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2018 REPORT ON
PROPERTY VISIT TO THE
IOCG JOINT VENTURE GROUP CLAIMS
AYLMER TOWNSHIP, ONTARIO

NTS 41115

January 15, 2019

Thomas Hart, P.Geo

Table of Contents

1.0 Introduction	3
2.0 Property Location, Access, and Description	3
3.0 PREVIOUS WORK	7
4.0 GEOLOGY	7
4.1. Regional Geology	7
4.2. Local Geology	10
4.3. Mineralization	11
5.0. 2018 Property Visit and Sampling	11
5.1. October 24	12
5.2. October 31	12
5.0 STATEMENT OF EXPENDITURE	17
6.0 Discussion	17
7.0 Recommendation	18
8.0 REFERENCES	19
9.0 STATEMENT of the author	20
Appendix A: Sample Descriptions	21
Appendix B – Analytical Certificates	24
Appendix B – Financial	25

List of Tables

Table 1: List of claims composing the IOCG Joint Venture Property

Table 2: Highlights of the sampling on the IOCG Group property (coordinates are UTM metres NAD 83, Zone 17)

Table 3: Summary of Expenditures

List of Figures

Figure 1: Property location map

Figure 2: IOCG Joint Venture Group claim map

Figure 3: Geology of Aylmer and Telfer townships after Dressler (1981); with claims outlined in white

Figure 4: Generalized stratigraphy of the Huronian Supergroup; Modified after Young (1991)

Figure 5: Claims map of the property with the locations of sampled collected in 2018.

Figure 6: Block of breccia from the East Quarry

Figure 7: Material submitted for analyses from the East Quarry.

Figure 8: Exposure of the material sampled along the east access road

Figure 9: West Quarry hill breccia with sulphide blebs

1.0 INTRODUCTION

This report has been prepared by Transition Metals to document of a property visit and sampling of the IOCG Joint Venture Group claims located in Alymer Township completed on October 24 and 31, 2018. The visit was conducted to examine quartz matrix breccia in units of the Gowganda Formation hosting copper and gold mineralization on the western end of the Mirage geophysical anomaly, north of Lake Wanapitei.

2.0 PROPERTY LOCATION, ACCESS, AND DESCRIPTION

The Property is located in north-central Alymer township at 46° 2.37' N latitude, 080° – 2.4' W longitude (UTM coordinates: Zone 17, NAD 83; 517500 m E, 5190000 m N), approximately 63 km north of Capreol by road (Fig. 1). The township is located within the Sudbury Mining Division and the District of Sudbury, Ontario. Access to the Property from Sudbury, Ontario, is north through Hamner and Capreol along highway 545 for approximately 10 km to the Portelance Road, after crossing the Wanapitei River turn south on to the Poupore Road. From Hamner, the distance to the property by road is approximately 63 km.

The Property is comprised of 42 single cell claims and one multi-cell mining claim covering approximately 1,455.2 hectares, as listed in Table 1, and shown in Figure 2. The claims are 100% held in the name of Tom Sheppard, a member of the IOCG Joint Venture Group. There are three claims due in 2019, two on August 2 and one on August 16 with the next due date being May 2020.

Table 1: List of claims composing the IOCG Joint Venture Property

Tenure	Township	Type	Anniversary Date	Percentage	Work Req.	Consult. Reserve	Expln. Reserve	Total Reserve
122139	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
125981	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
128088	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
137966	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
139625	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
148107	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
148108	AYLMER	Single Cell	2020-08-16	100	400	0	4	4
149476	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
153874	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
153875	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
166537	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
166645	AYLMER	Single Cell	2019-08-02	100	400	0	0	0
170521	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
177357	AYLMER	Single Cell	2020-05-24	100	400	0	0	0
178761	AYLMER	Single Cell	2020-08-16	100	400	0	47	47
178762	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
178763	AYLMER	Single Cell	2020-08-16	100	400	0	0	0

Tenure	Township	Type	Anniversary Date	Percentage	Work Reqd.	Consult Reserve	Explan. Reserve	Total Reserve
178764	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
186047	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
210379	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
210393	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
225325	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
227286	AYLMER	Single Cell	2020-08-16	100	400	0	8	8
229424	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
231953	AYLMER	Single Cell	2020-08-02	100	400	0	85	85
239390	AYLMER	Single Cell	2020-08-16	100	400	0	207	207
244102	AYLMER	Single Cell	2020-05-24	100	400	0	0	0
251454	AYLMER	Single Cell	2020-12-02	100	400	0	6	6
251455	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
252842	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
285806	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
285807	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
285808	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
298639	AYLMER	Single Cell	2020-08-16	100	400	0	3	3
302083	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
318737	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
318738	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
318739	AYLMER	Single Cell	2019-08-16	100	400	0	0	0
335723	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
335724	AYLMER	Single Cell	2020-12-02	100	400	0	0	0
340910	AYLMER	Single Cell	2019-08-02	100	400	0	29	29
345447	AYLMER	Single Cell	2020-08-16	100	400	0	0	0
524992	AYLMER, TELFER	Multi-cell	2020-06-25	100	9600	0	0	0

