	495
IG_BH02_LG024	2	1	9	< 20	2	1	8	35	< 0.5	0.003	17	1	< 5	86	153	4	70	3.3	< 2	< 0.3	< 0.1	1	< 0.2	1.9	391
IG_BH02_LG025	2	< 1	14	20	2	2	3	17	< 0.5	0.001	19	1.1	< 5	115	192	4.4	98	4	2	< 0.3	< 0.1	1	< 0.2	0.6	682
IG_BH02_LG026	2	1	14	20	2	3	13	21	< 0.5	0.022	17	0.9	< 5	108	203	4.6	108	3.7	< 2	< 0.3	< 0.1	1	< 0.2	2.8	711

Analyte Symbol	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Li	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.002	0.1	0.01	0.5	0.05	5	1	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS
IG_BH02_LG001	16.2	31.1	3.08	11.1	1.9	0.614	1.44	0.18	0.84	0.12	0.36	0.05	0.32	0.045	3.6	0.54	1.2	0.37	9	93	0.7	4.41	1.74
IG_BH02_LG002	20.7	36.2	3.58	11.9	1.91	0.494	1.39	0.18	0.88	0.15	0.43	0.056	0.36	0.053	2.8	0.82	< 0.5	0.44	7	69	< 0.1	5.06	1.62
IG_BH02_LG003	16.9	29.3	2.99	10.5	2.08	0.412	1.49	0.2	1.01	0.16	0.44	0.064	0.41	0.06	2.6	0.91	< 0.5	0.4	9	76	< 0.1	6.77	1.4
IG_BH02_LG004	16.4	28.9	3	10.2	1.82	0.431	1.43	0.18	0.88	0.14	0.39	0.057	0.37	0.051	2.6	0.79	3.9	0.41	10	71	< 0.1	6.22	2.21
IG_BH02_LG005	21.7	38.3	3.88	13.8	2.17	0.675	1.62	0.19	0.92	0.14	0.42	0.055	0.34	0.045	3.4	0.61	< 0.5	0.31	< 5	77	0.1	4.73	1.3
IG_BH02_LG006	17.2	30.5	3.13	10.8	1.98	0.463	1.52	0.21	1.01	0.16	0.45	0.059	0.39	0.056	2.8	0.9	0.7	0.39	8	80	< 0.1	6.7	2.85
IG_BH02_LG007	18.4	37.5	3.45	12.5	2.26	0.746	1.75	0.23	1.1	0.18	0.46	0.062	0.43	0.061	3.6	0.53	0.6	0.31	12	89	0.4	4.4	1.91
IG_BH02_LG008	15.1	26.8	2.74	9.74	1.76	0.409	1.39	0.18	0.96	0.15	0.4	0.053	0.34	0.051	2.3	1.07	2.6	0.33	9	62	< 0.1	5.59	1.77
IG_BH02_LG009	16.5	29.5	3.01	10.5	1.91	0.444	1.51	0.19	0.91	0.15	0.42	0.058	0.38	0.055	2.5	1	1.8	0.36	7	44	< 0.1	6.46	1.36
IG_BH02_LG010	20.4	36.7	3.69	12.7	2.07	0.619	1.43	0.19	0.78	0.11	0.29	0.039	0.24	0.036	3.5	0.47	4.4	0.25	< 5	86	< 0.1	4.12	1
IG_BH02_LG011	14.1	25.4	2.62	9.47	1.97	0.401	1.53	0.21	1.05	0.19	0.5	0.071	0.49	0.074	2.5	0.82	< 0.5	0.49	8	56	< 0.1	6.49	1.15
IG_BH02_LG012	16.2	29.2	2.94	10.3	1.94	0.467	1.46	0.21	1.08	0.17	0.44	0.059	0.38	0.058	2.5	0.9	< 0.5	0.32	8	42	< 0.1	6.19	1.8
IG_BH02_LG013	18.1	31	3.15	11.1	1.99	0.408	1.57	0.19	0.93	0.16	0.42	0.061	0.41	0.06	2.7	0.83	2.1	0.39	8	80	< 0.1	7.02	2.45
IG_BH02_LG014	3.31	6.48	0.73	2.71	0.98	0.139	1.22	0.24	1.54	0.29	0.83	0.121	0.82	0.126	1.3	1.14	< 0.5	0.5	18	17	< 0.1	1.97	7.31
IG_BH02_LG015	45.9	101	12.4	49.4	8.86	2.42	6.5	0.78	4.11	0.72	1.96	0.275	1.67	0.248	3.2	0.38	< 0.5	0.47	11	242	< 0.1	5.95	2.12
IG_BH02_LG016	17.6	30.6	3.1	10.4	1.94	0.476	1.49	0.18	0.89	0.16	0.43	0.057	0.39	0.061	2.7	0.86	< 0.5	0.43	8	61	< 0.1	6.21	1.93
IG_BH02_LG017	19.6	34.5	3.41	11.6	1.81	0.478	1.34	0.18	1.03	0.18	0.49	0.073	0.47	0.067	2.8	1.28	< 0.5	0.37	8	71	< 0.1	4.34	2.54
IG_BH02_LG018	10.4	16.9	1.73	5.94	1.09	0.468	0.89	0.12	0.58	0.09	0.23	0.034	0.23	0.031	1.8	0.39	< 0.5	0.55	7	25	< 0.1	3.05	1.37
IG_BH02_LG019	16.8	29.4	2.93	10.1	1.86	0.478	1.27	0.18	0.83	0.14	0.38	0.054	0.32	0.048	2.6	0.9	0.7	0.46	8	65	0.2	5.78	2.71
IG_BH02_LG020	18.2	32.2	3.19	10.9	1.83	0.509	1.28	0.17	0.81	0.14	0.35	0.055	0.37	0.06	3	0.55	< 0.5	0.34	7	58	< 0.1	4.71	1.42
IG_BH02_LG021	37.9	69.7	7.8	30.5	5.21	1.35	3.96	0.49	2.57	0.48	1.4	0.201	1.4	0.218	2.9	0.33	0.5	0.19	20	55	0.1	5.41	2.04
IG_BH02_LG022	17.1	29.9	2.98	10.5	1.77	0.464	1.35	0.18	0.85	0.14	0.36	0.051	0.36	0.059	2.6	0.94	26.1	0.34	8	41	< 0.1	5.48	1.15
IG_BH02_LG023	15.4	30.1	3.08	11.3	2.95	0.937	2.77	0.35	1.7	0.27	0.67	0.088	0.55	0.082	4	1.41	0.6	0.13	< 5	54	< 0.1	6.52	1.19
IG_BH02_LG024	12.7	22.3	2.25	7.8	1.4	0.381	1.12	0.14	0.76	0.13	0.37	0.048	0.28	0.042	2.1	0.69	< 0.5	0.35	11	49	< 0.1	4.47	1.6
IG_BH02_LG025	21	34.4	3.42	11.8	1.84	0.509	1.34	0.17	0.92	0.14	0.36	0.054	0.36	0.054	2.7	0.67	0.7	0.47	< 5	28	< 0.1	4.6	2.34
IG_BH02_LG026	16.8	28.5	2.87	9.86	1.79	0.399	1.45	0.18	0.87	0.14	0.39	0.05	0.33	0.048	3	0.78	0.9	0.47	< 5	58	< 0.1	5.12	1.9

IG_BH01_LG029	0.3	0.049	2.3	0.36	< 0.5	0.26	< 0.1	5.19	1.49	3	7	23	< 0.5	0.003	< 0.3	10	0.46
IG_BH01_LG030	0.34	0.052	3.9	0.7	< 0.5	0.34	< 0.1	7.44	1.51	4	12	58	< 0.5	0.005	0.4	5	0.52
IG_BH01_LG031	1.14	0.191	1.9	0.14	< 0.5	0.94	< 0.1	2.85	0.75	213	2	84	< 0.5	0.003	< 0.3	< 3	6.64
IG_BH01_LG032	0.31	0.05	4.3	0.57	< 0.5	0.37	< 0.1	9.08	1.62	5	12	62	< 0.5	0.004	0.3	7	0.39
IG_BH01_LG033	0.51	0.074	4	0.68	0.9	0.3	< 0.1	5.74	1.32	6	8	65	< 0.5	0.006	0.3	7	1.24
IG_BH01_LG034	1.26	0.195	1.9	0.14	< 0.5	0.77	0.1	2.84	0.75	229	3	84	< 0.5	0.003	< 0.3	< 3	4.44
IG_BH01_LG035	1.54	0.238	2.4	0.19	0.5	0.32	0.2	3.59	1.17	127	8	75	< 0.5	0.005	< 0.3	19	2.54
IG_BH01_LG036	1.16	0.179	2	0.14	< 0.5	0.7	< 0.1	3.01	0.8	258	4	121	< 0.5	0.003	< 0.3	< 3	2.7
IG_BH01_LG037	0.3	0.049	4.2	0.41	< 0.5	0.32	< 0.1	5.37	0.99	175	20	118	< 0.5	0.006	0.3	8	0.42
IG_BH01_LG038	0.45	0.068	3.8	0.82	< 0.5	0.35	< 0.1	6.09	2.14	7	11	58	< 0.5	0.003	0.3	9	0.38
IG_BH01_LG039	1.33	0.191	3.8	0.3	0.6	0.34	0.1	9.39	2.22	306	60	68	< 0.5	0.071	0.3	8	2.43
IG_BH01_LG040	0.34	0.061	4.7	0.52	< 0.5	0.31	0.1	5.73	1.55	7	18	69	< 0.5	0.005	< 0.3	5	0.33
IG_BH01_LG041	0.33	0.043	3.5	0.38	< 0.5	0.29	< 0.1	5.88	1.32	4	6	46	< 0.5	0.003	0.4	7	0.24
IG_BH01_LG042	1.02	0.156	3.2	0.39	0.6	0.56	0.2	6.03	1.75	419	16	87	< 0.5	0.006	0.3	< 3	4.54
IG_BH01_LG043	1.2	0.182	1.8	0.51	1.2	0.32	< 0.1	2.9	0.77	81	22	91	< 0.5	0.003	< 0.3	< 3	10.54
IG_BH01_LG044	0.26	0.044	4.9	0.32	< 0.5	0.13	< 0.1	6.86	0.83	6	7	68	< 0.5	0.003	0.3	3	0.54
IG_BH01_LG045	1.34	0.203	2.1	0.15	0.5	0.26	0.1	3.26	0.94	185	8	69	< 0.5	0.005	< 0.3	4	3.17

Lithogeochemistry – IG_BH02

All analyses performed by Activation Laboratories Ltd. in Thunder Bay or Ancaster, Ontario. In addition to the results included below, 63 certified reference materials (to measure accuracy), 7 duplicates (to measure precision), and 18 method blanks (to monitor contamination) were analysed by Actlabs to ensure overall quality control in the lithogeochemical analyses. Certified reference material (CRM) measurements averaged within 0.1 % of certified values (>99 % accuracy). There were a few CRM samples that were >10% off their certified values in one element, but other elements in the material were within an acceptable range of > 90% accuracy so these discrepancies were deemed insignificant. Duplicate sample measurements averaged within 7 % of original measured values (>93% precision), and the method blanks all returned measurements below, or within an acceptable range of, detection limit (no discernable contamination).

Lithogeochemical results of various tests carried out by Activation Laboratories (NWMO, 2022d).

Report Number: A20-05149

Report Date: 18/6/2020

Analyte Symbol	From (position along borehole; m)	To (position along borehole; m)	Au	As	Br	Cr	Ir	Sc	Se	Sb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
Unit Symbol			ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			2	0.5	0.5	5	5	0.1	3	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01
Analysis Method			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP
IG_BH02_LG001	15.29	15.41	< 2	< 0.5	< 0.5	17	< 5	2.7	< 3	< 0.2	32.3	70.95	14.65	2.7	0.035	0.68	2.93	4.42	1.66	0.296	0.09	0.48	98.89
IG_BH02_LG002	15.75	15.9	< 2	< 0.5	< 0.5	28	< 5	1.9	< 3	1	31.2	72.86	13.56	2.11	0.036	0.33	1.86	4.2	2.58	0.22	0.07	0.58	98.41
IG_BH02_LG003	60.05	60.2	< 2	< 0.5	< 0.5	17	< 5	2	< 3	< 0.2	30.8	72.33	14.43	1.91	0.025	0.34	1.24	4.5	2.73	0.175	0.05	0.8	98.54
IG_BH02_LG004	73.47	73.68	< 2	< 0.5	< 0.5	19	< 5	1.9	< 3	< 0.2	1.07	74.01	14.09	1.73	0.033	0.32	1.74	4.39	3.01	0.16	0.03	0.45	99.96
IG_BH02_LG005	113.1	113.28	< 2	< 0.5	< 0.5	22	< 5	2.8	< 3	7.1	31.1	71.59	14.6	2.96	0.039	0.71	3.06	4.34	1.75	0.308	0.1	0.5	99.95
IG_BH02_LG006	132.25	132.4	< 2	0.5	< 0.5	22	< 5	2	< 3	< 0.2	1.03	74.22	14.18	1.86	0.036	0.37	2.02	4.53	2.47	0.174	0.04	0.68	100.6
IG_BH02_LG007	280.6	280.8	< 2	< 0.5	18.1	14	< 5	2.9	< 3	< 0.2	32.3	70.15	14.51	2.92	0.049	0.75	1.91	5.54	1.22	0.315	0.09	1.39	98.85
IG_BH02_LG008	284.5	284.7	< 2	< 0.5	1.2	20	< 5	1.8	< 3	< 0.2	29.6	72.63	14.02	1.7	0.028	0.32	1.58	4.47	2.9	0.154	0.04	1.65	99.49
IG_BH02_LG009	346.75	347	< 2	< 0.5	11.7	35	< 5	2.1	< 3	< 0.2	28.1	72.64	13.75	1.81	0.034	0.38	1.42	4.52	2.91	0.164	0.05	0.93	98.61
IG_BH02_LG010	368.5	368.65	< 2	0.5	< 0.5	23	< 5	2.9	< 3	< 0.2	31.1	71.82	14.62	2.74	0.032	0.65	3.09	4.5	1.71	0.306	0.1	0.37	99.92
IG_BH02_LG011	372.24	372.44	< 2	< 0.5	< 0.5	29	< 5	1.8	< 3	0.4	30.7	73.51	13.5	1.55	0.031	0.27	1.53	4.38	3.24	0.131	0.04	0.48	98.66
IG_BH02_LG012	381.03	381.2	< 2	< 0.5	1.1	30	< 5	2.2	< 3	< 0.2	30.4	73.34	13.55	1.88	0.037	0.42	1.56	4.4	2.81	0.16	0.05	0.87	99.06
IG_BH02_LG013	478.22	478.44	< 2	< 0.5	< 0.5	22	< 5	2.2	< 3	< 0.2	30.5	73.13	13.74	1.84	0.033	0.31	1.78	4.38	2.84	0.167	0.04	1.92	100.2
IG_BH02_LG014	531.25	531.47	< 2	< 0.5	< 0.5	22	< 5	1	< 3	< 0.2	32.5	75.78	13.04	0.78	0.015	0.06	0.59	4.3	4.59	0.038	0.01	0.19	99.41
IG_BH02_LG015	536.48	536.82	< 2	< 0.5	< 0.5	668	< 5	34.5	< 3	< 0.2	30.2	42.77	12	10.3	0.159	10.24	11.38	1.99	3.26	0.94	0.47	5.72	99.24

