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ECHO RIDGE RESOURCES INC.
TASHOTA RESOURCES INC.

Assessment Report: 2017 Reconnaissance Mapping and Prospecting Program on the Echo Ridge Property

Tilly Lake, Powell Lake and Moss Township
District of Thunder Bay, Northwestern Ontario
NTS Map Sheet 52B/10

I.A. Osmani, *M.Sc., P.Geo.*
Faarnad Geological Consulting (FGC) Inc.
Burnaby, BC

November 14, 2018

SUMMARY

The Echo Ridge property ("Property") of Echo Ridge Resources Inc. and Tashota Resources Inc. is located approximately 125 km west of Thunder Bay in northwestern Ontario. The Property consists of unpatented mining claims (13 Legacy/176 Cells) covering more than 1,968 hectares.

The 2017 reconnaissance prospecting and mapping program carried out in a selected area of the Property was to 1) evaluate the geological setting and economic potential of the known copper-gold mineralization, 2) find new potentially economic mineralization of both base and precious metals, and 3) make recommendations for future exploration program on the Property. The Property hosts widespread copper-gold mineralization that shows many similarities, both in geological settings and styles of mineralization, to known mineralization on the adjacent west Shebandowan greenstone belt.

The Property is underlain by northeast-striking, steeply dipping metasedimentary rocks of the Quetico Terrane (QT), close to its boundary with the Shebandowan greenstone belt of the Wawa Terrane (WT). The QT and WT are separated by a major structure, the boundary Fault Zone (BFZ) which passes through the most southeastern corner of the Property. The metasedimentary rocks mainly consist of massive-to thinly bedded greywacke and minor finely laminated siltstone and mudstone. Within high-strain zones, the metasedimentary rocks are variably converted to sericite±chlorite-quartz-biotite-feldspar schist. These metasedimentary rocks are intruded by large and small intermediate to mafic and felsic bodies. One of the largest intermediate to mafic intrusive bodies occurring in the western part of the Property is the "Tilly Lake Diorite Complex" (TLDC). The TLDC consists predominantly of diorite and quartz diorite. The TLDC extends northeasterly from west-southwest for approximately 4.7 km to the north-central part of the Property. It is widest (1.43 km) in the southwest and narrowest (few metres wide) in the northeast. The diorites of the TLDC have an average colour index of 25 to 40 and consist of mostly fine- to medium-grained and vary from massive to variably deformed and altered. Occasionally, the diorite appears to be grading into more mafic dioritic or gabbroic phases and is indicated by their relatively higher colour indexes, which may be caused by the strong chloritization and epidotization of the rocks. Geochemically, both altered and least-altered varieties are normal diorites. The TLDC and adjacent metasedimentary rocks are deformed by a series of subparallel to parallel, northeast-striking, steeply dipping shear zones that form up to 450 m wide structural zone, the Tilly Lake Deformation Zone (TLDZ).

The diorites of the TLDC are the main host to widespread structurally-controlled copper-gold-silver mineralization on the Property. The results of the current exploration program in conjunction with the historical data have delineated an area up to 450m x 2800m of shearing and mineralization within the eastern half of the TLDC. Of the two main styles of copper-gold-silver mineralization on the Property, the most predominant style occurs along the schistosity planes in sheared diorites and along the diorite-metasedimentary contacts. The rocks within and adjacent to the shear zones are intensely fractured, mylonitized and schistose and are usually accompanied by carbonitization, silicification, chloritization, sericitization, albitization and epidotization of the rocks. Hematization and/or feldspathization in some instances are associated with the significant

base and precious metal mineralization. The second style of mineralization is associated with quartz-carbonate veins emplaced within and/or adjacent to shear zones in diorites and, less commonly, in the sedimentary rocks. The copper-gold mineralization of both styles is associated with mostly sulphide minerals such as chalcopyrite, pyrite and minor bornite. Oxide minerals (magnetite, hematite and malachite staining) associated with sulphide minerals occur locally in sheared diorites and along the diorite-metasedimentary contacts.

Although copper-gold-silver mineralization is widely distributed throughout the eastern half of the TLDC, the best mineralization occurs along the sheared north and south margins of the TLDC, both along and near the contact with the metasedimentary rocks. Examples of such setting/style of mineralization are well evident from the following results yielded by the grab samples: **1) North margin** - 4.16% Cu, 449 ppb Au and 26.7 ppm Ag (sample #473608); 3.21% Cu, 224 ppb Au and 30.2 ppm Ag (sample #473607), and **2) South margin** - 2.38% Cu, 1910 ppb Au and 43.9 ppm Ag (sample #473709); 9780 ppm Cu, 1170 ppb Au and 29.8 ppm Ag (#473708); 9150 ppm Cu, 1200 ppb Au and 25 ppm Ag (sample #473705); 7830 ppm Cu, 970 ppb Au and 20.8 ppm Ag (sample #473706). The best copper-gold-silver mineralization (1.4% Cu, 492 ppb Au and 17.2 ppm Ag) associated with the sheared metasedimentary rocks occurs along the contact with the diorite at the northeast end of the TLDC. Quartz±carbonate veins hosted by sheared diorites usually contain anomalous copper and gold (e.g., 1099 ppb Au, 376 ppm Cu – sample #473707).

A detailed litho-structural mapping and prospecting program coupled with geophysical surveys (e.g., ground magnetometer, electromagnetic and induced polarization) is recommended for the entire Property. Mechanical stripping of new discoveries and cleaning of historical trenches and detailed mapping and sampling of them are highly recommended to assess the full extent and style of mineralization on the Property.

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Appendix V. Certificate of Geochemical Analysis (AGAT Work Order 17B276250) – 2017 Whole Rock and Grab Assay Samples.

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Tilly Lake, Powell Lake and Moss Township
District of Thunder Bay, Northwestern Ontario
NTS Map Sheet 52B/10

1 INTRODUCTION

The Echo Ridge property ("Property") is located approximately 125 km west of Thunder Bay in northwestern Ontario **(Figure 1)**. The Property consists of contiguous unpatented mining claims (13 Legacy/176 Cells), covering over 1,968 hectares. This report describes the reconnaissance bedrock mapping and prospecting work carried out from October 17 to October 24, 2017, by the contractors Ike Osmani (M.Sc., P.Geo.), Ben Kuzmich and Bill Spade for Echo Ridge Resources Inc. ("Echo Ridge" or the "Company"). The report also describes the past exploration in detailed and incorporated the results of the past work where relevant to the current study.

The three main objectives of the current reconnaissance work program were to 1) evaluate the geological setting and economic potential of known copper-gold mineralization, 2) find the new potentially significant base and precious metal mineralization, and 3) make recommendations for future exploration program on the Property.

The Property occurs mostly within the metasedimentary rocks of Quetico basin adjacent to the Quetico-Wawa (west end of Shebandowan greenstone belt) terrane boundary. The sedimentary rocks are intruded by gabbro, diorite, granodiorite and quartz diorite to tonalite bodies.

2 PROPERTY LOCATION AND DESCRIPTION

2.1 Location

The Property occurs within the southeastern and southwestern parts of Tilly Lake Area (G-562) and Moss Township (G-676), respectively, and Powell Lake Area (G-549) on NTS Map sheet 52B/10SE. The Property is located approximately 58 km southeast of Atikokan and 38 km southwest of the village of Kashabowie which sits at the junction of Trans-Canada Highway 11 and secondary Ontario Highway 802 **(Figure 1)**. The centre of the Property is located approximately at 655500mE / 5375500mN UTM coordinates (NAD83, Zone 15N).

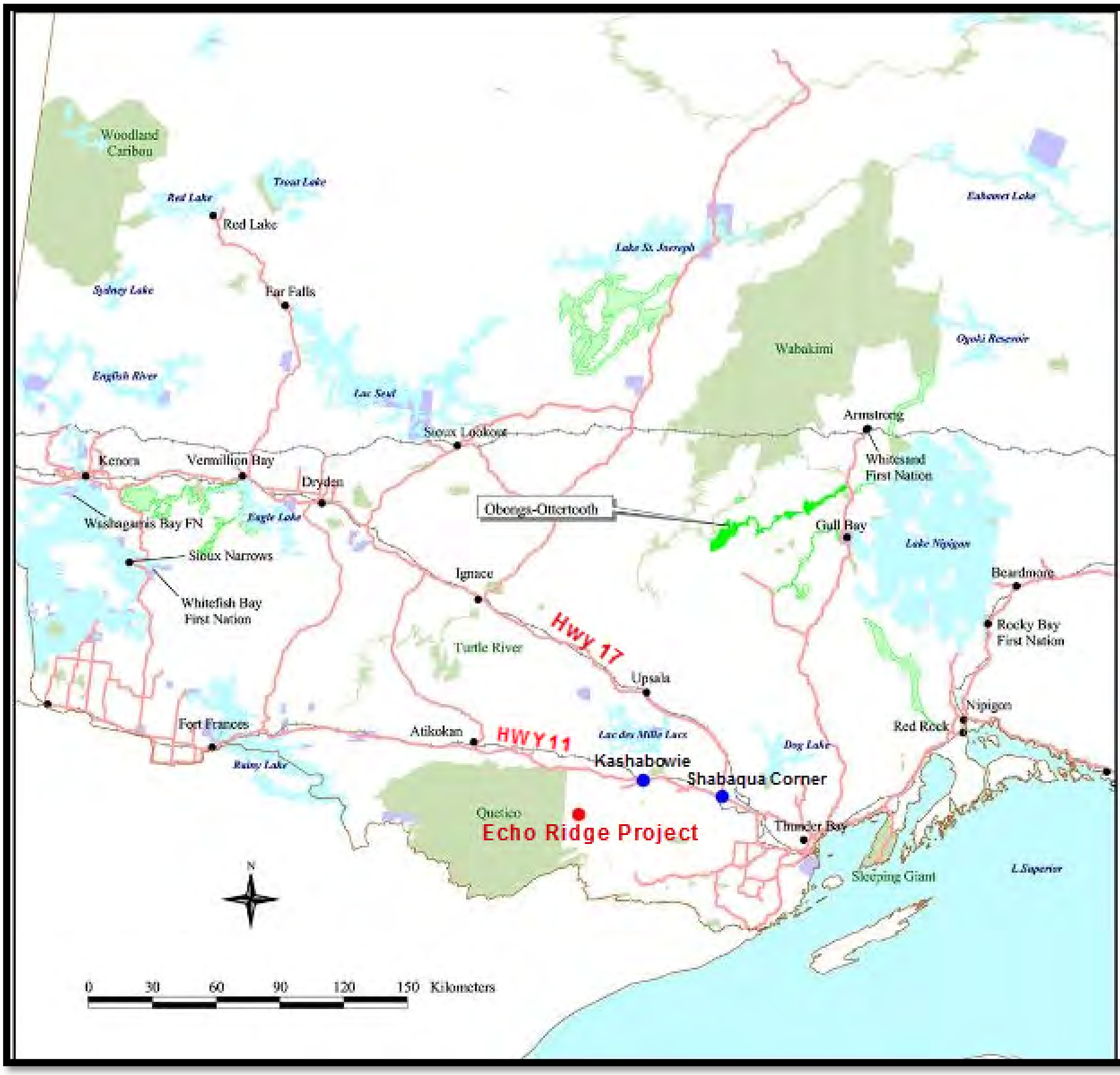

Figure 1. Map of northwestern Ontario showing the infrastructure and location of Echo Ridge Project (red dot).

2.2 *Property Description*

The Echo Ridge property owned 50% by Echo Ridge Resources Inc. and 50% by Tashota Resources Inc., comprises 13 contiguous unpatented Legacy claims or 176 Cells (124 single cells and 52 boundary cells) according to newly implemented mining claim system by the MNDM **(Figure 2)**. **Table 1** is a combined list of both the Legacy and Cell claims and a summary of the claims data that are included in the Property. The area of the Property is approximately 1,968 hectares. The Property's southern, northern, northeastern and eastern boundaries straddle the Hamlin property of Wesdome Gold Mines Ltd., Larose property of Tashota Resoures Inc., Ardeen property of Kesselrun Resoures Inc. and Shield Development, respectively **(Figure 3)**.

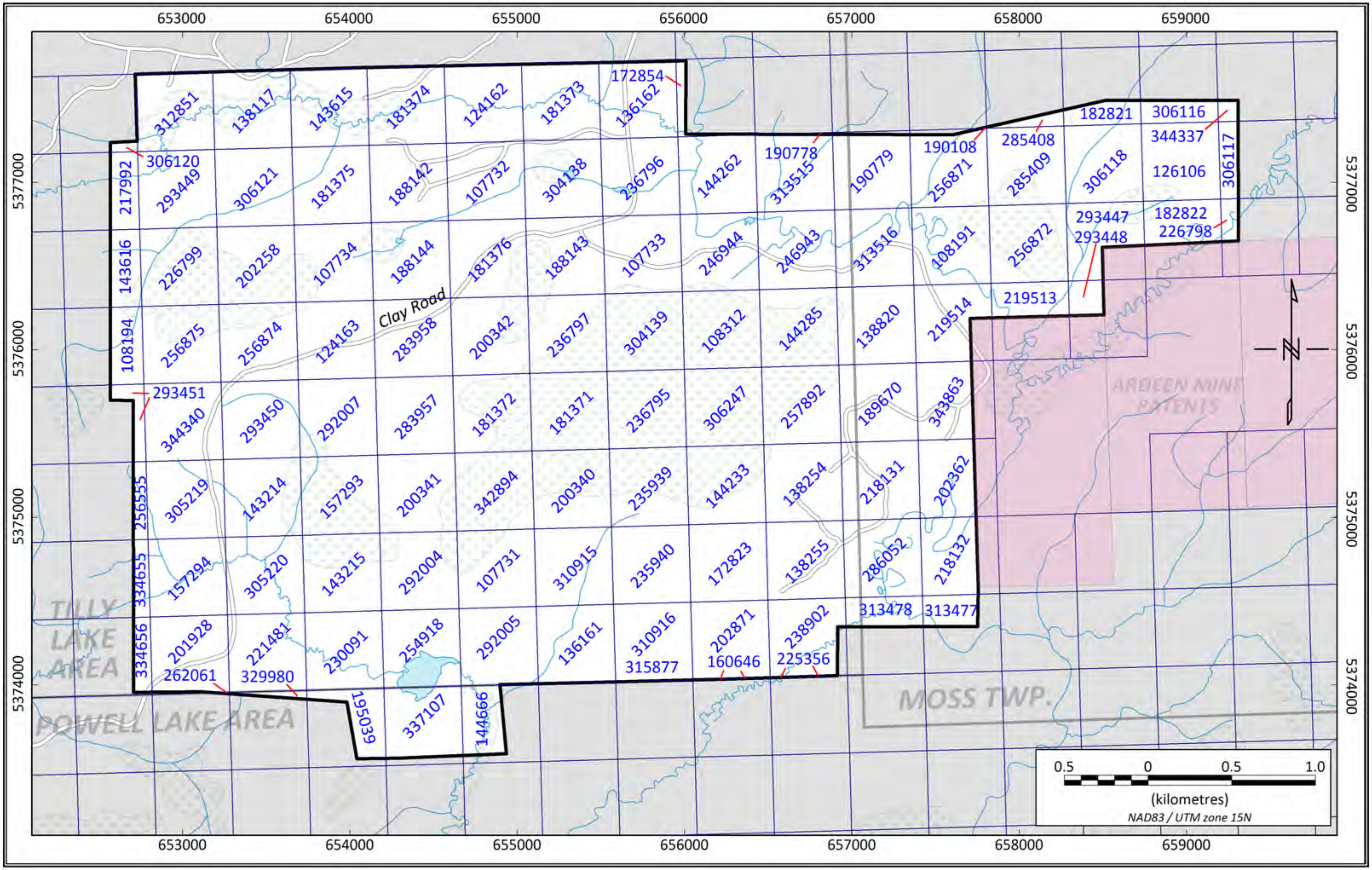

Figure 2. Echo Ridge property claim map, northwestern Ontario.

Table 1. List of claims and related summary – Echo Ridge property.

Legacy Claim ID	Area/Township	Tenure/Cell ID	Tenure/Cell Type	Anniversary Date	Tenure %	Work Required	Work Applied	Total Reserve
3019965	POWELL LAKE & TILLY LAKE	329980	Boundary Cell Mining Claim	2018-12-03	100	200	0	0
3019965	POWELL LAKE & TILLY LAKE	262061	Boundary Cell Mining Claim	2018-12-03	100	200	0	0
3019967	POWELL LAKE & TILLY LAKE	160646	Boundary Cell Mining Claim	2018-12-03	100	200	0	0
3019967	POWELL LAKE & TILLY LAKE	315877	Boundary Cell Mining Claim	2018-12-03	100	200	0	0
3019967	POWELL LAKE & TILLY LAKE	225356	Boundary Cell Mining Claim	2018-12-03	100	200	0	0
3019965	POWELL LAKE & TILLY LAKE	195039	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3019965	TILLY LAKE	230091	Single Cell Mining Claim	2018-12-15	100	400	0	0
3019965	TILLY LAKE	221481	Single Cell Mining Claim	2018-12-15	100	400	0	0
3019965	TILLY LAKE	201928	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3019966	POWELL LAKE & TILLY LAKE	144666	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3019966	POWELL LAKE & TILLY LAKE	337107	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3020000	POWELL LAKE & TILLY LAKE	144666	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3020000	POWELL LAKE & TILLY LAKE	337107	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
3020000	POWELL LAKE & TILLY LAKE	195039	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274762	TILLY LAKE	143214	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	334656	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274762	TILLY LAKE	334655	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274762	TILLY LAKE	305220	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	305219	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	256555	Boundary Cell Mining	2018-12-15	100	200	0	0

			Claim					
4274762	TILLY LAKE	230091	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	221481	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	201928	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274762	TILLY LAKE	157294	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	157293	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274762	TILLY LAKE	143215	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY LAKE	313515	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274775	TILLY LAKE	246944	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY LAKE	246943	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY LAKE	190778	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274775	TILLY LAKE	172854	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4274775	TILLY LAKE	144262	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY L./MOSS	313516	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY LAKE & MOSS TWP	190779	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4282349	POWELL LAKE & TILLY LAKE	195039	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4282349	POWELL LAKE & TILLY LAKE	337107	Boundary Cell Mining Claim	2018-12-15	100	200	0	0
4282349	TILLY LAKE	230091	Single Cell Mining Claim	2018-12-15	100	400	0	0
4274775	TILLY LAKE	144285	Single Cell Mining Claim	2018-12-16	100	400	0	0
4274775	TILLY LAKE & MOSS TWP	138820	Single Cell Mining Claim	2018-12-16	100	400	0	0
4282348	MOSS TWP	202362	Single Cell Mining Claim	2018-12-16	100	200	0	0
4282348	TILLY LAKE	257892	Single Cell Mining Claim	2018-12-16	100	400	0	0
4282348	TILLY LAKE	144285	Single Cell Mining Claim	2018-12-16	100	400	0	0
4282348	MOSS TWP	343863	Single Cell Mining Claim	2018-12-16	100	200	0	0
4282348	TILLY LAKE & MOSS TWP	138820	Single Cell Mining Claim	2018-12-16	100	400	0	0
4282348	TILLY LAKE & MOSS TWP	189670	Single Cell Mining Claim	2018-12-16	100	400	0	0

4274775	MOSS TWP	108191	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274775	TILLY LAKE	236796	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274775	TILLY LAKE	136162	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274775	TILLY LAKE	107733	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274775	MOSS TWP	219514	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274775	MOSS TWP	256871	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274791	TILLY LAKE	107732	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	304138	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	283958	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	236797	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	236796	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	200342	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	188144	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	188143	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	181376	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	181373	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	136162	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	124162	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274791	TILLY LAKE	107733	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	108191	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	126106	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	182821	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	182822	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	190108	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	219513	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	219514	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	226798	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	256871	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	256872	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	285408	Boundary Cell Mining	2019-03-24	100	200	0	0

			Claim					
4274792	MOSS TWP	285409	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	293447	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	293448	Single Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	306116	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	306117	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4274792	MOSS TWP	306118	Single Cell Mining Claim	2019-03-24	100	400	0	0
4274792	MOSS TWP	344337	Boundary Cell Mining Claim	2019-03-24	100	200	0	0
4282348	MOSS TWP	219514	Single Cell Mining Claim	2019-03-24	100	200	0	0
3019966	TILLY LAKE	292005	Boundary Cell Mining Claim	2019-07-20	100	200	0	1851
3019966	TILLY LAKE	254918	Single Cell Mining Claim	2019-07-20	100	400	0	0
3019966	TILLY LAKE	136161	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
3019967	TILLY LAKE	310916	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
3019967	TILLY LAKE	238902	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
3019967	TILLY LAKE	202871	Single Cell Mining Claim	2019-07-20	100	400	0	0
3019967	TILLY LAKE	136161	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
3020000	TILLY LAKE	292005	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264808	TILLY LAKE	107731	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	342894	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	310916	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264808	TILLY LAKE	310915	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	292005	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264808	TILLY LAKE	292004	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	283957	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	254918	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	236795	Single Cell Mining Claim	2019-07-20	100	400	0	0

4264808	TILLY LAKE	235940	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	235939	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	200341	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	200340	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	181372	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	181371	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264808	TILLY LAKE	136161	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264809	MOSS TWP	218132	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264809	TILLY LAKE	310916	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264809	TILLY LAKE	306247	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	304139	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	238902	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264809	TILLY LAKE	236795	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	235940	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	235939	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	202871	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	172823	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	144233	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	138255	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	138254	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE	108312	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE & MOSS TWP	313478	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4264809	MOSS,TILLY LAKE AREA	286052	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	TILLY LAKE & MOSS TWP	218131	Single Cell Mining Claim	2019-07-20	100	400	0	0
4264809	MOSS TWP	313477	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4274762	TILLY LAKE	292004	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274762	TILLY LAKE	283957	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274762	TILLY LAKE	254918	Single Cell Mining Claim	2019-07-20	100	400	0	0

4274762	TILLY LAKE	200341	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274775	TILLY LAKE	304139	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274775	TILLY LAKE	108312	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274791	TILLY LAKE	304139	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274791	TILLY LAKE	283957	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274791	TILLY LAKE	236795	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274791	TILLY LAKE	181372	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274791	TILLY LAKE	181371	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	TILLY LAKE	306247	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	TILLY LAKE	144233	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	TILLY LAKE	138254	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	TILLY LAKE	108312	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	MOSS TWP	218132	Boundary Cell Mining Claim	2019-07-20	100	200	0	0
4282348	TILLY LAKE & MOSS TWP	218131	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282348	TILLY LAKE & MOSS TWP	286052	Single Cell Mining Claim	2019-07-20	100	400	0	0
4282349	TILLY LAKE	254918	Single Cell Mining Claim	2019-07-20	100	400	0	0
4274762	TILLY LAKE	344340	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274762	TILLY LAKE	293451	Boundary Cell Mining Claim	2019-08-31	100	200	0	0
4274762	TILLY LAKE	293450	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274762	TILLY LAKE	292007	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	292007	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	188142	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	181375	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	181374	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	124163	Single Cell Mining Claim	2019-08-31	100	400	0	0
4274791	TILLY LAKE	107734	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	107734	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	344340	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	312851	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	306121	Single Cell Mining Claim	2019-08-31	100	400	0	0

4281389	TILLY LAKE	306120	Boundary Cell Mining Claim	2019-08-31	100	200	0	0
4281389	TILLY LAKE	293451	Boundary Cell Mining Claim	2019-08-31	100	200	0	0
4281389	TILLY LAKE	293450	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	293449	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	292007	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	256875	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	256874	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	226799	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	217992	Boundary Cell Mining Claim	2019-08-31	100	200	0	0
4281389	TILLY LAKE	202258	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	188142	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	181375	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	181374	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	143616	Boundary Cell Mining Claim	2019-08-31	100	200	0	0
4281389	TILLY LAKE	143615	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	138117	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	124163	Single Cell Mining Claim	2019-08-31	100	400	0	0
4281389	TILLY LAKE	108194	Boundary Cell Mining Claim	2019-08-31	100	200	0	0

3 ACCESSIBILITY, INFRASTRUCTURE, PHYSIOGRAPHY AND CLIMATE

3.1 *Access*

The Property is accessed by driving west for approximately 112 km on Trans-Canada Highway 11/17 from Thunder Bay to Shabaqua Corner and from there to west on Highway 11 to the village of Kashabowie **(Figure 1, Figure 3 and Figure 4)**. From Kashabowie, continue westward on Highway 11 for about 20 km to Swamp Road. Turn left on Swamp Road and drive south for approximately 32 km via Clay Road to the centre of the Property. Alternatively, the Property can also be reached from Highway 11/Swamp Road junction by continuing to drive west on the highway for about 20 km to the Fortes Road. Turn left on Fortes Road and drive south for approximately 22 km to Clay Road. Turn right on Clay Road and drive for about 10 km to the centre of the property. Numerous secondary logging and bush roads provide easy access to most parts of the property.