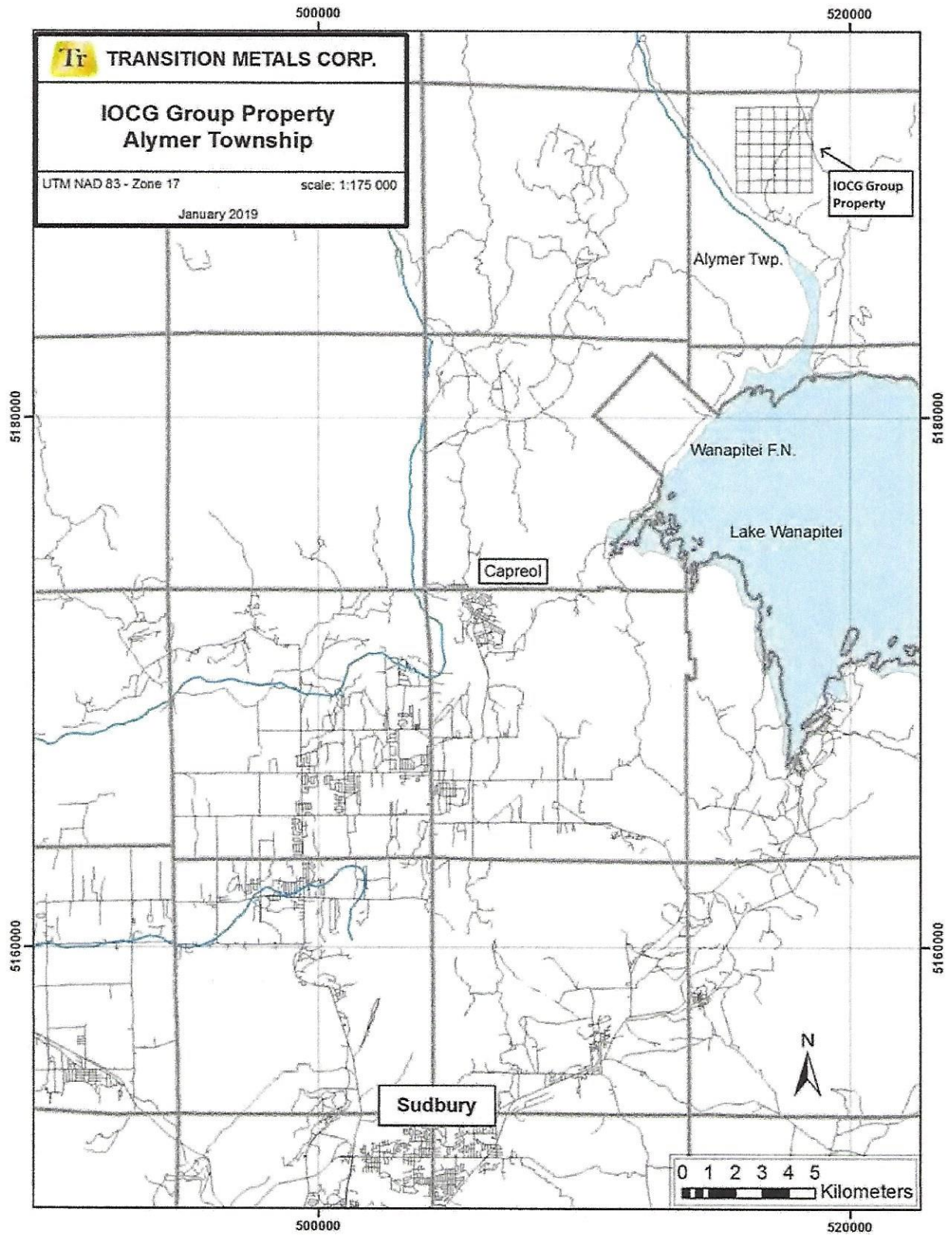


Figure 1: Property location map

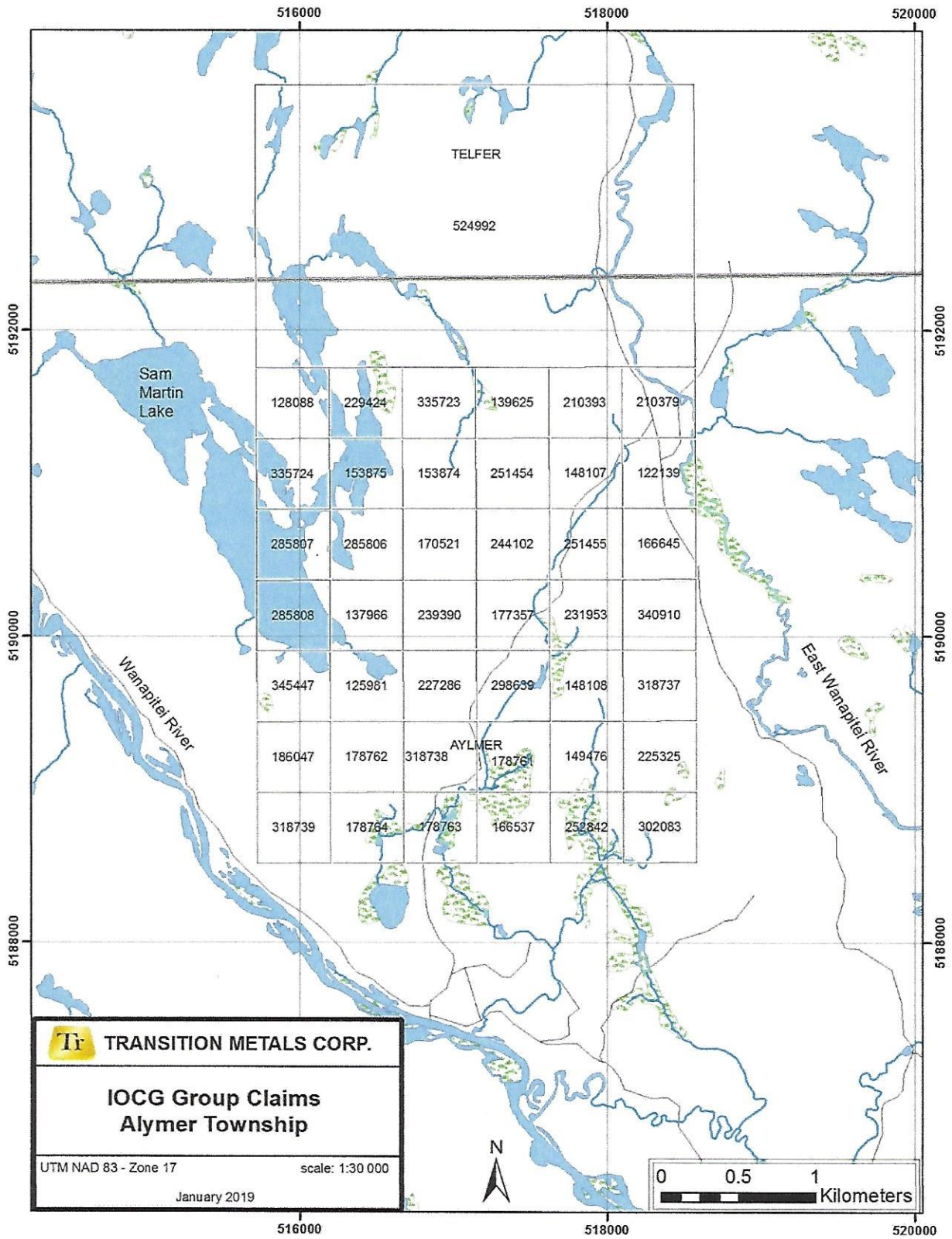


Figure 2: IOCG Joint Venture Group claim map

3.0 PREVIOUS WORK

Below is a brief summary of historical work conducted over the Property as compiled by Winter (2017).

1950- H. Barry discovered copper mineralization in the matrix of a breccia; a 2 m chip sample from 1949 returned 2.07% Cu. Three drill holes, 182.7 m, were drilled in 1952. A 4.1 m intersection adjacent to the showing was estimated to run 0.5% Cu.

1958 - Kennco Exploration completed an airborne EM and magnetic surveys, but no bedrock conductors were identified. Three pits were excavated and 2 packsack diamond drill holes were completed with scattered pyrite and trace chalcopyrite were present in the first hole but no sulphides were identified in the second hole.

1964 - R.C. Dennie drilled a 61 m hole in reporting pyrite in the core.

1965 - L.L. Billoki conducted an IP survey and completed two drill holes totalling 277 m reporting up to 10% pyrite and 2% chalcopyrite across 3 meters.

1979 - Kerr Addison Mines Limited completed ground VLF-EM and magnetometer surveys.

1991 - Falconbridge flew a GEOTEM fixed — wing airborne EM survey covering part of the current property. No anomalies were identified.

2002 - Roger Poulin investigated the property area for possible decorative stone quarrying.

2008 – 2017 - F. Delabbio reported on mapping, trenching, sampling, geophysics, soil sampling, and prospecting in claim 4203306 and adjacent areas on the behave of the IOCG Joint Venture Group. Copper values of 1.8% Cu and 0.25% Cu were reported. VLF and vertical loop ground EM surveys indicated the presence of possible conductors.

2011 – Geotech conducted an airborne VTEM – horizontal magnetic gradient survey for the IOCG Joint Venture Group covering 9 km² over 51 line kilometres. Geotech stated that the area does not have anomalies that have EM response.

2017 – S. Winter completed a mapping and sampling program for the IOCG Joint Venture Group.

4.0 GEOLOGY

4.1. Regional Geology

The property is located in the south portion of the Cobalt Embayment, northeast of the Sudbury Igneous Complex. Rocks of the Huronian Supergroup have been intruded by sills, dykes and irregular bodies of Nipissing gabbro (Fig. 3). Archean age rocks of the Superior Province occur to the west, while metasedimentary and intrusive rocks of the Grenville Province occur to the south. Several Sudbury olivine diabase dykes cut the older lithologies. Bedrock is locally well exposed.