IG_BH02_LG016	567.26	567.44	< 2	< 0.5	11.2	13	< 5	2.1	< 3	< 0.2	1.04	74.5	14.07	1.88	0.034	0.34	1.84	4.47	2.97	0.165	0.04	0.46	100.8
IG_BH02_LG017	573.51	573.68	< 2	< 0.5	18.5	21	< 5	2.9	< 3	0.3	31.7	72.59	14.75	2.59	0.045	0.55	2.63	4.68	1.75	0.25	0.06	0.56	100.5
IG_BH02_LG018	600.43	600.62	< 2	< 0.5	4	24	< 5	1.6	< 3	< 0.2	30.5	74.38	13.74	1.43	0.026	0.32	1.06	4.11	4.51	0.13	0.04	0.68	100.4
IG_BH02_LG019	632.98	633.26	< 2	< 0.5	< 0.5	23	< 5	1.9	< 3	< 0.2	1.05	73.68	14.16	1.8	0.033	0.33	1.75	4.36	3.09	0.163	0.05	0.43	99.85
IG_BH02_LG020	668.29	668.44	2	< 0.5	1.7	23	< 5	3.8	< 3	< 0.2	30	72.9	13.25	2.65	0.037	0.68	2.7	3.93	1.75	0.26	0.07	1.13	99.37
IG_BH02_LG021	672.2	672.4	< 2	1	1.4	376	< 5	19	< 3	0.4	33.1	55.35	14.26	7.12	0.133	5.49	9.57	3.46	1.02	0.574	0.18	3.11	100.3
IG_BH02_LG022	680.74	680.91	3	1.7	6.8	22	< 5	2	< 3	< 0.2	30.3	74.15	13.99	1.82	0.033	0.36	1.86	4.46	2.63	0.167	0.04	0.66	100.2
IG_BH02_LG023	682.58	682.74	< 2	< 0.5	14.3	< 5	< 5	2.3	< 3	0.2	30.8	58.9	18.74	1.97	0.037	0.53	4.01	8.61	1.27	0.249	0.06	4.12	98.49
IG_BH02_LG024	702.01	702.19	< 2	< 0.5	5.1	21	< 5	1.7	< 3	< 0.2	31.2	75.04	13.86	1.62	0.029	0.25	1.62	4.64	2.93	0.13	0.03	0.47	100.6
IG_BH02_LG025	777.49	777.75	< 2	< 0.5	13.6	24	< 5	1.9	< 3	< 0.2	32	72.74	14.3	1.85	0.031	0.32	1.99	4.97	3.1	0.166	0.05	1.05	100.6
IG_BH02_LG026	904.5	904.74	< 2	< 0.5	13.7	21	< 5	1.9	< 3	< 0.2	29.2	73.11	14.25	1.97	0.027	0.42	1.44	4.7	2.69	0.188	0.05	1.66	100.5

Analyte Symbol	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Cd	S	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	20	1	1	1	1	0.5	0.001	1	0.5	5	1	2	0.5	1	0.2	2	0.3	0.1	1	0.2	0.1	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
IG_BH02_LG001	3	1	25	< 20	4	4	13	66	< 0.5	0.003	19	1	< 5	50	258	4.2	145	4	< 2	< 0.3	< 0.1	1	0.3	2.4	390
IG_BH02_LG002	2	1	14	30	2	4	10	57	< 0.5	0.003	18	1	< 5	91	161	4.9	112	3.6	3	0.3	< 0.1	1	0.6	1.9	555
IG_BH02_LG003	2	1	12	20	2	3	12	46	< 0.5	0.003	19	1	< 5	87	198	5.3	88	3.8	< 2	< 0.3	< 0.1	1	< 0.2	2.6	505
IG_BH02_LG004	2	1	10	20	2	2	7	44	< 0.5	0.003	18	1	< 5	99	181	4.7	85	3.8	< 2	< 0.3	< 0.1	1	< 0.2	3.3	522
IG_BH02_LG005	3	1	26	30	5	4	7	67	< 0.5	0.004	18	1	< 5	52	244	4.3	134	4.2	< 2	< 0.3	< 0.1	1	4	2.3	419
IG_BH02_LG006	2	2	12	20	2	1	12	48	< 0.5	0.002	18	1.1	< 5	88	194	5.2	93	4.3	< 2	< 0.3	< 0.1	1	< 0.2	3.8	466
IG_BH02_LG007	3	1	29	20	5	5	21	39	< 0.5	0.003	20	1	< 5	58	238	5.5	152	4	< 2	0.4	< 0.1	1	< 0.2	1.3	348
IG_BH02_LG008	2	1	10	< 20	2	2	9	39	< 0.5	0.003	18	1.1	< 5	86	182	4.8	79	4.1	< 2	0.3	< 0.1	1	< 0.2	1.8	529
IG_BH02_LG009	2	1	11	40	2	2	8	38	< 0.5	0.002	18	1.1	< 5	86	163	5	86	4.1	2	< 0.3	< 0.1	1	< 0.2	1.5	603
IG_BH02_LG010	3	< 1	24	20	5	4	15	64	< 0.5	0.004	18	0.9	< 5	49	253	3.6	143	3.6	2	0.5	< 0.1	1	< 0.2	1	396
IG_BH02_LG011	2	1	9	40	2	2	7	37	< 0.5	0.003	18	1.1	< 5	105	155	6	74	3.4	< 2	< 0.3	< 0.1	1	< 0.2	2.2	481
IG_BH02_LG012	2	1	12	30	2	2	8	39	< 0.5	0.002	18	1	< 5	81	180	5.3	88	4.1	2	0.3	< 0.1	1	< 0.2	1.7	507
IG_BH02_LG013	2	1	12	30	2	4	7	43	< 0.5	0.014	18	1.1	< 5	90	222	5.2	88	4.3	< 2	< 0.3	< 0.1	1	< 0.2	1.9	565
IG_BH02_LG014	1	1	< 5	< 20	< 1	< 1	2	14	< 0.5	0.001	19	1.8	< 5	126	16	9.4	15	3.5	< 2	< 0.3	< 0.1	< 1	< 0.2	1.3	14
IG_BH02_LG015	39	1	233	750	45	197	71	79	< 0.5	0.067	14	1.4	< 5	104	789	20.2	125	6.4	< 2	< 0.3	< 0.1	1	< 0.2	6.4	655
IG_BH02_LG016	2	1	13	< 20	2	2	6	42	< 0.5	0.003	18	1	< 5	93	192	4.9	91	3.9	< 2	< 0.3	< 0.1	1	< 0.2	2.6	570
IG_BH02_LG017	3	1	23	20	4	2	9	58	< 0.5	0.003	19	0.8	< 5	73	307	5.6	105	4.7	< 2	< 0.3	< 0.1	1	< 0.2	2.9	330
IG_BH02_LG018	2	< 1	10	30	2	2	25	21	< 0.5	0.003	15	0.8	< 5	134	136	3.3	66	2.3	< 2	< 0.3	< 0.1	1	< 0.2	0.7	919
IG_BH02_LG019	2	1	12	20	2	2	8	42	< 0.5	0.003	18	1	< 5	98	193	4.5	89	4.1	< 2	< 0.3	< 0.1	1	< 0.2	2.1	668
IG_BH02_LG020	4	< 1	29	20	5	6	15	48	< 0.5	0.002	16	0.8	< 5	70	236	4.3	119	3.3	< 2	0.3	< 0.1	1	< 0.2	2.3	471
IG_BH02_LG021	20	1	140	420	26	75	43	81	< 0.5	0.004	17	1.8	< 5	37	1226	14.5	109	5.2	< 2	< 0.3	< 0.1	1	0.4	0.3	213
IG_BH02_LG022	2	1	14	20	2	2	9	48	< 0.5	0.002	18	0.9	< 5	83	206	4.4	93	4.1	< 2	< 0.3	< 0.1	1	< 0.2	1.6	561
IG_BH02_LG023	2	1	21	< 20	2	4	37	48	< 0.5	0.003	19	1	< 5	34	310	9	125	7.3	< 2	0.3	< 0.1	1	< 0.2	0.6	495
IG_BH02_LG024	2	1	9	< 20	2	1	8	35	< 0.5	0.003	17	1	< 5	86	153	4	70	3.3	< 2	< 0.3	< 0.1	1	< 0.2	1.9	391
IG_BH02_LG025	2	< 1	14	20	2	2	3	17	< 0.5	0.001	19	1.1	< 5	115	192	4.4	98	4	2	< 0.3	< 0.1	1	< 0.2	0.6	682
IG_BH02_LG026	2	1	14	20	2	3	13	21	< 0.5	0.022	17	0.9	< 5	108	203	4.6	108	3.7	< 2	< 0.3	< 0.1	1	< 0.2	2.8	711

Analyte Symbol	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Li	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.002	0.1	0.01	0.5	0.05	5	1	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS
IG_BH02_LG001	16.2	31.1	3.08	11.1	1.9	0.614	1.44	0.18	0.84	0.12	0.36	0.05	0.32	0.045	3.6	0.54	1.2	0.37	9	93	0.7	4.41	1.74
IG_BH02_LG002	20.7	36.2	3.58	11.9	1.91	0.494	1.39	0.18	0.88	0.15	0.43	0.056	0.36	0.053	2.8	0.82	< 0.5	0.44	7	69	< 0.1	5.06	1.62
IG_BH02_LG003	16.9	29.3	2.99	10.5	2.08	0.412	1.49	0.2	1.01	0.16	0.44	0.064	0.41	0.06	2.6	0.91	< 0.5	0.4	9	76	< 0.1	6.77	1.4
IG_BH02_LG004	16.4	28.9	3	10.2	1.82	0.431	1.43	0.18	0.88	0.14	0.39	0.057	0.37	0.051	2.6	0.79	3.9	0.41	10	71	< 0.1	6.22	2.21
IG_BH02_LG005	21.7	38.3	3.88	13.8	2.17	0.675	1.62	0.19	0.92	0.14	0.42	0.055	0.34	0.045	3.4	0.61	< 0.5	0.31	< 5	77	0.1	4.73	1.3
IG_BH02_LG006	17.2	30.5	3.13	10.8	1.98	0.463	1.52	0.21	1.01	0.16	0.45	0.059	0.39	0.056	2.8	0.9	0.7	0.39	8	80	< 0.1	6.7	2.85
IG_BH02_LG007	18.4	37.5	3.45	12.5	2.26	0.746	1.75	0.23	1.1	0.18	0.46	0.062	0.43	0.061	3.6	0.53	0.6	0.31	12	89	0.4	4.4	1.91
IG_BH02_LG008	15.1	26.8	2.74	9.74	1.76	0.409	1.39	0.18	0.96	0.15	0.4	0.053	0.34	0.051	2.3	1.07	2.6	0.33	9	62	< 0.1	5.59	1.77
IG_BH02_LG009	16.5	29.5	3.01	10.5	1.91	0.444	1.51	0.19	0.91	0.15	0.42	0.058	0.38	0.055	2.5	1	1.8	0.36	7	44	< 0.1	6.46	1.36
IG_BH02_LG010	20.4	36.7	3.69	12.7	2.07	0.619	1.43	0.19	0.78	0.11	0.29	0.039	0.24	0.036	3.5	0.47	4.4	0.25	< 5	86	< 0.1	4.12	1
IG_BH02_LG011	14.1	25.4	2.62	9.47	1.97	0.401	1.53	0.21	1.05	0.19	0.5	0.071	0.49	0.074	2.5	0.82	< 0.5	0.49	8	56	< 0.1	6.49	1.15
IG_BH02_LG012	16.2	29.2	2.94	10.3	1.94	0.467	1.46	0.21	1.08	0.17	0.44	0.059	0.38	0.058	2.5	0.9	< 0.5	0.32	8	42	< 0.1	6.19	1.8
IG_BH02_LG013	18.1	31	3.15	11.1	1.99	0.408	1.57	0.19	0.93	0.16	0.42	0.061	0.41	0.06	2.7	0.83	2.1	0.39	8	80	< 0.1	7.02	2.45
IG_BH02_LG014	3.31	6.48	0.73	2.71	0.98	0.139	1.22	0.24	1.54	0.29	0.83	0.121	0.82	0.126	1.3	1.14	< 0.5	0.5	18	17	< 0.1	1.97	7.31
IG_BH02_LG015	45.9	101	12.4	49.4	8.86	2.42	6.5	0.78	4.11	0.72	1.96	0.275	1.67	0.248	3.2	0.38	< 0.5	0.47	11	242	< 0.1	5.95	2.12
IG_BH02_LG016	17.6	30.6	3.1	10.4	1.94	0.476	1.49	0.18	0.89	0.16	0.43	0.057	0.39	0.061	2.7	0.86	< 0.5	0.43	8	61	< 0.1	6.21	1.93
IG_BH02_LG017	19.6	34.5	3.41	11.6	1.81	0.478	1.34	0.18	1.03	0.18	0.49	0.073	0.47	0.067	2.8	1.28	< 0.5	0.37	8	71	< 0.1	4.34	2.54
IG_BH02_LG018	10.4	16.9	1.73	5.94	1.09	0.468	0.89	0.12	0.58	0.09	0.23	0.034	0.23	0.031	1.8	0.39	< 0.5	0.55	7	25	< 0.1	3.05	1.37
IG_BH02_LG019	16.8	29.4	2.93	10.1	1.86	0.478	1.27	0.18	0.83	0.14	0.38	0.054	0.32	0.048	2.6	0.9	0.7	0.46	8	65	0.2	5.78	2.71
IG_BH02_LG020	18.2	32.2	3.19	10.9	1.83	0.509	1.28	0.17	0.81	0.14	0.35	0.055	0.37	0.06	3	0.55	< 0.5	0.34	7	58	< 0.1	4.71	1.42
IG_BH02_LG021	37.9	69.7	7.8	30.5	5.21	1.35	3.96	0.49	2.57	0.48	1.4	0.201	1.4	0.218	2.9	0.33	0.5	0.19	20	55	0.1	5.41	2.04
IG_BH02_LG022	17.1	29.9	2.98	10.5	1.77	0.464	1.35	0.18	0.85	0.14	0.36	0.051	0.36	0.059	2.6	0.94	26.1	0.34	8	41	< 0.1	5.48	1.15
IG_BH02_LG023	15.4	30.1	3.08	11.3	2.95	0.937	2.77	0.35	1.7	0.27	0.67	0.088	0.55	0.082	4	1.41	0.6	0.13	< 5	54	< 0.1	6.52	1.19
IG_BH02_LG024	12.7	22.3	2.25	7.8	1.4	0.381	1.12	0.14	0.76	0.13	0.37	0.048	0.28	0.042	2.1	0.69	< 0.5	0.35	11	49	< 0.1	4.47	1.6
IG_BH02_LG025	21	34.4	3.42	11.8	1.84	0.509	1.34	0.17	0.92	0.14	0.36	0.054	0.36	0.054	2.7	0.67	0.7	0.47	< 5	28	< 0.1	4.6	2.34
IG_BH02_LG026	16.8	28.5	2.87	9.86	1.79	0.399	1.45	0.18	0.87	0.14	0.39	0.05	0.33	0.048	3	0.78	0.9	0.47	< 5	58	< 0.1	5.12	1.9

Lithogeochemistry – IG_BH03

All analyses performed by Activation Laboratories Ltd. in Thunder Bay or Ancaster, Ontario. In addition to the results included below, 63 certified reference materials (to measure accuracy), 7 duplicates (to measure precision), and 18 method blanks (to monitor contamination) were analysed by Actlabs to ensure overall quality control in the lithogeochemical analyses. Certified reference material (CRM) measurements averaged within 0.1 % of certified values (>99 % accuracy). There were a few CRM samples that were >10% off their certified values in one element, but other elements in the material were within an acceptable range of > 90% accuracy so these discrepancies were deemed insignificant. Duplicate sample measurements averaged within 7 % of original measured values (>93% precision), and the method blanks all returned measurements below, or within an acceptable range of, detection limit (no discernable contamination).