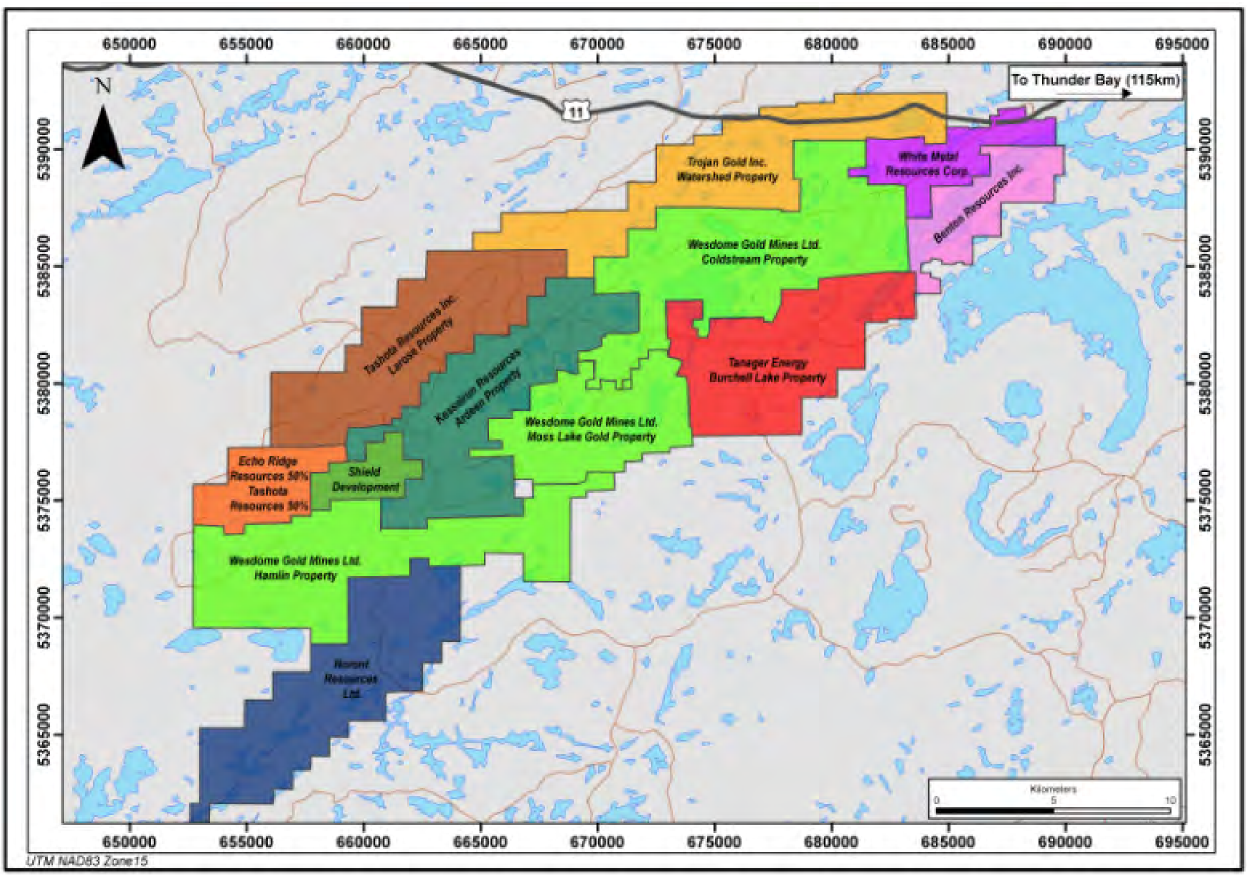

Figure 3. Mining property holders in the most western part of the Shebandowan greenstone belt (claim boundaries are as of August 30, 2017).

3.2 Infrastructure

The CN rail line and a major power line pass 25 to 30 km north of the Property **(Figure 1 and Figure 4)**. The nearby city of Thunder Bay is an important shipping and transportation hub. Both the Canadian National and Canadian Pacific Railways service Thunder Bay. The Port of Thunder Bay is the largest outbound port on the St. Lawrence Seaway System and the sixth largest port in Canada. Skilled labour, mining and specialized exploration services and equipment are readily available from the City of Thunder Bay. General labour, prospectors and heavy machinery contractors are available from the nearby villages of Kashabowie, Shebandowan, Shabaqua Corner, as well as the town of Atikokan. Accommodations are available in Atikokan, Sapawe and from fishing and hunting lodges in the area.

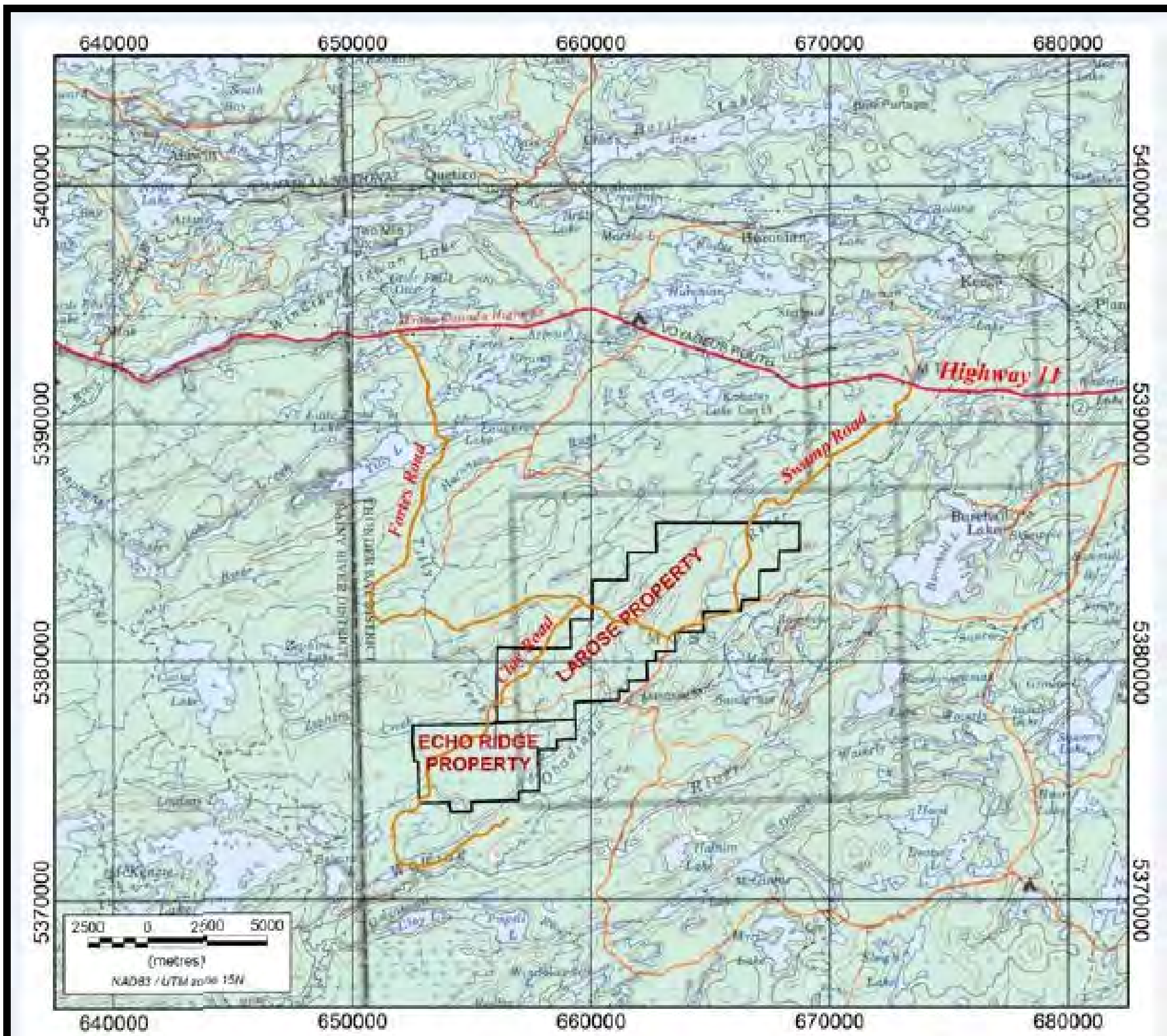

Figure 4. Map showing access roads and other infrastructures – Echo Ridge Property. The map is also showing the Larose Property of Tashota Resources Inc. straddling the northeastern claim boundary of the Echo Ridge property.

3.3 Physiography

The terrain in the Echo Ridge Project area consists of rolling hills with relief rarely greater than 20 metres. The overburden on these ridges is relatively thin, generally, 1 to 3 metres in depth, and consists of sandy till that is locally boulder laded. Most of the project area has been recently logged and vegetation in the elevated terrains now consists of a thick re-growth of spruce, fir, and pine, interrupted by local stands of mature white pines. Muskeg, alder swamps, and thick growths of cedar locally cover the low-lying areas.

Although property crisscrossed by numerous creeks (e.g., Tilly Creek) and seasonal streams, it has no major water body. Nearest relatively large water bodies occurring approximately 5 km south of the property are Powell and Clay lakes. The two largest lakes, McGinnis and Moss lakes, occur approximately 10 km southeast and 12 km east-northeast of the Echo Ridge property, respectively.

Bedrock exposure is good on the property and in adjacent areas. In areas of metasedimentary and gabbroic rocks on the property, the topography consists of northeast-trending ridges and lineaments reflecting the trend of these rocks.

3.4 Climate

The climate is typical of northwestern Ontario with extreme seasonal variations. Temperatures average 20ºC in July and -17ºC in January; they reach over 30ºC in summer months, and -40ºC in January and February. Annual precipitation averages 660 mm, with roughly one quarter falling as snow.

4 EXPLORATION HISTORY

Copper mineralization was first discovered in 1966 by Harris (1970) within the north-central part of the current Echo Ridge property. The copper-bearing minerals such as chalcopyrite and malachite along with pyrite are reported by Harris (1970) to occur in a sheared, medium-grained quartz diorite, about 60 m north of the contact between the metasedimentary and the diorite sill-like body. The northeast-trending (~050º) sheared mineralized zone is 15 m wide and was traced by Harris (1970) for about 45 m along the strike. The highly mineralized section reportedly contains about 3% pyrite and 1% chalcopyrite as disseminations throughout the rock.

No exploration work occurred since the initial discovery of Harris (1970) until 1990 when Noranda Exploration Company Limited conducted a comprehensive exploration work program consisting of grid construction, geological mapping, whole rock geochemistry, ground magnetic and IP/resistivity surveys, trenching and drilling within the current Echo Ridge claim boundary (Chubb 1990a and 1990b, Thomson 1990, Thomson and Chubb 1990) **(Figure 5)**. Geological mapping and sampling were carried out on cut grid lines. Assay results from grab samples are reported to range from nil to up to 13.30 g/t Au and up to 4.2% Cu. A total of 180 samples were collected but only half of them analyzed for whole rock (WR) geochemical analysis. The WR results were used in identifying certain geochemical trends on the property. For example, anomalous strontium (Sr) values were found to the west of the gold mineralization and areas of anomalously high values of K2O, Na2O and Ba which show lower gold values. Three trenches (Trench #1, #2a and #2b) were dug out based on areas exhibiting anomalous visible alteration/mineralization and geophysical IP targets. These trenches were sampled and analyzed but their assay results were reported as pending (Thompson and Chubb 1990). Four drill holes, totalling 449 meters, were drilled on the current claim (#4274791) of the Echo Ridge property. The results of the drilling are shown in **Table 2**.

Between 1991 and1996, Russell Kwiatkowski and Ed Kukkee conducted various exploration programs in the most southwestern claims (3019965, 3019966, 3020000 and 4282349) of the Echo Ridge property **(Figure 5)**. These work programs consisted of prospecting, trenching and diamond drilling. Number of grab samples have assayed from 0.11% to 14.4% Cu, 0.036 oz/T Au to 0.89 oz/T Au and 0.16% to 0.31% Mo. Three out of five trenches dug out south of Elephant Lake in 1992 gave following results: Trench #2A – 0.02 g/T Au and 0.08% Mo; Trench #3 – 0.67 g/T Au, 0.44% Mo, 1.85% Cu and 0.24 g/T Au, 0.14% Mo, 2.42% Cu; Trench #4 – 0.20 g/T Au.

A fourth stripped area exposed mineralization at the Cu-Mo occurrence just west of the road on the Echo Ridge property (Thomson 1991 in Bowdidge 2016). In 1992, three holes (DDH #92-1, #92-2 and #92-3), totalling 113.0 metres, were drilled in the Elephant Lake area on claims 301996 and 3019965 of the current Echo Ridge property. The best result was obtained from DDH #92-2 (6.1 m grading 0.021 oz/Au, 0.28% Cu and 0.08% Mo, including 1.52 m grading 0.041 oz/t Au, 0.42% Cu and 0.24% Mo). In 1994, Russell Kwiatkowski and Ed Kukkee drilled a single hole, totalling 87 metres, at Elephant Lake. The drill hole intersected widespread disseminated sulphides in a porphyritic phase of the Obadinaw granodiorite. Drill core samples reportedly assayed up to 0.11% Mo over 0.49 m, 0.91% Cu over 0.40 m, 0.82 oz/Ag over 0.30 m and 0.036 oz/Au over 0.46 m (Kukkee 1994).

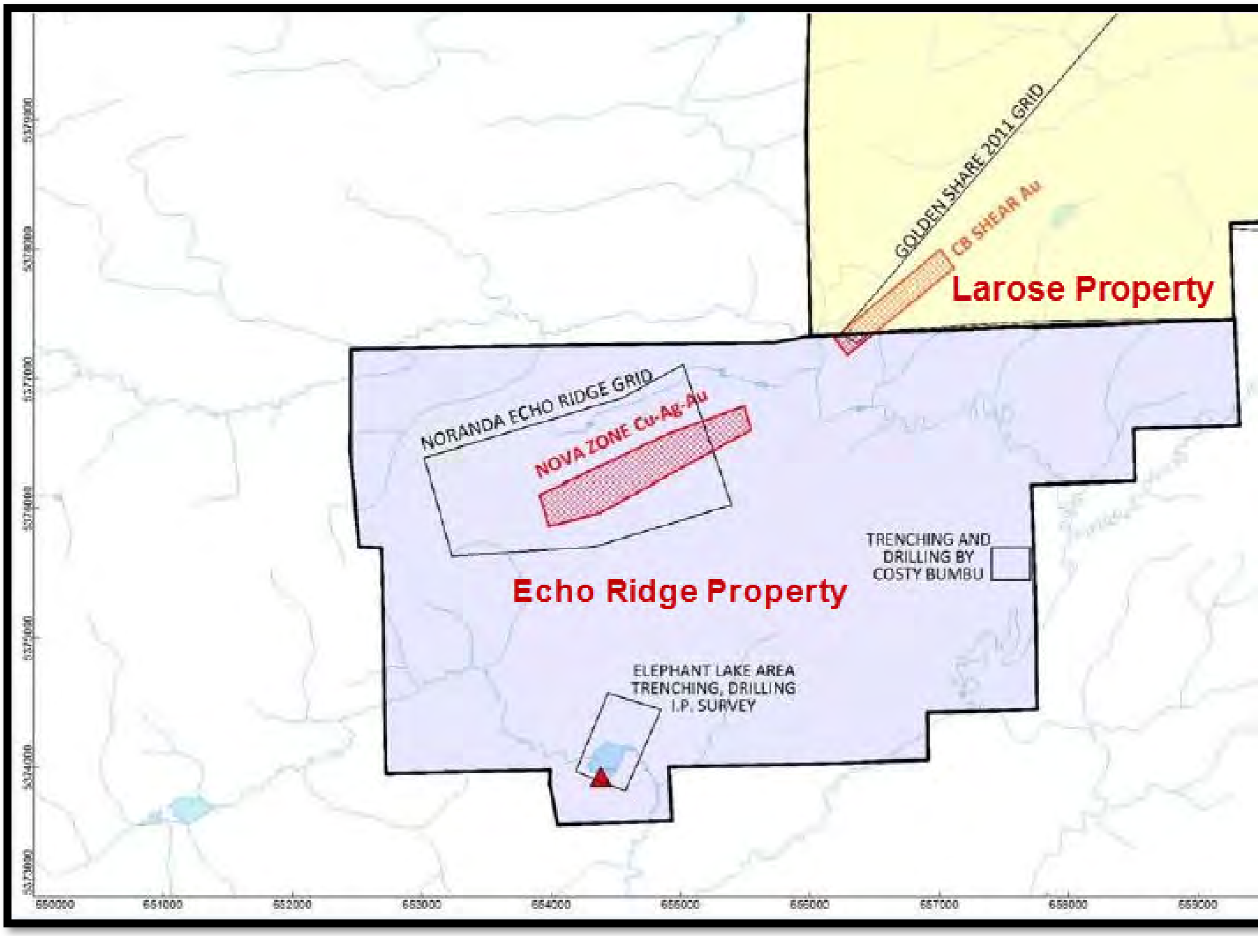

Figure 5. Areas of significant past exploration activities on the Echo Ridge property.

Table 2. Drill hole results – Noranda Exploration Company Limited.

Drill Hole	Copper (%)	Gold (g/T)	Silver (g/T)	Width (m)
NT-90-1	0.13 ***incl. 0.58***	 ***0.10***	 ***7.70***	65.0 ***8.0***
NT-90-2	0.07 ***incl. 1.0***	 ***0.518***	 ***31.8***	71.0 ***1.0***
NT-90-3	0.28 ***incl. 0.55***	 ***0.04***	 n/a	26.0 ***7.0***
NT-90-4	NSV	NSV	NSV	n/a

NSV: no significant values. n/a: not applicable.

In 1997, Costy Bumbu excavated and stripped a series of trenches on quartz veins and sulphide zones near the east-central claim boundary (claim #4282348) on the Echo Ridge property (Larouche 1997) **(Figure 5 and Table 3)**. Anomalous gold and copper values were reported from a large number of grab samples. In the same year, immediately south of the Echo Ridge property, Ken Kukkee carried out prospecting and overburden removal by backhoe on his Powell Lake property (claim #1216482). A total of 203 grab samples were collected and analyzed for gold. A number of samples returned anomalous gold values. Anomalous gold areas were subsequently trenched across and along the strike for up to 40 metres. Assay values of up to 6.23 g/t Au over 7.0 m and 2.42 g/t Au over 1.0 m are reported from the trenched areas (Kukkee 1998).

In 1998, three test holes (KK98-1 through KK98-3), totalling 76.20 metres, were drilled by Ken Kukkee on the same claim (#1216482) that he trenched in 1997. The best assay results from these holes are 1.08 g/t Au over 3.5 m (DDH KK98-1), 1.16 g/t Au over 3.0 m and 1.5 g/t over 1.5 m (DDH KK98-2), and 0.227 g/t Au over 1.5 m (DDH KK98-3) (Kukkee 1998).

In 2003, a numbered company (6078559 Canada Inc.), owned by Costy Bumbu, drilled eleven holes, totalling 1093 m, near the east-central claim boundary of the Property **(Figure 5 and Figure 6)**. Of the eleven drill holes, two holes (ML-03-04 and ML-03-11) totalling 310 metres, were drilled outside the 1997 trenched area (Larouche 1997). Only gold assays from all drill holes were reported (Larouche 2003a, 2003b). The highest gold value for each hole is shown in **Table 3**.

In 2004, Geotech Ltd. flew a helicopter-borne time-domain electromagnetic (TDEM) survey for joint-venture partners Canadian Golden Dragon Resources Ltd., East-West Resources Corporation and Maple Minerals Corporation (Caven 2005 in Campbell et al. 2012).

Between 2005 and 2006, Golden Dragon Resources Inc. carried out an IP survey and drilled two diamond drill holes in the Elephant Lake area in southwestern claims of the Property. Drill hole EL06-01 intersected with sporadic mineralization, assaying up to 0.56% Cu over 0.40 m and 0.27% Mo over 0.20 m (Rajnovich 2006).

Table 3. Drill hole results - 6078559 Canada Inc. (Larouche 2003).

Drill Hole	Gold Mineralization (g/T)	Width (m)
ML-03-01	0.111	0.90
ML-03-02	0.071	0.60
ML-03-03	0.127	1.00
ML-03-04	Background values	n/a
ML-03-05	0.022	1.10
ML-03-06	0.075	1.10
ML-03-07	0.698	1.30
ML-03-08	0.466	1.50
ML-03-09	0.061	0.50
ML-03-10	0.141	1.00
ML-03-11	1.198	1.00

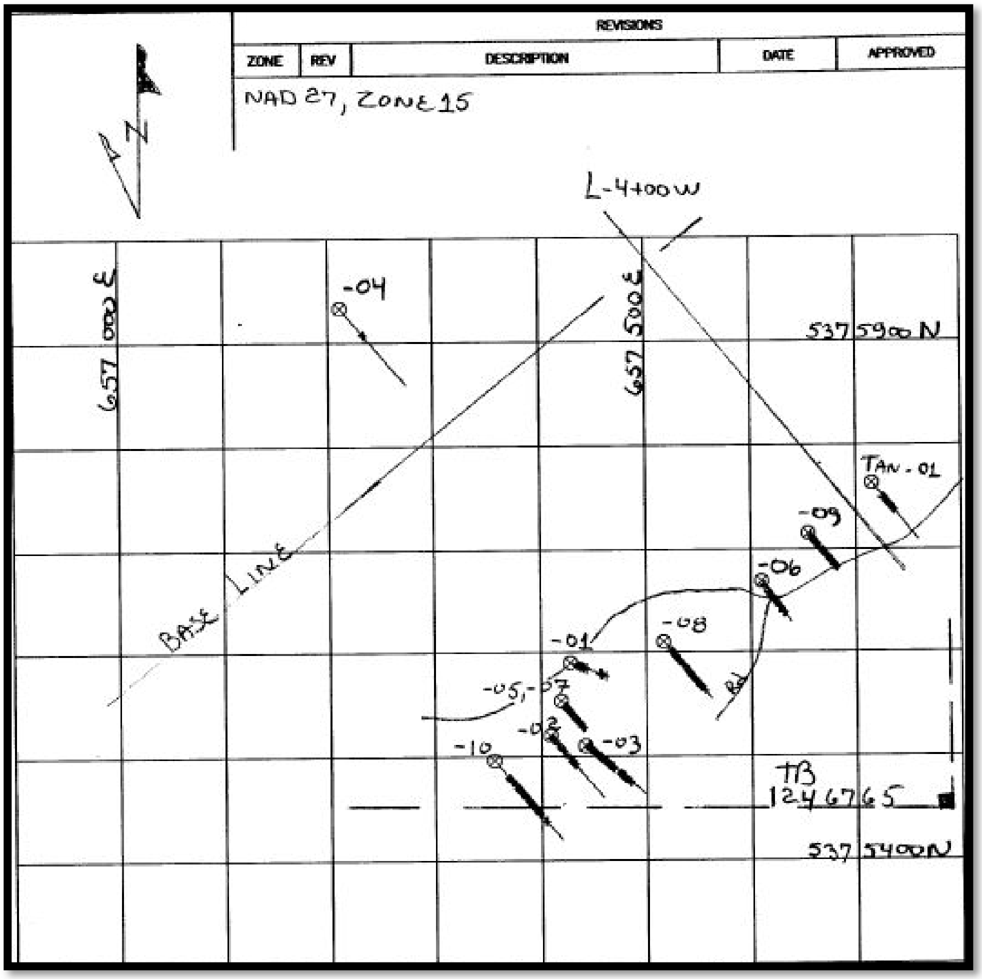

Figure 6. 2003 Diamond drill hole plan map - 6078559 Canada Inc. The drilling conducted in 1997 trenched areas is shown in Figure 5 and Figure 7.