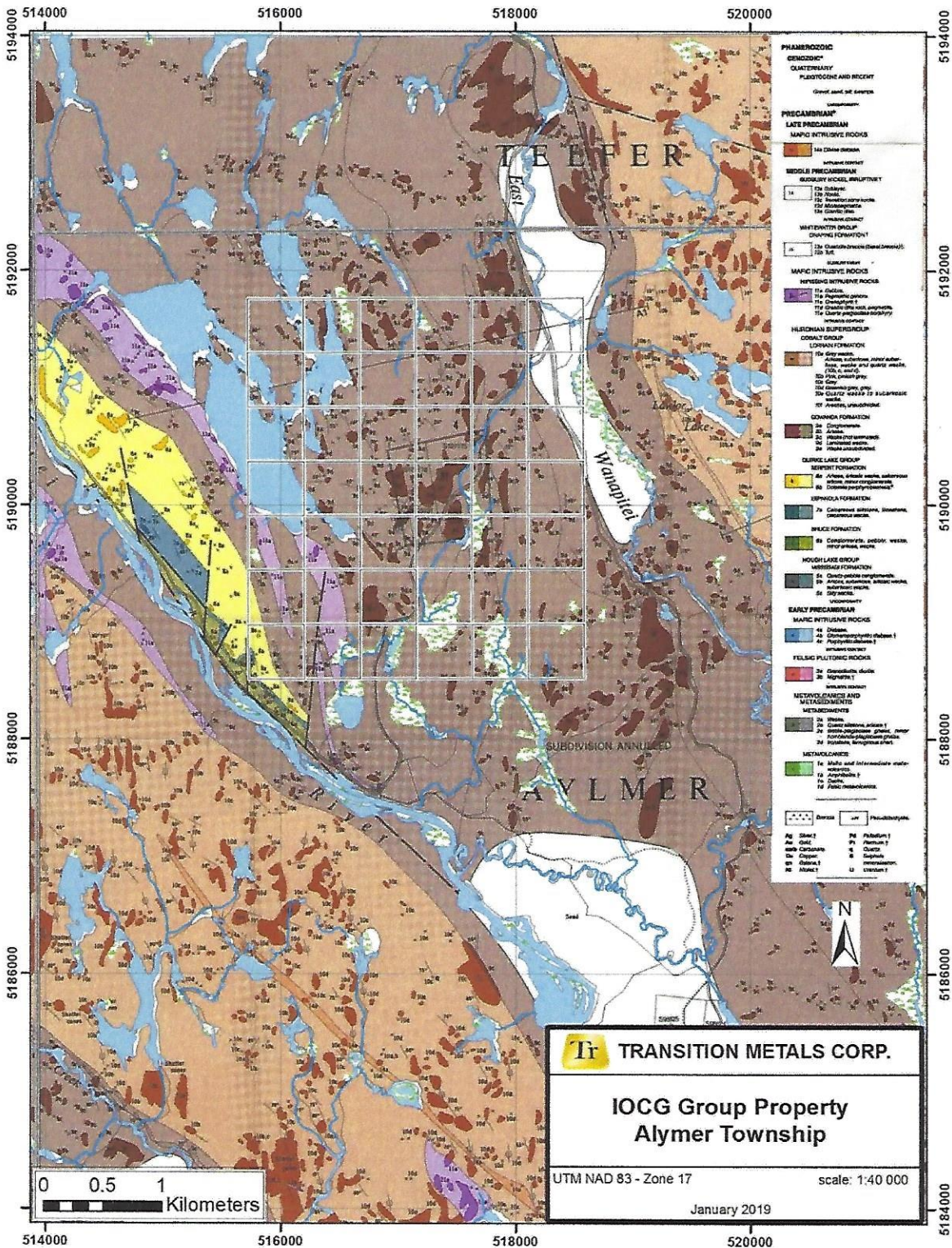


Figure 3: Geology of Aylmer and Telfer townships after Dressler (1981); with claims outlined in white

The Huronian metasedimentary rocks lie unconformably above the Archean basement. They are part of the Huronian Supergroup, portions of which extend across the region from Sault Ste. Marie in the west to the Cobalt area near the Quebec border in the east. The Huronian sediments are interpreted to have been deposited during a period of marine transgression from south to north, commencing with sandstones, conglomerates and argillites with local intercalated mafic volcanics followed by more mature clastic sediments and marine evaporates. The sediments are thought to have been deposited from the northwest towards the southeast, with the clastic material derived from gradual uplift of the foreland to the north. The unconformity with the basement rocks is sharply defined in some places and at others is represented by several meters of regolith. The Huronian Supergroup has been divided into four groups, each containing several formations, as seen summarized after Young (1991), (Figure 4).

The primary intrusive event affecting the region was the emplacement of the Nipissing diabase sills and dykes which are dated at 2120 Ma. The sills and dykes were folded during the Penokean Orogeny and metamorphosed to greenschist facies. The Nipissing diabase is found as intrusions in the Huronian sediments and also the underlying Archean rocks.

The major structural event that deformed the Huronian sediments was the Penokean Orogeny, which affected the region between about 1850 Ma and 1750 Ma. The deformation caused by the Penokean Orogeny resulted in folding and thrust faulting of the Huronian sediments. The Murray fault system and Onaping fault systems are composed predominantly of strike-slip faults that were formed sometime after the Grenville Orogeny (post 1000 Ma). In the area of the property, the major fold axes trend approximately north-south. The major north-northwest fault is the McLaren Lake-Wanapitei River Fault; the major north-south faults are the McLaren Creek and Laundry Lake Faults.

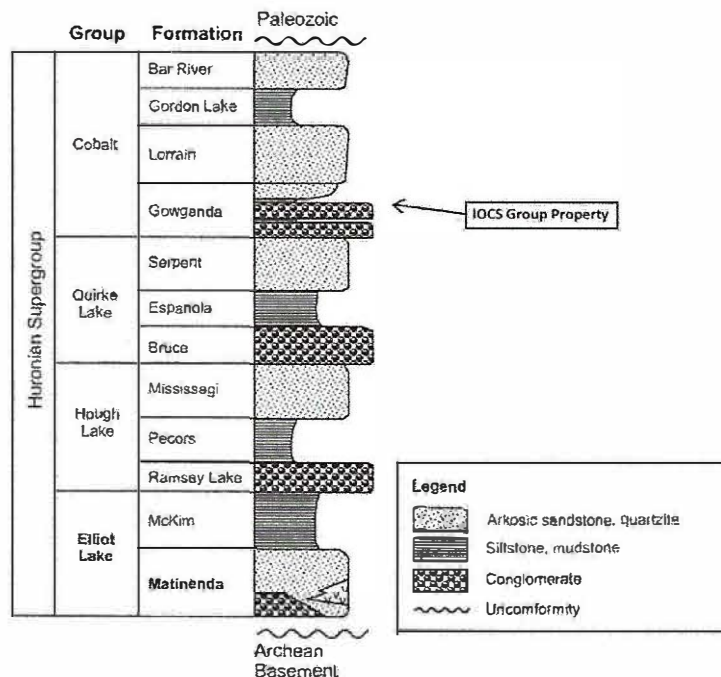


Figure 4: Generalized stratigraphy of the Huronian Supergroup; Modified after Young (1991)

4.2. Local Geology

The Gowganda Formation is the basal formation of the Cobalt Group and underlies the Property (Figure 3 and 4). This formation is composed of conglomerates, sandstones, quartzites, siltstones and argillites but consists wackes, sandstones and siltstones, in the area of the property. A northwest-trending exposure of Nipissing gabbro is located in the southwest part of the property. Structurally, the property lies on the western limb of a syncline trending north-north west. Overburden consists of a coarse glacial till ranging from a few centimetres to several meters in depth.

Alteration appears to be dominantly albitic (pink) with chloritization and carbonatization. The wackes appear to be very fine grained, chloritized and albitized. Mineralization in the central part of the property area consists of a number of showings mainly composed of coarse breccias with quartz and or carbonate as the matrix plus variable amounts of pyrites, chalcopyrite, and in some cases bornite. A dark green-black chlorite accompanies some of the quartz veining and mineralization. Much of the pyrite occurs as coarse, disseminated cubes. In some locations the breccia matrix hosts cubic shaped cavities filled with limonite which may be a weathering product of the pyrite. Regionally in some of the showings, gold values are reported, associated with the copper mineralization.

Some of the breccia bodies appear to be more or less "stratiform" however others are crosscutting. On a property in Scadding township to the southeast, similar mineralization shows a crude zoning of hydrothermal alteration in breccia near gold mineralization. The pattern of alteration from proximal to distal includes:

- Green chloritic breccia with quartz + ankerite + sulphide stringers and/or matrix material.
- Pink albitic + hematitic breccia with coarse dolomite + quartz stringers and/or matrix material.

On the property the East Quarry breccia appears to be controlled by a near vertical north trending structure with an indeterminate width due to the limited exposure. But the structure appeared to narrow towards the north. The orientation of the West Quarry difficult to determine as the limits of the breccia were only observed in plan. However, the exposures in the quarry face and in outcrop downhill from the quarry, along with intersections in historical drill holes, suggest the potential for a greater vertical and horizontal extent. Dressler (1981) described the mineralization and brecciation as appearing to be related to a minor east steeply dipping fault. The brecciation and hydrothermal impregnations of the breccia by quartz and carbonate are not uncommon in the vicinity of the property. A thin gabbro dike was observed just west of the mineralized showing.

4.3. Mineralization

There is a broad regional structural zone in the order of 14 to 15 km wide that extends from the Grenville Front, northwest from Dana, Janes, Davis and Scadding townships and that then turns to trend more north-north westerly through the eastern part of Wanapitei Lake and the area to the east of the lake. From here the zone continues through the eastern part of Fraleck and Aylmer townships. The western limit of the structural zone is the upper Wanapitei Fault which follows the Wanapitei River. The Property lies approximately 1 km east of this major fault in Aylmer township (Fig. 3).