Lithogeochemical results of various tests carried out by Activation Laboratories (NWMO, 2022d).

Report Number: A20-05149

Report Date: 18/6/2020

Analyte Symbol	From (position along borehole; m)	To (position along borehole; m)	Au	As	Br	Cr	Ir	Sc	Se	Sb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
Unit Symbol			ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			2	0.5	0.5	5	5	0.1	3	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01
Analysis Method			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP
IG_BH03_LG001	74.00	74.30	< 2	< 0.5	< 0.5	27	< 5	2	< 3	< 0.2	1.06	73.39	14.24	1.77	0.03	0.39	1.99	4.52	2.46	0.189	0.06	0.6	99.64
IG_BH03_LG002	131.01	131.25	< 2	< 0.5	< 0.5	28	< 5	2.1	< 3	< 0.2	1.04	72.92	13.84	1.77	0.032	0.38	1.99	4.54	2.21	0.183	0.05	0.59	98.51
IG_BH03_LG003	149.48	149.64	< 2	0.9	< 0.5	369	< 5	16.6	< 3	< 0.2	34	53.93	13.46	8.28	0.125	7.9	8.18	3.24	2.12	0.728	0.2	2.08	100.2
IG_BH03_LG004	184.72	184.83	< 2	0.9	< 0.5	18	< 5	1.2	< 3	< 0.2	32.7	77.01	12.83	0.9	0.022	0.17	0.5	4.14	4.61	0.077	0.01	0.27	100.5
IG_BH03_LG005	231.97	232.16	< 2	0.6	< 0.5	21	< 5	4	< 3	< 0.2	36.4	71.09	14.53	3.22	0.04	0.81	3.17	4.26	1.86	0.447	0.12	0.5	100.1
IG_BH03_LG006	363.51	363.73	< 2	< 0.5	6.5	17	< 5	2.2	< 3	< 0.2	34	72.26	14.69	1.67	0.023	0.37	1.31	4.27	3.33	0.164	0.05	1.27	99.4
IG_BH03_LG007	477.80	477.98	< 2	< 0.5	1.7	20	< 5	0.7	< 3	< 0.2	32.5	75.89	12.9	0.59	0.014	0.06	0.51	4.42	4.28	0.036	<0.01	0.33	99.04
IG_BH03_LG008	489.97	490.15	< 2	< 0.5	< 0.5	46	< 5	4.1	< 3	< 0.2	34.2	71.43	14.98	3.01	0.041	0.85	3.32	4.41	1.64	0.331	0.1	0.54	100.6
IG_BH03_LG009	546.75	546.94	3	< 0.5	< 0.5	26	< 5	2	< 3	< 0.2	34.4	74.22	14.14	1.76	0.029	0.4	1.92	4.36	2.36	0.184	0.05	0.87	100.3
IG_BH03_LG010	547.37	547.55	< 2	< 0.5	< 0.5	949	< 5	20.2	< 3	< 0.2	35.6	51.35	12.14	8.67	0.144	10.19	8.32	2.67	2.63	0.629	0.18	3.32	100.3
IG_BH03_LG011	553.20	553.49	< 2	< 0.5	< 0.5	18	< 5	2	< 3	< 0.2	33.3	74.49	14.17	1.85	0.032	0.41	2.1	4.45	2.38	0.195	0.05	0.67	100.8
IG_BH03_LG012	569.01	569.17	< 2	1.3	< 0.5	21	< 5	2	< 3	0.2	1.06	73.41	13.76	1.8	0.03	0.39	2.05	4.36	2.54	0.192	0.05	0.52	99.1
IG_BH03_LG013	642.75	642.89	< 2	< 0.5	< 0.5	31	< 5	4	< 3	< 0.2	35.8	70.92	14.61	2.95	0.04	0.84	3.38	4.31	1.62	0.328	0.09	0.62	99.7

Lithogeochemistry – IG_BH03

All analyses performed by Activation Laboratories Ltd. in Thunder Bay or Ancaster, Ontario. In addition to the results included below, 63 certified reference materials (to measure accuracy), 7 duplicates (to measure precision), and 18 method blanks (to monitor contamination) were analysed by Actlabs to ensure overall quality control in the lithogeochemical analyses. Certified reference material (CRM) measurements averaged within 0.1 % of certified values (>99 % accuracy). There were a few CRM samples that were >10% off their certified values in one element, but other elements in the material were within an acceptable range of > 90% accuracy so these discrepancies were deemed insignificant. Duplicate sample measurements averaged within 7 % of original measured values (>93% precision), and the method blanks all returned measurements below, or within an acceptable range of, detection limit (no discernable contamination).

Lithogeochemical results of various tests carried out by Activation Laboratories (NWMO, 2022d).

Report Number: A20-05149

Report Date: 18/6/2020

Analyte Symbol	From (position along borehole; m)	To (position along borehole; m)	Au	As	Br	Cr	Ir	Sc	Se	Sb	Mass	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
Unit Symbol			ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit			2	0.5	0.5	5	5	0.1	3	0.2		0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01
Analysis Method			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	GRAV	FUS-ICP
IG_BH03_LG001	74.00	74.30	< 2	< 0.5	< 0.5	27	< 5	2	< 3	< 0.2	1.06	73.39	14.24	1.77	0.03	0.39	1.99	4.52	2.46	0.189	0.06	0.6	99.64
IG_BH03_LG002	131.01	131.25	< 2	< 0.5	< 0.5	28	< 5	2.1	< 3	< 0.2	1.04	72.92	13.84	1.77	0.032	0.38	1.99	4.54	2.21	0.183	0.05	0.59	98.51
IG_BH03_LG003	149.48	149.64	< 2	0.9	< 0.5	369	< 5	16.6	< 3	< 0.2	34	53.93	13.46	8.28	0.125	7.9	8.18	3.24	2.12	0.728	0.2	2.08	100.2
IG_BH03_LG004	184.72	184.83	< 2	0.9	< 0.5	18	< 5	1.2	< 3	< 0.2	32.7	77.01	12.83	0.9	0.022	0.17	0.5	4.14	4.61	0.077	0.01	0.27	100.5
IG_BH03_LG005	231.97	232.16	< 2	0.6	< 0.5	21	< 5	4	< 3	< 0.2	36.4	71.09	14.53	3.22	0.04	0.81	3.17	4.26	1.86	0.447	0.12	0.5	100.1
IG_BH03_LG006	363.51	363.73	< 2	< 0.5	6.5	17	< 5	2.2	< 3	< 0.2	34	72.26	14.69	1.67	0.023	0.37	1.31	4.27	3.33	0.164	0.05	1.27	99.4
IG_BH03_LG007	477.80	477.98	< 2	< 0.5	1.7	20	< 5	0.7	< 3	< 0.2	32.5	75.89	12.9	0.59	0.014	0.06	0.51	4.42	4.28	0.036	<0.01	0.33	99.04
IG_BH03_LG008	489.97	490.15	< 2	< 0.5	< 0.5	46	< 5	4.1	< 3	< 0.2	34.2	71.43	14.98	3.01	0.041	0.85	3.32	4.41	1.64	0.331	0.1	0.54	100.6
IG_BH03_LG009	546.75	546.94	3	< 0.5	< 0.5	26	< 5	2	< 3	< 0.2	34.4	74.22	14.14	1.76	0.029	0.4	1.92	4.36	2.36	0.184	0.05	0.87	100.3
IG_BH03_LG010	547.37	547.55	< 2	< 0.5	< 0.5	949	< 5	20.2	< 3	< 0.2	35.6	51.35	12.14	8.67	0.144	10.19	8.32	2.67	2.63	0.629	0.18	3.32	100.3
IG_BH03_LG011	553.20	553.49	< 2	< 0.5	< 0.5	18	< 5	2	< 3	< 0.2	33.3	74.49	14.17	1.85	0.032	0.41	2.1	4.45	2.38	0.195	0.05	0.67	100.8
IG_BH03_LG012	569.01	569.17	< 2	1.3	< 0.5	21	< 5	2	< 3	0.2	1.06	73.41	13.76	1.8	0.03	0.39	2.05	4.36	2.54	0.192	0.05	0.52	99.1
IG_BH03_LG013	642.75	642.89	< 2	< 0.5	< 0.5	31	< 5	4	< 3	< 0.2	35.8	70.92	14.61	2.95	0.04	0.84	3.38	4.31	1.62	0.328	0.09	0.62	99.7

IG_BH03_LG014	655.00	655.28	< 2	< 0.5	< 0.5	15	< 5	2	< 3	< 0.2	1.06	73.85	13.92	1.85	0.032	0.39	2.11	4.52	2.37	0.196	0.06	0.46	99.75
IG_BH03_LG015	735.49	735.70	< 2	< 0.5	17.6	20	< 5	1.2	< 3	< 0.2	34.8	77.24	12.93	0.6	0.022	0.05	0.41	4.47	4.47	0.034	0.01	0.28	100.5
IG_BH03_LG016	765.90	766.05	< 2	1.5	< 0.5	30	< 5	2.3	< 3	< 0.2	34.9	73.14	14.64	2.01	0.03	0.44	2.59	4.55	1.89	0.213	0.06	0.42	99.98
IG_BH03_LG017	774.08	774.25	< 2	1	< 0.5	27	< 5	2	< 3	< 0.2	34.7	73.91	14.32	1.87	0.032	0.45	2.14	6.01	0.74	0.2	0.05	0.85	100.6
IG_BH03_LG018	774.53	774.69	< 2	< 0.5	< 0.5	650	< 5	28.6	< 3	< 0.2	39.7	44.69	10.31	10.71	0.172	15.61	10.16	0.69	2.66	0.895	0.45	3.8	100.2
IG_BH03_LG019	867.73	867.90	< 2	< 0.5	12.2	30	< 5	2.2	< 3	< 0.2	33.9	73.7	14.16	1.91	0.028	0.47	2.03	4.84	1.79	0.209	0.05	1.57	100.8
IG_BH03_LG020	889.70	889.90	< 2	< 0.5	12	16	< 5	2.1	< 3	< 0.2	32.9	73.5	14.31	1.9	0.03	0.42	2.28	4.55	2.4	0.209	0.06	0.98	100.7
IG_BH03_LG021	957.50	957.70	< 2	< 0.5	< 0.5	23	< 5	3.5	< 3	< 0.2	36.8	70.13	14.33	3.02	0.037	0.79	3.08	4.65	1.52	0.407	0.1	1.52	99.58
IG_BH03_LG022	958.37	958.58	< 2	< 0.5	5.5	21	< 5	0.6	< 3	< 0.2	33.2	76.99	12.8	0.58	0.013	0.05	0.62	4.53	3.5	0.036	<0.01	0.6	99.73

Analyte Symbol	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Cd	S	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	20	1	1	1	1	0.5	0.001	1	0.5	5	1	2	0.5	1	0.2	2	0.3	0.1	1	0.2	0.1	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	TD-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
IG_BH03_LG001	2	1	14	20	2	3	10	52	< 0.5	0.002	18	1	< 5	81	219	4.3	109	4.4	< 2	0.4	< 0.1	1	< 0.2	3	493
IG_BH03_LG002	2	1	13	20	2	2	10	51	< 0.5	0.004	18	1	< 5	76	208	5.2	111	4.7	< 2	< 0.3	< 0.1	1	< 0.2	2.8	453
IG_BH03_LG003	19	1	175	430	33	228	15	101	< 0.5	0.003	17	1.2	< 5	78	575	13.5	104	4.1	< 2	< 0.3	< 0.1	1	< 0.2	9	417
IG_BH03_LG004	1	2	< 5	< 20	1	1	11	27	< 0.5	0.002	19	1.8	< 5	172	21	8.5	22	4.2	< 2	< 0.3	< 0.1	1	< 0.2	3.9	46
IG_BH03_LG005	4	1	34	20	6	7	17	70	< 0.5	0.006	19	0.9	< 5	57	250	6.5	165	6.4	< 2	0.3	< 0.1	1	< 0.2	1.5	447
IG_BH03_LG006	2	1	18	< 20	2	2	18	38	< 0.5	0.003	20	0.9	< 5	109	171	3.6	101	4.9	< 2	< 0.3	< 0.1	1	< 0.2	1.8	930
IG_BH03_LG007	< 1	1	< 5	< 20	< 1	< 1	8	20	< 0.5	0.004	17	1.4	< 5	162	15	7.7	14	2.5	< 2	< 0.3	< 0.1	< 1	< 0.2	2.3	16
IG_BH03_LG008	4	< 1	36	50	6	7	16	66	< 0.5	0.005	18	0.8	< 5	49	253	4.9	140	4.2	< 2	0.4	< 0.1	1	< 0.2	1.3	400
IG_BH03_LG009	2	< 1	13	30	2	1	9	48	< 0.5	0.003	18	0.9	< 5	73	224	4.2	99	3.7	< 2	0.4	< 0.1	1	< 0.2	1.5	636
IG_BH03_LG010	23	1	179	1110	42	229	20	77	< 0.5	0.006	14	1.3	< 5	82	519	13.8	91	5.2	< 2	< 0.3	< 0.1	1	< 0.2	4.8	656
IG_BH03_LG011	2	1	16	20	3	3	27	53	< 0.5	0.003	18	0.9	< 5	76	220	4.2	106	4.3	2	0.4	< 0.1	1	< 0.2	2.2	509
IG_BH03_LG012	2	< 1	14	20	2	3	8	50	< 0.5	0.002	18	0.9	< 5	78	218	4.1	106	4	< 2	0.3	< 0.1	1	< 0.2	2	605
IG_BH03_LG013	4	< 1	35	40	6	5	19	67	< 0.5	0.008	18	0.8	< 5	48	250	4.8	145	4.1	< 2	0.4	< 0.1	1	< 0.2	1.2	400
IG_BH03_LG014	2	1	15	< 20	3	3	8	51	< 0.5	0.003	18	0.9	< 5	83	222	4.2	109	4.6	< 2	< 0.3	< 0.1	1	< 0.2	2.6	500
IG_BH03_LG015	1	< 1	< 5	20	< 1	< 1	3	13	< 0.5	0.01	18	1.8	< 5	200	8	16.2	31	3.4	< 2	< 0.3	< 0.1	< 1	0.2	2.2	7
IG_BH03_LG016	2	< 1	18	20	3	2	31	59	< 0.5	0.006	17	0.8	< 5	69	245	3.5	111	3.3	< 2	0.4	< 0.1	1	< 0.2	1.9	513
IG_BH03_LG017	2	1	15	30	3	3	48	39	< 0.5	0.007	18	0.8	< 5	24	339	4.3	115	4.7	< 2	0.6	< 0.1	1	< 0.2	0.8	623
IG_BH03_LG018	31	1	206	720	62	535	13	86	< 0.5	0.02	12	1.4	< 5	73	416	17.7	118	6.2	< 2	< 0.3	< 0.1	1	< 0.2	4.5	629
IG_BH03_LG019	2	1	15	20	3	4	25	34	< 0.5	0.006	18	0.9	< 5	58	243	4.2	120	4.5	< 2	< 0.3	< 0.1	1	< 0.2	1	390
IG_BH03_LG020	2	1	16	20	3	1	11	37	< 0.5	0.004	18	0.9	< 5	69	242	3.9	122	4.5	< 2	0.4	< 0.1	1	< 0.2	1.1	574
IG_BH03_LG021	4	1	32	30	6	7	23	68	< 0.5	0.015	18	0.8	< 5	50	264	5.8	163	6.1	< 2	< 0.3	< 0.1	1	< 0.2	2.6	452
IG_BH03_LG022	< 1	< 1	< 5	30	< 1	2	6	12	< 0.5	0.054	16	1.3	< 5	99	49	5.1	23	2.8	< 2	< 0.3	< 0.1	< 1	< 0.2	1.1	62