In 2011, the staff of Thunder Bay Resident Geologist Office twice visited the Echo Ridge property. During these visits, outcrops exposed along the logging roads were visited and several mineralized (pyrite, chalcopyrite, malachite) grab samples of sheared diorite and metasedimentary rocks were collected for geochemical analysis. Majority of these samples returned anomalous copper, gold and molybdenum values. In the fall of the same year, Mr. Don Hoy for Wolfden Resources Corp. collected and analyzed several grab samples from the Echo Ridge property. Copper values ranging from 6,806 ppm (0.68%) to 69,696 ppm (~7%) are reported from these samples (Campbell et al. 2012). Anomalous gold and molybdenum values are also yielded by some samples.

In 2014, Echo Ridge Resources Inc. revisited some historical trenches, located along the current eastern property boundary on claim 4282348 **(Figure 5 and Figure 7)** that were initially excavated in 1997 by Costy Bumbu (Larouche 1997). Echo Ridge Resources Inc. re-mapped and re-sampled these trenches (Bowdidge 2014) and reported a number of grab samples yielding weakly to highly anomalous gold values. The best assay results are reported from three trenches (Trench-3, Trench-5 and Trench-6). Trench-3, which yielded the highest gold value (7.5 g/T Au) of all the trenches, is underlain by up to 20-metre wide schistose metagreywacke with minor disseminated pyrite±chalcopyrite. The highest gold value (7.5 g/T) was returned by a grab sample taken from east side of the trench with a sulphide-rich band containing 5-10% disseminated pyrite, traces of chalcopyrite and a modest amount of malachite staining on weathered surfaces. No copper value is reported. Grab samples from Trench-5, located around 200 m southwest of the Trench-3, have assayed number of anomalous gold values but the best value (0.94 g/T Au) was obtained from a grab sample taken from an 8-metre long, 15-20 cm wide, heavily pyritized arcuate quartz vein cutting through the metagreywacke. Trench-6, located approximately 100 m northeast of Trench-3, is underlain by 15 m wide metagreywacke. A grab sample from a 7.0 metre long and up to 25 cm wide, northeast-striking conformable quartz vein (parallel to bedding and foliation) with 10% disseminated pyrite and <1% chalcopyrite assayed 1.58 g/T gold. Gold mineralization associated with northeast-trending quartz veins are hosted within the schistose sediments occur 200 to 300 metres west of a major northeast-striking structure, the boundary Fault Zone (BFZ).

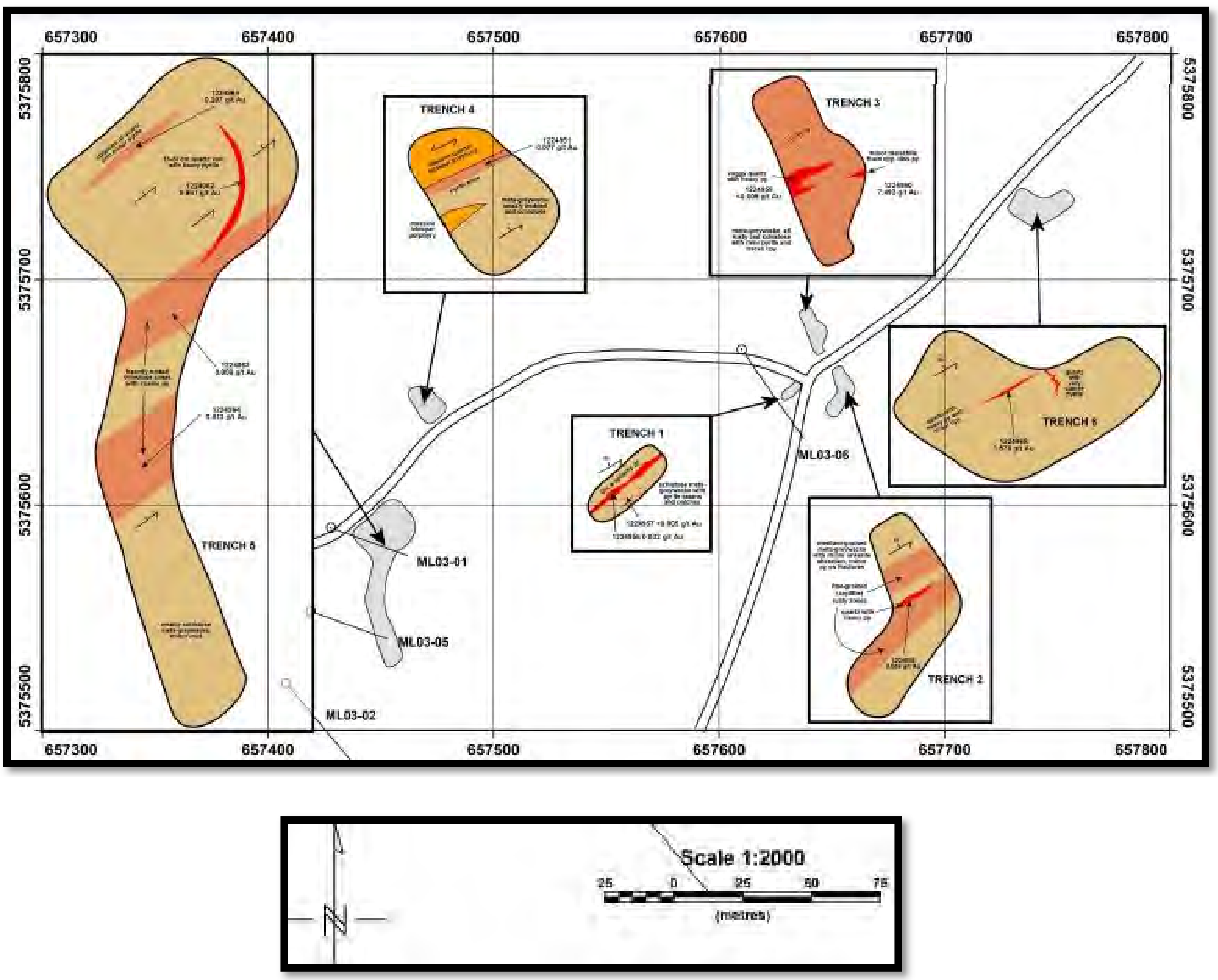

Figure 7. Plan map of historical trenches (a.k.a. 'Costy' trenches - Larouche 1997) showing new sampling and assay values with brief geological description Source: Bowdidge (2014).

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5 GEOLOGICAL SETTING

5.1 Regional Geology

The Echo Ridge property largely occurs within the metasedimentary rocks of the Quetico Terrane (QT), close to its boundary with the Shebandowan greenstone belt (SGB) of Wawa Terrane (WT) **(Figure 8 and Figure 9)**. A very small southeastern portion of the Property (Legacy claim #4264809) extends into the western margin of SGB. The curvilinear QT-WT boundary separates the Quetico metasedimentary rocks (~2.698 to 2.696 Ga) from the predominantly volcano-plutonic rocks of the WT (2.8 to 2.7 Ga) to the south. The northern QT boundary with the western Wabigoon Terrane (3.4 to 2.7 Ga) is well defined as the Seine River–Rainy Lake fault, whereas east of Lake Nipigon the boundary within the eastern Wabigoon appears to be an imbricate zone with an earlier history of structural telescoping (Devaney and Williams 1989; Tomlinson et al. 1996). The Wabigoon–Quetico interface is also marked sporadically by coarse clastic rocks (<2.692 Ga) of the Seine assemblage (Fralick and Davis 1999) that were deposited in trans-tensional basins (Blackburn et al. 1991) or delta fan environments (Fralick et al. 2006). The QT consists predominantly of greywacke, derived migmatite and granitic intrusions. A minor banded iron formation and rare pillow basalts also occur along the southern margin of the basin close to the Quetico-Wawa terrane boundary.

An early D1 deformation predated emplacement of a chain of Alaskan-type mafic-ultramafic intrusions in the western part of the northern QT which are associated with alkali plutons including nepheline syenite and carbonatite (Pettigrew and Hattori 2006). Two subsequent deformation events (D2 and D3) were followed by low-pressure, high-temperature metamorphism that reached upper amphibolites and locally granulite facies in the central region and greenschist facies at the margins (Percival 1989). Coeval, crust-derived granitic plutons and pegmatites, include peraluminous granite and biotite granite.

The Wawa Terrane (WT), which is predominantly Neoarchean in age (2.77 to 2.72 Ga), contains small remnants of Mesoarchean crust in the form of sporadic tonalitic gneiss (2.92 Ga) and 2.89 to 2.88 Ga volcanic rocks (e.g., Hawk assemblage of Michpicoten greenstone belt in Wawa area) (Moser 1994, Turek et al. 1992). In the Echo Ridge project area, the western SGB is separated from the Quetico metasedimentary rocks by a major regional structure, the Boundary Fault Zone (Osmani 1997) **(Figure 9)**. The western SGB is characterized by the presence of predominantly 2.72 Ga tholeiitic to calc-alkalic mafic to felsic metavolcanic rocks and their associated intrusive equivalents. Clastic and chemical (chert and chert-magnetite banded iron formation) metasedimentary rocks, although comprise a very small component of the supracrustal rocks, occur in a relative abundance close to the Quetico-Wawa terrane boundary. Komatiitic mafic and ultramafic metavolcanics and associated intrusive rocks are rare but widely distributed in the Greenwater Lake area east of the terrane boundaries. The western SGB is host to two past producing mines and two developed prospects described below **(Figure 9)**:

A. Past Producers
1. Huronian Mine (a.k.a Ardeen and Kerry): the mine produced 29,678 oz Au and 172,376 oz Ag (Harris 1970).
2. North Coldstream Mine: the mine produced ~ 102 million pounds Cu, 22, 000 oz Au and 440, 000 oz Ag (Giblin 1964, Osmani 1997).

B. Developed Prospects
1. Moss Lake Gold Deposit: 1.4 million ounces Au in ***Indicated*** and 1.75 million ounces Au in ***Inferred*** categories (Richards et al. 2013).
2. Osmani Gold Deposit: 96,400 ounces Au in ***Indicated*** and 763,276 ounces Au in ***Inferred*** categories (McCracken 2011).

One of the most significant regional structures hosting gold prospects/deposits in the project area is the Boundary Fault Zone (BFZ) centred on the Quetico-Wawa terrain boundary **(Figure 9)**. The faulted boundary zone, which varies up to several hundred metres wide, consists of numerous northeast-striking (30º–50º) discrete shear zones. The BFZ and related splay shears in the boundary area host gold mineralization in a variety of rock types. The past gold producer Huronian Mine, located approximately 7.5 km northeast from the eastern boundary of Echo Ridge property, is hosted by one of the splay structures related to BFZ near the western margin of the SGB. Gold at the Huronian Mine occurs in an en echelon quartz-carbonate veins hosted in chlorite-sericite-carbonate schist of a mafic metavolcanic protolith. There are several other important gold occurrences in the mine area that are also hosted in splay structures related to BFZ (e.g., McKellar, Minoletti, Beaver and Fisher Lake occurrences - Osmani 1993, 1997).

To the west of the faulted boundary, several significant shear-zone-hosted gold mineralizations have also been discovered in recent years within the metasedimentary rocks of the Quetico Terrane. These gold discoveries occur both adjacent to and as far as 2.0 km away from the Quetico-Wawa terrane boundary. The most significant of these discoveries to date is the "Larose Prospect" located on the adjacent Larose property of Tashota Resources Inc. (www.tashotaresources.com). Gold mineralization on the Larose property is hosted within up to 25 m wide and 9.0 km long northeast-trending structure, the Larose Shear Zone (LSZ). The LSZ comprised of numerous subparallel, narrow (cm to metre scale) and northeast-trending discrete shears. Gold occurs in cm-scale quartz-carbonate veins hosted within sheared and altered (oxidized, sericitized and silicified) sedimentary and intermediate to felsic hypabyssal (feldspar±quartz porphyries) rocks. Strongly sheared and altered (silicified and oxidized) sedimentary and hypabyssal rocks are also auriferous but usually contain lower gold grades than veins that they host. However, whether gold mineralization associated with the LSZ on the Larose property and the shear zones hosting copper-gold mineralization on the Echo Ridge property is related to the BFZ or represents an entirely different system has yet to be established.

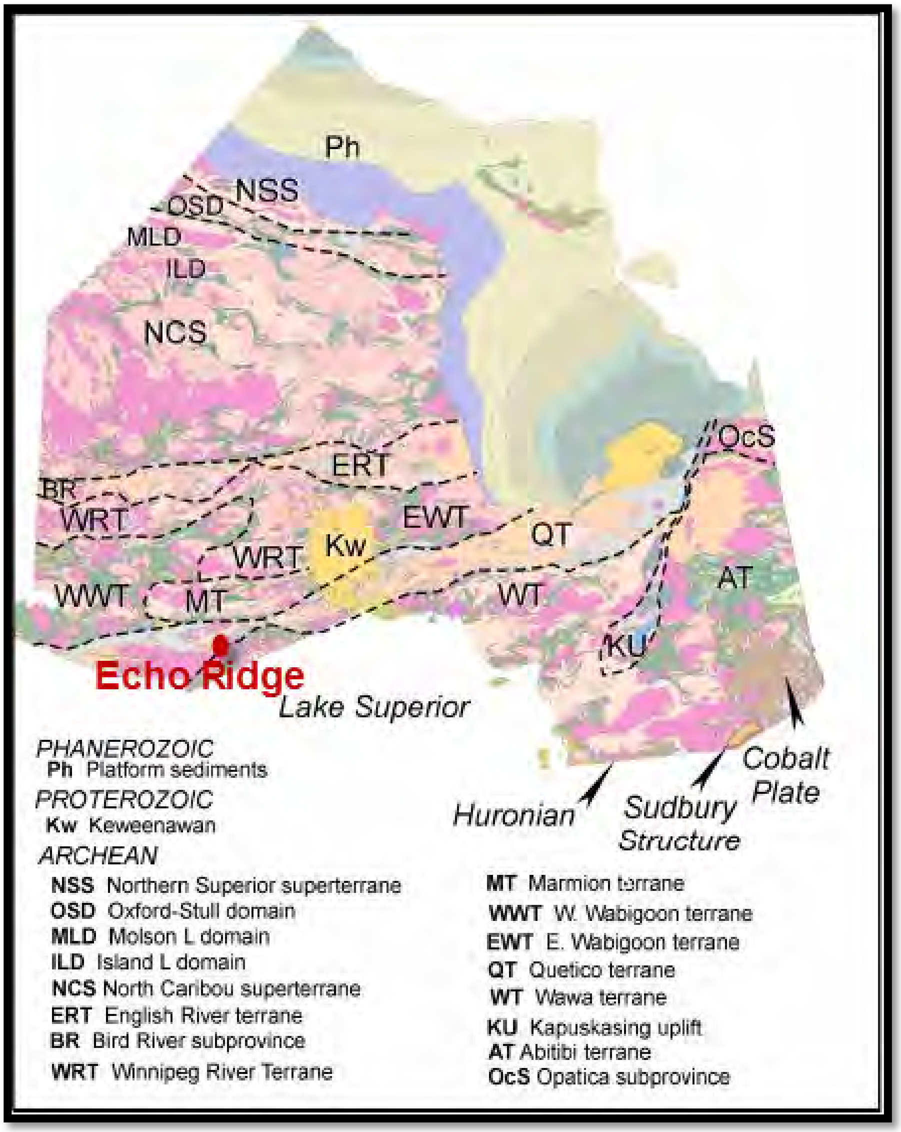

Figure 8. Geological map of Ontario (modified after Ontario Geological Survey 1991). Superimposed are subdivisions of the Superior Province (Percival and Easton 2007).

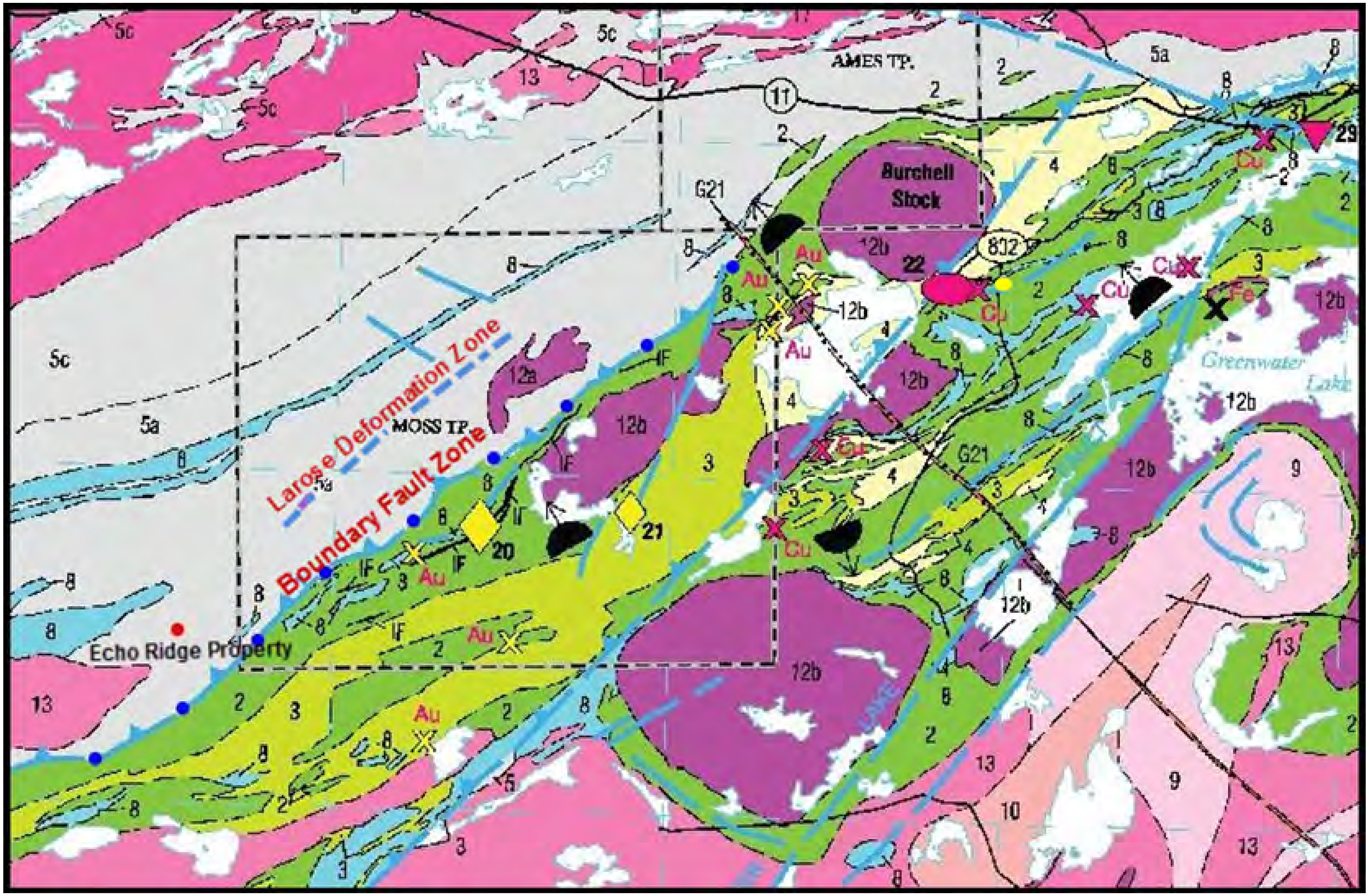

Figure 9. Regional geology map showing the setting of Echo Ridge Property (red dot).The yellow dot southeast of the Burchell Lake Stock indicates the location of the Osmani Gold Deposit. Sources: Santaguida (2001) and Osmani (1996, 1997).

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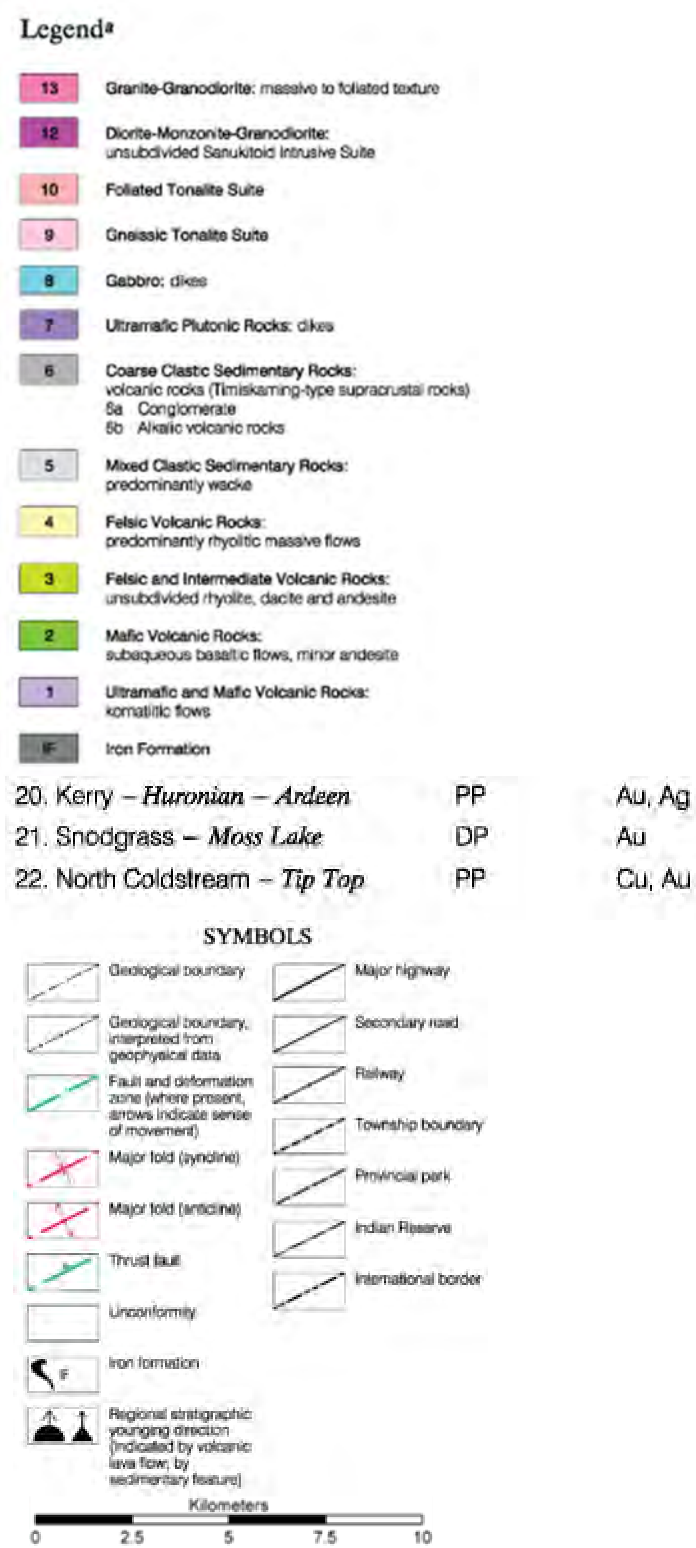

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5.2 Property Geology

The area covering the parts of Tilly and Powell lakes area and Moss Township was mapped in 1966 and 1967 by Harris (1970) for the Ontario Department of Mines and Northern Affairs (ODMNA). The Moss Township was re-mapped in 1991 by Osmani (1993, 1997). The following description of major rock units is based on one week (October 17 – 24, 2017) of reconnaissance bedrock mapping and prospecting carried by the author and two assistants in the selected parts of the Property.

The Echo Ridge property is largely underlain by clastic metasedimentary rocks of the Quetico Terrane (QT) **(Figure 9, Appendix I and Appendix II)**. The most southeastern corner of the Property, which is underlain by mafic metavolcanic rocks (massive to pillowed flows and their derived schists) of the western SGB, was not explored during the current program and therefore, it is not discussed further in this report.