Gates (1991) describes in the order of 30 mineral showings or occurrences that for the most part lie within the indicated structural zone and of these, in the order of 25 are characterized by soda metasomatism as expressed by albitization. The associated mineralization varies from quartz veins with pyrite and chalcopyrite to breccia bodies mineralized with quartz, pyrite and chalcopyrite. Also, arsenopyrite is not uncommon.

Iron carbonate alteration and silicification are usually present and all zones appear to be structurally controlled. The property in Aylmer township is not described by Gates (1991), however, it falls within the indicated structural zone and shows the same features of soda metasomatism etc. as for the majority of the occurrences described in OFR 5771.

A paper given by Martinsson (2011), at the Iron Oxide Copper Gold (IOCG) Workshop in Antatagasta, Chile in 2011, provides a review of IOCG deposits in the northern part of the Fennoscandia Shield and of particular interest are the "Au-type IOCG Deposits". Described as having the following typical features;

- Albite, sericite, carbonate, biotite, quartz and tourmaline alteration,
- Au, Co, Cu, As, Ni, Bi, Te, Mo, Zn, U metal association,

One deposit of note, the Suurikuusikko (18.2Mt @5.1ppm Au), is structurally controlled and mineralization occurs in brecciated and albite—carbonate altered schist and mafic volcanic rocks, associated with disseminated sulphides. The gold, in this example, is hosted within arsenopyrite (71%) and pyrite (22%). It was proposed by Winter (2017) that the Fennoscandian IOCG —Type gold deposits, those described by Gates (1991) and the mineralization on the IOCG Joint Venture Group property are all Au-type, IOCG deposits.

5.0. 2018 PROPERTY VISIT AND SAMPLING

On October 24 and 31, 2018, Transition geologists Grant Mourre and Tom Hart visited the property to determine the degree of interest that Transition Metals may have in optioning the property from the IOCG Group. On October 24, the visit was conducted by Stewart Winter and the East and West quarries were visited and sampled. On October 31, the breccia pit and gold

occurrence located south of the West Quarry was visited and sampled. The highlights of the sampling are contained in Table 2, the sample descriptions are contained in Appendix A and the analytical certificates are contained in Appendix B.

5.1. October 24

A total of eight samples were collected on the October 24 visit from the East Quarry, West Quarry access road and the West Quarry. The East Quarry is located in claim 244102 and exposes a north-trending structure hosting brecciated wackes of the Gowganda Formation (Fig. 5). The breccias consist of angular to subangular blocks of wacke in a quartz +/- carbonate matrix with variable amounts of chlorite (Fig. 6). A quartz vein hosting extremely altered fragments of wallrock, chlorite and pyrite was sampled from the north end of the quarry (Fig. 7). This sample returned 5.93% Cu and 0.441 ppm Au but is not typical of the quartz veining exposed in the area (Table 2).

The West Quarry access and West Quarry samples are located in claim 177357 (Fig. 5). Two samples of the quartz matrix breccia was collected along the east access road to the quarry (Fig. 8), and appear to correlate with the gold occurrence sampled on October 31 along the south access road. Neither sample returned anomalous gold or copper values.

5.2. October 31

A total of eight samples were collected on the October 31 visit from the area of the west entrance to the West Quarry. Three samples were collected from the quartz matrix breccia exposed on the hill top above the West Quarry (Fig. 5). Three of the samples were collected from a pit located on the hillside which exposed brecciated siltstone with a quartz +/-carbonate matrix and minor disseminated to poddy pyrite and chalcopyrite (Fig. 5). Three samples were collected from the Cu breccia, a breccia similar in appearance to the pit. The breccia is exposed approximately 25 m to the east of the pit and hosts a sulphide content of up to 20% in patches tens of centimetres in diameter. The final two samples were collected on the hill, above the previous six samples, and along strike with the quartz-matrix breccia represented by sample L783546. The best results were observed in sample L782578 which returned 6930 ppm Cu from the Cu breccia.

Table 2: Highlights of the sampling on the IOCG Group property (coordinates are UTM metres NAD 83, Zone 17)

Sample	East	North	Showing	Description	Au (ppm)	Bi (ppm)	Cu (ppm)	In (ppm)	Mo (ppm)	Sn (ppm)	Te (ppm)
L782572	517169	5190145	West Quarry	brecciated greywacke	0.018	0.09	4.7	0.008	1.3	0.3	0.05
L782573	517173	5190143	West Quarry	brecciated greywacke	0.006	0.07	4.7	0.007	1.19	0.5	0.08
L783545	517569	5190636	East Quarry	brecciated greywacke	0.441	1.87	59300	0.916	0.89	0.7	0.44
L783546	517320	5190092	west	siltstone	0.03	0.23	41.8	0.007	1.49	0.3	0.13

Sample	East	North	Showing	Description	Au (ppm)	Bi (ppm)	Cu (ppm)	In (ppm)	Mo (ppm)	Sn (ppm)	Te (ppm)
			quarry road								
L783547	517349	5190150	west quarry road	brecciated sandstone	<0.001	0.03	41.4	<0.005	0.92	0.2	<0.05
L783548	517183	5190223	West Quarry	sandstone	0.038	0.5	4.6	<0.005	2.92	0.2	0.17
L783549	517183	5190222	West Quarry	sandstone	0.001	0.09	6.9	<0.005	1.35	0.2	0.1
L783550	517182	5190198	West Quarry	quartz vein	<0.001	0.46	4.5	<0.005	1.68	0.2	0.32
L782575	517234	5189868	Pit 1	brecciated siltstone	0.001	0.02	8.5	0.01	0.6	2.2	<0.05
L782576	517234	5189868	Pit 1	brecciated siltstone	<0.001	0.04	228	0.015	0.7	2	<0.05
L782577	517234	5189868	Pit 1	brecciated siltstone	<0.001	0.06	390	0.018	1.06	1.5	<0.05
L782578	517251	5189869	Cu Bx	brecciated siltstone	0.02	0.91	6930	0.063	0.61	1.9	<0.05
L782579	517254	5189868	Cu Bx	brecciated siltstone	0.009	1.59	6660	0.062	0.38	1.8	<0.05
L782580	517257	5189869	Cu Bx	brecciated siltstone	0.015	2.85	5730	0.057	0.93	2	0.06
L782581	517249	5190045	Hillside	siltstone	0.02	0.45	17.4	0.005	5.28	0.4	0.39
L782582	517254	5190044	Hillside	siltstone	0.175	1.24	7.7	<0.005	15.7	0.2	2.8