Analyte Symbol	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Li	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.002	0.1	0.01	0.5	0.05	5	1	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP	TD-ICP	FUS-MS	FUS-MS	FUS-MS
IG_BH03_LG001	20.2	34.8	3.39	11.5	2.03	0.501	1.5	0.18	0.87	0.14	0.37	0.049	0.3	0.044	3.2	0.71	0.9	0.39	8	71	< 0.1	5.75	1.71
IG_BH03_LG002	19.4	34.1	3.4	11.5	1.99	0.44	1.54	0.19	1.01	0.16	0.44	0.062	0.36	0.05	3.2	0.84	< 0.5	0.34	6	66	< 0.1	6.2	2.63
IG_BH03_LG003	30.7	65.7	7.63	29.8	5.53	1.45	4.05	0.51	2.55	0.44	1.26	0.169	1.08	0.161	2.9	0.26	< 0.5	0.34	19	143	0.1	4.06	1.09
IG_BH03_LG004	2.83	6.25	0.68	2.53	0.87	0.114	0.95	0.2	1.35	0.24	0.68	0.1	0.64	0.09	1.8	1.05	0.5	0.62	17	30	0.2	1.72	6.38
IG_BH03_LG005	22.8	41.8	4.29	15.4	2.77	0.819	2.03	0.25	1.31	0.23	0.58	0.079	0.51	0.072	4.2	0.63	< 0.5	0.32	8	91	< 0.1	4.97	1.29
IG_BH03_LG006	15.1	27.9	2.7	8.96	1.61	0.323	1.13	0.15	0.72	0.13	0.31	0.041	0.23	0.033	3.4	0.71	< 0.5	0.43	9	86	< 0.1	4.73	1.54
IG_BH03_LG007	5.52	10.7	1.11	3.63	0.9	0.123	0.98	0.19	1.31	0.25	0.73	0.1	0.61	0.085	1	0.74	< 0.5	0.65	18	10	< 0.1	2.01	1.57
IG_BH03_LG008	19.3	34.2	3.51	12.7	2.14	0.621	1.52	0.19	0.94	0.16	0.42	0.059	0.38	0.055	3.6	0.49	< 0.5	0.28	< 5	77	< 0.1	4.35	1.09
IG_BH03_LG009	18.1	31.5	3.17	10.4	1.82	0.504	1.27	0.17	0.84	0.14	0.32	0.044	0.29	0.046	2.7	0.62	< 0.5	0.28	7	35	< 0.1	5.31	1.28
IG_BH03_LG010	25	52.4	6.21	25	4.77	1.3	3.7	0.49	2.62	0.47	1.33	0.179	1.21	0.187	2.4	0.28	< 0.5	0.38	7	138	0.1	4.12	0.92
IG_BH03_LG011	17.3	30	2.99	10.3	1.75	0.476	1.32	0.17	0.82	0.14	0.36	0.05	0.33	0.048	2.9	0.67	< 0.5	0.33	8	34	< 0.1	5.15	1.14
IG_BH03_LG012	19.7	33.9	3.36	11.2	1.84	0.446	1.37	0.16	0.86	0.13	0.36	0.046	0.33	0.044	2.8	0.6	< 0.5	0.33	9	58	< 0.1	5.51	1.68
IG_BH03_LG013	19.8	34.7	3.5	12.2	2.08	0.627	1.43	0.19	0.99	0.16	0.43	0.063	0.4	0.057	3.7	0.45	< 0.5	0.23	6	73	< 0.1	4.3	1.15
IG_BH03_LG014	19.7	33.8	3.31	11.4	1.92	0.456	1.33	0.17	0.85	0.13	0.37	0.053	0.33	0.05	3.2	1.21	< 0.5	0.35	7	53	< 0.1	5.6	2.43
IG_BH03_LG015	4.42	9.85	1.14	4	1.32	0.065	1.83	0.4	2.58	0.49	1.41	0.203	1.28	0.177	2.8	1.97	< 0.5	0.81	16	7	< 0.1	2.55	12.9
IG_BH03_LG016	17.1	29.1	2.79	9.29	1.5	0.432	1.12	0.14	0.68	0.11	0.3	0.039	0.26	0.036	2.9	0.45	< 0.5	0.36	6	53	0.1	4.24	1.32
IG_BH03_LG017	18.4	33.8	3.27	11.5	2.02	0.545	1.39	0.18	0.85	0.13	0.33	0.043	0.3	0.049	3.2	0.74	< 0.5	0.11	< 5	22	< 0.1	5.96	1.61
IG_BH03_LG018	46	102	12.2	49.1	8.62	2.2	6.37	0.74	3.66	0.62	1.69	0.212	1.43	0.222	2.8	0.34	< 0.5	0.27	< 5	188	< 0.1	5.44	1.14
IG_BH03_LG019	20.9	36	3.54	12	1.93	0.491	1.46	0.17	0.83	0.14	0.4	0.052	0.32	0.046	3.3	0.77	< 0.5	0.19	< 5	41	< 0.1	5.39	1.84
IG_BH03_LG020	20	34.5	3.34	11.3	1.88	0.521	1.29	0.16	0.74	0.12	0.36	0.052	0.34	0.053	3.3	0.66	< 0.5	0.27	7	42	< 0.1	5.11	2.28
IG_BH03_LG021	22.7	41.5	4.24	15	2.59	0.806	2.02	0.25	1.19	0.2	0.52	0.07	0.41	0.065	4.2	0.67	1	0.18	< 5	63	< 0.1	5.13	1.29
IG_BH03_LG022	5.85	11.1	1.17	4.06	0.96	0.168	0.92	0.15	0.87	0.16	0.45	0.064	0.44	0.072	1.7	1.28	< 0.5	0.33	14	7	0.2	2.57	4.19

Appendix 2

Screened Lithogeochemistry Data used in this Report by Sample Group and Logged Lithology