The metasedimentary rocks mainly consist of massive-to thinly bedded, weakly graded metagreywacke, and minor thinly bedded to finely laminated metasiltstone and metamudstone. Within high-strain zones, the metasedimentary rocks are variably converted to sericite±chlorite-quartz-biotite-feldspar schist. Metagreywackes weather light- to medium grey and are dark- to medium grey on fresh surfaces and they have sandy textures. These metasedimentary rocks are intruded by large and small intermediate to mafic and felsic bodies. One of the largest intermediate to mafic intrusive bodies occurring in the western part of the Property is "Tilly Lake Diorite Complex" (TLDC), informally termed in this study **(Appendix I)**. Fine-grained to almost aphanitic, hard siliceous or siliciclastic rocks of probably sedimentary protolith are locally observed, particularly close to contact with the TLDC.

The TLDC, which has been emplaced within the metasedimentary rocks of the QT, is host to widespread structurally-controlled copper-gold-silver mineralization on the Property (Chubb 1990a and 1990b; Thomson 1990, 1991; Thomson and Chubb (1990). The TLDC, which extends northeasterly from west-southwest for approximately 4.7 km to the north-central part of the Property, is widest (1.43 km) in the southwest and narrowest (few metres) in the northeast. The diorites of the TLDC have an average colour index of 25 to 40 and consist of mostly fine- to medium-grained diorite and quartz diorite. These intrusions vary from being massive to variably deformed and altered. Occasionally, the diorite appears to be grading into more mafic or gabbroic phases due to their relatively higher colour indexes which may have caused by the strong chloritization and epidotization of the rocks.

The TLDC near the western property boundary was not mapped in 2017 by the author. This area and to the west of the claim boundary on the aeromagnetic map is characterized by relatively higher magnetic susceptibilities (Ontario Geological Survey 2003). The higher magnetic susceptibilities, in the authors' opinion, can be attributed to either increase in the mafic minerals and/or higher concentration of magnetite in the diorites relative to their mostly non-magnetic eastern counterparts. Alternatively, the western TLDC may have possibly transitioned into gabbroic phasees cannot be completely ruled out. Geochemically, both altered and least-altered varieties in the eastern half of the TLDC are normal diorites (see "Geochemistry" section). The plagioclase in the eastern TLDC is always epidotized and amphibole grains are partial to completely alter to chlorite. Within highly strained and altered zones, the diorites are highly obliterated and can only be distinguished as chlorite±biotite-sericite-plagioclase schist. Some diorites, particularly highly altered and deformed varieties, are non- to weakly magnetic which may suggest the breakdown of magnetite by hydrothermal fluids circulating through the structures. The biotite-enriched phase of the TLDC is observed near the contact with Obadinaw River granodiorite stock (Harris 1970) in the most southwestern part of the property and also, locally, along with the contact with the metasedimentary rocks. This change of hornblende to biotite is probably caused by the introduction of potassic fluids from nearby Obadinaw River granodiorite stock. Hydrothermal fluids enriched in silica and carbonate introduced during the shearing event (s) is probably responsible for the conversion of hornblende to biotite, within and along the margins of the TLDC. The whole rock geochemistry data discussed later in this report supports the widespread mobilization of some major oxides.

The Obadinaw River granodiorite stock, as described by Harris (1970) or the Tilly Lake granodiorite (TLG), informally called in this study, has been emplaced within the metasedimentary rocks. According to Harris (1970), it also intrudes the TLDC in the southwestern corner of the Property **(Appendix I)**. However, this contact was not observed during the current reconnaissance mapping program. Few outcrops of the TLG examined along an old forestry road (claim numbers 301995 and 4274762) by the author appear to show the intrusion may ranges in composition from granodiorite to tonalite. However, a detailed mapping of the stock coupled with the petrography and geochemistry studies are needed to determine its true composition. The colour index of the intrusive rocks ranges from 10 to 25 with biotite and hornblende are the main ferromagnesian minerals. These rocks, in the authors' opinion, may possibly be representative of a more evolved phase of the same magma responsible for the emplacement of an earlier phase represented by the TLDC. In hand specimens, these intrusions are medium- to fine-grained and massive to, locally, fractured. On weather surfaces, they are generally off-white and light grey on fresh surfaces. The tonalitic phase consists of 10 to 25% biotite and hornblende, up to 25% quartz and 50 to 60% feldspar (mostly plagioclase). A medium- to fine-grained granodiorite outcropping near the contact with the metasediments consists of up to 30% biotite±hornblende, 25 to 30% quartz and 40 to 50% plagioclase and k-feldspar. Plagioclase is mild to strongly sausseritized within all intrusive phases.

5.3 Structural Geology

Tectonic foliation (S_1/S_2) in sedimentary rocks generally conforms to the bedding trends (S_0) on the property. Generally, bedding and foliation strike northeast-southwest (050º to 065º), but deflection (up to 075º) of these structures is noted proximal to TLG and shear/fault zones. The dip of foliation and bedding ranges from 75º to 90º northeast or northwest.

Two main trends of shearing/faulting were noted during the reconnaissance mapping in selected areas, particularly in the northern parts the Property **(Appendix I and Appendix II)**: 1) a northeast- to east-northeast (050º to 070º), and 2) a north-northeast (025º to 040º). The northeast- to east-northeast characterizes the most dominant shearing trend on the Property. A few northwest-striking fractures (~300º) observed in the west-central part of the property may be suggesting a possible existence of northwest-trending faults in this area.

The north-northeast-trending structures were observed at two locations near the TLDC-sedimentary contact in the northwestern part of the property. At these locations, the structure is characterized by north-northeast-striking foliation/fractures within the diorite hosting narrow (up to 8 cm wide), conformable quartz veins. Sulphides occur both in quartz veins and diorite host along the contact zone. Two samples, one representing the quartz vein (sample #473617) and the second is a diorite with quartz (sample #473619) taken from the contact areas, returned highly anomalous copper-gold mineralization (see “Economic Geology” section).

The northeast- to east-northeast-striking shears are abundant, particularly in the northwestern parts of the property (e.g., northeastern half of the TLDC) where they occur as a series of parallel to subparallel macroscopic structures forming a broad deformation zone, the Tilly Lake Deformation Zone (TLDZ), a term used in this report. The TLDZ, which marks the southern and northern boundaries of the TLDC in the north-western part of the Property, is up to 450 m wide and 2800 m long **(Appendix I and Appendix II)**. Deformation affecting the TLDC and adjacent sedimentary rocks is usually accompanied with syn- to post-tectonic hydrothermal fluids altering (e.g., silicification, carbonitization, chloritization and sericitization) the host rocks. The TLDZ is host to several copper-gold-silver occurrences **(Appendix I, Appendix II and Appendix III)**.

6 GEOCHEMISTRY

A total of seven (7) rock samples were collected and sent out to AGAT Laboratories, Thunder Bay (Ontario) for whole rock geochemistry analysis. These samples were analyzed for major oxides and trace elements, including rare earth elements (REEs). Major oxides and trace element were analyzed respectively by XRF method and ICP technique with OES finish (Appendix I and Appendix II). The REEs were analyzed by ICP technique with MS finish.

The analyzed rock samples **(Table 4)** are characterized by wide compositional ranges (e.g., SiO_2 = 54.7-63.5 wt. %, $Fe_2O_3^{total}$ = 3.82-7.59 wt. %, MgO = 1.63-4.08 wt. %, CaO = 2.70-7.60 wt. %, Ba = 10-28 ppm, Ni = 16-66 ppm, Rb = 38-92 ppm, and Sr = 405-929 ppm). Their LOI (1.36-4.46 wt.%) and alkali (4.91-7.91 wt. %) contents suggest that they have undergone from mild to a high degree of alteration. When these samples are plotted on multi-cationic R1-R2 discrimination diagram (De La Roche et al. 1980), six samples fall in the diorite to syenodiorite fields and one sample (53) in the tonalite field **(Figure 10a)**. The tonalite was mapped as altered (moderately carbonitized) quartz diorite. Of the six dioritic samples, three samples (55, 56 and 58) plot in the normal diorite and three (51, 54 and 59) outside the normal diorite field were mapped as strongly to moderately altered diorites, which is evident with their higher LOI contents (2.14 wt. % to 4.46 wt. %). The LOI content greater than 2.0 wt. % in analyzed rocks is considered altered (Burianek et al. 2008). The diorite samples with higher LOI are also characterized by relatively higher K_2O content (2.80-2.59 wt. %) and plot in the monzodiorite, monzonite and syenodiorite fields. The potassium enrichment is generally weak to moderate in diorites, however, the intense alteration is observed both within and close to mineralized shear zones accompanied by fluids rich in carbonate, silica and sulphides. The evidence for diorite being the protolith for both altered and least-altered samples is indicated by their similar chondrite-normalized REEs patterns displaying moderate slopes with an average La/Yb ratio of 10.5 (discussed below).

The studied diorites are mostly metaluminous in characteristics, with the exception of one sample (53) which is marginal between metaluminous and peraluminous **(Figure 10b)**. The metaluminous character of diorites is supported by the relatively excess amount of Ca after Al **(Table 4)** and contains calcic phases such as hornblende and augite, and lacks either muscovite or Na-Fe-Mg phases (Frost et al. 2001). The analyzed samples are characterized by moderate to high CaO (2.70-7.60 wt. %) and $Fe_2O_3^{total}$ (3.82-7.56 wt. %) contents, and low to moderate MgO (1.63-4.08 wt. %) and alkalis (Na_2O+K_2O = 4.69-7.91 wt. %), testifying their affinity to the calc-alkaline rock suite.

Table 4. Whole rock geochemistry (major oxides, trace elements and rare earth elements) of samples from the Echo Ridge property.

Samples	51	53	54	55	56	58	59
UTM Coordinates	0655191E 5376706N	0654755E 5376469N	0654722E 5376397N	0654348E 5376393N	0654422E 5376407N	0654256E 5376159N	0653240E 5374197N
Major and minor Oxides (Wt.%)							
SiO_2	56.90	63.50	54.70	57.70	57.20	56.10	62.60
Al_2O_3	16.50	17.30	16.60	16.30	16.50	16.20	16.90
TiO_2	0.47	0.37	0.64	0.56	0.59	0.62	0.43
Fe_2O_3	6.55	3.82	7.41	6.77	7.59	7.49	3.88
Cr_2O_3	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01
MnO	0.08	0.04	0.12	0.12	0.14	0.12	0.06
MgO	2.83	1.63	3.53	2.99	3.52	4.08	2.22
CaO	3.99	2.70	5.24	5.87	6.63	7.60	4.85
Na_2O	4.59	5.30	5.32	3.58	3.31	3.32	5.33
K_2O	2.80	1.72	2.59	1.90	1.60	1.37	1.59
BaO	0.12	0.06	0.04	0.06	0.04	0.04	0.04
SrO	0.04	0.06	0.08	0.10	0.08	0.1	0.08
V_2O_5	0.02	0.01	0.03	0.03	0.03	0.04	0.01
P_2O_5	0.16	0.10	0.16	0.16	0.15	0.16	0.14
LOI	4.46	2.14	2.26	2.92	1.68	1.62	1.36
Total	99.5	98.7	98.70	99.00	99.00	98.80	99.50
Trace elements (ppm)							
Ag	<1	<1	<1	<1	<1	<1	<1
As	20.8	15.0	14.4	8.9	3.8	2.1	2.8
Ba	964.0	512.0	318.0	562.0	396.0	435.0	387.0
Co	19.5	11.4	24.3	24.6	25.1	27.8	10.1
Cs	4.5	0.9	3.7	1.8	1.4	0.7	0.7
Hf	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Mo	3.0	3.0	2.0	4.0	4.0	8.0	3.0
Nb	3.0	4.0	3.0	2.0	<1	<1	4
Ni	20.0	18.0	22.0	39.0	49.0	66.0	36.0
Rb	79.5	51.5	91.8	63.1	56.1	38.2	45.5
Sr	405.0	595.0	652.0	929.0	714.0	794.0	741.0
Ta	<0.5	1.0	<0.5	3.4	1.5	1.2	<0.5
Tl	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
V	140.0	80.0	212.0	202.0	224.0	241.0	87.0
W	9.0	2.0	2.0	1.0	<1	<1	<1
Y	11.6	12.0	17.4	17.6	17.6	19.4	10.2
Yb	1.4	1.2	1.9	2.1	2.2	2.1	1.2
Zr	102.0	102.0	88.0	102.0	97.0	94.0	117.0
Th	2.5	1.7	1.2	2.4	2.4	1.7	1.9
U	0.7	0.6	0.3	0.6	0.5	0.4	0.7
Rare Earth Elements (ppm)							
La	21.0	14.8	15.8	20.4	18.3	16.6	17.6
Ce	43.5	31.4	33.4	42.7	38.3	36.0	37.7
Pr	5.4	4.1	4.3	5.2	4.8	4.6	4.7
Nd	20.0	17.1	18.2	22.9	20.9	20.7	16.9
Sm	3.6	3.1	3.8	4.1	3.9	4.2	3.1
Eu	1.1	0.9	1.0	1.3	1.0	1.2	1.0
Gd	3.3	2.8	3.5	3.6	3.4	3.8	2.9
Tb	0.5	0.4	0.5	0.5	0.5	0.5	0.4
Dy	2.3	2.3	3.3	3.2	3.2	3.4	2.0
Ho	0.5	0.4	0.6	0.6	0.6	0.7	0.4
Er	1.4	1.3	2.0	1.9	2.1	2.2	1.2

Tm	0.2	0.2	0.3	0.3	0.3	0.3	0.2
Yb	1.4	1.2	1.9	2.1	2.2	2.1	1.2
Lu	0.2	0.2	0.3	0.3	0.3	0.3	0.2

Samples: 51 (473651), 53 (473653), 54 (473654), 55 (473655), 56 (473656), 58 (473658) and 59 (473659).

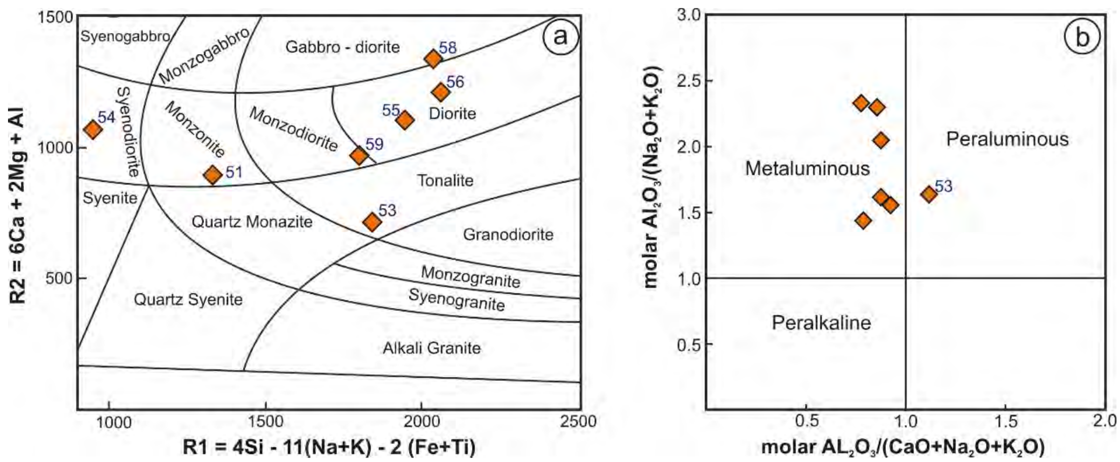

Figure 10. a) R1-R2 multicationic discrimination diagram (after de la Roche et al., 1980), and b) molar A/NK versus A/CNK diagram (after Maniar and Piccoli, 1989) for the seven samples collected in 2017 from the Echo Ridge property.

Tectonic setting of the analyzed diorite samples is determined by using Rb vs. Nb+Y discrimination diagram of Pearce et al. (1984) **(Figure 11)**. On this diagram, all seven samples plot in the volcanic arc granites.

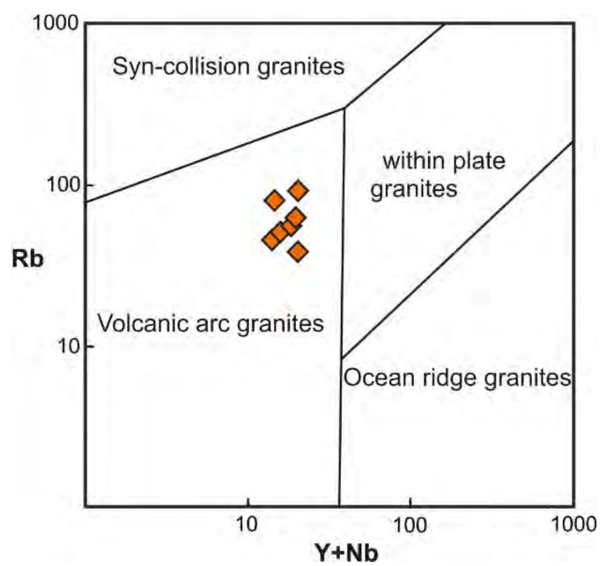

Figure 11. Rb versus Y + Nb tectonic discrimination diagram (after Pearce et al. 1984) of the samples collected in 2017 from the Echo Ridge property.

The analyzed samples contain rare earth elements (REEs) in the range varying from 80 ppm to 109 ppm with an average of 96 ppm **(Table 4)**. The chondrite-normalized REEs plots **(Figure 12)** (McDonough and Sun 1995) of all seven samples show overall moderate slopes (La/Yb=10.5 on average) characterized by the enrichment in light rare earth elements (LREEs) relative to the heavy rare earth elements (HREEs). All samples show similar parallel slopes (fractionation trends) decreasing from La to Ho and are almost flat from Er to Lu, and there are no conspicuous differences between the samples. In contrast to the majority of the samples, which do not show any notable Eu anomaly however very weak negative anomalies ($Eu_n/Eu_n^* = 0.87$ and 0.88) are shown by two samples indicating minor fractionation of feldspars from the melt.

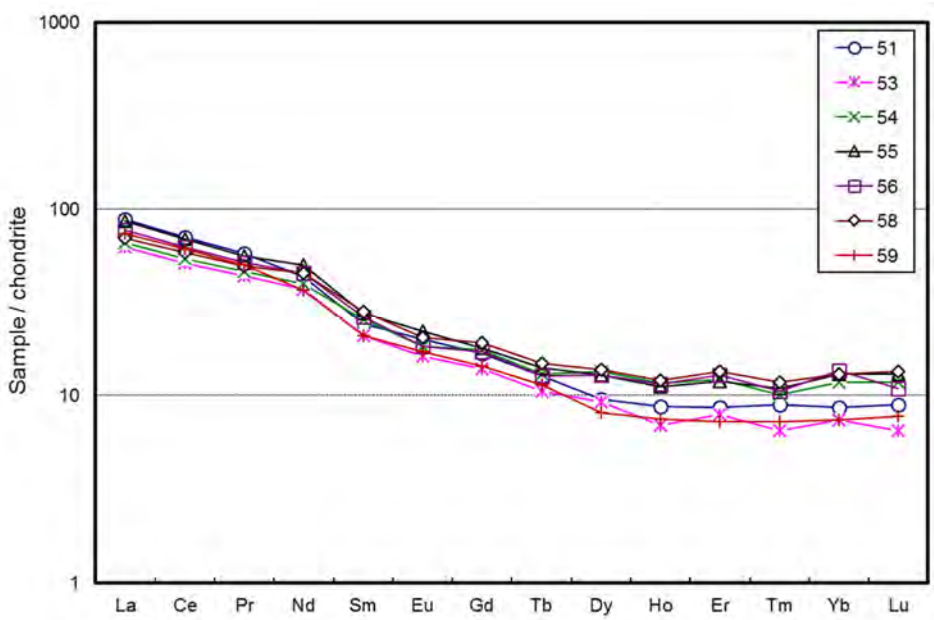

Figure 12. Chondrite-normalized REE plots of the samples collected in 2017 from the Echo Ridge property. Normalized values are from McDonough and Sun (1995).

The Echo Ridge diorite samples with mostly intermediate geochemical ranges (major oxides and trace elements) display REEs patterns that compared well with mineralized diorites, for e.g., research studies were done in Turkey, Sudan and Pakistan (Ciiukwu and Obiora 2014, Lissan and Bakheit 2011, Tahirkheli et al. 2012). The diorites, for example, from the Chitral region of northern Pakistan, host to copper-gold mineralization are very similar, in terms of both geological setting and geochemistry, with the diorites of the Echo Ridge property. In the Chitral region, sulphide mineralization related to hydrothermal activity occurs in deformed (sheared/fractured) and altered diorites as the case on the Echo Ridge property. Copper-gold mineralization associated with quartz veins also occurs in deformed and altered diorites of both Chitral region and Echo Ridge property. The mineralized Chitral diorites, which are part of a large "Drosh Diorite Complex", has been emplaced into the volcano-sedimentary rocks of Cretaceous age whereas, the diorites of the "Tilly Lake Diorite Complex" on the Echo Ridge property is emplaced within Archean sedimentary rocks close to the greenstone belt.

7 ECONOMIC GEOLOGY

Copper-gold-silver associated with mostly sulphide mineralization is known to occur in up to 250 m wide and 1.0 km long sheared and altered diorites (Campbell et al. 2012) within the Tilly Lake Diorite Complex (TLDC). However, the results of the current exploration program in conjunction with the historical data have defined an up to 450m x 2800m area of shearing and mineralization within the eastern half of the TLDC **(Appendix I, Appendix II and Appendix III)**. Two main styles of copper-gold-silver mineralization occur on the Property. The most predominant style of mineralization occurs along the schistosity planes in sheared diorites and along the diorite-metasedimentary contacts. The rocks within and adjacent to shear zones are intensely fractured, mylonitized and schistose that often, depending on the composition of associated lithologies, accompanied with carbonitization, silicification, chloritization, sericitization, albitization and epidotization of the rocks. Hematization and/or feldspathization in some instances are associated with the significant base and precious metal mineralization. The second style of mineralization is associated with quartz-carbonate veins emplaced within and/or adjacent to shear zones in diorites.

The copper-gold-silver mineralization of both styles is associated with mostly sulphide minerals such as chalcopyrite, pyrite and bornite. Oxide minerals (magnetite, hematite and malachite) associated with sulphide minerals are observed in some instances. Minor malachite staining is noted within a sheared diorite and at the diorite-metasedimentary contact located along the main logging road. The process and intensity of shearing seem to control the amount and depth of groundwater penetration resulting in oxidation of sulphides to malachite.

7.1 Results of Lithogeochemical Sampling

A total of 39 grab samples were collected for geochemical analysis during the course of reconnaissance prospecting/mapping and sampling program **(Table 4 and Table 5)**. Of the 39 samples collected, 7 rock samples **(Table 4)**, including both altered and least-altered diorites, were analyzed for the whole rock geochemistry (major oxides, rare earth elements and other trace elements) which have already been discussed in the preceding "Geochemistry" section. A strongly sheared and altered (carbonate, silica, chlorite, sericite) sample of diorite (#473651), which contained less than 1% pyrite-magnetite+/-chalcopyrite, was also selected for the whole rock analysis. This sample assayed weakly anomalous copper (512 ppm) and gold (18 ppb) **(Table 5)**.

Thirty-three (33) samples that included mineralized diorites, quartz veins and metasedimentary rocks were assayed for copper, gold, silver, arsenic, bismuth, molybdenum, lead, zinc, nickel, cobalt and many other elements **(Table 5, Appendix IV)**. Copper and gold are the most valuable metals sought on the Property. Other metals such as silver, bismuth and molybdenum also occur in association with copper-gold mineralization but usually in a small amount, therefore, they are insignificant in terms of economics. Assay results of 33 grab samples are listed in **Table 5** and briefly discussed below.