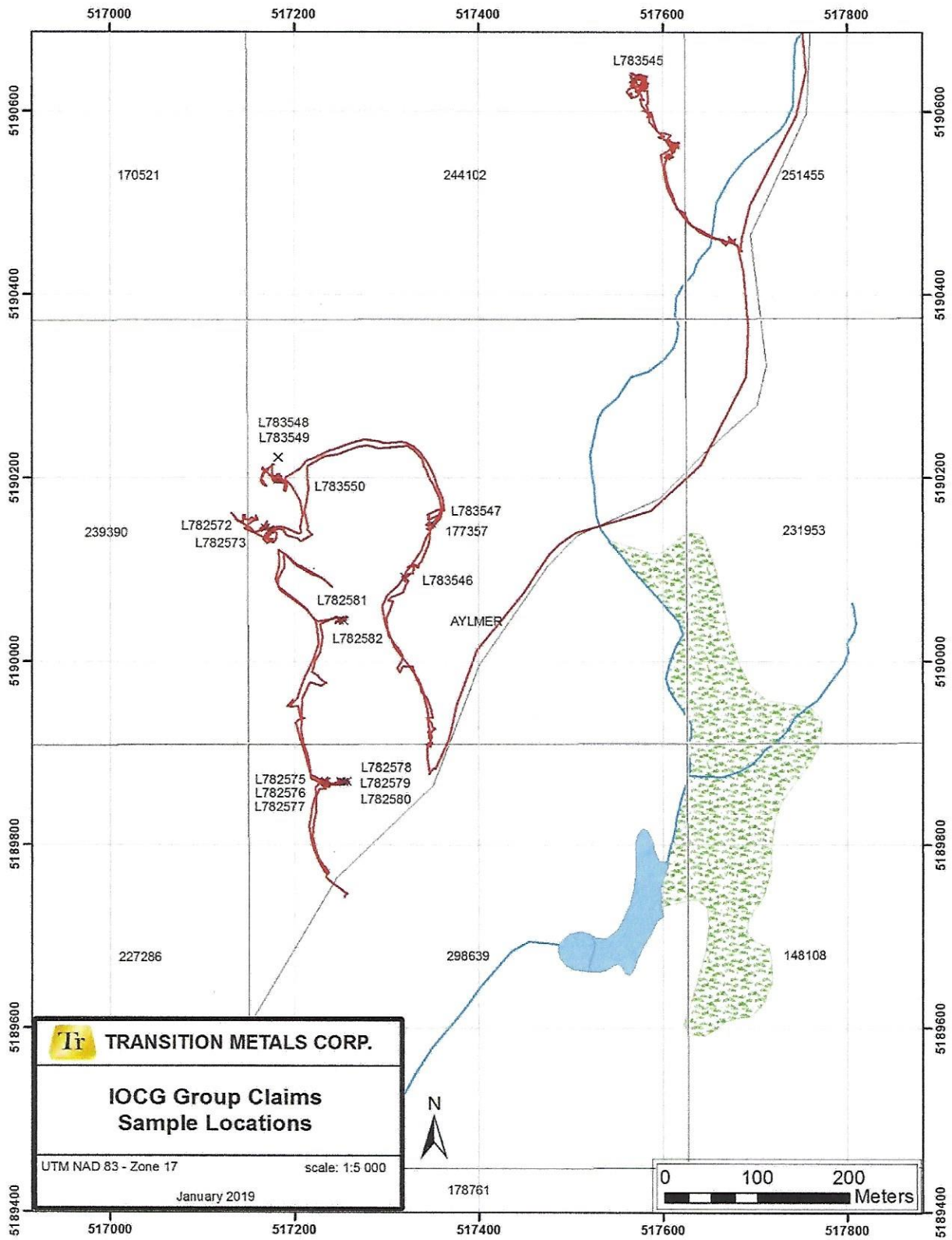


Figure 5: Claims map of the property with the locations of sampled collected in 2018.



Figure 6: Block of breccia from the East Quarry



Figure 7: Material submitted for analyses from the East Quarry.



Figure 8: Exposure of the material sampled along the east access road



Figure 9: West Quarry hill breccia with sulphide blebs

5.0 STATEMENT OF EXPENDITURE

The total value of work done on the IOCG Group Property is summarized in Table 3.

Table 3: Summary of expenditures

Work Performed						
Category	From date	To date	Invoice	Costs (\$)	Cost+HST (\$)	Subtotal
Geological Survey			geologist			
	01/10/2018	31/10/2018	Grant Mourre - salary 2 days	\$1,180		
	01/10/2018	31/10/2018	1810.2 - 2 days	\$1,100	\$1,243	
	01/11/2018	30/11/2018	1811.2 - 5 days - research and report	\$2,750	\$3,108	
						\$5,531
Associated Costs						
Assays						
		14/11/2018	4508456		\$942	
						\$942
Transportation						
	vehicle mileage					
	01/10/2018	31/10/2018	2 trips 178 km @ \$0.55 / km	\$196		
						\$196
					Total	\$6,668

6.0 DISCUSSION

Gates (1991) describes a 14 to 15 km wide regional structural zone that extends from the Grenville Front through the eastern part of Wanapitei with the western limit being the upper Wanapitei Fault which follows the Wanapitei River. This would mean that the Property lies within this structural zone which hosts in the order of 30 mineral showings or occurrences, many of which are characterized by soda metasomatism and associated quartz veins with pyrite and chalcopyrite to breccia bodies with quartz, pyrite and chalcopyrite. The IOCG Group interprets this alteration and mineralization to be an expression of iron oxide copper (gold) (IOCG) mineralization. Although the Property has some of the characteristic of an IOCG deposit, there are other mineralized occurrences in the area that do not seem to fit this model and recent work to the east has suggested the presence of Sudbury style breccia.

Debicki (1987) reported that soda metasomatism described as incipient to nearly 100% replacement by albite, had been reported in Huronian Supergroup rocks from Sault Ste. Marie to possibly Cobalt. The alteration is thought have occurred between 1.85 and 1.20 billion years ago, and would have been post Nipissing gabbro and post Sudbury Igneous Complex but pre-Sudbury diabase. The metasomatized rocks range from massive to strongly brecciated with the sequence in the area east of Lake Wanapitei as being

albite followed by carbonate rhombohedra, and quartz or chlorite with secondary events that may include quartz flooding, introduction of carbonate, chloritization, sulphide and copper-gold minerals.

Similar breccias have been observed in the Doherty Lake – Sturgeon River area, over 15 km to the north of the IOCG Group Property, and may be associated with gold mineralization in the Doherty Lake area. Although both Gates (1991) and Debicki (1987) highlighted the area to the east of Lake Wanapitei, there is mention of a wider spread metasomatic event in the Huronian Supergroup. The difference with the Lake Wanapitei area may be the presence of the past-producing Scadding and Norstar deposits possibly indicative of a mineralization event in combination with the metasomatism.

7.0 RECOMMENDATION

This property is located within the regional structural zone that extends north from the Grenville Front, and hosts breccias and metasomatic alteration seems to occur in some locations within rocks of the Huronian Supergroup. The presence of sulphide mineralization hosting copper mineralization suggests a potential copper-gold mineralization of an IOCG style as proposed by Gates (1991).

It is recommended that as program of soil sampling be completed to extend the current coverage and to help define the possible extent of mineralization. The sampling should be followed up by a diamond drill program to test the breccia at depth.

8.0 REFERENCES

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- Smith, D., 2014. Site Visit, Delabbio Property, Aylmer Township, Ontario, Canada, 10 p.
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9.0 STATEMENT OF THE AUTHOR

I, Thomas Hart do hereby certify that:

- 1) I reside at 2404 Algonquin Road, Sudbury, Ontario P3E 5V1,
- 2) I graduated with a M.Sc. (Geology) degree in 1984 from the University of Toronto.
- 3) I have been practicing my profession in Canada since 1984, as an exploration geologist (an employee and independent consultant) on precious and base metal projects with exploration/mining companies in Canada, and as a mapping geologist with the Ontario Geological Survey.
- 4) I am the proprietor of Hart Geoscience Inc., a consulting company based in Sudbury Ontario contracted by Transition Metals Corp. to provide management services with respect to on-going exploration and development activities on their properties in Ontario. In this capacity, I am authorized to act as an Agent of the Company.
- 4) I am a member of the Association of Professional Geoscientists of Ontario
- 7) I supervised the portions of this work program and writing of the technical report.

Signed this 15 of January, 2019 in the City of Sudbury, Ontario

Thomas Hart, M.Sc., P. Geo.

APPENDIX A: SAMPLE DESCRIPTIONS

Sample	East	North	Area	Showing	Type	Description
L782572	517169	5190145	Alymer Twp.	West Quarry	rubble	bx'd Gowganda gwke w vuggy qtz mtx and diss to blebby, cg, 3-5% py/cpy
L782573	517173	5190143	Alymer Twp.	West Quarry	rubble	bx'd Gowganda gwke w diss f-mg, 2-3% py/cpy
L782574					std	Standard
L783545	517569	5190636	Alymer Twp.	East Quarry	rubble	bx'd Gowganda gwke w vuggy qtz mtx and diss to blebby, cg, 3-5% py/cpy
L783546	517320	5190092	Alymer Twp.	west quarry road	grab	pink altd Gowganda siltstone w patchy to diss 20-30% mg py
L783547	517349	5190150	Alymer Twp.	west quarry road	grab	pink altd Gowganda sandstone w qtz mtx
L783548	517183	5190223	Alymer Twp.	West Quarry	grab	gossan in altd Gowganda sandstone w diss 5-10% f-mg py/cpy
L783549	517183	5190222	Alymer Twp.	West Quarry	grab	gossan in altd Gowganda sandstone w diss 3-5% f-mg py/cpy
L783550	517182	5190198	Alymer Twp.	West Quarry	grab	qtz vn w blebby to cg py/cpy in altd Gowganda sandstone
L782575	517234	5189868	Alymer Twp.	Pit 1	grab	light brown-tan, highly altered siltstone, bxd with qtz-chlc-carb mtx, 2-3% fg py
L782576	517234	5189868	Alymer Twp.	Pit 1	rubble	light brown-tan, highly altered siltstone, bxd with qtz-chlc-carb mtx, 3-5% fg py
L782577	517234	5189868	Alymer Twp.	Pit 1	grab	light brown-tan, highly altered siltstone, bxd with qtz-chlc-carb mtx, 3-5% fg py
L782578	517251	5189869	Alymer Twp.	Cu Bx	grab	med brown, highly altered siltstone, bxd with qtz-chlc-carb mtx, 5-15% m-fg py, cpy, mi mal
L782579	517254	5189868	Alymer Twp.	Cu Bx	rubble	med brown, highly altered siltstone, bxd with qtz-chlc-carb mtx, 5-15% m-fg py, cpy, mi mal
L782580	517257	5189869	Alymer Twp.	Cu Bx	grab	med brown, highly altered siltstone, bxd with qtz-chlc-carb mtx, 5-15% m-fg py, cpy, mi mal
L782581	517249	5190045	Alymer Twp.	Hillside	rubble	as L783546 - pink altd Gowganda siltstone w patchy to diss 20-30% mg py
L782582	517254	5190044	Alymer Twp.	Hillside	rubble	as L783546 - pink altd Gowganda siltstone w patchy to diss 20-30% mg py