ALBA SAMPLE #	Lithology	Borehole ID	Sample ID	From [m down hole]	To [m down hole]	Logged Lithology	Interpreted Lithology	Primary Alteration Index	Primary Alteration Assemblage	Au_INAA_ppb	As_INAA_ppm	Br_INAA_ppm	Cr_INAA_ppm	Sc_FUS-ICP_ppm	Be_FUS-ICP_ppm	V_FUS-ICP_ppm	Co_FUS-MS_ppm	Ga_FUS-MS_ppm	Ge_FUS-MS_ppm	Rb_FUS-MS_ppm	Sr_FUS-ICP_ppm	Y_FUS-ICP_ppm	Zr_FUS-ICP_ppm	Nb_FUS-MS_ppm	Sb_FUS-MS_ppm	Cs_FUS-MS_ppm	Ba_FUS-ICP_ppm	La_FUS-MS_ppm	Ce_FUS-MS_ppm	Pr_FUS-MS_ppm	Nd_FUS-MS_ppm	Sm_FUS-MS_ppm
14	Amphibolite	IG_BH01	IG_BH01_LG014	315.04	315.12	Amphibolite	Amphibolite						258	17	3	140	26	17		28	1429	18.9	204	6.2		1.3	216	82.9	168	18.9	69.9	11.7
28	Amphibolite	IG_BH01	IG_BH01_LG028	656.32	656.48	Amphibolite	Amphibolite				0.7		168	19	2	168	34	19	1.2	68	936	20.8	157	4.9		2.8	951	47.4	105	12.7	52.6	9.85
31	Amphibolite	IG_BH01	IG_BH01_LG031	735.09	735.33	Amphibolite	Amphibolite				2.5		898	30		193	47	12	1.6	145	138	9.4	67	2.2		13	648	18.4	37.6	4.31	16.4	3.05
34	Amphibolite	IG_BH01	IG_BH01_LG034	792.92	793.03	Amphibolite	Amphibolite			4			893	33		203	49	14	1.6	113	206	12.4	68	2.5		4.8	656	22.1	45.7	5.67	23.6	4.48
35	Amphibolite	IG_BH01	IG_BH01_LG035	795.65	795.75	Amphibolite	Amphibolite						455	27		227	42	17	1.6	51	653	16.4	87	3.5		2.8	406	31.9	60.1	7.33	29.8	5.5
36	Amphibolite	IG_BH01	IG_BH01_LG036	797.48	797.62	Amphibolite	Amphibolite						959	35		206	54	17	1.5	101	200	12	69	2.7		5.4	591	22.1	46.6	5.65	23.6	4.47
38	Amphibolite	IG_BH01	IG_BH01_LG038	895.67	895.97	Amphibolite	Amphibolite						399	21	2	139	41	17	1.2	52	1137	17.8	154	6.4		3.2	870	70.1	149	17.4	68.7	11.7
42	Amphibolite	IG_BH01	IG_BH01_LG042	968.28	968.44	Amphibolite	Amphibolite				1.5		1170	26	2	139	58	13	1.4	94	266	14.6	118	9.3		13.7	622	49.6	112	13.7	56.5	9.76
43	Amphibolite	IG_BH01	IG_BH01_LG043	978.81	978.9	Amphibolite	Amphibolite	A2	Hematization		1.9	4.1	443	26	3	179	42	12	1.2	71	241	14.7	68	12.5		0.5	254	50.3	104	10.8	43.5	7.63
45	Amphibolite	IG_BH01	IG_BH01_LG045	999.1	999.29	Amphibolite	Amphibolite	A3	Hematization				905	33	2	223	46	13	1.4	43	529	13.7	68	2.7		4.9	344	25	52.5	6.46	26.9	5.29
60	Amphibolite	IG_BH02	IG_BH02_LG015	536.48	536.82	Amphibolite		A2	Chloritization				668	39		233	45	14	1.4	104	789	20.2	125	6.4		6.4	655	45.9	101	12.4	49.4	8.86
66	Amphibolite	IG_BH02	IG_BH02_LG021	672.2	672.4	Amphibolite		A2	Chloritization		1	1.4	376	20		140	26	17	1.8	37	1226	14.5	109	5.2	0.4	0.3	213	37.9	69.7	7.8	30.5	5.21
74	Amphibolite	IG_BH03	IG_BH03_LG003	149.48	149.64	Amphibolite		A3	Chloritization		0.9		369	19		175	33	17	1.2	78	575	13.5	104	4.1		9	417	30.7	65.7	7.63	29.8	5.53
81	Amphibolite	IG_BH03	IG_BH03_LG010	547.37	547.55	Amphibolite							949	23		179	42	14	1.3	82	519	13.8	91	5.2		4.8	656	25	52.4	6.21	25	4.77
89	Amphibolite	IG_BH03	IG_BH03_LG018	774.53	774.69	Amphibolite							650	31		206	62	12	1.4	73	416	17.7	118	6.2		4.5	629	46	102	12.2	49.1	8.62
16	Aplite Dyke	IG_BH01	IG_BH01_LG016	394.98	395.13	Aplite												19	1.2	135	98	3.9	25	2.5		2.3	1434	9.12	17.5	1.85	6.75	1.43
17	Aplite Dyke	IG_BH01	IG_BH01_LG017	400.37	400.53	Aplite	Aplite Dyke								2	6		20		121	66	7.9	36	3		1.1	185	5.24	11.3	1.21	4.1	1.28
18	Aplite Dyke	IG_BH01	IG_BH01_LG018	402.82	402.93	Aplite	Aplite Dyke							3				25	2	179	15	18.8	32	5.8		2.5	50	5.7	12.6	1.5	5.4	1.95
59		IG_BH02	IG_BH02_LG014	531.25	531.47	Aplite		A2	Silicification				22					19	1.8	126	16	9.4	15	3.5		1.3	14	3.31	6.48	0.73	2.71	0.98
69		IG_BH02	IG_BH02_LG024	702.01	702.19	Aplite		A2	Potassic			5.1	21	2		9	2	17	1	86	153	4	70	3.3		1.9	391	12.7	22.3	2.25	7.8	1.4
75		IG_BH03	IG_BH03_LG004	184.72	184.83	Aplite		A2	Potassic		0.9		18					19	1.8	172	21	8.5	22	4.2		3.9	46	2.83	6.25	0.68	2.53	0.87
78		IG_BH03	IG_BH03_LG007	477.8	477.98	Aplite		A4	Potassic			1.7	20					17	1.4	162	15	7.7	14	2.5		2.3	16	5.52	10.7	1.11	3.63	0.9
84	Amphibolite	IG_BH03	IG_BH03_LG013	642.75	642.89	Felsic	Amphibolite; onsistent with Felsic	A2	Chloritization				31	4		35	6	18	0.8	48	250	4.8	145	4.1		1.2	400	19.8	34.7	3.5	12.2	2.08
25	Aphanitic tonalite Dyke	IG_BH01	IG_BH01_LG025	587.04	587.2	Felsic	Aphanitic tonalite Dyke						15	4		33	6	21	0.9	48	259	4.4	129	3.9		1.2	436	21.7	38.6	3.8	13.8	2.21
46		IG_BH02	IG_BH02_LG001	15.29	15.41	Felsic							17	3		25	4	19	1	50	258	4.2	145	4	0.3	2.4	390	16.2	31.1	3.08	11.1	1.9
47		IG_BH02	IG_BH02_LG002	15.75	15.9	Felsic							28	2		14	2	18	1	91	161	4.9	112	3.6	0.6	1.9	555	20.7	36.2	3.58	11.9	1.91
52		IG_BH02	IG_BH02_LG007	280.6	280.8	Felsic		A2	Chloritization			18.1	14	3		29	5	20	1	58	238	5.5	152	4		1.3	348	18.4	37.5	3.45	12.5	2.26
55		IG_BH02	IG_BH02_LG010	368.5	368.65	Felsic							23	3		24	5	18	0.9	49	253	3.6	143	3.6		1	396	20.4	36.7	3.69	12.7	2.07
79		IG_BH03	IG_BH03_LG008	489.97	490.15	Felsic							46	4		36	6	18	0.8	49	253	4.9	140	4.2		1.3	400	19.3	34.2	3.51	12.7	2.14
23	Feldspar-phyric tonalite Dyke	IG_BH01	IG_BH01_LG023	549.15	549.33	Fsp-phyric Felsic	Feldspar-phyric tonalite Dyke				0.8		10	4		31	6	20	0.8	60	273	5.6	150	5.3		2.3	466	21.8	40.7	4.24	15.2	2.53
24	Feldspar-phyric tonalite Dyke	IG_BH01	IG_BH01_LG024	560.64	560.78	Fsp-phyric Felsic	Feldspar-phyric tonalite Dyke						7	3		23	4	20	0.8	40	249	3.6	127	3.8		4.5	363	18	32.1	3.22	11.4	1.88
33	Feldspar-phyric tonalite Dyke	IG_BH01	IG_BH01_LG033	776.2	776.28	Fsp-phyric Felsic	Feldspar-phyric tonalite Dyke				0.7		13	4	2	34	6	21	0.9	49	265	6	153	6.3		2.6	414	26.4	47.4	4.77	16.6	2.64
41	Biotite granodiorite-tonalite Dyke	IG_BH01	IG_BH01_LG041	953.41	953.62	Fsp-phyric Felsic	Biotite granodiorite-tonalite Dyke						8	2		26		17		59	194	3.6	135	3.6		1.3	710	22.6	39.4	3.68	12.1	1.73
50		IG_BH02	IG_BH02_LG005	113.1	113.28	Fsp-phyric Felsic		A2	Hematization				22	3		26	5	18	1	52	244	4.3	134	4.2	4	2.3	419	21.7	38.3	3.88	13.8	2.17
57		IG_BH02	IG_BH02_LG012	380.03	380.2	Fsp-phyric Felsic		A2	Hematization			1.1	30	2		12	2	18	1	81	180	5.3	88	4.1		1.7	507	16.2	29.2	2.94	10.3	1.94
65		IG_BH02	IG_BH02_LG020	668.29	668.44	Fsp-phyric Felsic		A2	Hematization	2		1.7	23	4		29	5	16	0.8	70	236	4.3	119	3.3		2.3	471	18.2	32.2	3.19	10.9	1.83
76		IG_BH03	IG_BH03_LG005	231.97	232.16	Fsp-phyric Felsic					0.6		21	4		34	6	19	0.9	57	250	6.5	165	6.4		1.5	447	22.8	41.8	4.29	15.4	2.77
87		IG_BH03	IG_BH03_LG016	765.9	766.05	Fsp-phyric Felsic					1.5		30	2		18	3	17	0.8	69	245	3.5	111	3.3		1.9	513	17.1	29.1	2.79	9.29	1.5
92		IG_BH03	IG_BH03_LG021	957.5	957.7	Fsp-phyric Felsic							23	4		32	6	18	0.8	50	264	5.8	163	6.1		2.6	452	22.7	41.5	4.24	15	2.59
3	Pegmatite Dyke	IG_BH01	IG_BH01_LG003	67.1	67.33	Pegmatite	Pegmatite Dyke							2		17	4	18	0.9	93	206	3.6	60	2.5		1	1606	15.5	26.4	2.54	8.88	1.28
8	Pegmatite Dyke	IG_BH01	IG_BH01_LG008	214.1	214.23	Pegmatite	Pegmatite Dyke				1			3	2	25	4	23	0.8	102	253	4.1	114	3.9		2.5	582	15.8	27.7	2.74	9.19	1.42
1	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG001	1.6	1.82	Tonalite	Biotite granodiorite-tonalite							3		27	5	20	0.8	60	297	4.3	95	2		1.6	556	13.7	24.6	2.61	9.1	1.61
2	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG002	24.71	24.83	Tonalite	Biotite granodiorite-tonalite	A3	Hematization					4		26	4	21	0.8	55	312	4.3	100	2.1		1.4	513	12	23.1	2.27	8.1	1.48
4	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG004	80.77	80.9	Tonalite	Biotite granodiorite-tonalite			6	0.9			2	2			17	1.1	71	161	3.6	58	3.3		2.3	405	22.8	39.7	3.72	12.1	1.74
5	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG005	131.88	131.97	Tonalite	Biotite granodiorite-tonalite				0.6				2	7		16		64	187	3.3	84	3.8		1.6	424	30.3	50.7	4.49	13.3	1.7
6	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG006	170.1	170.29	Tonalite	Biotite granodiorite-tonalite				3.1			2		7	2	18	0.8	62	197	3.5	83	3.6		1.2	403	40.5	67.6	6.13	19.1	2.17
7	Biotite tonalite	IG_BH01	IG_BH01_LG007	201.6	201.73	Tonalite	Biotite tonalite			4	2		8	5	2	32	2	22		52	356	4.4	126	2		1.2	583	18.5	33.3	3.22	11.5	1.93
9	Biotite tonalite	IG_BH01	IG_BH01_LG009	227.27	227.35	Tonalite	Biotite tonalite				2.3			4	2	29	6	23	0.8	63	357	4.9	127	5.8		2.9	441	16.8	30.1	3.04	10.7	1.87
10	Biotite granodiorite-tonalite Dyke	IG_BH01	IG_BH01_LG010	234.07	234.22	Tonalite	Biotite granodiorite-tonalite Dyke				0.8			2		12	2	19	1	82	243	3.5	82	3.3		1	988	55.5	91.5	8.43	25.6	2.97
11	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG011	287.97	288.27	Tonalite	Biotite granodiorite-tonalite				0.9						2	14	0.9	56	160	3.3	56	2.5		1.5	390	25.6	42.7	3.99	12.5	1.54
12	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG012	298.11	298.32	Tonalite	Biotite granodiorite-tonalite				0.9		7			6	2	18	0.9	70	223	3.4	71	3.1		2.2	434	30.6	51.4	4.67	14.5	1.7
13	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG013	299.95	300.13	Tonalite	Biotite granodiorite-tonalite									7	2	13	1	47	114	2.5	49	2.1		1.4	339	21.9	36.9	3.32	10.7	1.26
15	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG015	335.11	335.3	Tonalite	Biotite granodiorite-tonalite							2		7	2	18	0.9	70	189	3.5	77	3.7		1.8	392	32.6	55.4	4.95	15.4	1.85
19	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG019	443.22	443.3	Tonalite	Biotite granodiorite-tonalite				1.4			2		9	2	18	1	66	205	3.6	83	3		1.9	377	41.1	67.9	6	18.2	1.97
20	Biotite tonalite	IG_BH01	IG_BH01_LG020	452.16	452.28	Tonalite	Biotite tonalite							5		37	6	21	0.7	44	411	4	132	2.1		0.8	447	10.7	19	2.06	7.75	1.54
21	Biotite tonalite	IG_BH01	IG_BH01_LG021	470.11	470.22	Tonalite	Biotite tonalite							5		41	7	22	0.7	47	403	4.2	138	2.3		0.9	467	10.8	19.4	2.03	7.4	1.36