Of the 33 samples assayed, returned following ranges for copper and gold:

Copper:
<100 ppm = 11 samples (33.3%)
100 to 499 ppm = 7 samples (21.2%)
500 to 4,999 ppm = 6 samples (18.2%)
5,000 to 9,999 ppm = 5 samples (15.2%)
10,000 (1.0%) to 41,600 ppm (4.16%) = 4 samples (12.1%)

Gold:
<10 ppb or below the detection limit = 6 samples (18.2%)
10 to 99 ppb = 10 samples (30.3%)
100 to 499 ppb = 9 samples (27.3%)
500 and 1910 ppb gold = 8 samples (24.2%)

Samples yielding over 100 ppm copper and 10 ppb gold are arbitrarily selected to represent threshold values for the Echo Ridge property. These assigned threshold values represent 21.1% and 30.3% of the analyzed sample population for copper and gold, respectively. Copper values over 500 ppm and gold over 100 ppb are considered anomalous in this study. More than half the sample population (51.5%) represents anomalous to highly anomalous gold values (100 ppb – 1910 ppb), whereas slightly less than half (45.5%) the sample population constitutes anomalous to ore grade copper mineralization (500 ppm – 4.16% Cu). These statistics are based on a very small sample population and thus the values or value ranges assigned here as anomalous or highly anomalous may not be a true representation of an assigned group. Therefore, in order to acquire a more accurate statistical representation, a relatively larger sample population is required.

All major lithologies on the Property are host to copper, gold and silver mineralization, however, the most favourable among them are diorites and quartz veins. With the exception of one metasedimentary sample (#473602), yielding highly anomalous copper (1.40%)-gold (492 ppb) values, almost all significant mineralization is associated with sheared/altered diorites, particularly those occurring within the diorites along the margins of TLDC near the contact with the metasedimentary rocks of the Quetico Terrane **(Table 5, Appendix IV)**. Examples of this type of setting and style of mineralization are well evident from both this and previous studies (Chubb 1990a and 1990b, Thomson 1990, Thomson and Chubb 1990). In the current study, the highest copper value (4.16%) is obtained from a sample (#473608 - 654241mE/5376429mN) of heavily mineralized (chalcopyrite and pyrite) and sheared diorite located along the northern margin of the TLDC in contact with the metasedimentary rocks **(Table 5, Appendix IV)**. Anomalous gold (449 ppb), silver (26.7 ppm) arsenic (123 ppm), molybdenum (42.8 ppm) and bismuth (98 ppm) are also associated at this location with copper mineralization. The second highest copper value (3.21%) that occurs approximately 80 m south from the TLDC-metasedimentary contact, is yielded by a sample (#473607 – 654730mE/5376590) of a sheared and mineralized (massive to semi-massive sulphides – mainly chalcopyrite and pyrite) diorite taken from an old trench (Trench #2). Anomalous gold (224 ppb), silver (30.2 ppm), arsenic (72 ppm), molybdenum (71.8 ppm) and bismuth (103 ppm) are also associated with copper mineralization. A second sample (#473606 - 654727mE/5376589mN) taken from a 0.61 m wide exposed mineralized (py-cpy) shear zone in the same trench, yielded highly anomalous copper value (2940 ppm or 0.30%).

Another example of significant copper-gold mineralization associated with the TLDC-metasedimentary contact zone occurs near/along southern margin of the TLDC. Six samples were collected from and around the new discovery site for the geochemical analysis. Of the six samples, 2 samples are of a quartz-carbonate±chlorite vein (15 cm to 0.5 m wide) and 4 samples are of sheared and altered (silica-carbonate-chlorite-biotite±hematite) diorite. At this site, the highest copper (2.38%) and gold (1910 ppb) values are yielded by a sheared and altered (carbonatized, chloritized) diorite sample (#473709 – 654746mE/5376405MN). The sample contained up to 5% chalcopyrite in the form of a 0.5 cm to 1 cm wide veinlets. The second highest copper (9780 ppm) and gold (1170 ppb) values are yielded by the second sample that came from an adjacent area of the first sample. This is a highly silicified diorite sample (#473708) with up to 5% chalcopyrite stringers. Anomalous silver, arsenic, bismuth and molybdenum are also associated with copper-gold mineralization in both samples **(Table 5, Appendix IV and Appendix V)**. Two other samples of diorite from the same location yielding significant copper and gold are described as following: one sample (#473705), located at 654734mE/5376401mN, is a highly oxidized (gossanous) diorite with up to 1% chalcopyrite and minor malachite and assayed 9150 ppm copper and 1200 ppb gold; and the second sample (473706 – 654734mE/5376401mN), which is a sheared diorite with quartz-chlorite-pyrite (2%) and 1% chalcopyrite, returned 7830 ppm copper and 970 ppb gold. Anomalous silver, arsenic, molybdenum and bismuth are associated with copper-gold mineralization in both samples. Two quartz vein samples were also collected from and nearby discovery site for the geochemical analysis. One sample (#473707 – 654742mE/5376405mN) of red to white vuggy quartz vein with 2% pyrite and 1% chalcopyrite hosted within highly sheared and altered (silicified-chloritized-carbonitized) diorite, yielded weakly anomalous copper (376 ppm) and higher gold value (1090 ppb) **(Table 5)**. Another sample (#473710 – 654699mE/5376374mN) is a white quartz-carbonate-chlorite vein (0.5 m wide) was collected from a few metres west of the main discovery site. The vein, which is hosted by sheared diorite and contains up to 2% pyrite and trace of chalcopyrite, returned only anomalous gold (414 ppb) with no significant copper (129 ppm) mineralization.

Similar setting and style of mineralization are also observed along the contact zone in the west end of the Property (claim #4281389). Although copper-gold mineralization here is not proven as spectacular as they are found to be in the eastern half of the TLDC, nevertheless they are strongly anomalous hence has a potential of hosting significant mineralization. The far western part of the property, particularly the northern TLDC-metasedimentary contact zone is required additional prospecting and sampling to properly assess the economic potential of the western part of the Property. Two highly anomalous copper-gold mineralization obtained from this area are associated with quartz veins hosted within silicified diorite which occurs in close proximity to the diorite-metasedimentary contact zone. A sample of mineralized (chalcopyrite-pyrite) quartz vein (#473617) located at 652725mE/5375866mN, has returned 8730 ppm copper and 551 ppb gold. Another sample (#473619 – 653001mE/5375948mN) consisting of diorite and quartz material containing malachite, chalcopyrite and pyrite assayed anomalous copper (3750 ppm) and gold (152 ppb).

The southern TLDC-metasedimentary contact zone in the southwest part of the Property was cursorily examined during the course of the reconnaissance program. No known significant copper-gold mineralization occurs in this part of the Property. However, a sample of altered greywacke, located approximately 280 m south from the TLDC-metasedimentary contact and 200 m west from the main logging road, was taken for the geochemical analysis. The sample assayed highly anomalous copper-gold values (3980 ppm Cu and 702 ppb gold). Interestingly, this sample also contains strongly anomalous tungsten (W) value (691 ppm) which, in the author's knowledge, has never been reported from this area of the Property. Anomalous silver (8.4 ppm), arsenic (84 ppm), bismuth (107 ppm) and molybdenum (34.6 ppm) are also yielded by the sample. Unfortunately, there is no detailed description of this mineral occurrence currently available, therefore, the mineralization site, in the author's opinion, should be revisited to learn more about the setting and style of this mineralization. However, judging from the existing style/setting of mineralization on the Property, it is quite conceivable that silica-rich (quartz) hydrothermal fluids containing chalcopyrite, pyrite and tungsten-molybdenum-bearing compounds may have precipitated in shear/fracture zones. Adjacent Obadinaw River granodioritic stock may have acted as a heat engine forcing hydrothermal solution to circulate through shears/fracture zones. The second location of tungsten mineralization (184 ppm) (sample #473619 – 653001mE/5375948mN), which is also associated with copper-gold mineralization, occurs in a sheared diorite with quartz along the TLDC-metasedimentary contact in the northwestern part of the property. This mineralization has been discussed in the preceding paragraph.

Table 5. Assay results of samples collected during the 2017 reconnaissance exploration program on the Echo Ridge Property.

Sample	UTM Coordinates (mE/mN)	Description	Cu (ppm)	Au (ppb)	Ag (ppm)	As (ppm)	Mo (ppm)	Bi (ppm)	W (ppm)
473601	655094/5376709	Metasediment (greywacke), qtz, py							
473602	655054/5376693	Sheared metasedimentary rocks, cpy.	1.40%	492	17.2	11	8.7	89	
473603	655064/5376690	Sheared metasedimentary rocks, tr. cpy, py.	159	35			2.8		
473604	654972/5376676	Metasedimentary rock, S		10		466			
473605	654953/5376675	Metasedimentary rocks, tr. cpy.	72.1	96		221	3.0		
473606	654727/5376589	0.61m wide shear zone in diorite, py, cpy.	2940	62	2.8	26	5.3	22	
473607	654730/5376590	Massive Sulphides in sheared diorite (cpy-py).	3.21%	224	30.2	72	71.8	103	
473608	654241/5376429	Shear zone in diorite, cpy, py.	4.16%	449	26.7	123	42.8	98	
473609	654318/5376531	Schistose metasediment, S							
473610	654228/5376150	Sheared diorite, cpy, mal.	1180	239	2.5		31.2		
473611	654260/5376166	Tr. S							
473612	653194/5374064	Tr. py-cpy							
473613	653052/5374720	Altd. metasedimentary rocks (Gwk), qtz, py-cpy.	3980	702	8.4	84	34.6	107	691
473614	653031/5374816	Metasediment (greywacke), tr. py		12					
473615	656897/5376491	Sheared metasediments (greywacke)-sil. Dike, tr. S		12					
473616	656897/5376491	Sheared metasediments (greywacke)- in contact with sil. Dike, tr. S							
473617	652725/5375866	qv in silicified diorite, cpy.	8730	551	4.7		199		
473618	652956/5375932	Diorite/gabbro? with qv, tr. py-cpy	158						
473619	653001/5375948	Diorite with qtz, mal, cpy, py.	3750	152	2.6		236	12	184
473620	653021/5376125	Metasedimentary rock with qv, tr. py	175				57.6		
473621	653374/5375920	Diorite, py+/-cpy.	369	19		20	4.1		
473651	655191/5376706	Strongly sheared and altered. (carb-Sil) diorite, tr. py.	512	18		17	3.2		
473657	654151/5376147	10-15 cm wide sample from oxidized zone (~1% S) in diorite; white qv emplaced within the shear/fracture zone.	5880	268	53.8	17	69.3	40	
473701	655141/5376683	Sheared and altd. (ep-chl) diorite, minor potassic alteration, 3% py, tr. cpy.	85	179		40	3.0		
473702	654950/5376516	30 cm wide qv in sheared diorite, 3% py, tr-1% cpy.	255	579	17.3	120	155	442	
473703	Same as 473702	Same as sample 473702	556	137	4.6	19	88	492	

473704	654809/5376717	30 cm wide qv in sheared-Sil-carb sediments, no visible S.	35	25		10			
473705	654734/5376401	Gossanous diorite, tr.-1% cpy+/-mal.	9150	1200	25	60	26.1	54	
473706	654734/5376401	>15 cm wide qv (same outcrop as 473705) in sheared diorite, qtz-chl-py (2%)-cpy (1%).	7830	970	20.8	67	25.3	33	
473707	654742/5376405	Red to white vuggy qv with 2% py, <1% cpy in highly sheared, Sil-chl-carb diorite.	376	1090	8.5		9.6		
473708	654742/5376405	Highly silicified diorite with up to 5% cpy stringers.	9780	1170	29.8	70	53.6	101	
473709	654746/5376405	Sheared and altd. (carb-amph) diorite, 0.5-1cm wide cpy veinlets (approx. 5% cpy).	2.38%	1910	43.9	136	26.8	81	
473710	654699/5376374	0.5m wide white qtz-carb-chl vein with 2% py and tr. cpy in sheared diorite.	129	414	2.1		14.5		

Abbreviations

cpy – chalcopyrite
py – pyrite
chl – chlorite/chloritized
Sil – silica/silicified
altd. – altered
tr. – trace
Gwk – greywacke
amph – amphibole
ep – epidote/epidotized
S – sulphides
qv – quartz vein
carb – carbonate/carbonatized
qtz – quartz

Note:

1. Assay values for elements considered insignificant or below the detection limits are not shown in the table.
2. Copper values exceeding the upper detection limit (>10,000 ppm) were re-analyzed for ore grade and their values reported as percentages (%).

8 INTERPRETATION AND CONCLUSIONS

The 2017 reconnaissance exploration work, consisting of prospecting/mapping and lithogeochemical sampling, was designed to gain a better understanding of the geological setting and style of mineralization on the Echo Ridge property. The knowledge gained as a result of these works is expected to help identify new areas of potentially economic mineralization, and also to further develop the known areas of mineralization on the Property.

The results of current and historical works suggest that the Property is underlain predominantly by northeast-trending, steeply dipping metasedimentary rocks within the QT, close to its boundary with the Shebandowan greenstone belt of the Wawa Terrane (WT). The QT and WT are separated by a major structure, the BFZ. A large diorite to quartz diorite complex or TLDC, as called in this study, has been emplaced within the metasedimentary rocks of the QT. The TLDC, which extends northeasterly from west-southwest for approximately 4.7 km to the north-central part of the Property, is widest (1.43 km) in the southwest and narrowest (few metres) in the northeast. The TLDC and metasedimentary rocks are deformed by a series of subparallel to parallel, northeast-striking shear zones that defines up to 450 m wide TLDZ structural zone. All lithologies have undergone greenschist-facies regional metamorphism.

Copper-gold-silver mineralization, which is associated mainly with sulphides±oxides (pyrite-chalcopyrite±bornite±malachite), shows strong spatial association with shear zones, and the distribution of mineralization is observed to be structurally controlled. A strong association exists between copper-gold-silver mineralization and pervasive silica, carbonate, and potassium/hematite alteration in deformed host rocks.

The litho-structural mapping and geochemical (whole rock and assays) results revealed two main styles of copper-gold-silver mineralization on the Property. The first style of mineralization occurs along the schistosity (shear) planes in diorites and is the most favourable host rock for copper-gold-silver mineralization on the Property. The second style of mineralization occurs in quartz-carbonate veins emplaced mostly within sheared and altered diorites. Although copper-gold-silver mineralization also occurs in the sheared and altered metasedimentary rocks, usually less extensive in terms of both length and width and restricted to the diorite-metasedimentary contact areas. This can be attributed to the differences in competency contrast between the two units, where diorite acted as a rigid slab that under the transpressional deformation was subjected to intense shearing and fracturing compared to its metasedimentary counterparts, particularly along the TLDC-metasedimentary contacts more than elsewhere on the Property.

Hydrothermal solutions enriched in silica (quartz), carbonate, potassium and sulphides travelled through structural permeability (e.g., shears, fractures, lithological contacts) to the areas of precipitation and subsequently formed the copper-gold mineralization. The hydrothermal alteration and mineralization formed after the consolidation of the TLDC is likely in the post-magmatic cooling stage. The mineralization was emplaced either synchronously or subsequently to the shear zones that cut the consolidated TLDC and adjacent sedimentary rocks. Not all shear zones are mineralized, particularly those cutting the metasedimentary rocks having no contact with the competent body, and different shear zones show different amounts of mineralization and hydrothermal alteration.

Mineral paragenesis and geothermometry which are some of the essential tools in determining the various stages and phases of the hydrothermal cooling system were not part of the current study. However, a temperature range of >300 ºC to 125 ºC estimated in this study is based on observed sulphide-oxide mineral association and some geochemical aspects. This estimated temperature range broadly falls within the sulphide mineral precipitation ranges of Reed and Palandri (2006) which they calculated for hydrothermal fluids under reducing/oxidizing conditions. Two main stages of sulphide mineral precipitation might have taken place on the Echo Ridge Property. The first stage may have taken place under relatively higher temperatures that gave a copper-dominated mineralization with actinolite-chlorite, biotite, quartz, carbonates, pyrite, bornite, pyrrhotite and chalcopyrite assemblage. The second stage, probably under lower temperature stage, gave a polyphase mineralization consisting of chlorite, quartz, epidote, calcite, gold, silver, bismuth, pyrite and chalcopyrite. A relatively minor third stage, represented by metal oxide minerals (e.g., hematite and malachite), likely took place relatively close to the surface at temperatures between 150 ºC and 125 ºC.

Additional interpretations and conclusions from this study are summarized below:

1. Geochemically, the diorites are metaluminous, calc-alkaline rocks that were likely emplaced in a volcanic arc environment. On a chondrite-normalized REEs diagram, the diorites and their altered equivalents display similar moderately steep slopes (La/Yb=10.5 on average) and are enriched in the LREEs relative to HREEs, with negligible to very minor negative Eu anomalies. Their REEs patterns indicate moderately fractionated LREEs relative to almost flat HREEs, and show a steady decrease in slopes from La to Ho and are almost flat in HREEs, especially between Er to Lu.
2. Shearing, alteration and copper-gold mineralization, associated with up to 450 m wide zone in the northeastern half of the TLDC, is traced on surface for approximately 2.8 km strike length.
3. Alteration is variable in intensity in the northeastern half of the TLDC. Pervasive epidote alteration and patchy chlorite alteration is observed along shears/fractures with quartz flooding. Silica, albite and sericite occur as halos around the mineralized zones, accompanied by weak to moderate hematitic and potassic alteration. Pyrite-chalcopyrite±bornite occur as disseminated and, locally, semi-massive to massive and millimetre-centimetre scale stringers. Malachite staining is also noted in shear zones.
4. The geochemical results obtained from the majority of analyzed samples indicate that higher copper-gold-silver assays are generally associated with relatively higher K, Ba, Fe and lower Na values **(Appendix IV and Appendix V)**.

9 RECOMMENDATIONS

Based on the results of the 2017 reconnaissance exploration program, the following recommendations are provided for future work on the Echo Ridge property:

1. Since copper-gold-silver mineralization is mainly associated with disseminated pyrite-chalcopyrite in shear zones and locally as semi-massive to massive sulphides in fractures, a detailed litho-structural mapping and sampling coupled with ground magnetometer, electromagnetic and induced polarization surveys should be conducted on the Property.
2. Several historical trenches that were visited and re-sampled (grabs) during the current reconnaissance program have returned highly significant copper-gold mineralization (e.g., 3.21% Cu, sample #473607, trench #NT-2). However, these trenches are now largely covered with overburden material and vegetation, therefore, they should be mechanically stripped and power-washed in order to be mapped and sampled in detail.
3. Some of the most significant copper-gold mineralization discovered during the current reconnaissance program occurs along the north (e.g., 4.16% Cu, 449 ppb Au – sample #473608) and south (e.g., 2.38% Cu, 1910 ppb Au – sample #473709) margins of the TLDC, near or along the sheared contacts with the metasedimentary rocks. In light of these and other significant results, the special emphasis should be given to the diorite-metasedimentary contact zones when mapping and prospecting the Property as recommended above.
4. The new copper-gold-silver discoveries stated above should also be exposed by back-hoe trenching, power washed, mapped and sampled in order to assess the extent of copper-gold mineralization along the north and south margins of the TLDC.
5. To the author’s knowledge, there is no known significant mineral occurances in the southwestern part of the TLDC, particularly along or in proximity to the potentially sheared diorite-metasedimentary contact. This largely under-explored area was only cursorily investigated during the current program, therefore, it warrants a proper evaluation by appropriate geological and geophysical methods for additional discoveries of copper-gold mineralization.
6. A strongly anomalous copper-gold value (3980 ppm Cu and 702 ppb gold) yielded by an altered greywacke sample (#473613) is located 200 m west of the main logging road in the most southwestern corner of the Property (claim #4274762). Interestingly, this sample also returned strongly anomalous tungsten value (691 ppm W) which, in the author’s knowledge, has never been reported from this part of the Property. Therefore, in light of this interesting copper-gold-tungsten discovery, the sample site and adjacent areas is highly recommended for detailed mapping and sampling in order to reconfirm the assay results and gain a better understanding of the setting/style of this mineralization which may help in finding additional mineralization in this and other areas on the Property.

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11 STATEMENT OF QUALIFICATIONS

I, I.A. Osmani of 1803-5611 Goring Street, Burnaby, British Columbia, do hereby certify that:

1. I am a graduate of Lucknow University, Lucknow, India, with a Bachelor of Science Degree in Geology (1971).

2. I hold a Master of Science Degree in Geology from Aligarh Muslim University, Aligarh, India (1973).

3. I hold a Master of Science degree in Geology with a major in Geophysics from the University of Windsor, Ontario, Canada (1982).

4. I have been practicing my profession since 1981 both as research geoscientist and mapping geologist with government surveys and, as an exploration geologist with major/junior exploration and mining companies in Canada and internationally.

5. I am a member of the Association of Professional Engineers and Geoscientists of the Province Of Manitoba (#22870); a member of the Association of Professional Geoscientists of Ontario (#0609); and a member of the Association of Professional Engineers and Geoscientists of British Columbia (#32050).

6. I am a Principal Consultant with Faarnad Geological Consulting (FGC) Inc. and the Assessment Report, titled, 2017 Reconnaissance Mapping and Prospecting Program on the Echo Ridge Property was authored and supervised by me.

7. I have no interest in the property described herein.

Dated this 14th day of November 2018, at Burnaby, British Columbia

SIGNED

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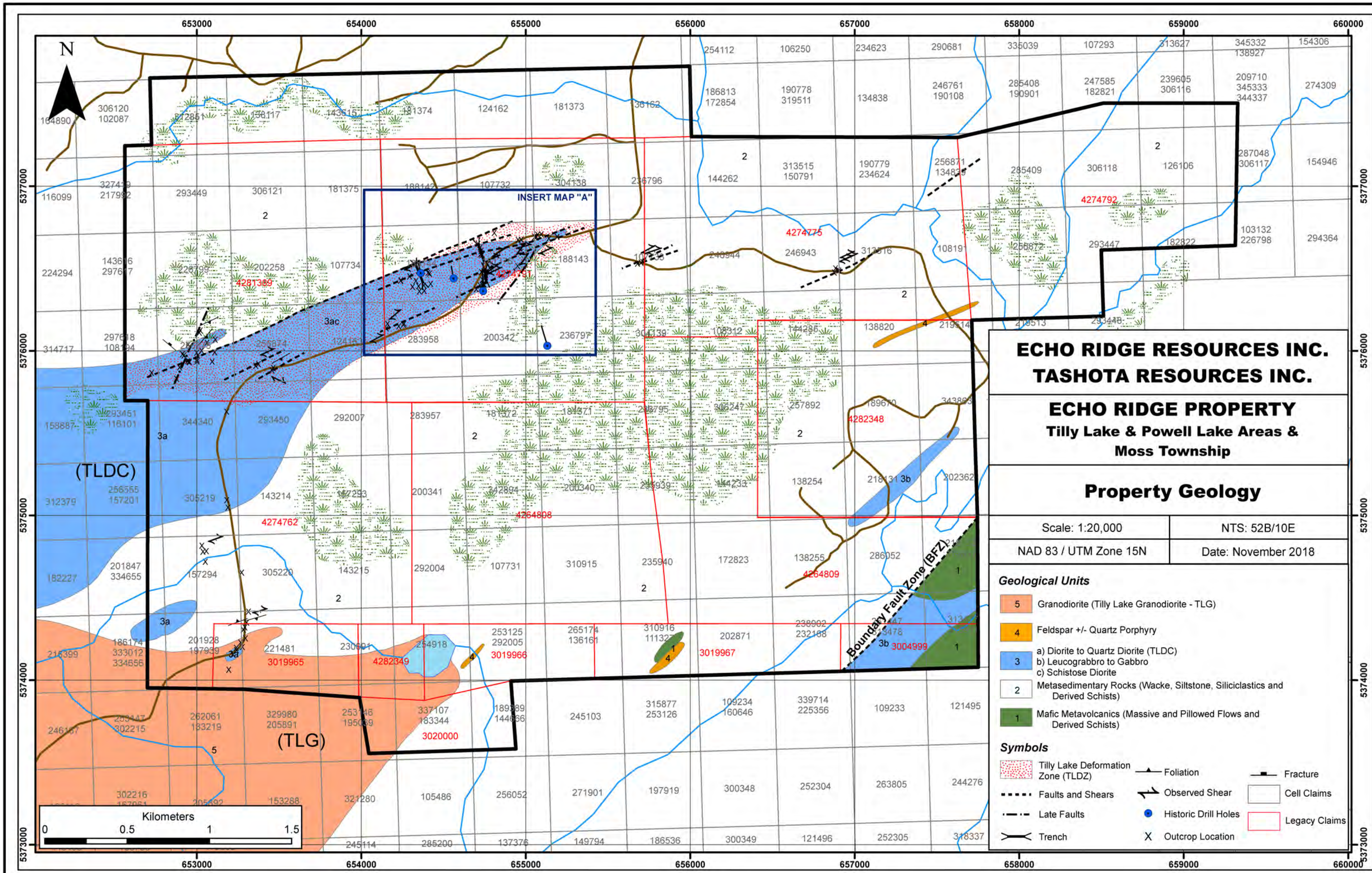
I.A. Osmani, M.Sc., P.Geo. (Ontario and British Columbia)

Faarnad Geological Consulting Inc.