APPENDIX B – ANALYTICAL CERTIFICATES



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Finalized Date: 14- NOV- 2018
Account: TRAMET

CERTIFICATE SD18275182

This report is for 17 Rock samples submitted to our lab in Sudbury, ON, Canada on 31- OCT- 2018.

The following have access to data associated with this certificate:

JAKE BURDEN
GRANT MOURRE

GREG COLLINS

THOMAS HART

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
LOG- 23	Pulp Logini- Rcvd with Barcode
CRU- 21	Crush entire sample > 70% - 6 mm
CRU- 31	Fine crushing - 70% < 2mm
SPL- 21	Split sample - riffle splitter
PUL- 32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu+ Four Acid	
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	WEI- 21	Au- ICP21	ME- MS61	ME MS61	ME- MS61	ME MS61	ME- MS61	ME MS61	ME- MS61	ME MS61	ME- MS61	ME MS61	ME- MS61	ME MS61	ME- MS61	ME MS61
		Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	
		kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
		0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	
L783545		1.67	0.441	0.49	3.94	7.8	210	0.50	1.87	3.35	<0.02	442	6.9	49	1.07	>10000	
L783546		2.35	0.030	0.03	8.71	108.0	30	0.73	0.23	0.20	<0.02	60.2	62.1	248	0.25	41.8	
L783547		0.90	<0.001	<0.01	3.78	2.3	20	0.45	0.03	0.22	<0.02	24.8	1.5	58	0.24	41.4	
L783548		0.75	0.038	0.02	7.76	322	30	0.69	0.50	0.06	<0.02	12.50	560	74	0.19	4.6	
L783549		0.70	0.001	<0.01	7.29	201	20	0.58	0.09	0.13	<0.02	20.2	208	53	0.10	6.9	
L783550		1.95	<0.001	0.02	5.26	132.5	30	0.68	0.46	0.85	<0.02	35.7	482	65	0.22	4.5	
L782572		1.78	0.018	0.01	5.61	82.4	40	0.62	0.09	1.65	<0.02	34.1	112.0	65	0.33	4.7	
L782573		1.22	0.006	<0.01	7.88	87.6	100	1.57	0.07	1.92	0.02	134.0	173.0	96	0.24	4.7	
L782574		0.07	2.48	4.91	5.59	21.2	360	1.02	0.09	4.23	0.36	24.6	11.5	25	6.12	74.1	
L782575		1.13	0.001	0.01	7.69	1.5	30	1.33	0.02	0.36	<0.02	76.5	1.2	105	0.16	8.5	
L782576		1.01	<0.001	<0.01	7.90	2.6	50	1.41	0.04	0.90	<0.02	123.0	3.0	112	0.23	228	
L782577		1.89	<0.001	<0.01	8.23	2.2	20	1.58	0.06	1.57	0.02	105.0	0.9	116	0.07	390	
L782578		1.64	0.020	0.03	7.69	3.3	50	1.56	0.91	2.53	0.03	73.8	92.3	122	0.15	6930	
L782579		1.20	0.009	0.03	6.92	4.5	40	1.35	1.59	4.35	<0.02	91.0	34.2	103	0.20	6660	
L782580		1.17	0.015	0.05	6.89	7.3	50	1.26	2.85	4.23	<0.02	91.7	54.0	115	0.22	5730	
L782581		2.66	0.020	0.03	8.04	149.0	10	0.83	0.45	0.65	<0.02	30.3	775	123	0.07	17.4	
L782582		1.25	0.175	0.10	7.88	396	20	0.74	1.24	0.36	<0.02	28.5	839	193	0.13	7.7	



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CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	
		Fe %	Ga ppm	Ge ppm	Hf ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm
L783545		6.58	10.45	0.53	1.5	0.916	1.13	234	4.2	2.11	355	0.89	1.74	1.7	31.7	300
L783546		4.95	22.8	0.13	4.4	0.007	0.49	29.7	0.4	0.08	51	1.49	7.06	1.1	30.3	670
L783547		0.48	8.97	0.08	1.2	<0.005	0.26	12.6	0.7	0.09	102	0.92	3.02	1.4	2.6	230
L783548		3.91	17.85	0.09	2.7	<0.005	0.48	5.6	0.2	0.01	27	2.92	6.87	2.1	37.0	60
L783549		3.54	15.20	0.08	3.1	<0.005	0.28	10.0	0.2	0.02	34	1.35	6.43	2.5	15.9	180
L783550		5.69	11.05	0.13	1.8	<0.005	0.30	17.7	0.5	0.33	136	1.68	4.01	1.8	72.5	450
L782572		1.66	9.46	0.10	2.2	0.008	0.30	17.0	1.0	0.63	350	1.30	4.27	3.1	87.2	460
L782573		2.61	21.2	0.20	3.8	0.007	0.61	61.7	2.8	0.95	446	1.19	5.93	5.2	49.6	650
L782574		3.23	11.20	0.13	1.9	0.053	2.44	11.7	43.6	0.99	741	6.87	0.94	2.3	11.2	660
L782575		0.59	16.50	0.15	3.4	0.010	0.86	37.8	6.5	0.29	96	0.60	6.46	7.2	13.5	700
L782576		0.56	18.30	0.22	3.7	0.015	0.56	62.0	5.8	0.59	89	0.70	6.48	8.6	19.2	750
L782577		0.44	18.90	0.20	4.0	0.018	0.26	52.5	2.1	0.74	679	1.06	7.40	8.9	9.6	980
L782578		1.31	21.5	0.18	3.4	0.063	0.44	34.8	4.1	0.19	333	0.61	6.55	6.2	31.0	690
L782579		2.50	17.10	0.21	2.9	0.062	0.45	44.8	11.0	0.57	357	0.38	4.98	4.5	26.7	510
L782580		2.56	17.70	0.20	2.9	0.057	0.54	45.2	10.1	0.49	337	0.93	5.04	4.6	34.2	540
L782581		7.23	22.0	0.13	4.0	0.005	0.25	14.8	0.3	0.08	43	5.28	6.65	3.9	103.5	290
L782582		8.45	20.6	0.12	3.1	<0.005	0.66	14.2	1.3	0.17	82	15.70	6.35	1.6	415	400

***** See Appendix Page for comments regarding this certificate *****



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CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm
L783545		2.9	36.6	<0.002	4.09	1.83	5.6	43	0.7	39.7	0.16	0.44	4.12	0.078	0.16	1.9
L783546		3.1	10.7	<0.002	1.89	0.50	8.2	5	0.3	47.9	0.14	0.13	12.75	0.051	0.03	3.7
L783547		0.7	2.9	<0.002	0.02	0.36	4.5	<1	0.2	25.9	0.13	<0.05	3.82	0.071	<0.02	1.1
L783548		1.3	6.1	<0.002	3.17	0.32	1.5	5	0.2	68.9	0.21	0.17	3.34	0.090	0.02	1.8
L783549		3.2	3.9	<0.002	1.36	0.30	3.9	4	0.2	55.3	0.26	0.10	5.64	0.097	0.02	1.9
L783550		1.5	7.2	<0.002	5.79	0.33	12.2	11	0.2	53.4	0.17	0.32	5.52	0.057	0.02	1.6
L782572		2.1	7.2	<0.002	0.58	0.42	12.0	1	0.3	69.6	0.30	0.05	6.80	0.138	0.03	2.0
L782573		1.2	15.8	<0.002	0.54	0.43	33.5	3	0.5	76.9	0.51	0.08	10.65	0.220	0.03	2.6
L782574		20.4	88.6	0.003	0.89	2.37	13.5	1	0.8	294	0.13	2.74	2.67	0.295	0.96	0.7
L782575		2.4	9.1	<0.002	<0.01	1.35	8.0	<1	2.2	34.4	0.73	<0.05	14.15	0.314	0.02	3.5
L782576		1.1	20.0	<0.002	0.04	1.03	14.1	<1	2.0	39.6	0.83	<0.05	20.3	0.301	0.04	4.0
L782577		1.4	3.3	<0.002	0.03	0.93	14.5	1	1.5	46.6	0.89	<0.05	22.0	0.317	0.02	5.5
L782578		2.2	11.4	<0.002	0.68	0.78	17.0	1	1.9	46.5	0.63	<0.05	11.60	0.233	0.04	4.0
L782579		2.4	16.8	<0.002	1.07	1.06	17.9	3	1.8	44.2	0.48	<0.05	10.95	0.173	0.05	2.7
L782580		3.4	18.5	<0.002	1.43	1.18	18.4	2	2.0	40.0	0.48	0.06	12.05	0.183	0.05	2.7
L782581		1.6	2.0	<0.002	6.86	0.47	5.1	14	0.4	37.4	0.41	0.39	9.54	0.131	0.02	4.5
L782582		3.7	6.5	<0.002	6.25	0.53	18.8	7	0.2	29.9	0.18	2.80	7.36	0.069	0.04	2.6



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CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	CRU-QC	PUL-QC
		V ppm 1	W ppm 0.1	Y ppm 0.1	Zn ppm 2	Zr ppm 0.5	Cu % 0.001	Pass2mm % 0.01	Pass75um % 0.01
L783545		44	0.5	22.8	5	52.6	5.93	76.3	88.3
L783546		180	0.7	6.7	3	154.5			95.8
L783547		45	0.5	3.9	2	41.9			
L783548		47	0.7	2.3	<2	94.5			
L783549		37	0.8	3.1	<2	111.0			
L783550		69	0.3	17.5	<2	62.2			
L782572		60	0.4	5.8	2	77.1			
L782573		123	1.0	9.0	<2	129.5			
L782574		108	3.4	11.0	94	67.1			
L782575		73	2.4	14.3	<2	119.5			
L782576		103	2.9	16.5	<2	126.0			
L782577		62	2.6	18.4	3	138.5			
L782578		148	1.2	23.7	<2	119.5			
L782579		88	1.0	24.7	<2	99.1			
L782580		89	1.0	24.2	<2	100.5			
L782581		79	1.5	7.3	2	132.5			
L782582		166	1.0	5.3	2	102.0			



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CERTIFICATE OF ANALYSIS SD18275182

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME- MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Sudbury located at 1351- B Kelly Lake Road, Unit #1, Sudbury, ON, Canada.
CRU- 21 CRU- 31 CRU- QC LOG- 22
LOG- 23 PUL- 32 PUL- QC SPL- 21
WEI- 21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au- ICP21 Cu- OG62 ME- MS61 ME- OG62



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QC CERTIFICATE SD18275182

This report is for 17 Rock samples submitted to our lab in Sudbury, ON, Canada on 31- OCT- 2018.
 The following have access to data associated with this certificate:

JAKE BURDEN GRANT MOURRE	GREG COLLINS	THOMAS HART
-----------------------------	--------------	-------------

SAMPLE PREPARATION


ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample logine Rcd w/o BarCode
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
LOG- 23	Pulp Login - Rcvd with Barcode
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CRU- 31	Fine crushing - 70% <2mm
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PUL- 32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
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ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate*****

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	Au- ICP21	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	
		Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
STANDARDS																
AMIS0486		0.227														
Target Range - Lower Bound																
Target Range - Upper Bound																
EMOG- 17			67.4	4.69	596	200	1.99	5.77	1.96	20.4	45.5	756	53	6.97	7930	4.86
Target Range - Lower Bound			59.5	4.18	515	310	1.60	5.31	1.72	18.5	42.9	686	49	6.56	7750	4.42
Target Range - Upper Bound			72.7	5.13	629	440	2.06	6.51	2.12	22.2	52.5	838	62	8.12	8910	5.42
GMO- 10																
Target Range - Lower Bound																
Target Range - Upper Bound																
JK- 1/		1.960														
Target Range - Lower Bound		1.875														
Target Range - Upper Bound		2.12														
NCSDC70006																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS 503c		0.675														
Target Range - Lower Bound		0.655														
Target Range - Upper Bound		0.741														
OREAS 920			0.11	8.03	5.6	580	2.78	0.65	0.51	0.07	103.5	16.8	84	9.46	120.5	4.25
Target Range - Lower Bound			0.08	6.91	4.4	450	2.54	0.61	0.44	0.04	84.6	13.9	70	7.72	104.0	3.72
Target Range - Upper Bound			0.13	8.47	5.8	640	3.22	0.77	0.56	0.12	103.5	17.3	88	9.54	120.0	4.56
OREAS 932																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS- 133b																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS- 134b																
Target Range - Lower Bound																
Target Range - Upper Bound																
PK2		4.80														
Target Range - Lower Bound		4.50														
Target Range - Upper Bound		5.07														

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To: TRANSITION METALS CORP.
 410 FALCONBRIDGE ROAD
 UNIT 5
 SUDBURY ON P3A 4S4

Page: 2 - B
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Ga ppm	Ge ppm	Hf ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm
STANDARDS																
AMISO486																
Target Range - Lower Bound																
Upper Bound																
EMOC- 17																
Target Range - Lower Bound																
Upper Bound																
EMOG- 17		11.50	0.16	1.8	0.917	1.66	22.9	28.8	0.95	742	1090	1.10	14.2	7650	830	7360
Target Range - Lower Bound		10.75	0.07	1.6	0.823	1.49	20.7	23.9	0.86	670	997	0.99	12.7	6820	700	6570
Upper Bound		13.25	0.29	2.2	1.015	1.85	26.4	29.7	1.08	830	1220	1.23	15.7	8330	880	8030
GMO- 10																
Target Range - Lower Bound																
Upper Bound																
JK- 17																
Target Range - Lower Bound																
Upper Bound																
NCSDC70006																
Target Range - Lower Bound																
Upper Bound																
OREAS 503c																
Target Range - Lower Bound																
Upper Bound																
OREAS 920		21.7	0.20	4.9	0.091	3.00	50.1	29.5	1.38	624	0.49	0.67	18.3	42.4	780	25.3
Target Range - Lower Bound		18.65	0.06	4.0	0.070	2.59	41.0	26.0	1.23	535	0.34	0.56	15.6	37.4		20.7
Upper Bound		22.9	0.28	5.2	0.098	3.19	51.2	32.2	1.53	665	0.58	0.71	19.2	46.2		26.4
OREAS 932																
Target Range - Lower Bound																
Upper Bound																
OREAS- 133b																
Target Range - Lower Bound																
Upper Bound																
OREAS- 134b																
Target Range - Lower Bound																
Upper Bound																
PK2																
Target Range - Lower Bound																
Upper Bound																

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Page: 2 - C
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	
		Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm
STANDARDS																
AMIS0486																
Target Range - Lower Bound																
Target Range - Upper Bound																
EMOG- 17																
Target Range - Lower Bound																
Target Range - Upper Bound																
EMOG- 17		99.1	0.317	3.27	811	8.3	7	2.6	210	0.93	1.34	11.25	0.330	2.14	3.2	74
Target Range - Lower Bound		98.9	0.286	2.91	643	7.2	4	2.2	184.5	0.78	1.10	10.35	0.294	1.89	2.8	67
Target Range - Upper Bound		121.0	0.354	3.57	869	9.0	9	3.2	226	1.08	1.46	12.65	0.370	2.61	3.7	84
GMO- 10																
Target Range - Lower Bound																
Target Range - Upper Bound																
JK- 17																
Target Range - Lower Bound																
Target Range - Upper Bound																
NCSDC70006																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS 503c																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS 920		174.5	<0.002	0.04	1.71	15.5	1	5.2	88.8	1.41	<0.05	20.7	0.508	0.96	4.0	101
Target Range - Lower Bound		158.5	<0.002	<0.01	1.22	12.8	<1	4.3	73.6	1.08	<0.05	17.35	0.434	0.76	3.3	86
Target Range - Upper Bound		193.5	0.004	0.05	1.76	15.8	2	5.7	90.4	1.43	0.10	21.2	0.542	1.08	4.2	108
OREAS 932																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS- 133b																
Target Range - Lower Bound																
Target Range - Upper Bound																
OREAS- 134b																
Target Range - Lower Bound																
Target Range - Upper Bound																
PK2																
Target Range - Lower Bound																
Target Range - Upper Bound																

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Page: 2 - D
 Total # Pages: 3 (AA D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OC62
		W	Y	Zn	Zr	Cu
		ppm	ppm	ppm	ppm	%
		0.1	0.1	2	0.5	0.001
STANDARDS						
AMIS0486						
Target Range - Lower Bound						0.818
Target Range - Upper Bound						0.803
EMOG-17						0.863
Target Range - Lower Bound						
Target Range - Upper Bound						
EMOG-17		4.2	15.9	7600	60.4	
Target Range - Lower Bound		3.3	14.3	6800	55.6	
Target Range - Upper Bound		4.7	17.7	8320	76.4	
GMO-10						0.012
Target Range - Lower Bound						
Target Range - Upper Bound						
JK-1/						
Target Range - Lower Bound						
Target Range - Upper Bound						
NCSDC70006						0.010
Target Range - Lower Bound						
Target Range - Upper Bound						
OREAS 503c						
Target Range - Lower Bound						
Target Range - Upper Bound						
OREAS 920		3.4	36.2	126	164.0	
Target Range - Lower Bound		2.5	29.8	102	128.0	
Target Range - Upper Bound		3.7	36.6	130	174.0	
OREAS 932						6.06
Target Range - Lower Bound						5.91
Target Range - Upper Bound						6.35
OREAS-133b						0.031
Target Range - Lower Bound						0.030
Target Range - Upper Bound						0.034
OREAS-134b						0.143
Target Range - Lower Bound						0.129
Target Range - Upper Bound						0.141
PK2						
Target Range - Lower Bound						
Target Range - Upper Bound						



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Page: 3 - A
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	Au-ICP21 Au ppm	ME-MS61 Ag ppm	ME-MS61 Al %	ME-MS61 As ppm	ME-MS61 Ba ppm	ME-MS61 Be ppm	ME-MS61 Bi ppm	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %
BLANKS																
BLANK		<0.001														
Target Range - Lower Bound		<0.001														
Target Range - Upper Bound		0.002														
BLANK			<0.01	<0.01	<0.2	<10	<0.05	0.01	<0.01	<0.02	0.01	<0.1	<1	<0.05	0.2	<0.01
Target Range - Lower Bound			<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2	<0.01
Target Range - Upper Bound			0.02	0.02	0.4	20	0.10	0.02	0.02	0.04	0.02	0.2	2	0.10	0.4	0.02
DUPLICATES																
ORIGINAL		1.510														
DUP		1.620														
Target Range - Lower Bound		1.485														
Target Range - Upper Bound		1.645														
ORIGINAL		0.163														
DUP		0.136														
Target Range - Lower Bound		0.141														
Target Range - Upper Bound		0.158														
L782572			0.01	5.61	82.4	40	0.62	0.09	1.65	<0.02	34.1	112.0	65	0.33	4.7	1.66
DUP			0.01	5.51	78.8	40	0.64	0.08	1.60	<0.02	34.9	103.5	64	0.33	3.7	1.61
Target Range - Lower Bound			<0.01	5.27	76.4	30	0.55	0.07	1.53	<0.02	32.8	102.5	60	0.26	3.9	1.54
Target Range - Upper Bound			0.02	5.85	84.8	50	0.71	0.10	1.72	0.04	36.2	113.0	69	0.40	4.5	1.73
ORIGINAL		<0.001														
DUP		<0.001														
Target Range - Lower Bound		<0.001														
Target Range - Upper Bound		0.002														

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Page: 3 - B
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Ca ppm	Ce ppm	Hf ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm
BLANKS																
BLANK	Target Range - Lower Bound															
	Upper Bound															
BLANK	Target Range - Lower Bound															
	Upper Bound															
BLANK	Target Range - Lower Bound	<0.05	0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	0.3	<10	<0.5
	Upper Bound	<0.05	0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5
		0.10	0.10	0.2	0.010	0.02	1.0	0.4	0.02	10	0.10	0.02	0.2	0.4	20	1.0
DUPLICATES																
ORIGINAL	Target Range - Lower Bound															
	Upper Bound															
ORIGINAL	Target Range - Lower Bound															
	Upper Bound															
L782572	Target Range - Lower Bound	9.48	0.10	2.2	0.008	0.30	17.0	1.0	0.63	350	1.30	4.27	3.1	87.2	480	2.1
DUP	Upper Bound	9.44	0.12	2.2	0.008	0.30	17.6	1.2	0.62	340	1.24	4.25	3.1	86.4	440	2.3
	Lower Bound	8.93	<0.05	2.0	<0.005	0.28	15.9	0.8	0.58	323	1.16	4.04	2.8	82.3	420	1.6
	Upper Bound	9.97	0.17	2.4	0.010	0.33	18.7	1.4	0.67	367	1.38	4.48	3.4	91.3	480	2.8
ORIGINAL	Target Range - Lower Bound															
	Upper Bound															

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Page: 3 - C
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm
BLANKS																
BLANK																
Target Range - Lower Bound																
Target Range - Upper Bound																
BLANK		<0.1	<0.002	<0.01	0.07	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
Target Range - Lower Bound		<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
Target Range - Upper Bound		0.2	0.004	0.02	0.10	0.2	2	0.4	0.4	0.10	0.10	0.02	0.010	0.04	0.2	2
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Target Range - Upper Bound																
L782572		7.2	<0.002	0.58	0.42	12.0	1	0.3	69.6	0.30	0.05	6.80	0.138	0.03	2.0	60
DUP		7.3	<0.002	0.54	0.42	12.1	1	0.4	72.7	0.31	0.06	6.73	0.138	0.04	2.0	59
Target Range - Lower Bound		6.8	<0.002	0.52	0.34	11.3	<1	<0.2	67.4	0.24	<0.05	6.42	0.126	<0.02	1.8	56
Target Range - Upper Bound		7.7	0.004	0.60	0.50	12.8	2	0.4	74.9	0.37	0.10	7.11	0.150	0.04	2.2	63
ORIGINAL																
DUP																
Target Range - Lower Bound																
Target Range - Upper Bound																

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Page: 3 - D
 Total # Pages: 3 (AA D)
 Plus Appendix Pages
 Finalized Date: 14- NOV- 2018
 Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62
		W ppm	Y ppm	Zn ppm	Zr ppm	Cu %
BLANKS						
BLANK						
Target Range - Lower Bound						
Target Range - Upper Bound						
BLANK						0.001
Target Range - Lower Bound						<0.001
Target Range - Upper Bound						0.002
BLANK		<0.1	<0.1	<2	<0.5	
Target Range - Lower Bound		<0.1	<0.1	<2	<0.5	
Target Range - Upper Bound		0.2	0.2	4	1.0	
DUPLICATES						
ORIGINAL						
DUP						
Target Range - Lower Bound						
Target Range - Upper Bound						
ORIGINAL						
DUP						
Target Range - Lower Bound						
Target Range - Upper Bound						
L782572		0.4	5.8	2	77.1	
DUP		0.4	5.8	2	76.4	
Target Range - Lower Bound		0.3	5.4	<2	70.5	
Target Range - Upper Bound		0.5	6.2	4	83.0	
ORIGINAL						
DUP						
Target Range - Lower Bound						
Target Range - Upper Bound						



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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 14- NOV- 2018
Account: TRAMET

QC CERTIFICATE OF ANALYSIS SD18275182

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME- MS61

LABORATORY ADDRESSES

Processed at ALS Sudbury located at 1351- B Kelly Lake Road, Unit #1, Sudbury, ON, Canada.
Applies to Method: CRU- 21 CRU- 31 CRU- QC LOG- 22
LOG- 23 PUL- 32 PUL- QC SPL- 21
WEI- 21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Applies to Method: Au- ICP21 Cu- OG62 ME- MS61 ME- OG62