22	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG022	529.93	530.02	Tonalite	Biotite granodiorite-tonalite				0.7	4.4		2		14	3	18	0.8	54	228	3	143	3.3		1.2	423	41.1	67.5	6.09	18	1.83
26	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG026	593.12	593.27	Tonalite	Biotite granodiorite-tonalite							2	2	16		16		55	224	3	158	3.5		1.4	528	48.3	78.7	6.95	21	2.37
27	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG027	636.09	636.2	Tonalite	Biotite granodiorite-tonalite	A2	Potassic						2	11		18		53	167	4.5	81	2.4		1.2	410	9.07	15.7	1.53	4.9	0.99
29	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG029	659.05	659.25	Tonalite	Biotite granodiorite-tonalite	A2	Potassic					2		9		19	1	49	168	4.5	62	2.3		1.1	446	9.52	17.9	1.93	7.19	1.7
30	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG030	701.13	701.25	Tonalite	Biotite granodiorite-tonalite				2.1			2		24	5	18	0.7	56	242	3.1	153	4		1.8	403	38.4	64.2	5.79	17.5	1.99
32	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG032	752.3	752.35	Tonalite	Biotite granodiorite-tonalite				1		11	2		24	5	19	0.9	59	236	3.2	165	4.2		1.8	447	51.8	85.7	7.61	23.6	2.38
37	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG037	841.99	842.11	Tonalite	Biotite granodiorite-tonalite					18.4	13	3		29	6	19	0.8	51	258	3.2	170	4.3		1.3	431	26.8	44.8	4.22	13.6	1.71
39	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG039	901.98	902.16	Tonalite	Biotite granodiorite-tonalite						8	2		23	5	19	1	59	225	4.5	145	4.7		1.3	387	24	40.4	3.82	12.3	1.87
40	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG040	950.02	950.13	Tonalite	Biotite granodiorite-tonalite						9	3		29	6	18	0.7	50	250	3.9	185	4.4		1.5	403	25	43.2	4.1	13.9	1.87
44	Biotite granodiorite-tonalite	IG_BH01	IG_BH01_LG044	995.04	995.15	Tonalite	Biotite granodiorite-tonalite	A2	Hematization				18	3	2	29	3	19		50	242	3.5	202	4.4		1.2	434	33	55.2	4.98	17	1.99
48		IG_BH02	IG_BH02_LG003	60.05	60.2	Tonalite		A3	Potassic				17	2		12	2	19	1	87	198	5.3	88	3.8		2.6	505	16.9	29.3	2.99	10.5	2.08
49		IG_BH02	IG_BH02_LG004	73.47	73.68	Tonalite		A2	Potassic				19	2		10	2	18	1	99	181	4.7	85	3.8		3.3	522	16.4	28.9	3	10.2	1.82
51		IG_BH02	IG_BH02_LG006	132.25	132.4	Tonalite		A3	Potassic				22	2	2	12	2	18	1.1	86	194	5.2	93	4.3		3.8	466	17.2	30.5	3.13	10.8	1.98
53		IG_BH02	IG_BH02_LG008	284.5	284.7	Tonalite		A3	Potassic			1.2	20	2		10	2	18	1.1	86	182	4.8	79	4.1		1.8	529	15.1	26.8	2.74	9.74	1.76
54		IG_BH02	IG_BH02_LG009	346.75	347	Tonalite		A2	Chloritization			11.7	35	2		11	2	18	1.1	86	163	5	86	4.1		1.5	603	16.5	29.5	3.01	10.5	1.91
56		IG_BH02	IG_BH02_LG011	372.24	372.44	Tonalite		A3	Potassic				29	2		9	2	18	1.1	105	155	6	74	3.4		2.2	481	14.1	25.4	2.62	9.47	1.97
58		IG_BH02	IG_BH02_LG013	478.22	478.44	Tonalite		A2	Chloritization				22	2		12	2	18	1.1	90	222	5.2	88	4.3		1.9	565	18.1	31	3.15	11.1	1.99
61		IG_BH02	IG_BH02_LG016	567.26	567.44	Tonalite		A2	Silicification			11.2	13	2		13	2	18	1	93	192	4.9	91	3.9		2.6	570	17.6	30.6	3.1	10.4	1.94
62		IG_BH02	IG_BH02_LG017	573.51	573.68	Tonalite						18.5	21	3		23	4	19	0.8	73	307	5.6	105	4.7		2.9	330	19.6	34.5	3.41	11.6	1.81
63		IG_BH02	IG_BH02_LG018	600.43	600.62	Tonalite		A4	Potassic			4	24	2		10	2	15	0.8	134	136	3.3	66	2.3		0.7	919	10.4	16.9	1.73	5.94	1.09
64		IG_BH02	IG_BH02_LG019	632.98	633.26	Tonalite		A2	Potassic				23	2		12	2	18	1	98	193	4.5	89	4.1		2.1	668	16.8	29.4	2.93	10.1	1.86
67		IG_BH02	IG_BH02_LG022	680.74	680.91	Tonalite		A3	Potassic	3	1.7	6.8	22	2		14	2	18	0.9	83	206	4.4	93	4.1		1.6	561	17.1	29.9	2.98	10.5	1.77
68		IG_BH02	IG_BH02_LG023	682.58	682.74	Tonalite		A2	Bleaching			14.3		2		21	2	19	1	34	310	9	125	7.3		0.6	495	15.4	30.1	3.08	11.3	2.95
70		IG_BH02	IG_BH02_LG025	777.49	777.75	Tonalite		A2	Potassic			13.6	24	2		14	2	19	1.1	115	192	4.4	98	4		0.6	682	21	34.4	3.42	11.8	1.84
71		IG_BH02	IG_BH02_LG026	904.5	904.74	Tonalite		A4	Silicification			13.7	21	2		14	2	17	0.9	108	203	4.6	108	3.7		2.8	711	16.8	28.5	2.87	9.86	1.79
72		IG_BH03	IG_BH03_LG001	74	74.3	Tonalite		A2	Hematization				27	2		14	2	18	1	81	219	4.3	109	4.4		3	493	20.2	34.8	3.39	11.5	2.03
73		IG_BH03	IG_BH03_LG002	131.01	131.25	Tonalite							28	2		13	2	18	1	76	208	5.2	111	4.7		2.8	453	19.4	34.1	3.4	11.5	1.99
77		IG_BH03	IG_BH03_LG006	363.51	363.73	Tonalite		A3	Silicification			6.5	17	2		18	2	20	0.9	109	171	3.6	101	4.9		1.8	930	15.1	27.9	2.7	8.96	1.61
80		IG_BH03	IG_BH03_LG009	546.75	546.94	Tonalite		A4	Potassic				26	2		13	2	18	0.9	73	224	4.2	99	3.7		1.5	636	18.1	31.5	3.17	10.4	1.82
82		IG_BH03	IG_BH03_LG011	553.2	553.49	Tonalite		A4	Potassic				18	2		16	3	18	0.9	76	220	4.2	106	4.3		2.2	509	17.3	30	2.99	10.3	1.75
83		IG_BH03	IG_BH03_LG012	569.01	569.17	Tonalite		A3	Potassic		1.3		21	2		14	2	18	0.9	78	218	4.1	106	4		2	605	19.7	33.9	3.36	11.2	1.84
85		IG_BH03	IG_BH03_LG014	655	655.28	Tonalite							15	2		15	3	18	0.9	83	222	4.2	109	4.6		2.6	500	19.7	33.8	3.31	11.4	1.92
86		IG_BH03	IG_BH03_LG015	735.49	735.7	Tonalite		A3	Potassic			17.6	20					18	1.8	200	8	16.2	31	3.4		2.2	7	4.42	9.85	1.14	4	1.32
88		IG_BH03	IG_BH03_LG017	774.08	774.25	Tonalite		A3	Potassic		1		27	2		15	3	18	0.8	24	339	4.3	115	4.7		0.8	623	18.4	33.8	3.27	11.5	2.02
90		IG_BH03	IG_BH03_LG019	867.73	867.9	Tonalite		A3	Bleaching			12.2	30	2		15	3	18	0.9	58	243	4.2	120	4.5		1	390	20.9	36	3.54	12	1.93
91		IG_BH03	IG_BH03_LG020	889.7	889.9	Tonalite		A2	Bleaching			12	16	2		16	3	18	0.9	69	242	3.9	122	4.5		1.1	574	20	34.5	3.34	11.3	1.88
93		IG_BH03	IG_BH03_LG022	958.37	958.58	Tonalite		A2	Silicification			5.5	21					16	1.3	99	49	5.1	23	2.8		1.1	62	5.85	11.1	1.17	4.06	0.96
						ALL SAMPLES	Row 2 to Row 94		MINIMUM	2	0.6	1.1	7	2	2	6	2	12	0.7	24	8	2.5	14	2	0.3	0.3	7	2.83	6.25	0.68	2.53	0.87
									AVERAGE	3.8	1.3	8.9	154.4	7.1	2.1	48.4	11.0	17.9	1.1	76.8	275.6	6.6	103.8	4.1	1.3	2.4	494.6	23.3	42.9	4.4	15.9	2.7
									MAXIMUM	6	3.1	18.5	1170	39	3	233	62	25	2	200	1429	20.8	204	12.5	4	13.7	1606	82.9	168	18.9	69.9	11.7
									N	5	27	23	69	81	17	84	79	93	85	93	93	93	93	93	4	93	93	93	93	93	93	93
						ALL FELSIC SAMPLES	Row 17 to Row 94		MINIMUM	2	0.6	1.1	7	2	2	6	2	13	0.7	24	8	2.5	14	2	0.3	0.6	7	2.83	6.25	0.68	2.53	0.87
									AVERAGE	3.8	1.2	9.5	20.3	2.6	2.0	19.1	3.5	18.5	1.0	77.0	209.8	4.9	103.1	3.8	1.6	1.8	485.5	20.0	34.8	3.4	11.3	1.8
									MAXIMUM	6	3.1	18.5	46	5	2	41	7	25	2	200	411	18.8	202	7.3	4	4.5	1606	55.5	91.5	8.43	25.6	2.97
									N	4	21	21	54	66	11	69	64	78	71	78	78	78	78	78	3	78	78	78	78	78	78	78
	AMPHIBOLITE	Row 2 to Row 16							MINIMUM	4.0	0.7	1.4	168.0	17.0	2.0	139.0	26.0	12.0	1.2	28.0	138.0	9.4	67.0	2.2	0.4	0.3	213.0	18.4	37.6	4.3	16.4	3.1
									AVERAGE	4.0	1.4	2.8	637.3	26.6	2.3	183.3	43.1	15.0	1.4	76.0	617.3	15.4	107.5	5.3	0.4	5.2	541.9	40.4	84.8	9.9	39.7	7.1
									MAXIMUM	4.0	2.5	4.1	1170.0	39.0	3.0	233.0	62.0	19.0	1.8	145.0	1429.0	20.8	204.0	12.5	0.4	13.7	951.0	82.9	168.0	18.9	69.9	11.7
									N	1.0	6.0	2.0	15.0	15.0	6.0	15.0	15.0	15.0	14.0	15.0	15.0	15.0	15.0	15.0	1.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
	APLITE	Rows 17 to 23							MINIMUM	0.0	0.9	1.7	18.0	2.0	2.0	6.0	2.0	17.0	1.0	86.0	15.0	3.9	14.0	2.5	0.0	1.1	14.0	2.8	6.3	0.7	2.5	0.9
									AVERAGE	0.0	0.9	3.4	20.3	2.5	2.0	7.5	2.0	19.4	1.5	140.1	54.9	8.6	30.6	3.5	0.0	2.2	305.1	6.3	12.4	1.3	4.7	1.3
									MAXIMUM	0.0	0.9	5.1	22.0	3.0	2.0	9.0	2.0	25.0	2.0	179.0	153.0	18.8	70.0	5.8	0.0	3.9	1434.0	12.7	22.3	2.3	7.8	2.0
									N	0.0	1.0	2.0	4.0	2.0	1.0	2.0	1.0	7.0	6.0	7.0	7.0	7.0	7.0	7.0	0.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
	FELSIC DYKE	Rows 24 to 30							MINIMUM	0.0	0.0	18.1	14.0	2.0	0.0	14.0	2.0	18.0	0.8	48.0	161.0	3.6	112.0	3.6	0.3	1.0	348.0	16.2	31.1	3.1	11.1	1.9
									AVERAGE	0.0	0.0	18.1	24.9	3.3	0.0	28.0	4.9	18.9	0.9	56.1	238.9	4.6	138.0	3.9	0.5	1.5	417.9	19.5	35.6	3.5	12.4	2.1
									MAXIMUM	0.0	0.0	18.1	46.0	4.0	0.0	36.0	6.0	21.0	1.0	91.0	259.0	5.5	152.0	4.2	0.6	2.4	555.0	21.7	38.6	3.8	13.8	2.3
									N	0.0	0.0	1.0	7.0	7.0	0.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	2.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
	FELDSPAR PHYRIC	Rows 31 to 40							MINIMUM	2.0	0.6	1.1	7.0	2.0	2.0	12.0	2.0	16.0	0.8	40.0	180.0	3.5	88.0	3.3	4.0	1.3	363.0	16.2	29.1	2.8	9.3	1.5
									AVERAGE	2.0	0.9	1.4	18.7	3.2	2.0	26.5	4.8	18.4	0.9	58.7	240.0	4.9	134.5	4.6	4.0	2.3	476.2	20.8	37.2	3.7	13.0	2.2
									MAXIMUM	2.0	1.5	1.7	30.0	4.0	2.0	34.0	6.0	21.0	1.0	81.0	273.0	6.5	165.0	6.4	4.0	4.5	710.0	26.4	47.4	4.8	16.6	2.8
									N	1.0	4.0	2.0	10.0	10.0	1.0	10.0	9.0	10.0	9.0	10.0	10.0	10.0	10.0	10.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	PEGMATITE	Rows 42 to 42							MINIMUM	0.0	1.0	0.0	0.0	2.0	2.0	17.0	4.0	18.0	0.8	93.0	206.0	3.6	60.0	2.5	0.0	1.0	582.0	15.5	26.4	2.5	8.9	1.3
									AVERAGE	0.0	1.0	0.0	0.0	2.5	2.0	21.0	4.0	20.5	0.9	97.5	229.5	3.9	87.0	3.2	0.0	1.8	1094.0	15.7	27.1	2.6	9.0	1.4
									MAXIMUM	0.0	1.0	0.0	0.0	3.0	2.0	25.0	4.0	23.0	0.9	102.0	253.0	4.1	114.0	3.9	0.0	2.5	1606.0	15.8	27.7	2.7	9.2	1.4
									N	0.0	1.0	0.0	0.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	TONALITE	Rows 43 to 94							MINIMUM	3.0	0.6	1.2	7.0	2.0	2.0	6.0	2.0	13.0	0.7	24.0	8.0	2.5	23.0	2.0	0.0	0.6	7.0	4.4	9.9	1.1	4.0	1.0
									AVERAGE	4.3	1.4	10.7	19.8	2.4	2.0	16.7	3.0	18.3	0.9	74.0	220.2	4.5	102.8	3.7	0.0	1.7	497.3	21.9	37.6	3.6	11.9	1.8
									MAXIMUM	6.0	3.1	18.5	35.0	5.0	2.0	41.0	7.0	23.0	1.8	200.0	411.0	16.2	202.0	7.3	0.0	3.8	988.0	55.5	91.5	8.4	25.6	3.0
									N	3.0	15.0	16.0	33.0	45.0	8.0	48.0	45.0	52.0	47.0	52.0	52.0	52.0	52.0	52.0	0.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0