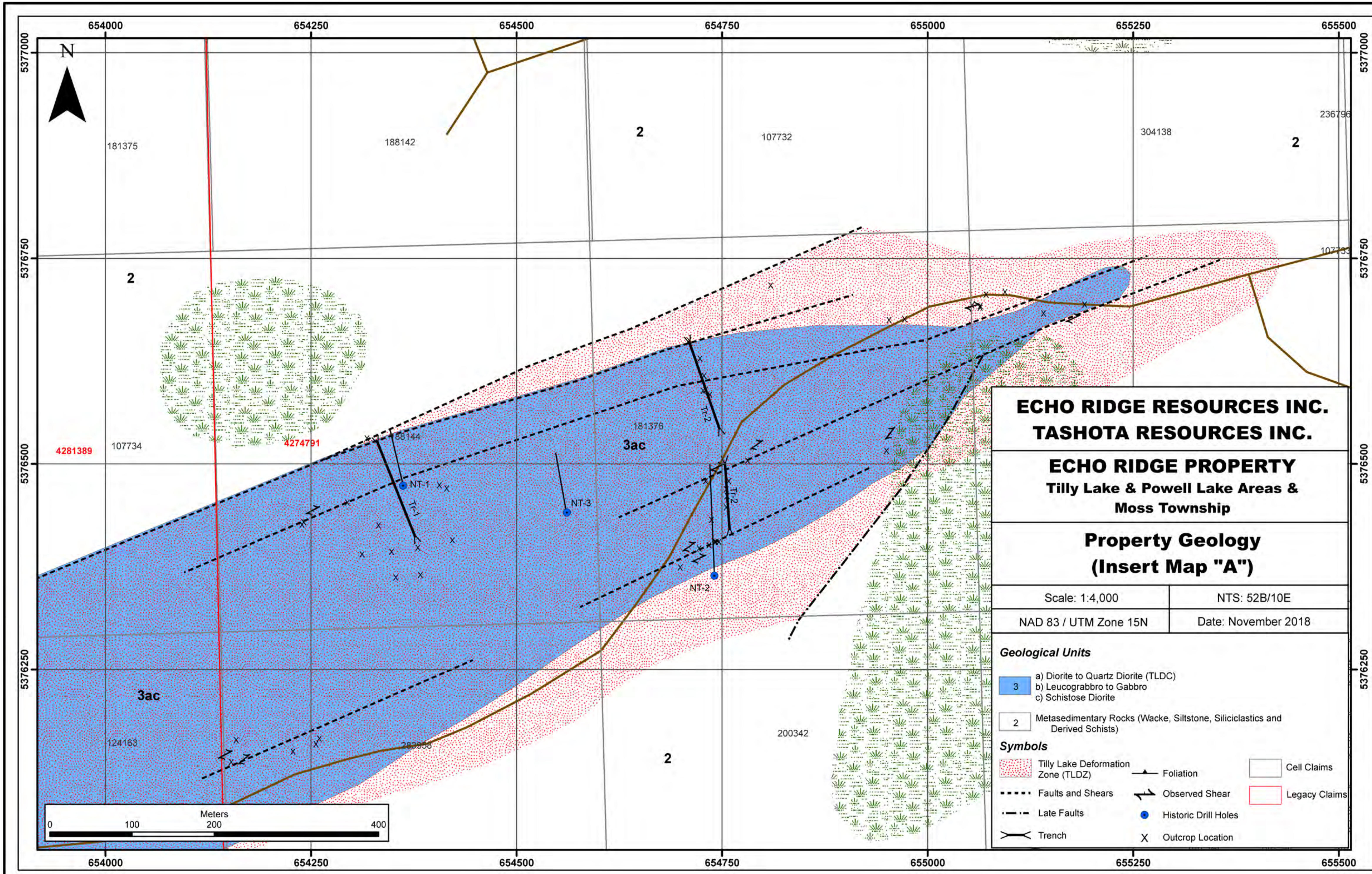
Appendix I

Geology map of the Echo Ridge property. Geology, in part, is compiled from Harris (1970) and Osmani (1997).


ECHO RIDGE RESOURCES INC.
TASHOTA RESOURCES INC.
ECHO RIDGE PROPERTY
Tilly Lake & Powell Lake Areas & Moss Township
Property Geology
Scale: 1:20,000
NTS: 52B/10E
NAD 83 / UTM Zone 15N
Date: November 2018
Geological Units
5 Granodiorite (Tilly Lake Granodiorite - TLG)
4 Feldspar +/- Quartz Porphyry
3 a) Diorite to Quartz Diorite (TLDC) b) Leucogabbro to Gabbro c) Schistose Diorite
2 Metasedimentary Rocks (Wacke, Siltstone, Siliciclastics and Derived Schists)
1 Mafic Metavolcanics (Massive and Pillowed Flows and Derived Schists)
Symbols
Tilly Lake Deformation Zone (TLDZ)
Faults and Shears
Late Faults
Trench
Foliation
Observed Shear
Historic Drill Holes
Outcrop Location
Fracture
Cell Claims
Legacy Claims
INSERT MAP "A"
(TLDC)
(TLG)
Boundary Fault Zone (BFZ)
N
Kilometers
0 0.5 1 1.5

Appendix II

An enlarged portion (Insert Map "A") of Appendix I showing geological details.


ECHO RIDGE RESOURCES INC.
TASHOTA RESOURCES INC.
ECHO RIDGE PROPERTY
Tilly Lake & Powell Lake Areas & Moss Township
Property Geology
(Insert Map "A")
Scale: 1:4,000
NTS: 52B/10E
NAD 83 / UTM Zone 15N
Date: November 2018
Geological Units
3
a) Diorite to Quartz Diorite (TLDC)
b) Leucogabbro to Gabbro
c) Schistose Diorite
2
Metasedimentary Rocks (Wacke, Siltstone, Siliciclastics and Derived Schists)
Symbols
Tilly Lake Deformation Zone (TLDZ)
Faults and Shears
Late Faults
Trench
Foliation
Observed Shear
Historic Drill Holes
Outcrop Location
Cell Claims
Legacy Claims
Meters
0
100
200
400
N
654000
654250
654500
654750
655000
655250
655500
5377000
5376750
5376500
5376250
181375
188142
107732
304138
236796
107734
4281389
4274791
181376
124163
283356
200342
3ac
2
NT-1
NT-2
NT-3
Tr-1
Tr-2

Appendix III

Location map of assay and whole rock geochemistry samples.


ECHO RIDGE RESOURCES INC.
TASHOTA RESOURCES INC.
ECHO RIDGE PROPERTY
Tilly Lake & Powell Lake Areas & Moss Township
Sample Location Map
Scale: 1:9,000
NTS: 52B/10E
NAD 83 / UTM Zone 15N
Date: November 2018
Symbols
Cell Claims
Legacy Claims
Outcrop Location
Assay Sample
Whole Rock Geochemistry Sample
Cu Copper
Au Gold
Bi Bismuth
W Tungsten
Kilometers
0 0.25 0.5 0.75 1
N
(473602) 1.4% Cu 492 Au
(473601)
(473651) 512 Cu 18 Au
(473603)
(473704) 25 Au
(473605)
(473606) 2940 Cu 62 Au
(473604)
(473701) 85 Cu 179 Au
(51)
(473607) 3.21% Cu 224 Au
(473608) 4.16% Cu 449 Au
(473609)
(53)
(54)
(55)
(56)
(473702) 255 Cu 579 Au 442 Bi
(473703) 556 Cu 137 Au 492 Bi
(473610) 1180 Cu 239 Au
(473657) 5880 Cu 268 Au
(473611)
(58)
(473710) 129 Cu 414 Au
(473707) 376 Cu 1090 Au
(473708) 9780 Cu 1170 Au
(473709) 2.38% Cu 1910 Au
(473705) 9150 Cu 1200 Au
(473706) 7830 Cu 970 Au
(473615)
(473616)
(473620)
(473621) 369 Cu 19 Au
(473617) 8730 Cu 551 Au
(473618)
(473619) 3750 Cu 152 Au 184 W
(473614)
(473613) 3980 Cu 702 Au 691 W
(59)
(473612)

Appendix IV

Certificate of Geochemical Analysis (AGAT Work Order 17B275199) – 2017 Whole Rock and Grab Assay Samples

5623 McADAM ROAD
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CLIENT NAME: MISC AGAT CLIENT ON
2275 LAKESHORE BLVD W, SUITE 518
TORONTO, ON M8V 3Y3
647-350-6122

ATTENTION TO: .

PROJECT:

AGAT WORK ORDER: 17B275199

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Dec 11, 2017

PAGES (INCLUDING COVER): 16

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17B275199

PROJECT:

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FAX (905)501-0589
http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 23, 2017 DATE RECEIVED: Oct 20, 2017 DATE REPORTED: Dec 11, 2017 SAMPLE TYPE: Rock

	Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
	Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample ID (AGAT ID)	RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
0473601 (8844316)		0.3	0.22	6	<5	8	<0.5	4	0.07	<0.5	5	3.0	37.0	23.5	0.79
0473602 (8844317)		17.2	0.71	11	<5	178	<0.5	89	2.50	2.8	24	20.2	25.3	>10000	2.84
0473603 (8844318)		0.3	1.67	9	<5	95	0.8	5	0.51	<0.5	40	19.7	79.8	159	3.51
0473604 (8844319)		0.2	1.35	466	<5	76	0.5	4	0.21	<0.5	27	14.3	53.8	88.5	2.85
0473605 (8844320)		0.3	1.52	221	<5	38	0.5	3	0.35	<0.5	26	12.7	90.2	72.1	3.60
0473606 (8844321)		2.8	1.95	28	<5	220	0.9	22	0.93	<0.5	32	35.1	22.3	2940	4.22
0473607 (8844322)		30.2	0.83	72	<5	108	<0.5	103	0.15	1.7	12	52.1	26.9	>10000	6.04
0473608 (8844323)		26.7	0.68	123	<5	84	<0.5	98	0.07	<0.5	8	75.9	12.7	>10000	6.79
0473651 (8844324)		0.8	1.67	17	<5	170	0.6	5	2.63	<0.5	28	19.9	28.3	512	3.76
0473652 (8844325)		40.0	0.55	3230	<5	67	<0.5	14	0.07	<0.5	17	7.0	34.0	89.8	4.17
0473701 (8844328)		0.7	1.34	40	<5	44	0.6	5	0.39	<0.5	16	25.8	25.6	85.1	3.76
0473702 (8844329)		17.3	0.14	120	<5	69	<0.5	442	0.02	<0.5	11	0.7	23.7	255	3.15
0473703 (8844330)		4.6	0.23	19	<5	78	<0.5	492	0.49	<0.5	17	3.8	24.3	556	1.19
0473704 (8844331)		0.4	0.41	10	<5	15	<0.5	6	0.18	<0.5	8	5.6	52.1	35.0	1.29
0473705 (8844332)		25.0	0.55	60	<5	42	<0.5	54	0.70	0.6	3	23.9	10.4	9150	6.62
0473706 (8844333)		20.8	0.50	67	<5	101	<0.5	33	1.91	<0.5	10	46.4	12.9	7830	6.13
0473707 (8844334)		8.5	0.06	5	<5	23	<0.5	4	0.11	<0.5	<1	1.2	32.4	376	0.80
0473708 (8844335)		29.8	0.53	70	<5	94	<0.5	101	1.62	0.7	6	37.8	13.3	9780	5.10
0473709 (8844336)		43.9	1.73	136	<5	128	0.6	81	0.73	2.9	20	56.0	19.9	>10000	8.62
0473710 (8844337)		2.1	0.50	3	<5	47	<0.5	3	1.39	<0.5	6	10.4	14.3	129	2.30

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Certificate of Analysis

AGAT WORK ORDER: 17B275199
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON
ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
	Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
0473601 (8844316)		<5	<1	<1	0.03	2	2	0.15	99	6.1	0.01	8.3	64	6.4	<10
0473602 (8844317)		<5	<1	<1	0.24	12	6	0.36	562	8.7	<0.01	18.1	338	47.8	<10
0473603 (8844318)		10	<1	<1	0.32	21	19	1.22	429	2.8	0.03	48.7	598	9.3	19
0473604 (8844319)		9	<1	<1	0.26	15	13	1.09	422	3.7	0.02	35.1	547	7.6	11
0473605 (8844320)		10	<1	<1	0.14	12	11	1.19	441	3.0	0.04	38.8	587	16.7	<10
0473606 (8844321)		9	<1	<1	1.38	15	14	1.33	428	5.3	0.03	10.3	869	6.4	112
0473607 (8844322)		<5	2	<1	0.43	5	5	0.50	181	71.8	0.02	16.3	335	23.4	26
0473608 (8844323)		<5	2	<1	0.22	4	3	0.32	145	42.8	<0.01	11.0	158	28.3	11
0473651 (8844324)		13	1	<1	0.62	14	19	1.42	620	3.2	0.04	16.0	789	8.4	43
0473652 (8844325)		<5	<1	<1	0.28	10	4	0.25	94	4.0	0.04	15.8	330	1900	13
0473701 (8844328)		10	<1	<1	0.15	7	16	1.16	354	3.0	0.05	15.8	876	9.0	<10
0473702 (8844329)		<5	<1	<1	0.15	6	<1	0.01	21	155	<0.01	2.8	123	106	<10
0473703 (8844330)		<5	<1	<1	0.17	9	1	0.08	125	88.0	<0.01	4.7	67	160	<10
0473704 (8844331)		<5	<1	<1	0.06	4	5	0.29	143	7.6	0.02	24.2	170	12.7	<10
0473705 (8844332)		<5	1	<1	0.12	2	4	0.34	415	26.1	<0.01	9.6	159	22.1	<10
0473706 (8844333)		<5	1	<1	0.30	5	3	0.25	301	25.3	<0.01	16.6	421	20.1	<10
0473707 (8844334)		<5	<1	<1	0.04	<1	<1	0.02	44	9.6	<0.01	2.6	19	26.3	<10
0473708 (8844335)		<5	<1	<1	0.32	4	3	0.25	313	53.6	<0.01	13.4	258	23.9	14
0473709 (8844336)		8	<1	<1	0.62	11	16	1.29	392	26.8	0.04	14.9	522	22.6	37
0473710 (8844337)		<5	<1	<1	0.19	3	5	0.35	440	14.5	0.01	5.4	252	7.9	<10

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Certificate of Analysis

AGAT WORK ORDER: 17B275199
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample ID (AGAT ID) RDL:	0.01	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
0473601 (8844316)	0.02	<1	0.6	<10	<5	3.5	<10	<10	<5	0.02	<5	<5	5.4	<1
0473602 (8844317)	0.80	<1	1.8	16	<5	51.2	<10	27	<5	0.03	<5	<5	12.5	<1
0473603 (8844318)	0.19	<1	3.2	<10	6	39.4	<10	<10	<5	0.14	<5	<5	43.1	<1
0473604 (8844319)	0.18	1	3.1	<10	<5	8.8	<10	<10	<5	0.08	<5	<5	30.5	<1
0473605 (8844320)	0.60	<1	5.3	<10	<5	13.1	13	<10	<5	0.11	<5	<5	53.7	<1
0473606 (8844321)	0.69	<1	4.3	<10	8	30.8	11	<10	<5	0.19	<5	<5	68.7	<1
0473607 (8844322)	4.52	<1	2.1	24	<5	10.4	19	17	<5	0.08	<5	<5	30.1	<1
0473608 (8844323)	5.04	<1	2.9	27	<5	8.9	22	<10	<5	0.04	<5	<5	29.5	<1
0473651 (8844324)	0.36	<1	4.0	<10	<5	98.5	12	<10	<5	0.11	<5	<5	56.3	<1
0473652 (8844325)	1.34	2	0.9	<10	<5	21.5	13	<10	<5	0.02	<5	<5	16.8	<1
0473701 (8844328)	1.70	<1	2.9	<10	5	46.6	11	<10	<5	0.11	<5	<5	54.6	<1
0473702 (8844329)	0.14	<1	<0.5	11	<5	7.5	<10	98	<5	<0.01	<5	<5	5.7	<1
0473703 (8844330)	0.25	<1	<0.5	<10	<5	21.6	<10	119	<5	<0.01	<5	<5	4.0	9
0473704 (8844331)	0.15	<1	1.4	<10	<5	5.8	<10	<10	<5	0.02	<5	<5	14.2	<1
0473705 (8844332)	2.22	<1	0.5	12	<5	18.4	19	24	<5	0.02	<5	<5	12.5	<1
0473706 (8844333)	4.73	1	1.6	18	<5	49.0	20	16	<5	0.04	<5	<5	18.4	<1
0473707 (8844334)	0.28	<1	<0.5	<10	<5	5.7	<10	<10	<5	<0.01	<5	<5	2.1	<1
0473708 (8844335)	3.91	<1	1.0	18	<5	29.3	16	48	<5	0.04	<5	<5	14.8	<1
0473709 (8844336)	5.71	<1	2.6	18	6	43.0	26	20	<5	0.13	<5	<5	79.7	<1
0473710 (8844337)	1.20	<1	1.3	<10	<5	28.0	<10	<10	<5	0.03	<5	<5	11.4	<1

Certified By: Sherin Moussa

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Y	Zn	Zr	Cu-OL
	Unit:	ppm	ppm	ppm	%
Sample ID (AGAT ID)	RDL:	1	0.5	5	0.01
0473601 (8844316)		<1	10.3	<5	
0473602 (8844317)		5	355	9	1.40
0473603 (8844318)		8	67.3	15	
0473604 (8844319)		7	38.3	12	
0473605 (8844320)		6	53.2	9	
0473606 (8844321)		7	74.7	6	
0473607 (8844322)		3	432	<5	3.21
0473608 (8844323)		2	260	<5	4.16
0473651 (8844324)		6	55.0	7	
0473652 (8844325)		2	163	15	
0473701 (8844328)		4	42.6	8	
0473702 (8844329)		<1	6.1	<5	
0473703 (8844330)		2	24.3	<5	
0473704 (8844331)		2	15.8	<5	
0473705 (8844332)		2	85.9	<5	
0473706 (8844333)		3	53.8	<5	
0473707 (8844334)		<1	2.5	<5	
0473708 (8844335)		2	65.0	<5	
0473709 (8844336)		2	331	6	2.38
0473710 (8844337)		3	15.3	<5	

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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Certificate of Analysis

AGAT WORK ORDER: 17B275199
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

Analyte:	Ag	As	Ba	Ce	Co	Cs	Dy	Er	Eu	Gd	Hf	Ho	La	Lu
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID) RDL:	1	0.5	0.5	0.5	0.5	0.1	0.05	0.05	0.05	0.05	1	0.05	0.1	0.05
0473651 (8844324)	<1	20.8	964	43.5	19.5	4.5	2.34	1.38	1.13	3.33	3	0.48	21.0	0.22
0473653 (8844326)	<1	15.0	512	31.4	11.4	0.9	2.27	1.27	0.92	2.77	3	0.38	14.8	0.16
0473654 (8844327)	<1	14.4	318	33.4	24.3	3.7	3.30	1.96	1.03	3.49	3	0.64	15.8	0.29

Analyte:	Mo	Nb	Nd	Ni	Pr	Rb	Sm	Sr	Ta	Tb	Th	Tl	Tm	U
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID) RDL:	2	1	0.1	5	0.05	0.2	0.1	0.1	0.5	0.05	0.1	0.5	0.05	0.05
0473651 (8844324)	3	3	20.0	20	5.40	79.5	3.6	405	<0.5	0.46	2.5	<0.5	0.22	0.73
0473653 (8844326)	3	4	17.1	18	4.09	51.5	3.1	595	1.0	0.38	1.7	<0.5	0.16	0.55
0473654 (8844327)	2	3	18.2	22	4.32	91.8	3.8	652	<0.5	0.47	1.2	<0.5	0.25	0.29

Analyte:	V	W	Y	Yb	Zr
Unit:	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID) RDL:	5	1	0.5	0.1	2
0473651 (8844324)	140	9	11.6	1.4	102
0473653 (8844326)	80	2	12.0	1.2	102
0473654 (8844327)	212	2	17.4	1.9	88

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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CANADA L4Z 1N9
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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	TiO2	SrO	V2O5
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample ID (AGAT ID)	RDL:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0473651 (8844324)		16.5	0.12	3.99	<0.01	6.55	2.80	2.83	0.08	4.59	0.16	56.9	0.47	0.04	0.02
0473653 (8844326)		17.3	0.06	2.70	<0.01	3.82	1.72	1.63	0.04	5.30	0.10	63.5	0.37	0.06	0.01
0473654 (8844327)		16.6	0.04	5.24	<0.01	7.41	2.59	3.53	0.12	5.32	0.16	54.7	0.64	0.08	0.03

	Analyte:	LOI	Total
	Unit:	%	%
Sample ID (AGAT ID)	RDL:	0.01	0.01
0473651 (8844324)		4.46	99.5
0473653 (8844326)		2.14	98.7
0473654 (8844327)		2.26	98.7

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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Certificate of Analysis

AGAT WORK ORDER: 17B275199
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppb)

DATE SAMPLED: Oct 23, 2017 | DATE RECEIVED: Oct 20, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Au	Au-Grav
	Unit:	ppb	g/t
Sample ID (AGAT ID)	RDL:	1	0.5
0473601 (8844316)		1	
0473602 (8844317)		492	
0473603 (8844318)		35	
0473604 (8844319)		10	
0473605 (8844320)		96	
0473606 (8844321)		62	
0473607 (8844322)		224	
0473608 (8844323)		449	
0473651 (8844324)		18	
0473652 (8844325)		>10000	52.3
0473701 (8844328)		179	
0473702 (8844329)		579	
0473703 (8844330)		137	
0473704 (8844331)		25	
0473705 (8844332)		1200	
0473706 (8844333)		970	
0473707 (8844334)		1090	
0473708 (8844335)		1170	
0473709 (8844336)		1910	
0473710 (8844337)		414	

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

	REPLICATE #1				REPLICATE #2											
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	8844316	0.3	0.3	0.0%	8844333	20.8	21.0	1.0%								
Al	8844316	0.22	0.22	0.0%	8844333	0.497	0.494	0.6%								
As	8844316	6	5	18.2%	8844333	67	67	0.0%								
B	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
Ba	8844316	8	8	0.0%	8844333	101	101	0.0%								
Be	8844316	< 0.5	< 0.5	0.0%	8844333	< 0.5	< 0.5	0.0%								
Bi	8844316	4	4	0.0%	8844333	33	35	5.9%								
Ca	8844316	0.07	0.07	0.0%	8844333	1.91	1.91	0.0%								
Cd	8844316	< 0.5	< 0.5	0.0%	8844333	< 0.5	< 0.5	0.0%								
Ce	8844316	5	5	0.0%	8844333	10	9	10.5%								
Co	8844316	3.0	2.9	3.4%	8844333	46.4	46.0	0.9%								
Cr	8844316	37.0	36.5	1.4%	8844333	12.9	12.6	2.4%								
Cu	8844316	23.5	24.4	3.8%	8844333	7830	7770	0.8%								
Fe	8844316	0.79	0.79	0.0%	8844333	6.13	6.07	1.0%								
Ga	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
Hg	8844316	< 1	< 1	0.0%	8844333	1	1	0.0%								
In	8844316	< 1	< 1	0.0%	8844333	< 1	< 1	0.0%								
K	8844316	0.03	0.03	0.0%	8844333	0.30	0.30	0.0%								
La	8844316	2	2	0.0%	8844333	5	5	0.0%								
Li	8844316	2	2	0.0%	8844333	3	3	0.0%								
Mg	8844316	0.15	0.15	0.0%	8844333	0.245	0.244	0.4%								
Mn	8844316	99	97	2.0%	8844333	301	299	0.7%								
Mo	8844316	6.1	5.9	3.3%	8844333	25.3	24.9	1.6%								
Na	8844316	0.01	0.01	0.0%	8844333	< 0.01	< 0.01	0.0%								
Ni	8844316	8.26	7.83	5.3%	8844333	16.6	16.6	0.0%								
P	8844316	64	62	3.2%	8844333	421	421	0.0%								
Pb	8844316	6.4	5.0	24.6%	8844333	20.1	18.5	8.3%								
Rb	8844316	< 10	< 10	0.0%	8844333	< 10	< 10	0.0%								
S	8844316	0.02	0.02	0.0%	8844333	4.73	4.70	0.6%								
Sb	8844316	< 1	< 1	0.0%	8844333	1	< 1									
Sc	8844316	0.6	0.6	0.0%	8844333	1.56	1.52	2.6%								

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CANADA L4Z 1N9
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ATTENTION TO: .