ALBA SAMPLE #	Eu_FUS-MS_ppm	Gd_FUS-MS_ppm	Tb_FUS-MS_ppm	Dy_FUS-MS_ppm	Ho_FUS-MS_ppm	Er_FUS-MS_ppm	Tm_FUS-MS_ppm	Yb_FUS-MS_ppm	Lu_FUS-MS_ppm	Hf_FUS-MS_ppm	Ta_FUS-MS_ppm	W_FUS-MS_ppm	Tl_FUS-MS_ppm	Bi_FUS-MS_ppm	Th_FUS-MS_ppm	U_FUS-MS_ppm	Ni_TD-ICP_ppm	Cu_TD-ICP_ppm	Zn_TD-ICP_ppm	S_TD-ICP_pct	Ag_TD-ICP_ppm	Pb_TD-ICP_ppm	Li_TD-ICP_ppm	SiO2_FUS-ICP_pct	Al2O3_FUS-ICP_pct	Fe2O3(T)_FUS-ICP_pct	MnO_FUS-ICP_pct	MgO_FUS-ICP_pct	CaO_FUS-ICP_pct	Na2O_FUS-ICP_pct	K2O_FUS-ICP_pct	TiO2_FUS-ICP_pct	P2O5_FUS-ICP_pct	Total_FUS-ICP_pct
14	3.22	7.96	0.88	4.06	0.64	1.65	0.197	1.32	0.216	4.6	0.28	10.1	0.15	0.2	11.4	2.59	171	12	86	0.006	0.4	12		52.38	14.85	7.75	0.14	8.51	8.04	4.07	0.89	0.672	0.49	100.5
28	2.47	6.96	0.93	4.36	0.8	2.02	0.278	1.83	0.276	4.6	0.34		0.46		7.07	2.04	143	74	86	0.095		8		54.05	14.02	8.69	0.117	6.6	7.64	2.87	2.68	0.978	0.38	99.99
31	0.748	2.29	0.31	1.7	0.35	1.07	0.166	1.14	0.191	1.9	0.14		0.94		2.85	0.75	213	2	84	0.003				47.18	10.22	9.22	0.156	10.98	9.14	0.17	5.38	0.557	0.17	99.81
34	1.14	3.49	0.47	2.54	0.47	1.32	0.188	1.26	0.195	1.9	0.14		0.77		2.84	0.75	229	3	84	0.003				47.66	10.63	9.64	0.168	12.04	9.53	0.89	4	0.577	0.16	99.74
35	1.55	4.2	0.59	3.06	0.59	1.7	0.239	1.54	0.238	2.4	0.19		0.32	0.2	3.59	1.17	127	8	75	0.005		19		49.87	13.68	9.98	0.154	8.53	9.96	2.91	1.87	0.732	0.22	100.4
36	1.23	3.47	0.45	2.5	0.47	1.32	0.183	1.16	0.179	2	0.14		0.7		3.01	0.8	258	4	121	0.003				46.08	11.07	10.94	0.175	13.09	8.62	1.13	3.58	0.582	0.17	98.12
38	3.01	8.03	0.89	4.02	0.65	1.68	0.226	1.33	0.191	3.8	0.3	0.6	0.34		9.39	2.22	306	60	68	0.071		8		49.84	13.3	8.05	0.127	10.93	9.37	2.87	2.22	0.649	0.48	98.89
42	2.53	6.69	0.74	3.28	0.53	1.32	0.171	1.02	0.156	3.2	0.39	0.6	0.56	0.2	6.03	1.75	419	16	87	0.006				43.91	9.2	9.43	0.169	16.82	9.47	0.64	3.49	0.636	0.37	98.66
43	1.67	4.85	0.66	3.09	0.52	1.36	0.187	1.2	0.182	1.8	0.51	1.2	0.32		2.9	0.77	81	22	91	0.003				41.51	9.69	9.45	0.152	9.12	14.39	1.69	2.41	0.627	0.32	99.9
45	1.38	4.01	0.53	2.61	0.5	1.41	0.212	1.34	0.203	2.1	0.15		0.26		3.26	0.94	185	8	69	0.005				49.1	11.13	9.76	0.164	11.03	10.47	2.71	1.53	0.607	0.19	99.87
60	2.42	6.5	0.78	4.11	0.72	1.96	0.275	1.67	0.248	3.2	0.38		0.47		5.95	2.12	197	71	79	0.067		11	242	42.77	12	10.3	0.159	10.24	11.38	1.99	3.26	0.94	0.47	99.24
66	1.35	3.96	0.49	2.57	0.48	1.4	0.201	1.4	0.218	2.9	0.33		0.19		5.41	2.04	75	43	81	0.004		20	55	55.35	14.26	7.12	0.133	5.49	9.57	3.46	1.02	0.574	0.18	100.3
74	1.45	4.05	0.51	2.55	0.44	1.26	0.169	1.08	0.161	2.9	0.26		0.34		4.06	1.09	228	15	101	0.003		19	143	53.93	13.46	8.28	0.125	7.9	8.18	3.24	2.12	0.728	0.2	100.2
81	1.3	3.7	0.49	2.62	0.47	1.33	0.179	1.21	0.187	2.4	0.28		0.38		4.12	0.92	229	20	77	0.006		7	138	51.35	12.14	8.67	0.144	10.19	8.32	2.67	2.63	0.629	0.18	100.3
89	2.2	6.37	0.74	3.66	0.62	1.69	0.212	1.43	0.222	2.8	0.34		0.27		5.44	1.14	535	13	86	0.02			188	44.69	10.31	10.71	0.172	15.61	10.16	0.69	2.66	0.895	0.45	100.2
16	0.38	1.19	0.17	0.75	0.13	0.33	0.053	0.34	0.046	1.9	0.75		0.72		4.86	4.12	2	3	11	0.009		20		75.5	13.49	0.95	0.014	0.08	0.69	3.36	5.71	0.036	0.01	100
17	0.201	1.49	0.24	1.44	0.26	0.8	0.112	0.77	0.12	2.3	0.4		0.54		3.75	8.83		6	14	0.03		18		76.51	13.16	1.04	0.02	0.06	0.75	3.97	4.81	0.039	-0.01	100.7
18	0.048	2.57	0.5	3.06	0.56	1.56	0.217	1.53	0.193	3.3	1.21	2.5	0.96		4.53	14.6		5	15	0.006		16		73.94	13.51	0.94	0.087	0.05	0.43	4.12	5.2	0.03	0.02	98.52
59	0.139	1.22	0.24	1.54	0.29	0.83	0.121	0.82	0.126	1.3	1.14		0.5		1.97	7.31		2	14			18	17	75.78	13.04	0.78	0.015	0.06	0.59	4.3	4.59	0.038	0.01	99.41
69	0.381	1.12	0.14	0.76	0.13	0.37	0.048	0.28	0.042	2.1	0.69		0.35		4.47	1.6		8	35	0.003		11	49	75.04	13.86	1.62	0.029	0.25	1.62	4.64	2.93	0.13	0.03	100.6
75	0.114	0.95	0.2	1.35	0.24	0.68	0.1	0.64	0.09	1.8	1.05		0.62	0.2	1.72	6.38		11	27	0.002		17	30	77.01	12.83	0.9	0.022	0.17	0.5	4.14	4.61	0.077	0.01	100.5
78	0.123	0.98	0.19	1.31	0.25	0.73	0.1	0.61	0.085	1	0.74		0.65		2.01	1.57		8	20	0.004		18	10	75.89	12.9	0.59	0.014	0.06	0.51	4.42	4.28	0.036	-0.01	99.04
84	0.627	1.43	0.19	0.99	0.16	0.43	0.063	0.4	0.057	3.7	0.45		0.23		4.3	1.15	5	19	67	0.008	0.4	6	73	70.92	14.61	2.95	0.04	0.84	3.38	4.31	1.62	0.328	0.09	99.7
25	0.62	1.61	0.19	0.87	0.15	0.4	0.051	0.33	0.051	3.4	0.48		0.29		4.55	1.15	8	17	56	0.004	0.4			70.2	15.15	3.1	0.038	0.89	3.34	4.49	1.76	0.33	0.09	99.75
46	0.614	1.44	0.18	0.84	0.12	0.36	0.05	0.32	0.045	3.6	0.54	1.2	0.37	0.7	4.41	1.74	4	13	66	0.003		9	93	70.95	14.65	2.7	0.035	0.68	2.93	4.42	1.66	0.296	0.09	98.89
47	0.494	1.39	0.18	0.88	0.15	0.43	0.056	0.36	0.053	2.8	0.82		0.44		5.06	1.62	4	10	57	0.003		7	69	72.86	13.56	2.11	0.036	0.33	1.86	4.2	2.58	0.22	0.07	98.41
52	0.746	1.75	0.23	1.1	0.18	0.46	0.062	0.43	0.061	3.6	0.53	0.6	0.31	0.4	4.4	1.91	5	21	39	0.003	0.4	12	89	70.15	14.51	2.92	0.049	0.75	1.91	5.54	1.22	0.315	0.09	98.85
55	0.619	1.43	0.19	0.78	0.11	0.29	0.039	0.24	0.036	3.5	0.47	4.4	0.25		4.12	1	4	15	64	0.004	0.5		86	71.82	14.62	2.74	0.032	0.65	3.09	4.5	1.71	0.306	0.1	99.92
79	0.621	1.52	0.19	0.94	0.16	0.42	0.059	0.38	0.055	3.6	0.49		0.28		4.35	1.09	7	16	66	0.005	0.4		77	71.43	14.98	3.01	0.041	0.85	3.32	4.41	1.64	0.331	0.1	100.6
23	0.773	1.86	0.24	1.19	0.21	0.57	0.072	0.43	0.069	3.9	0.6		0.38		4.95	1.28	6	4	61	0.002	0.4	7		69.79	15.07	3.3	0.039	0.81	3.14	4.32	2.06	0.447	0.12	100.7
24	0.563	1.45	0.17	0.78	0.13	0.33	0.045	0.26	0.042	3.4	0.45		0.26		3.63	1.05	3	10	54	0.003				71.63	15.47	2.57	0.031	0.61	3.22	4.42	1.6	0.293	0.08	100.2
33	0.741	2.06	0.28	1.34	0.21	0.57	0.076	0.51	0.074	4	0.68	0.9	0.30		5.74	1.32	6	8	65	0.006		7		70.34	14.61	3.31	0.039	0.82	3.06	4.59	1.65	0.443	0.12	100.2
41	0.577	1.41	0.17	0.73	0.13	0.34	0.046	0.33	0.043	3.5	0.38		0.29		5.88	1.32	4	6	46	0.003	0.4	7		74.68	13.46	2.49	0.039	0.45	2.18	4.1	2.32	0.201	0.06	100.2
50	0.675	1.62	0.19	0.92	0.14	0.42	0.055	0.34	0.045	3.4	0.61		0.31		4.73	1.3	4	7	67	0.004			77	71.59	14.6	2.96	0.039	0.71	3.06	4.34	1.75	0.308	0.1	99.95
57	0.467	1.46	0.21	1.08	0.17	0.44	0.059	0.38	0.058	2.5	0.9		0.32		6.19	1.8	2	8	39	0.002		8	42	73.34	13.55	1.88	0.037	0.42	1.56	4.4	2.81	0.16	0.05	99.06
65	0.509	1.28	0.17	0.81	0.14	0.35	0.055	0.37	0.06	3	0.55		0.34		4.71	1.42	6	15	48	0.002		7	58	72.9	13.25	2.65	0.037	0.68	2.7	3.93	1.75	0.26	0.07	99.37
76	0.819	2.03	0.25	1.31	0.23	0.58	0.079	0.51	0.072	4.2	0.63		0.32		4.97	1.29	7	17	70	0.006		8	91	71.09	14.53	3.22	0.04	0.81	3.17	4.26	1.86	0.447	0.12	100.1
87	0.432	1.12	0.14	0.68	0.11	0.3	0.039	0.26	0.036	2.9	0.45		0.36		4.24	1.32	2	31	59	0.006	0.4	6	53	73.14	14.64	2.01	0.03	0.44	2.59	4.55	1.89	0.213	0.06	99.98
92	0.806	2.02	0.25	1.19	0.2	0.52	0.07	0.41	0.065	4.2	0.67	1	0.18		5.13	1.29	7	23	68	0.015			63	70.13	14.33	3.02	0.037	0.79	3.08	4.65	1.52	0.407	0.1	99.58
3	0.344	1.02	0.14	0.72	0.13	0.34	0.047	0.31	0.047	1.7	0.46	0.6	0.51		3.96	1.65	2	46	47	0.004	0.4	19		68.7	15.07	2.34	0.028	0.5	1.25	3.89	5.55	0.204	0.05	98.64
8	0.425	0.92	0.14	0.72	0.13	0.42	0.065	0.46	0.073	3.3	0.72		0.55		3.43	1.67	2	8	66	0.003	0.5	8		67.04	17.28	2.85	0.04	0.6	2.56	5.43	3.15	0.269	0.04	100.7
1	0.486	1.18	0.16	0.81	0.16	0.44	0.062	0.42	0.064	2.6	0.3		0.36		3.41	0.61	4	31	54	0.005		8		70.18	15.35	2.69	0.04	0.62	2.6	4.72	2.37	0.268	0.06	99.39
2	0.452	1.12	0.16	0.83	0.15	0.4	0.062	0.4	0.061	2.7	0.25		0.34		3.28	1.15	3	17	53	0.002	0.4	6		71	15.84	2.69	0.037	0.59	2.6	4.75	2.26	0.269	0.07	100.8
4	0.455	1.09	0.13	0.62	0.11	0.35	0.05	0.33	0.049	2	0.88		0.42	0.2	8.34	1.66	2	13	38			8		75.67	12.53	1.61	0.027	0.23	1.62	4.11	2.29	0.098	0.04	98.61
5	0.546	0.99	0.12	0.6	0.11	0.3	0.05	0.34	0.052	2.3	0.52		0.28		6.8	2.63		10	44	0.002	0.4	8		75.89	13.46	2.04	0.032	0.29	1.85	4.24	2.13	0.142	0.02	100.6
6	0.553	1.31	0.16	0.74	0.12	0.32	0.045	0.3	0.049	2.6	0.64		0.39		9.04	0.98	2	8	47	0.002		6		74.16	13.3	2.12	0.031	0.37	2.06	4.23	1.95	0.158	0.03	98.89
7	0.61	1.4	0.18	0.9	0.16	0.42	0.057	0.36	0.054	3.5	0.22				3.53	0.68	3	37	61	0.003				69.39	15.2	3.29	0.046	0.78	3.07	4.44	1.94	0.336	0.1	99
9	0.525	1.27	0.17	0.93	0.17	0.48	0.073	0.53	0.074	3.7	1.16		0.44		3.4	0.93	3	18	72	0.004	0.4			68.81	16.03	3.31	0.042	0.7	3.25	5.04	1.49	0.328	0.1	99.64
10	0.677	1.62	0.16	0.71	0.12	0.35	0.051	0.31	0.046	2.5	0.43		0.42		11.9	1.66	2	7	49	0.003		11		69.37	15.63	2.33	0.03	0.38	2.09	4.42	3.74	0.175	0.06	98.71
11	0.422	0.99	0.12	0.59	0.11	0.31	0.048	0.32	0.048	1.7	0.44	1.2	0.35	0.4	6.5	1.42	2	8	33	0.312	0.4	7		78.11	11.05	2.19	0.025	0.22	1.52	3.5	1.9	0.11	0.02	99.58
12	0.393	1	0.13	0.62	0.11	0.32	0.045	0.35	0.055	2.2	0.72	0.7	0.42		7.44	2.18		6	40	0.047		6		74.13	12.63	1.84	0.027	0.26	1.84	4.05	2.09	0.124	0.03	98.93
13	0.265	0.79	0.09	0.45	0.08	0.23	0.03	0.22	0.038	1.6	0.5	2.9	0.26	0.2	5.23	1.89		6	85	0.225		6		81.66	8.74	1.56	0.02	0.18	1.26	2.71	1.44	0.092	0.03	99.19
15	0.521	1.02	0.13	0.63	0.11	0.31	0.047	0.32	0.052	2.4	0.62		0.43	0.2	7.6	2.43	2	20	44	0.003		8		75.04	13.03	2.13	0.03	0.33	1.99	4.15	2.07	0.14	0.03	99.35
19	0.521	0.99	0.13	0.69	0.11	0.32	0.05	0.33	0.054	2.5	0.55		0.39	0.2	6.94	3.35	2	18	42	0.003	0.4	7		73.92	13.37	2.05	0.027	0.33	2.12	4.24	2.03	0.165	0.04	98.67
20	0.604	1.22	0.15	0.84	0.14	0.37	0.054	0.34	0.055	3.3	0.2		0.28		1.81	0.68	3	10	60	0.003				68.39	15.97	3.41	0.038	0.84	3.72	4.8	1.25	0.384	0.09	99.41
21	0.555	1.17	0.16	0.78	0.15	0.42	0.063	0.44	0.076	3.3	0.21		0.29		2	1.25	4	7	61	0.003				69.44	15.57	3.41	0.038	0.88	3.69	4.84	1.3	0.372	0.1	100.1
22	0.604	0.97	0.11	0.54	0.1	0.29	0.042	0.28	0.045	3.9	0.58		0.34		7.1	1.85	2	6	47	0.003	0.4			73.89	13.05	2.34	0.028	0.45	2.45	4.1	1.67	0.223	0.06	98.6
26	0.67	1.22	0.12	0.59	0.09	0.28	0.039	0.24	0.039	3.8	0.36		0.37		9.53	1.3	3	9	49	0.004		6		75.11	13.35	2.59	0.034	0.48	2.36	4.01	1.92	0.24	0.08	100.6
27	0.528	0.88	0.13	0.75	0.16	0.42	0.058	0.36	0.048	3.1	0.44		0.28		2.77	1.32	2	8	25	0.003		9		74.6	13.68	1.41	0.025	0.29	1.94	4.66	1.96	0.11	0.05	99.14
29	0.38	1.51	0.2	0.93	0.15	0.36	0.05	0.3	0.049	2.3	0.36		0.26		5.19	1.49	3	7	23	0.003		10		74	14.19	1.29	0.023	0.22	1.91	4.71	2.28	0.088	0.03	99.2
30	0.599	1.15	0.12	0.58	0.1	0.33	0.049	0.34	0.052	3.9	0.7		0.34		7.44	1.51	4	12	58	0.005	0.4			73.29	13.73	3.09	0.038	0.67	2.76	3.96	1.72	0.317	0.09	100.2
32	0.623	1.15	0.11	0.59	0.1	0.3	0.046	0.31	0.05	4.3	0.57		0.37		9.08	1.62	5	12	62	0.004		7		72.67	13.38	3.33	0.039	0.71	2.65	3.91	1.76	0.32	0.08	99.24
37	0.649	1.11	0.13	0.59	0.11	0.3	0.045	0.3	0.049	4.2	0.41		0.32		5.37	0.99	175	20	118	0.006		8		70.24	14.09	3.49	0.043	0.86	3.07	4.17	1.67	0.337	0.1	98.49
39	0.592	1.3	0.17	0.83	0.14	0.42	0.065	0.45	0.068	3.8	0.82		0.35		6.09	2.14	7	11	58	0.003		9		70.08	13.47	3.15	0.042	0.69	2.68	4.1	1.8	0.299	0.07	100.3
40	0.592	1.3	0.16	0.76	0.14	0.37	0.054	0.34	0.061	4.7	0.58		0.31		5.73	1.55	7	18	69	0.005				70.83	13.81	3.56	0.044	0.86	2.93	4.04	1.68	0.335	0.1	98.52
44	0.432	1.24	0.13	0.63	0.11	0.31	0.046	0.26	0.044	4.9	0.48		0.13		6.86	0.83	6	7	68	0.003				72.51	13.07	3.67	0.05	0.95	2.8	3.63	1.66	0.377	0.12	99.38
48	0.412	1.49	0.2	1.01	0.16	0.44	0.064	0.41	0.06	2.6	0.91		0.4		6.77	1.4	3	12	46	0.003		9	76	72.33	14.43	1.91	0.025	0.34	1.24	4.5	2.73	0.175	0.05	98.54
49	0.431	1.43	0.18	0.88	0.14	0.39	0.057	0.37	0.051	2.6	0.79	3.9	0.41		6.22	2.21	2	7	44	0.003		10	71	74.01	14.09	1.73	0.033	0.32	1.74	4.39	3.01	0.16	0.03	99.96
51	0.463	1.52	0.21	1.01	0.16	0.45	0.059	0.39	0.056	2.8	0.9	0.7	0.39		6.7	2.85		12	48	0.003		8	80	74.22	14.18	1.86	0.036	0.37	2.02	4.53	2.47	0.174	0.05	100.6
53	0.409	1.39	0.18	0.96	0.16	0.4	0.053	0.34	0.051	2.3	1.07	2.6	0.33		5.59	1.77	2	9	39	0.003		9	62	72.63	14.02	1.7	0.028	0.32	1.58	4.47	2.9	0.154	0.04	99.49
54	0.444	1.51	0.19	0.91	0.15	0.42	0.058	0.38	0.055	2.5	1	1.8	0.36		6.46	1.36	2	8	38	0.002		7	44	72.64	13.75	1.81	0.034	0.38	1.42	4.52	2.91	0.164	0.05	98.61
56	0.401	1.53	0.21	1.05	0.19	0.5	0.071	0.49	0.074	2.5	0.82		0.49		6.49	1.15	2	7	37	0.003		8	56	73.51	13.5	1.55	0.031	0.27	1.53	4.38	3.24	0.131	0.04	98.66
58	0.408	1.57	0.19	0.93	0.16	0.42	0.061	0.41	0.06	2.7	0.83	2.1	0.39		7.02	2.45	4	7	43	0.014		8	80	73.13	13.74	1.84	0.033	0.31	1.78	4.38	2.84	0.167	0.04	100.2
61	0.476	1.49	0.18	0.89	0.16	0.43	0.057	0.39	0.061	2.7	0.86		0.43		6.21	1.93	2	6	42	0.003		8	61	74.5	14.07	1.88	0.034	0.34	1.84	4.47	2.97	0.165	0.04	100.8
62	0.478	1.34	0.18	1.03	0.18	0.49	0.073	0.47	0.067	2.8	1.28		0.37		4.34	2.54	2	9	58	0.003		8	71	72.59	14.75	2.59	0.045	0.55	2.63	4.68	1.75	0.25	0.06	100.5
63	0.468	0.89	0.12	0.58	0.09	0.23	0.034	0.23	0.031	1.8	0.39		0.55		3.05	1.37	2	25	21	0.003		7	25	74.38	13.74	1.43	0.026	0.32	1.06	4.11	4.51	0.13	0.04	100.4
64	0.478	1.27	0.18	0.83	0.14	0.38	0.054	0.32	0.048	2.6	0.9	0.7	0.46	0.2	5.78	2.71	2	8	42	0.003		8	65	73.68	14.16	1.8	0.033	0.33	1.75	4.36	3.09	0.163	0.05	99.85
67	0.464	1.35	0.18	0.85	0.14	0.36	0.051	0.36	0.059	2.6	0.94	26.1	0.34		5.48	1.15	2	9	48	0.002		8	41	74.15	13.99	1.82	0.033	0.36	1.86	4.46	2.63	0.167	0.04	100.2
68	0.937	2.77	0.35	1.7	0.27	0.67	0.088	0.55	0.082	4	1.41	0.6	0.13		6.52	1.19	4	37	48	0.003			54	58.9	18.74	1.97	0.037	0.53	4.01	8.61	1.27	0.249	0.06	98.49
70	0.509	1.34	0.17	0.92	0.14	0.36	0.054	0.36	0.054	2.7	0.67	0.7	0.47		4.6	2.34	2	3	17				28	72.74	14.3	1.85	0.031	0.32	1.99	4.97	3.1	0.166	0.05	100.6
71	0.399	1.45	0.18	0.87	0.14	0.39	0.05	0.33	0.048	3	0.78	0.9	0.47		5.12	1.9	3	13	21	0.022			58	73.11	14.25	1.97	0.027	0.42	1.44	4.7	2.69	0.188	0.05	100.5
72	0.501	1.5	0.18	0.87	0.14	0.37	0.049	0.3	0.044	3.2	0.71	0.9	0.39		5.75	1.71	3	10	52	0.002	0.4	8	71	73.39	14.24	1.77	0.03	0.39	1.99	4.52	2.46	0.189	0.06	99.64
73	0.44	1.54	0.19	1.01	0.16	0.44	0.062	0.36	0.05	3.2	0.84		0.34		6.2	2.63	2	10	51	0.004		6	66	72.92	13.84	1.77	0.032	0.38	1.99	4.54	2.21	0.183	0.05	98.51
77	0.323	1.13	0.15	0.72	0.13	0.31	0.041	0.23	0.033	3.4	0.71		0.43		4.73	1.54	2	18	38	0.003		9	86	72.26	14.69	1.67	0.023	0.37	1.31	4.27	3.33	0.164	0.05	99.4
80	0.504	1.27	0.17	0.84	0.14	0.32	0.044	0.29	0.046	2.7	0.62		0.28		5.31	1.28		9	48	0.003	0.4	7	35	74.22	14.14	1.76	0.029	0.4	1.92	4.36	2.36	0.184	0.05	100.3
82	0.476	1.32	0.17	0.82	0.14	0.36	0.05	0.33	0.048	2.9	0.67		0.33		5.15	1.14	3	27	53	0.003	0.4	8	34	74.49	14.17	1.85	0.032	0.41	2.1	4.45	2.38	0.195	0.05	100.8
83	0.446	1.37	0.16	0.86	0.13	0.36	0.046	0.33	0.044	2.8	0.6		0.33		5.51	1.68	3	8	50	0.002		9	58	73.41	13.76	1.8	0.03	0.39	2.05	4.36	2.54	0.192	0.05	99.1
85	0.456	1.38	0.17	0.85	0.13	0.37	0.053	0.33	0.05	3.2	1.21		0.35		5.6	2.43	3	8	51	0.003		7	53	73.85	13.92	1.85	0.032	0.39	2.11	4.52	2.37	0.196	0.06	99.75
86	0.065	1.83	0.4	2.58	0.49	1.41	0.203	1.28	0.177	2.8	1.97		0.81		2.55	12.9		3	13	0.01		16	7	77.24	12.93	0.6	0.022	0.05	0.41	4.47	4.47	0.034	0.01	100.5
88	0.545	1.39	0.18	0.85	0.13	0.33	0.043	0.3	0.049	3.2	0.74		0.11		5.96	1.61	3	48	39	0.007	0.6		22	73.91	14.32	1.87	0.032	0.45	2.14	6.01	0.74	0.2	0.05	100.6
90	0.491	1.46	0.17	0.83	0.14	0.4	0.052	0.32	0.046	3.3	0.77		0.19		5.39	1.84	4	25	34	0.006			41	73.7	14.16	1.91	0.028	0.47	2.03	4.84	1.79	0.209	0.05	100.8
91	0.521	1.29	0.16	0.74	0.12	0.36	0.052	0.34	0.053	3.3	0.66		0.27		5.11	2.28		11	37	0.004	0.4	7	42	73.5	14.31	1.9	0.03	0.42	2.28	4.55	2.4	0.209	0.06	100.7
93	0.168	0.92	0.15	0.87	0.16	0.45	0.064	0.44	0.072	1.7	1.28		0.33	0.2	2.57	4.19	2	6	12	0.054		14	7	76.99	12.8	0.58	0.013	0.05	0.62	4.53	3.5	0.036	-0.01	99.73
ALL SAMPLES MINIMUM	0.048	0.79	0.09	0.45	0.08	0.23	0.03	0.22	0.031	1	0.14	0.6	0.11	0.2	1.72	0.61	2	2	11	0.002	0.4	6	7	41.51	8.74	0.58	0.013	0.05	0.41	0.17	0.74	0.03	-0.01	98.12
ALL SAMPLES AVERAGE	0.7	2.0	0.3	1.3	0.2	0.6	0.1	0.5	0.1	2.9	0.6	2.8	0.38	0.3	5.2	2.1	47.4	14.9	53.2	0.014	0.4	9.7	65.4	68.9	13.7	3.3	0.1	2.1	3.3	4.1	2.5	0.3	0.1	99.7
ALL SAMPLES MAXIMUM	3.22	8.03	0.93	4.36	0.8	2.02	0.278	1.83	0.276	4.9	1.97	26.1	0.96	0.7	11.9	14.6	535	74	121	0.312	0.6	20	242	81.66	18.74	10.94	0.175	16.82	14.39	8.61	5.71	0.978	0.49	100.8
ALL SAMPLES N	93	93	93	93	93	93	93	93	93	93	93	25	92	13	93	93	80	93	93	90	23	67	48	93	93	93	93	93	93	93	93	93	93	93
ALL FELSIC SAMPLES MINIMUM	0.048	0.79	0.09	0.45	0.08	0.23	0.03	0.22	0.031	1	0.2	0.6	0.11	0.2	1.72	0.61	2	2	11	0.002	0.4	6	7	58.9	8.74	0.58	0.013	0.05	0.41	2.71	0.74	0.03	-0.01	98.41
ALL FELSIC SAMPLES AVERAGE	0.5	1.4	0.2	0.9	0.2	0.4	0.1	0.4	0.1	3.0	0.7	2.7	0.38	0.3	5.3	2.2	6.1	13.1	47.1	0.013	0.4	9.3	55.1	72.8	14.1	2.2	0.0	0.5	2.1	4.4	2.5	0.2	0.1	99.7
ALL FELSIC SAMPLES MAXIMUM	0.937	2.77	0.5	3.06	0.56	1.56	0.217	1.53	0.193	4.9	1.97	26.1	0.96	0.7	11.9	14.6	175	48	118	0.312	0.6	20	93	81.66	18.74	3.67	0.087	0.95	4.01	8.61	5.71	0.447	0.12	100.8
ALL FELSIC SAMPLES N	78	78	78	78	78	78	78	78	78	78	78	21	77	10	78	78	65	78	78	75	22	59	43	78	78	78	78	78	78	78	78	78	78	78
AMPHIBOLITE MINIMUM	0.7	2.3	0.3	1.7	0.4	1.1	0.2	1.0	0.2	1.8	0.1	0.6	0.2	0.2	2.8	0.8	75.0	2.0	68.0	0.003	0.4	7.0	55.0	41.5	9.2	7.1	0.1	5.5	7.6	0.2	0.9	0.6	0.2	98.1
AMPHIBOLITE AVERAGE	1.8	5.1	0.6	3.1	0.6	1.5	0.2	1.3	0.2	2.8	0.3	3.1	0.4	0.2	5.2	1.4	226.4	24.7	85.0	0.02	0.4	13.0	153.2	48.6	12.0	9.2	0.2	10.5	9.6	2.1	2.6	0.7	0.3	99.7
AMPHIBOLITE MAXIMUM	3.2	8.0	0.9	4.4	0.8	2.0	0.3	1.8	0.3	4.6	0.5	10.1	0.9	0.2	11.4	2.6	535.0	74.0	121.0	0.1	0.4	20.0	242.0	55.4	14.9	10.9	0.2	16.8	14.4	4.1	5.4	1.0	0.5	100.5
AMPHIBOLITE N	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	4.0	15.0	3.0	15.0	15.0	15.0	15.0	15.0	15.0	1.0	8.0	5.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
APLITE MINIMUM	0.0	1.0	0.1	0.8	0.1	0.3	0.0	0.3	0.0	1.0	0.4	2.5	0.4	0.2	1.7	1.6	2.0	2.0	11.0	0.0	0.0	11.0	10.0	73.9	12.8	0.6	0.0	0.1	0.4	3.4	2.9	0.0	0.0	98.5
APLITE AVERAGE	0.2	1.4	0.2	1.5	0.3	0.8	0.1	0.7	0.1	2.0	0.9	2.5	0.6	0.2	3.3	6.3	2.0	6.1	19.4	0.0	0.0	16.9	26.5	75.7	13.3	1.0	0.0	0.1	0.7	4.1	4.6	0.1	0.0	99.8
APLITE MAXIMUM	0.4	2.6	0.5	3.1	0.6	1.6	0.2	1.5	0.2	3.3	1.2	2.5	1.0	0.2	4.9	14.6	2.0	11.0	35.0	0.0	0.0	20.0	49.0	77.0	13.9	1.6	0.1	0.3	1.6	4.6	5.7	0.1	0.0	100.7
APLITE N	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	1.0	7.0	1.0	7.0	7.0	1.0	7.0	7.0	6.0	0.0	7.0	4.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
FELSIC DYKE MINIMUM	0.5	1.4	0.2	0.8	0.1	0.3	0.0	0.2	0.0	2.8	0.5	0.6	0.2	0.4	4.1	1.0	4.0	10.0	39.0	0.0	0.4	6.0	69.0	70.2	13.6	2.1	0.0	0.3	1.9	4.2	1.2	0.2	0.1	98.4
FELSIC DYKE AVERAGE	0.6	1.5	0.2	0.9	0.1	0.4	0.1	0.4	0.1	3.5	0.5	2.1	0.3	0.6	4.5	1.4	5.3	15.9	59.3	0.0	0.4	8.5	81.2	71.2	14.6	2.8	0.0	0.7	2.8	4.6	1.7	0.3	0.1	99.4
FELSIC DYKE MAXIMUM	0.7	1.8	0.2	1.1	0.2	0.5	0.1	0.4	0.1	3.7	0.8	4.4	0.4	0.7	5.1	1.9	8.0	21.0	67.0	0.0	0.5	12.0	93.0	72.9	15.2	3.1	0.0	0.9	3.4	5.5	2.6	0.3	0.1	100.6
FELSIC DYKE N	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	3.0	7.0	2.0	7.0	7.0	7.0	7.0	7.0	7.0	5.0	4.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
FELDSPAR PHYRIC MINIMUM	0.4	1.1	0.1	0.7	0.1	0.3	0.0	0.3	0.0	2.5	0.4	0.9	0.2	0.0	3.6	1.1	2.0	4.0	39.0	0.0	0.4	6.0	42.0	69.8	13.3	1.9	0.0	0.4	1.6	3.9	1.5	0.2	0.1	99.1
FELDSPAR PHYRIC AVERAGE	0.6	1.6	0.2	1.0	0.2	0.4	0.1	0.4	0.1	3.5	0.6	1.0	0.3	0.0	5.0	1.3	4.7	12.9	57.7	0.0	0.4	7.1	64.0	71.9	14.4	2.7	0.0	0.7	2.8	4.4	1.9	0.3	0.1	99.9
FELDSPAR PHYRIC MAXIMUM	0.8	2.1	0.3	1.3	0.2	0.6	0.1	0.5	0.1	4.2	0.9	1.0	0.4	0.0	6.2	1.8	7.0	31.0	70.0	0.0	0.4	8.0	91.0	74.7	15.5	3.3	0.0	0.8	3.2	4.7	2.8	0.4	0.1	100.7
FELDSPAR PHYRIC N	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	2.0	10.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	3.0	7.0	6.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PEGMATITE MINIMUM	0.3	0.9	0.1	0.7	0.1	0.3	0.0	0.3	0.0	1.7	0.5	0.6	0.5	0.0	3.4	1.7	2.0	8.0	47.0	0.003	0.4	8.0	0.0	67.0	15.1	2.3	0.0	0.5	1.3	3.9	3.2	0.2	0.0	98.6
PEGMATITE AVERAGE	0.4	1.0	0.1	0.7	0.1	0.4	0.1	0.4	0.1	2.5	0.6	0.6	0.5	0.0	3.7	1.7	2.0	27.0	56.5	0.004	0.5	13.5	0.0	67.9	16.2	2.6	0.0	0.6	1.9	4.7	4.4	0.2	0.0	99.7
PEGMATITE MAXIMUM	0.4	1.0	0.1	0.7	0.1	0.4	0.1	0.5	0.1	3.3	0.7	0.6	0.6	0.0	4.0	1.7	2.0	46.0	66.0	0.004	0.5	19.0	0.0	68.7	17.3	2.9	0.0	0.6	2.6	5.4	5.6	0.3	0.1	100.7
PEGMATITE N	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.000	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TONALITE MINIMUM	0.1	0.8	0.1	0.5	0.08	0.2	0.03	0.2	0.03	1.6	0.2	0.6	0.11	0.20	1.8	0.6	2.0	3.0	12.0	0.002	0.40	6.0	7.0	58.9	8.7	0.6	0.0	0.1	0.4	2.7	0.7	0.0	0.0	98.5
TONALITE AVERAGE	0.5	1.3	0.2	0.8	0.14	0.4	0.06	0.4	0.06	3.0	0.7	3.3	0.36	0.23	5.7	2.0	6.8	13.1	46.7	0.017	0.42	8.2	51.6	73.1	13.97	2.1	0.0	0.4	2.1	4.5	2.3	0.2	0.1	99.6
TONALITE MAXIMUM	0.9	2.8	0.4	2.6	0.49	1.4	0.20	1.3	0.18	4.9	2.0	26.1	0.81	0.40	11.9	12.9	175.0	48.0	118.0	0.312	0.60	16.0	86.0	81.7	18.7	3.7	0.1	1.0	4.0	8.6	4.5	0.4	0.1	100.8
TONALITE N	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	14.0	51.0	7.0	52.0	52.0	45.0	52.0	52.0	50.0	12.0	39.0	27.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0