Se	8844316	< 10	< 10	0.0%	8844333	18	18	0.0%								
Sn	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
Sr	8844316	3.5	3.4	2.9%	8844333	49.0	47.9	2.3%								
Ta	8844316	< 10	< 10	0.0%	8844333	20	20	0.0%								
Te	8844316	< 10	< 10	0.0%	8844333	16	12	28.6%								
Th	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
Ti	8844316	0.02	0.02	0.0%	8844333	0.04	0.04	0.0%								
Tl	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
U	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								
V	8844316	5.36	5.33	0.6%	8844333	18.4	18.1	1.6%								
W	8844316	< 1	< 1	0.0%	8844333	< 1	< 1	0.0%								
Y	8844316	< 1	< 1	0.0%	8844333	3	2									
Zn	8844316	10.3	10.4	1.0%	8844333	53.8	54.1	0.6%								
Zr	8844316	< 5	< 5	0.0%	8844333	< 5	< 5	0.0%								

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

	REPLICATE #1				REPLICATE #2											
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	8844324	< 1	< 1	0.0%	8844326	< 1	< 1	0.0%								
As	8844324	20.8	19.3	7.5%	8844326	15.0	14.1	6.2%								
Ba	8844324	964	980	1.6%	8844326	512	516	0.8%								
Ce	8844324	43.5	45.1	3.6%	8844326	31.4	30.5	2.9%								
Co	8844324	19.5	20.0	2.5%	8844326	11.4	11.2	1.8%								
Cs	8844324	4.5	3.6	22.2%	8844326	0.9	0.9	0.0%								
Dy	8844324	2.34	2.34	0.0%	8844326	2.27	2.16	5.0%								
Er	8844324	1.38	1.33	3.7%	8844326	1.27	1.32	3.9%								
Eu	8844324	1.13	1.19	5.2%	8844326	0.92	0.85	7.9%								
Gd	8844324	3.33	3.43	3.0%	8844326	2.77	2.77	0.0%								
Hf	8844324	3	3	0.0%	8844326	3	3	0.0%								
Ho	8844324	0.485	0.494	1.8%	8844326	0.383	0.388	1.3%								
La	8844324	21.0	21.8	3.7%	8844326	14.8	14.4	2.7%								
Lu	8844324	0.22	0.22	0.0%	8844326	0.16	0.16	0.0%								
Mo	8844324	3	3	0.0%	8844326	3	3	0.0%								
Nb	8844324	3	3	0.0%	8844326	4	4	0.0%								
Nd	8844324	20.0	20.6	3.0%	8844326	17.1	16.8	1.8%								

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Ni	8844324	20	20	0.0%	8844326	18	18	0.0%								
Pr	8844324	5.40	5.57	3.1%	8844326	4.09	3.85	6.0%								
Rb	8844324	79.5	78.1	1.8%	8844326	51.5	51.2	0.6%								
Sm	8844324	3.63	3.73	2.7%	8844326	3.12	3.18	1.9%								
Sr	8844324	405	416	2.7%	8844326	595	622	4.4%								
Ta	8844324	< 0.5	< 0.5	0.0%	8844326	1.0	0.7									
Tb	8844324	0.46	0.49	6.3%	8844326	0.38	0.36	5.4%								
Th	8844324	2.51	2.59	3.1%	8844326	1.74	1.64	5.9%								
Tl	8844324	< 0.5	< 0.5	0.0%	8844326	< 0.5	< 0.5	0.0%								
Tm	8844324	0.22	0.21	4.7%	8844326	0.16	0.16	0.0%								
U	8844324	0.73	0.75	2.7%	8844326	0.552	0.515	6.9%								
V	8844324	140	148	5.6%	8844326	80	78	2.5%								
W	8844324	9	9	0.0%	8844326	2	2	0.0%								
Y	8844324	11.6	11.9	2.6%	8844326	12.0	12.3	2.5%								
Yb	8844324	1.35	1.31	3.0%	8844326	1.2	1.2	0.0%								
Zr	8844324	102	101	1.0%	8844326	102	101	1.0%								

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

	REPLICATE #1				REPLICATE #2				REPLICATE #3							
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD				
Al2O3	8844324	16.5	16.4	0.4%	8844326	17.3	17.6	1.3%	8844327	16.6	16.5	0.3%				
BaO	8844324	0.12	0.12	5.1%	8844326	0.06	0.05	16.2%	8844327	0.04	0.04	16.9%				
CaO	8844324	3.99	4.00	0.3%	8844326	2.70	2.71	0.6%	8844327	5.24	5.28	0.6%				
Cr2O3	8844324	<0.01	<0.01	0.0%	8844326	<0.01	<0.01	0.0%	8844327	<0.01	<0.01	0%				
Fe2O3	8844324	6.55	6.57	0.2%	8844326	3.82	3.84	0.4%	8844327	7.41	7.42	0.2%				
K2O	8844324	2.80	2.81	0.2%	8844326	1.72	1.75	2.0%	8844327	2.59	2.59	0%				
MgO	8844324	2.83	2.83	0.2%	8844326	1.63	1.66	1.5%	8844327	3.53	3.56	0.9%				
MnO	8844324	0.08	0.09	10.3%	8844326	0.04	0.04	0.0%	8844327	0.12	0.12	2.3%				
Na2O	8844324	4.59	4.61	0.4%	8844326	5.30	5.34	0.9%	8844327	5.32	5.32	0%				
P2O5	8844324	0.16	0.16	1.2%	8844326	0.10	0.11	10.3%	8844327	0.16	0.15	2%				
SiO2	8844324	56.9	56.9	0.1%	8844326	63.5	64.4	1.5%	8844327	54.7	55.0	0.6%				
TiO2	8844324	0.47	0.47	0.6%	8844326	0.37	0.38	1.9%	8844327	0.64	0.64	0.8%				
SrO	8844324	0.04	0.05	19.0%	8844326	0.06	0.07	3.1%	8844327	0.08	0.07	10.8%				
V2O5	8844324	0.02	0.03	8.0%	8844326	0.01	<0.01	43.5%	8844327	0.03	0.04	5.7%				
LOI	8844324	4.46	4.44	0.4%	8844326	2.14	2.15	0.5%								

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppb)

	REPLICATE #1				REPLICATE #2											
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Au	8844316	1	2		8844336	1910	2280	17.7%								

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Quality Assurance - Certified Reference materials

AGAT WORK ORDER: 17B275199

PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

	CRM #1 (ref.CDN-ME-1303)				CRM #2 (ref.CDN-ME-1304)				CRM #3							
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Ag	152	149	98%	90% - 110%	34.0	33.8	99%	90% - 110%								
Cu	3440	3541	103%	90% - 110%	2680	2744	102%	90% - 110%								
Pb	12200	11780	97%	90% - 110%	2580	2534	98%	90% - 110%								
Zn	9310	9219	99%	90% - 110%	2200	2187	99%	90% - 110%								

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

	CRM #1 (ref.SY-4)				CRM #2 (ref.SY-4)				CRM #3							
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Ba	340	280	82%	90% - 110%	340	349	103%	90% - 110%								
Ce	122	146	120%	90% - 110%	122	124	102%	90% - 110%								
Co	2.8	2.5	88%	90% - 110%	2.8	2.8	101%	90% - 110%								
Dy	18.2	19.8	109%	90% - 110%	18.2	20.4	112%	90% - 110%								
Er	14.2	14.9	105%	90% - 110%	14.2	15.3	108%	90% - 110%								
Eu	2	2	113%	90% - 110%	2	2	102%	90% - 110%								
Gd	14	17	119%	90% - 110%	14	15	108%	90% - 110%								
Hf	10.6	10.2	96%	90% - 110%	10.6	11.7	110%	90% - 110%								
Ho	4.3	4.8	111%	90% - 110%	4.3	4.3	100%	90% - 110%								
La	58	65	112%	90% - 110%	58	58	100%	90% - 110%								
Lu	2.1	2.2	103%	90% - 110%	2.1	2.1	99%	90% - 110%								
Nb	13	14	106%	90% - 110%	13	13	101%	90% - 110%								
Nd	57	63	111%	90% - 110%	57	62	109%	90% - 110%								
Pr	15	18	118%	90% - 110%	15	15	102%	90% - 110%								
Rb	55	59	107%	90% - 110%	55	57	104%	90% - 110%								
Sm	12.9	13.7	106%	90% - 110%	12.9	13	101%	90% - 110%								
Sr	1191	1196	100%	90% - 110%	1191	1170	99%	90% - 110%								
Ta	0.9	0.9	98%	90% - 110%												
Tb	2.6	3.2	121%	90% - 110%	2.6	2.6	100%	90% - 110%								
Th	1.4	1.4	99%	90% - 110%	1.4	1.2	85%	90% - 110%								
Tm	2.3	2.4	106%	90% - 110%	2.3	2.2	97%	90% - 110%								
U	0.8	0.9	115%	90% - 110%	0.8	0.8	106%	90% - 110%								
Yb	14.8	15.1	102%	90% - 110%	14.8	15.9	108%	90% - 110%								
Zr	517	559	108%	90% - 110%	517	537	104%	90% - 110%								

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Quality Assurance - Certified Reference materials

AGAT WORK ORDER: 17B275199
PROJECT:

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

	CRM #1 (SY-4)				CRM #2 (sy-4)				CRM #3							
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Al2O3	20.69	20.7	100%	90% - 110%	20.69	20.6	100%	90% - 110%								
BaO	0.04	0.042	105%	90% - 110%	0.04	0.044	110%	90% - 110%								
CaO	8.05	7.86	98%	90% - 110%	8.05	7.91	98%	90% - 110%								
Fe2O3	6.21	6.23	100%	90% - 110%	6.21	6.20	100%	90% - 110%								
K2O	1.66	1.63	98%	90% - 110%	1.66	1.62	98%	90% - 110%								
MgO	0.54	0.541	100%	90% - 110%	0.54	0.534	99%	90% - 110%								
MnO	0.108	0.108	100%	90% - 110%	0.108	0.108	100%	90% - 110%								
Na2O	7.1	7.19	101%	90% - 110%	7.1	7.20	101%	90% - 110%								
P2O5	0.131	0.115	88%	90% - 110%	0.131	0.125	95%	90% - 110%								
SiO2	49.9	49.5	99%	90% - 110%	49.9	49.5	99%	90% - 110%								
TiO2	0.287	0.292	102%	90% - 110%	0.287	0.282	98%	90% - 110%								
SrO	0.1408	0.136	97%	90% - 110%	0.1408	0.141	100%	90% - 110%								
LOI									4.56	4.24	92%	90% - 110%				

(202-052) Fire Assay - Trace Au, ICP-OES finish (ppb)

	CRM #1 (ref.GS6D)				CRM #2				CRM #3							
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits				
Au	6090	5702	94%	90% - 110%												
Au-Grav					14.9	14.7	98%	95% - 105%								

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CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON
AGAT WORK ORDER: 17B275199
PROJECT:
ATTENTION TO: .
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12020		ICP/OES
Al	MIN-200-12020		ICP/OES
As	MIN-200-12020		ICP/OES
B	MIN-200-12020		ICP/OES
Ba	MIN-200-12020		ICP/OES
Be	MIN-200-12020		ICP/OES
Bi	MIN-200-12020		ICP/OES
Ca	MIN-200-12020		ICP/OES
Cd	MIN-200-12020		ICP/OES
Ce	MIN-200-12020		ICP/OES
Co	MIN-200-12020		ICP/OES
Cr	MIN-200-12020		ICP/OES
Cu	MIN-200-12020		ICP/OES
Fe	MIN-200-12020		ICP/OES
Ga	MIN-200-12020		ICP/OES
Hg	MIN-200-12020		ICP/OES
In	MIN-200-12020		ICP/OES
K	MIN-200-12020		ICP/OES
La	MIN-200-12020		ICP/OES
Li	MIN-200-12020		ICP/OES
Mg	MIN-200-12020		ICP/OES
Mn	MIN-200-12020		ICP/OES
Mo	MIN-200-12020		ICP/OES
Na	MIN-200-12020		ICP/OES
Ni	MIN-200-12020		ICP/OES
P	MIN-200-12020		ICP/OES
Pb	MIN-200-12020		ICP/OES
Rb	MIN-200-12020		ICP/OES
S	MIN-200-12020		ICP/OES
Sb	MIN-200-12020		ICP/OES
Sc	MIN-200-12020		ICP/OES
Se	MIN-200-12020		ICP/OES
Sn	MIN-200-12020		ICP/OES
Sr	MIN-200-12020		ICP/OES
Ta	MIN-200-12020		ICP/OES
Te	MIN-200-12020		ICP/OES
Th	MIN-200-12020		ICP/OES
Ti	MIN-200-12020		ICP/OES
Tl	MIN-200-12020		ICP/OES
U	MIN-200-12020		ICP/OES
V	MIN-200-12020		ICP/OES
W	MIN-200-12020		ICP/OES
Y	MIN-200-12020		ICP/OES
Zn	MIN-200-12020		ICP/OES
Zr	MIN-200-12020		ICP/OES
Cu-OL	MIN-200-12035/12018		ICP/OES
Ag	MIN-200-12016		ICP-MS
As	MIN-200-12016		ICP-MS
Ba	MIN-200-12016		ICP-MS

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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON
AGAT WORK ORDER: 17B275199
PROJECT:
ATTENTION TO: .
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ce	MIN-200-12016		ICP-MS
Co	MIN-200-12016		ICP-MS
Cs	MIN-200-12016		ICP-MS
Dy	MIN-200-12016		ICP-MS
Er	MIN-200-12016		ICP-MS
Eu	MIN-200-12016		ICP-MS
Gd	MIN-200-12016		ICP-MS
Hf	MIN-200-12016		ICP-MS
Ho	MIN-200-12016		ICP-MS
La	MIN-200-12016		ICP-MS
Lu	MIN-200-12016		ICP-MS
Mo	MIN-200-12016		ICP-MS
Nb	MIN-200-12016		ICP-MS
Nd	MIN-200-12016		ICP-MS
Ni	MIN-200-12016		ICP-MS
Pr	MIN-200-12016		ICP-MS
Rb	MIN-200-12016		ICP-MS
Sm	MIN-200-12016		ICP-MS
Sr	MIN-200-12016		ICP-MS
Ta	MIN-200-12016		ICP-MS
Tb	MIN-200-12016		ICP-MS
Th	MIN-200-12016		ICP-MS
Tl	MIN-200-12016		ICP-MS
Tm	MIN-200-12016		ICP-MS
U	MIN-200-12016		ICP-MS
V	MIN-200-12016		ICP-MS
W	MIN-200-12016		ICP-MS
Y	MIN-200-12016		ICP-MS
Yb	MIN-200-12016		ICP-MS
Zr	MIN-200-12016		ICP-MS
Al2O3	MIN-200-12027		XRF
BaO	MIN-200-12027		XRF
CaO	MIN-200-12027		XRF
Cr2O3	MIN-200-12027		XRF
Fe2O3	MIN-200-12027		XRF
K2O	MIN-200-12027		XRF
MgO	MIN-200-12027		XRF
MnO	MIN-200-12027		XRF
Na2O	MIN-200-12027		XRF
P2O5	MIN-200-12027		XRF
SiO2	MIN-200-12027		XRF
TiO2	MIN-200-12027		XRF
SrO	MIN-200-12027		XRF
V2O5	MIN-200-12027		XRF
LOI	MIN-200-12021		GRAVIMETRIC
Total	MIN-200-12027		CALCULATION
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Au-Grav	MIN-200-12006		GRAVIMETRIC

Appendix V

Certificate of Geochemical Analysis (AGAT Work Order 17B276250) – 2017 Whole Rock and Grab Assay Samples

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FAX (905)501-0589
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CLIENT NAME: MISC AGAT CLIENT ON
2275 LAKESHORE BLVD W, SUITE 518
TORONTO, ON M8V 3Y3
647-350-6122

ATTENTION TO: .

PROJECT:

AGAT WORK ORDER: 17B276250

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Dec 11, 2017

PAGES (INCLUDING COVER): 16

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample ID (AGAT ID) RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
473608 (8851046)	5.8	2.18	80	<5	162	0.6	11	0.49	<0.5	25	27.8	36.1	4450	4.71
473609 (8851047)	<0.2	1.29	15	<5	98	0.5	<1	0.68	<0.5	36	11.3	54.3	85.6	2.48
473610 (8851048)	2.5	1.77	16	<5	243	<0.5	1	2.58	3.1	16	12.3	46.8	1180	3.13
473611 (8851049)	<0.2	1.78	<1	<5	247	<0.5	<1	0.91	<0.5	13	16.9	56.7	95.4	2.79
473612 (8851050)	<0.2	1.04	<1	<5	101	<0.5	<1	0.77	<0.5	15	8.3	27.3	<0.5	1.02
473613 (8851051)	8.4	0.92	84	<5	200	<0.5	107	0.05	<0.5	10	93.2	139	3980	12.8
473614 (8851052)	<0.2	1.70	1	<5	140	0.5	<1	0.43	<0.5	37	14.9	75.3	34.7	2.88
473615 (8851053)	<0.2	0.85	5	<5	168	0.8	<1	2.77	<0.5	124	9.0	9.4	3.6	3.27
473616 (8851054)	<0.2	1.53	4	<5	78	0.7	<1	3.09	0.5	81	17.7	84.6	312	3.98
473617 (8851055)	4.7	2.05	<1	<5	209	0.5	22	1.28	1.7	26	35.5	17.2	8730	4.25
473618 (8851056)	<0.2	2.47	<1	<5	35	1.0	<1	1.59	0.7	25	9.2	59.6	158	4.08
473619 (8851057)	2.6	0.68	6	<5	76	<0.5	12	1.14	0.6	12	9.6	25.6	3750	2.03
473620 (8851058)	<0.2	1.31	<1	<5	99	<0.5	<1	0.54	<0.5	16	9.9	72.3	175	2.34
473621 (8851059)	0.5	1.83	20	<5	118	<0.5	<1	1.54	<0.5	22	17.4	11.1	369	4.06
473657 (8851060)	53.8	0.37	17	<5	117	<0.5	40	0.03	0.8	4	10.9	27.6	5880	7.26
473659 (8851061)	<0.2	0.82	<1	<5	90	<0.5	<1	0.68	<0.5	17	6.9	19.7	3.5	0.97
473655 (8851062)	<0.2	2.22	6	<5	151	0.5	<1	1.85	<0.5	18	20.2	33.6	86.3	3.44
473656 (8851063)	<0.2	2.46	2	<5	300	0.6	<1	0.91	<0.5	13	20.5	38.7	46.2	3.35
473658 (8851064)	0.4	1.77	2	<5	227	<0.5	<1	1.03	<0.5	12	17.4	59.1	119	2.82

Certified By: Sherin Moussa

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Certificate of Analysis

AGAT WORK ORDER: 17B276250
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
	Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
473608 (8851046)		8	<1	<1	1.51	11	14	1.38	476	3.9	0.02	24.1	853	12.6	121
473609 (8851047)		7	<1	<1	0.44	17	12	0.78	307	5.0	0.03	43.4	649	7.2	27
473610 (8851048)		10	<1	<1	1.26	8	9	1.34	691	31.2	0.03	20.6	791	15.8	75
473611 (8851049)		8	<1	<1	0.72	7	10	1.47	445	5.7	0.04	29.0	773	1.8	34
473612 (8851050)		7	<1	<1	0.40	7	7	0.75	247	3.2	0.04	22.5	535	2.2	21
473613 (8851051)		<5	2	<1	0.30	7	6	0.68	145	34.6	0.01	88.8	351	87.7	11
473614 (8851052)		9	<1	<1	0.74	18	12	1.18	422	3.9	0.04	45.4	515	6.1	50
473615 (8851053)		6	<1	<1	0.25	54	13	0.53	769	2.0	0.04	21.0	1470	21.4	<10
473616 (8851054)		11	<1	<1	0.13	38	31	1.39	908	40.7	0.06	50.3	883	10.0	<10
473617 (8851055)		10	<1	<1	0.52	12	16	1.60	771	199	0.04	19.1	1080	6.0	23
473618 (8851056)		<5	<1	<1	0.19	14	11	0.59	117	7.3	0.08	49.3	676	7.4	12
473619 (8851057)		6	<1	<1	0.14	5	4	0.46	259	236	0.02	28.9	379	2.1	<10
473620 (8851058)		7	<1	<1	0.43	7	11	1.00	255	57.6	0.03	68.0	477	3.0	26
473621 (8851059)		7	<1	<1	0.46	10	11	1.19	556	4.1	0.02	13.3	1130	3.5	25
473657 (8851060)		<5	2	<1	0.33	3	1	0.12	36	69.3	0.01	36.2	294	8.9	12
473659 (8851061)		5	<1	<1	0.23	7	5	0.55	176	3.2	0.05	20.6	666	<0.5	10
473655 (8851062)		9	<1	<1	0.79	8	14	1.68	744	2.7	0.04	21.5	791	6.1	49
473656 (8851063)		11	<1	<1	1.13	6	17	1.99	749	2.8	0.03	26.3	692	3.6	70
473658 (8851064)		8	<1	<1	0.68	6	10	1.48	454	6.0	0.04	32.7	772	2.3	31

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Certificate of Analysis

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ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

Sample ID (AGAT ID)	Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
473608 (8851046)		0.72	<1	4.4	<10	8	33.6	16	<10	<5	0.24	<5	<5	58.1	<1
473609 (8851047)		0.20	<1	3.4	<10	5	41.6	<10	<10	<5	0.18	<5	<5	29.5	<1
473610 (8851048)		0.33	<1	4.9	<10	<5	40.8	<10	<10	<5	0.18	<5	<5	69.2	<1
473611 (8851049)		0.24	<1	4.2	<10	7	72.7	10	<10	<5	0.20	<5	<5	72.5	<1
473612 (8851050)		0.04	<1	1.5	<10	<5	93.2	<10	<10	<5	0.13	<5	<5	20.4	<1
473613 (8851051)		4.89	<1	2.6	42	<5	34.8	51	<10	<5	0.11	<5	9	61.4	691
473614 (8851052)		0.16	<1	4.1	<10	7	44.0	10	<10	<5	0.21	<5	<5	41.4	<1
473615 (8851053)		0.24	<1	0.8	<10	<5	204	11	<10	<5	0.01	<5	<5	28.8	<1
473616 (8851054)		0.38	<1	4.3	<10	<5	106	13	<10	<5	0.01	<5	<5	55.6	<1
473617 (8851055)		0.92	<1	4.6	11	7	57.3	14	<10	<5	0.22	<5	<5	63.7	<1
473618 (8851056)		0.70	<1	2.8	<10	<5	43.8	14	<10	<5	0.05	<5	<5	29.8	<1
473619 (8851057)		0.53	<1	1.9	<10	<5	32.5	<10	<10	<5	0.06	<5	<5	26.1	184
473620 (8851058)		0.19	<1	2.9	<10	<5	27.7	<10	<10	<5	0.13	<5	<5	27.3	<1
473621 (8851059)		0.52	<1	3.1	<10	6	91.5	11	<10	<5	0.19	<5	<5	41.0	<1
473657 (8851060)		1.22	<1	<0.5	27	<5	25.6	24	14	<5	0.04	<5	<5	19.2	<1
473659 (8851061)		0.10	<1	1.1	<10	<5	105	<10	<10	<5	0.14	<5	<5	21.2	<1
473655 (8851062)		0.13	<1	3.9	<10	7	120	<10	<10	<5	0.23	<5	<5	72.7	<1
473656 (8851063)		0.01	<1	4.4	<10	9	92.2	10	<10	<5	0.26	<5	<5	81.8	<1
473658 (8851064)		0.33	<1	4.1	<10	6	77.6	<10	<10	<5	0.19	<5	<5	69.7	<1

Certified By: Sherin Moussa

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Certificate of Analysis

AGAT WORK ORDER: 17B276250
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Y	Zn	Zr
	Unit:	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	1	0.5	5
473608 (8851046)		7	197	5
473609 (8851047)		9	37.5	16
473610 (8851048)		5	182	<5
473611 (8851049)		4	32.9	<5
473612 (8851050)		5	21.6	<5
473613 (8851051)		1	29.2	<5
473614 (8851052)		6	51.7	14
473615 (8851053)		21	23.9	20
473616 (8851054)		15	55.9	33
473617 (8851055)		9	126	<5
473618 (8851056)		4	13.9	5
473619 (8851057)		4	33.3	<5
473620 (8851058)		5	21.0	10
473621 (8851059)		8	65.9	<5
473657 (8851060)		1	30.6	<5
473659 (8851061)		5	13.1	<5
473655 (8851062)		5	64.0	<5
473656 (8851063)		4	82.4	<5
473658 (8851064)		4	32.4	<5

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

Certificate of Analysis

AGAT WORK ORDER: 17B276250
PROJECT:

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Ag	As	Ba	Ce	Co	Cs	Dy	Er	Eu	Gd	Hf	Ho	La	Lu
	Unit:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	1	0.5	0.5	0.5	0.5	0.1	0.05	0.05	0.05	0.05	1	0.05	0.1	0.05
473659 (8851061)		<1	2.8	387	37.7	10.1	0.7	1.99	1.16	0.97	2.88	3	0.41	17.6	0.19
473655 (8851062)		<1	8.9	562	42.7	24.6	1.8	3.18	1.90	1.25	3.59	3	0.61	20.4	0.32
473656 (8851063)		<1	3.8	396	38.3	25.1	1.4	3.16	2.07	1.04	3.44	3	0.63	18.3	0.27
473658 (8851064)		<1	2.1	435	36.0	27.8	0.7	3.40	2.16	1.16	3.84	3	0.66	16.6	0.33

	Analyte:	Mo	Nb	Nd	Ni	Pr	Rb	Sm	Sr	Ta	Tb	Th	Tl	Tm	U
	Unit:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	2	1	0.1	5	0.05	0.2	0.1	0.1	0.5	0.05	0.1	0.5	0.05	0.05
473659 (8851061)		3	4	16.9	36	4.67	45.5	3.1	741	<0.5	0.41	1.9	<0.5	0.18	0.71
473655 (8851062)		4	2	22.9	39	5.22	63.1	4.1	929	3.4	0.51	2.4	<0.5	0.27	0.60
473656 (8851063)		4	<1	20.9	49	4.81	56.1	3.9	714	1.5	0.46	2.4	<0.5	0.26	0.51
473658 (8851064)		8	<1	20.7	66	4.64	38.2	4.2	794	1.2	0.54	1.7	<0.5	0.29	0.43

	Analyte:	V	W	Y	Yb	Zr
	Unit:	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	5	1	0.5	0.1	2
473659 (8851061)		87	<1	10.2	1.2	117
473655 (8851062)		202	1	17.6	2.1	102
473656 (8851063)		224	<1	17.6	2.2	97
473658 (8851064)		241	<1	19.4	2.1	94

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

Certificate of Analysis

AGAT WORK ORDER: 17B276250
PROJECT:

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http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	TiO2	SrO	V2O5
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample ID (AGAT ID)	RDL:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
473659 (8851061)		16.9	0.04	4.85	<0.01	3.88	1.59	2.22	0.06	5.33	0.14	62.6	0.43	0.08	0.01
473655 (8851062)		16.3	0.06	5.87	<0.01	6.77	1.90	2.99	0.12	3.58	0.16	57.7	0.56	0.10	0.03
473656 (8851063)		16.5	0.04	6.63	0.01	7.59	1.60	3.52	0.14	3.31	0.15	57.2	0.59	0.08	0.03
473658 (8851064)		16.2	0.04	7.60	0.01	7.49	1.37	4.08	0.12	3.32	0.16	56.1	0.62	0.10	0.04

	Analyte:	LOI	Total
	Unit:	%	%
Sample ID (AGAT ID)	RDL:	0.01	0.01
473659 (8851061)		1.36	99.5
473655 (8851062)		2.92	99.0
473656 (8851063)		1.68	99.0
473658 (8851064)		1.62	98.8

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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FAX (905)501-0589
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Certificate of Analysis

AGAT WORK ORDER: 17B276250
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(202-051) Fire Assay - Trace Au, AAS finish

DATE SAMPLED: Oct 25, 2017 | DATE RECEIVED: Oct 24, 2017 | DATE REPORTED: Dec 11, 2017 | SAMPLE TYPE: Rock

	Analyte:	Au
	Unit:	ppm
Sample ID (AGAT ID)	RDL:	0.002
473608 (8851046)		0.079
473609 (8851047)		0.007
473610 (8851048)		0.239
473611 (8851049)		0.003
473612 (8851050)		0.006
473613 (8851051)		0.702
473614 (8851052)		0.012
473615 (8851053)		0.012
473616 (8851054)		0.010
473617 (8851055)		0.551
473618 (8851056)		<0.002
473619 (8851057)		0.152
473620 (8851058)		0.005
473621 (8851059)		0.019
473657 (8851060)		0.268
473659 (8851061)		<0.002
473655 (8851062)		0.005
473656 (8851063)		<0.002
473658 (8851064)		<0.002

Comments: RDL - Reported Detection Limit

Certified By: Sherin Moussa

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

	REPLICATE #1				REPLICATE #2											
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Ag	8851046	5.76	5.70	1.0%	8851063	< 0.2	< 0.2	0.0%								
Al	8851046	2.18	2.16	0.9%	8851063	2.46	2.54	3.2%								
As	8851046	80	77	3.8%	8851063	2	2	0.0%								
B	8851046	< 5	< 5	0.0%	8851063	< 5	< 5	0.0%								
Ba	8851046	162	161	0.6%	8851063	300	313	4.2%								
Be	8851046	0.6	0.6	0.0%	8851063	0.6	0.6	0.0%								
Bi	8851046	11	9	20.0%	8851063	< 1	< 1	0.0%								
Ca	8851046	0.49	0.49	0.0%	8851063	0.91	0.94	3.2%								
Cd	8851046	< 0.5	< 0.5	0.0%	8851063	0.5	0.5	0.0%								
Ce	8851046	25	24	4.1%	8851063	13	14	7.4%								
Co	8851046	27.8	27.1	2.6%	8851063	20.5	21.1	2.9%								
Cr	8851046	36.1	34.9	3.4%	8851063	38.7	39.7	2.6%								
Cu	8851046	4450	4440	0.2%	8851063	46.2	48.4	4.7%								
Fe	8851046	4.71	4.69	0.4%	8851063	3.35	3.44	2.7%								
Ga	8851046	8	8	0.0%	8851063	11	11	0.0%								
Hg	8851046	< 1	< 1	0.0%	8851063	< 1	< 1	0.0%								
In	8851046	< 1	< 1	0.0%	8851063	< 1	< 1	0.0%								
K	8851046	1.51	1.50	0.7%	8851063	1.13	1.16	2.6%								
La	8851046	11	11	0.0%	8851063	6	6	0.0%								
Li	8851046	14	14	0.0%	8851063	17	18	5.7%								
Mg	8851046	1.38	1.37	0.7%	8851063	1.99	2.06	3.5%								
Mn	8851046	476	474	0.4%	8851063	749	769	2.6%								
Mo	8851046	3.87	3.25	17.4%	8851063	2.8	2.2	24.0%								
Na	8851046	0.02	0.02	0.0%	8851063	0.03	0.03	0.0%								
Ni	8851046	24.1	23.1	4.2%	8851063	26.3	26.3	0.0%								
P	8851046	853	834	2.3%	8851063	692	715	3.3%								
Pb	8851046	12.6	10.5	18.2%	8851063	3.6	2.8	25.0%								
Rb	8851046	121	120	0.8%	8851063	70	75	6.9%								
S	8851046	0.72	0.71	1.4%	8851063	0.01	0.01	0.0%								
Sb	8851046	< 1	< 1	0.0%	8851063	< 1	< 1	0.0%								
Sc	8851046	4.43	4.48	1.1%	8851063	4.4	4.6	4.4%								

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

Se	8851046	10	11	9.5%	8851063	< 10	< 10	0.0%
Sn	8851046	8	8	0.0%	8851063	9	9	0.0%
Sr	8851046	33.6	31.4	6.8%	8851063	92.2	95.2	3.2%
Ta	8851046	16	16	0.0%	8851063	10	10	0.0%
Te	8851046	< 10	< 10	0.0%	8851063	< 10	< 10	0.0%
Th	8851046	< 5	< 5	0.0%	8851063	< 5	< 5	0.0%
Ti	8851046	0.24	0.24	0.0%	8851063	0.264	0.270	2.2%
Tl	8851046	< 5	< 5	0.0%	8851063	< 5	< 5	0.0%
U	8851046	< 5	< 5	0.0%	8851063	< 5	< 5	0.0%
V	8851046	58.1	57.9	0.3%	8851063	81.8	85.0	3.8%
W	8851046	< 1	< 1	0.0%	8851063	< 1	< 1	0.0%
Y	8851046	7	7	0.0%	8851063	4	4	0.0%
Zn	8851046	197	199	1.0%	8851063	82.4	84.5	2.5%
Zr	8851046	5	5	0.0%	8851063	< 5	< 5	0.0%

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

	REPLICATE #1				REPLICATE #2			
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Ag	8851061	< 1	< 1	0.0%	8851062	< 1	< 1	0.0%
As	8851061	2.79	3.16	12.4%	8851062	8.9	7.3	19.8%
Ba	8851061	387	386	0.3%	8851062	562	601	6.7%
Ce	8851061	37.7	37.8	0.3%	8851062	42.7	43.9	2.8%
Co	8851061	10.1	10.1	0.0%	8851062	24.6	26.0	5.5%
Cs	8851061	0.7	1.3		8851062	1.8	1.9	5.4%
Dy	8851061	1.99	1.96	1.5%	8851062	3.18	3.25	2.2%
Er	8851061	1.16	1.12	3.5%	8851062	1.90	2.12	10.9%
Eu	8851061	0.97	0.97	0.0%	8851062	1.25	1.30	3.9%
Gd	8851061	2.88	2.88	0.0%	8851062	3.59	3.82	6.2%
Hf	8851061	3	3	0.0%	8851062	3	3	0.0%
Ho	8851061	0.41	0.41	0.0%	8851062	0.615	0.678	9.7%
La	8851061	17.6	18.0	2.2%	8851062	20.4	21.2	3.8%
Lu	8851061	0.192	0.185	3.7%	8851062	0.315	0.309	1.9%
Mo	8851061	3	3	0.0%	8851062	4	4	0.0%
Nb	8851061	4	4	0.0%	8851062	2	1	
Nd	8851061	16.9	17.0	0.6%	8851062	22.9	23.6	3.0%

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Ni	8851061	36	35	2.8%	8851062	39	44	12.0%
Pr	8851061	4.67	4.64	0.6%	8851062	5.22	5.61	7.2%
Rb	8851061	45.5	46.4	2.0%	8851062	63.1	67.1	6.1%
Sm	8851061	3.1	3.1	0.0%	8851062	4.12	4.55	9.9%
Sr	8851061	741	742	0.1%	8851062	929	968	4.1%
Ta	8851061	< 0.5	< 0.5	0.0%	8851062	3.42	3.04	11.8%
Tb	8851061	0.407	0.403	1.0%	8851062	0.514	0.571	10.5%
Th	8851061	1.92	1.84	4.3%	8851062	2.41	2.47	2.5%
Tl	8851061	< 0.5	< 0.5	0.0%	8851062	< 0.5	< 0.5	0.0%
Tm	8851061	0.178	0.172	3.4%	8851062	0.271	0.290	6.8%
U	8851061	0.710	0.705	0.7%	8851062	0.60	0.59	1.7%
V	8851061	87	84	3.5%	8851062	202	210	3.9%
W	8851061	< 1	< 1	0.0%	8851062	1	2	
Y	8851061	10.2	9.94	2.6%	8851062	17.6	18.5	5.0%
Yb	8851061	1.15	1.08	6.3%	8851062	2.1	2.1	0.0%
Zr	8851061	117	120	2.5%	8851062	102	103	1.0%

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

	REPLICATE #1				REPLICATE #2			
Parameter	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD
Al2O3	8851061	16.9	16.9	0.3%	8851062	16.3	16.3	0.0%
BaO	8851061	0.04	0.05	4.3%	8851062	0.06	0.06	0.0%
CaO	8851061	4.85	4.90	1.0%	8851062	5.87	5.87	0.0%
Cr2O3	8851061	<0.01	0.01	0.0%	8851062	< 0.01	< 0.01	0.0%
Fe2O3	8851061	3.88	3.91	0.7%	8851062	6.77	6.80	0.4%
K2O	8851061	1.59	1.60	0.9%	8851062	1.90	1.88	1.1%
MgO	8851061	2.22	2.20	0.5%	8851062	2.99	2.96	1.0%
MnO	8851061	0.06	0.06	3.2%	8851062	0.12	0.12	0.0%
Na2O	8851061	5.33	5.37	0.8%	8851062	3.58	3.58	0.0%
P2O5	8851061	0.14	0.13	3.7%	8851062	0.16	0.16	0.0%
SiO2	8851061	62.6	63.0	0.7%	8851062	57.7	57.7	0.0%
TiO2	8851061	0.43	0.43	0.0%	8851062	0.56	0.55	1.8%
SrO	8851061	0.08	0.08	1.2%	8851062	0.10	0.10	0.0%
V2O5	8851061	0.01	0.02	14.3%	8851062	0.03	0.03	0.0%
LOI	8851061	1.36	1.43	5.0%	8851062	2.92	2.91	0.3%

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Quality Assurance - Replicate

AGAT WORK ORDER: 17B276250
PROJECT:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(202-051) Fire Assay - Trace Au, AAS finish

	REPLICATE #1															
Parameter	Sample ID	Original	Replicate	RPD												
Au	8851046	0.0791	0.0632	22.3%												

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CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: .

(201-073) Aqua Regia Digest - Metals Package, ICP-OES finish

	CRM #1 (ref.CDN-ME-1303)				CRM #2 (ref.CDN-ME-1303)											
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Ag	152	151	99%	90% - 110%	152	151	99%	90% - 110%								
Cu	3440	3535	103%	90% - 110%	3440	3560	103%	90% - 110%								
Pb	12200	11879	97%	90% - 110%	12200	11688	96%	90% - 110%								
Zn	9310	9172	99%	90% - 110%	9310	9346	100%	90% - 110%								

(201-078) Borate Fusion - Lithogeochemistry Analysis, ICP-MS finish

	CRM #1 (ref.SY-4)				CRM #2 (ref.SY-4)											
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Ba	340	304	89%	90% - 110%	340	368	108%	90% - 110%								
Ce	122	146	120%	90% - 110%	122	129	105%	90% - 110%								
Co	2.8	2.4	87%	90% - 110%	2.8	3.0	107%	90% - 110%								
Dy	18.2	19.3	106%	90% - 110%	18.2	20.1	110%	90% - 110%								
Er	14.2	14.8	104%	90% - 110%	14.2	15.4	108%	90% - 110%								
Eu	2	2	110%	90% - 110%	2	2	107%	90% - 110%								
Gd	14	16	116%	90% - 110%	14	15	107%	90% - 110%								
Hf	10.6	10.7	101%	90% - 110%	10.6	10.9	103%	90% - 110%								
Ho	4.3	4.7	109%	90% - 110%	4.3	4.5	104%	90% - 110%								
La	58	70	121%	90% - 110%	58	61	106%	90% - 110%								
Lu	2.1	2.2	103%	90% - 110%	2.1	2.1	99%	90% - 110%								
Nb	13	14	106%	90% - 110%	13	13	98%	90% - 110%								
Nd	57	62	109%	90% - 110%	57	60	105%	90% - 110%								
Ni	9	10	113%	90% - 110%												
Pr	15	17	116%	90% - 110%	15	16	105%	90% - 110%								
Rb	55	63	115%	90% - 110%	55	59	107%	90% - 110%								
Sm	12.9	13.4	104%	90% - 110%	12.9	14.1	109%	90% - 110%								
Sr	1191	1200	101%	90% - 110%	1191	1270	106%	90% - 110%								
Ta	0.9	0.8	91%	90% - 110%												
Tb	2.6	3.1	119%	90% - 110%	2.6	2.7	104%	90% - 110%								
Th	1.4	1.7	119%	90% - 110%	1.4	1.2	85%	90% - 110%								
Tm	2.3	2.4	105%	90% - 110%	2.3	2.3	102%	90% - 110%								
U					0.8	0.7	89%	90% - 110%								
V					8	6	74%	90% - 110%								

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Yb	14.8	14.8	100%	90% - 110%	14.8	16.3	110%	90% - 110%								
Zr	517	594	115%	90% - 110%	517	532	103%	90% - 110%								

(201-676) Lithium Borate Fusion - Summation of Oxides, XRF finish

	CRM #1 (SY-4)				CRM #2											
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Al2O3	20.69	20.7	100%	90% - 110%	20.69	20.71	100%	90% - 110%								
BaO	0.04	0.042	105%	90% - 110%	0.04	0.04	100%	90% - 110%								
CaO	8.05	7.86	98%	90% - 110%	8.05	7.91	98%	90% - 110%								
Fe2O3	6.21	6.23	100%	90% - 110%	6.21	6.17	99%	90% - 110%								
K2O	1.66	1.63	98%	90% - 110%	1.66	1.64	98%	90% - 110%								
MgO	0.54	0.541	100%	90% - 110%	0.54	0.52	96%	90% - 110%								
MnO	0.108	0.108	100%	90% - 110%	0.108	0.113	104%	90% - 110%								
Na2O	7.1	7.19	101%	90% - 110%	7.10	7.18	101%	90% - 110%								
P2O5	0.131	0.115	88%	90% - 110%	0.131	0.121	92%	90% - 110%								
SiO2	49.9	49.5	99%	90% - 110%	49.9	49.7	99%	90% - 110%								
TiO2	0.287	0.292	102%	90% - 110%	0.287	0.288	100%	90% - 110%								
SrO	0.1408	0.136	97%	90% - 110%	0.14	014		90% - 110%								
LOI					4.56	4.18	91%	90% - 110%								

(202-051) Fire Assay - Trace Au, AAS finish

	CRM #1 (ref.GS5Q)				CRM #2											
Parameter	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits								
Au	5.59	5.37	96%	90% - 110%												

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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 17B276250

PROJECT:

ATTENTION TO: .

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12020		ICP/OES
Al	MIN-200-12020		ICP/OES
As	MIN-200-12020		ICP/OES
B	MIN-200-12020		ICP/OES
Ba	MIN-200-12020		ICP/OES
Be	MIN-200-12020		ICP/OES
Bi	MIN-200-12020		ICP/OES
Ca	MIN-200-12020		ICP/OES
Cd	MIN-200-12020		ICP/OES
Ce	MIN-200-12020		ICP/OES
Co	MIN-200-12020		ICP/OES
Cr	MIN-200-12020		ICP/OES
Cu	MIN-200-12020		ICP/OES
Fe	MIN-200-12020		ICP/OES
Ga	MIN-200-12020		ICP/OES
Hg	MIN-200-12020		ICP/OES
In	MIN-200-12020		ICP/OES
K	MIN-200-12020		ICP/OES
La	MIN-200-12020		ICP/OES
Li	MIN-200-12020		ICP/OES
Mg	MIN-200-12020		ICP/OES
Mn	MIN-200-12020		ICP/OES
Mo	MIN-200-12020		ICP/OES
Na	MIN-200-12020		ICP/OES
Ni	MIN-200-12020		ICP/OES
P	MIN-200-12020		ICP/OES
Pb	MIN-200-12020		ICP/OES
Rb	MIN-200-12020		ICP/OES
S	MIN-200-12020		ICP/OES
Sb	MIN-200-12020		ICP/OES
Sc	MIN-200-12020		ICP/OES
Se	MIN-200-12020		ICP/OES
Sn	MIN-200-12020		ICP/OES
Sr	MIN-200-12020		ICP/OES
Ta	MIN-200-12020		ICP/OES
Te	MIN-200-12020		ICP/OES
Th	MIN-200-12020		ICP/OES
Ti	MIN-200-12020		ICP/OES
Tl	MIN-200-12020		ICP/OES
U	MIN-200-12020		ICP/OES
V	MIN-200-12020		ICP/OES
W	MIN-200-12020		ICP/OES
Y	MIN-200-12020		ICP/OES
Zn	MIN-200-12020		ICP/OES
Zr	MIN-200-12020		ICP/OES
Ag	MIN-200-12016		ICP-MS
As	MIN-200-12016		ICP-MS
Ba	MIN-200-12016		ICP-MS
Ce	MIN-200-12016		ICP-MS

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CANADA L4Z 1N9
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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON
AGAT WORK ORDER: 17B276250
PROJECT:
ATTENTION TO: .
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Co	MIN-200-12016		ICP-MS
Cs	MIN-200-12016		ICP-MS
Dy	MIN-200-12016		ICP-MS
Er	MIN-200-12016		ICP-MS
Eu	MIN-200-12016		ICP-MS
Gd	MIN-200-12016		ICP-MS
Hf	MIN-200-12016		ICP-MS
Ho	MIN-200-12016		ICP-MS
La	MIN-200-12016		ICP-MS
Lu	MIN-200-12016		ICP-MS
Mo	MIN-200-12016		ICP-MS
Nb	MIN-200-12016		ICP-MS
Nd	MIN-200-12016		ICP-MS
Ni	MIN-200-12016		ICP-MS
Pr	MIN-200-12016		ICP-MS
Rb	MIN-200-12016		ICP-MS
Sm	MIN-200-12016		ICP-MS
Sr	MIN-200-12016		ICP-MS
Ta	MIN-200-12016		ICP-MS
Tb	MIN-200-12016		ICP-MS
Th	MIN-200-12016		ICP-MS
Tl	MIN-200-12016		ICP-MS
Tm	MIN-200-12016		ICP-MS
U	MIN-200-12016		ICP-MS
V	MIN-200-12016		ICP-MS
W	MIN-200-12016		ICP-MS
Y	MIN-200-12016		ICP-MS
Yb	MIN-200-12016		ICP-MS
Zr	MIN-200-12016		ICP-MS
Al_2O_3	MIN-200-12027		XRF
BaO	MIN-200-12027		XRF
CaO	MIN-200-12027		XRF
Cr_2O_3	MIN-200-12027		XRF
Fe_2O_3	MIN-200-12027		XRF
K_2O	MIN-200-12027		XRF
MgO	MIN-200-12027		XRF
MnO	MIN-200-12027		XRF
Na_2O	MIN-200-12027		XRF
P_2O_5	MIN-200-12027		XRF
SiO_2	MIN-200-12027		XRF
TiO_2	MIN-200-12027		XRF
SrO	MIN-200-12027		XRF
V_2O_5	MIN-200-12027		XRF
LOI	MIN-200-12021		GRAVIMETRIC
Total	MIN-200-12027		CALCULATION
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS