

**Assessment Report on
Mapping Program
Minnipuka Property, Minnipuka and Walls Townships**

Claims 4266190, 4265571, 4265572, 4265573, 4265574, 4265575, 4265576
G-2336, Minnipuka and Walls Townships, Porcupine Mining Division
UTM WGS84 Zone 17U 297433mE 5425484mN;
Lat 48° 56' 57"N, Long 83° 46' 01"W;
NTS 42B13

For:
Pavey Ark Minerals Inc.
Client number 41165

Prepared By:
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December 30, 2015

Executive Summary

This assessment report documents geological mapping and sampling of the Minnipuka Property, Minnipuka and Walls Townships, Porcupine Mining Division, Ontario. The exploration targets gold mineralization associated with the Puskuta Deformation Zone and base metal mineralization associated with felsic metavolcanic rocks.

Field work for this report was carried out on August 15 and September 25, 2014 and October 5 to 8, 2015. Historical drill core from AMAX hole 1039-06B-01 on claim 4266190 was sampled in the Timmins MNDM core library on October 15, 2015. Total expenditures were \$8,585.

The Minnipuka Property is located 80 km south of Hearst, Ontario. The Property is road accessible by route 583 and the Caithness logging road system that extends south from the Trans-Canada Highway 11 at Hearst. The Minnipuka Property is comprised of 7 contiguous staked claims (4266190, 4265571, 4265572, 4265573, 4265574, 4265575, 4265576) covering 112 units (1,792 ha) owned by Pavey Ark Minerals Inc., a private Ontario company.

There has been limited previous exploration on the Minnipuka Property. Work has been concentrated on the west end of the property in Walls Township where AMAX completed airborne geophysics and drilled one 65.5 m hole that intersected a narrow interval of massive pyrite-pyrrhotite in garnetiferous biotite schist in 1981. Subsequent assessment by Maurex Resources Limited reported that the AMAX core contained an interval of 6.02 ppm Au over 1.4 m. This result was not confirmed by resampling of the historical core at the MNDM Timmins core library for the present program.

The Minnipuka Property is underlain by predominately Archean rocks at the eastern end of the Kabinakagami Lake greenstone belt. There are no detailed maps of Minnipuka Township. The Puskuta Deformation Zone is a km wide, steeply dipping, dextral, transcurrent structure that on a regional scale bounds the south side of the Kabinakagami Lake greenstone belt and extends for over 30 km to the southeast through Minnipuka and Puskuta Townships.

Mafic and felsic to intermediate metavolcanic rocks on the property have been metamorphosed to amphibolite facies and have been strongly deformed. The mapping indicates that the Puskuta Deformation Zone is located immediately south of the claim group. Potentially gold mineralized alteration systems associated with large scale silicification, sericitization and sulphide mineralization were not identified in the present work.

The mapping program identified felsic to intermediate rocks, including rhyolite, south of Goat and Little Goat Lakes that may be prospective for base metals. These felsic rocks are coincident with at least 4 VTEM anomalies identified on the 2015 OGS airborne survey. None of the conductors have been drill tested and it is recommended that ground EM surveys be carried out to better define potential drill targets in this prospective metavolcanic stratigraphy.

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1.0 Introduction

This assessment report documents geological mapping carried out on the Minnipuka Property, Minnipuka and Walls Townships, Porcupine Mining Division, Ontario. The work was carried out by R.H. Sutcliffe on August 15 and September 25, 2014 and October 5 to 8, 2015. In addition, historical drill core from claim 4266190 was sampled in the Timmins MNM core library on October 15, 2015.

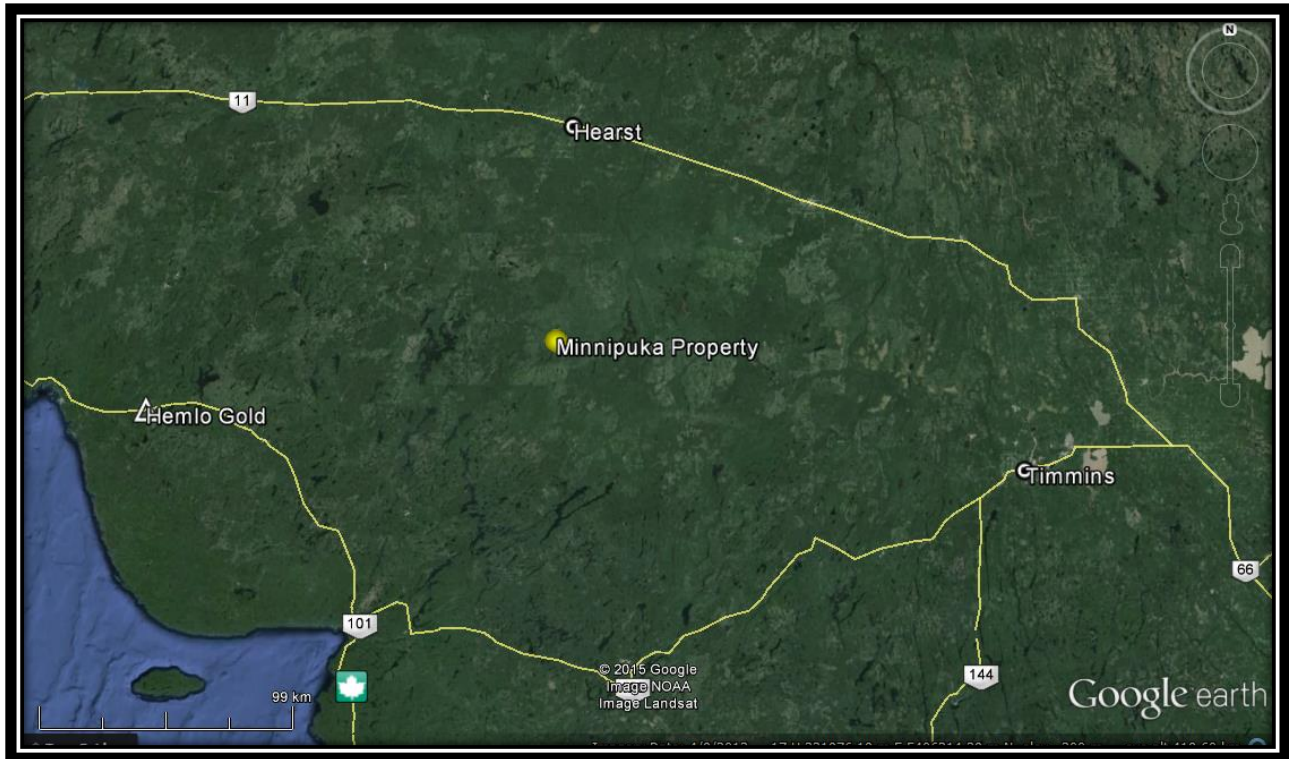
The exploration targets gold mineralization associated with the Puskuta deformation zone (Leclair et al. 1993) and base metal mineralization associated with felsic metavolcanic rocks.

2.0 Location and Access

The Minnipuka Property is 82 km south of Hearst, Ontario (Figure 1). The Property is road accessible by route 583 and the Caithness logging road system that extends south from the Trans-Canada Highway 11 at Hearst.

To access the property, at Hearst, Ontario, turn south from highway 11 onto route 583. Approximately 10.5 km south of Hearst on route 583, turn left onto the Caithness Road. At approximately 73 km south on the Caithness Road there is a junction with the Dishnish and Marjorie Roads. The Dishnish Road provides access to the east part of the claim group, via the Little Goat Lake Road, and the Marjorie Road crosses the western most claim of the Property. The Goat Lake Road extends south from the Marjorie Road to the center of the Property. Both the Dishnish and Marjorie Roads are all weather gravel roads. The Little Goat Lake and Goat Lake Roads are suitable for ATV or snowmobiles, however, access is restricted by the MNR during certain times of the year.

Figure 1. Minnipuka Property Location



Source: Google Earth 2015

3.0 Claim Holdings and Property Disposition

The Minnipuka Property is comprised of seven 16-unit contiguous staked claims (4266190, 4265571, 4265572, 4265573, 4265574, 4265575, 4265576) covering 112 units (1,792 ha) (Table 1). The claims are 100% owned by Pavey Ark Minerals Inc., a private Ontario company. One claim was initially staked in Walls Township in October, 2013, and subsequently 6 claims were staked in July, 2014 in Minnipuka Township. A claim map is provided as Map 1. The property was initially called the Walls Property by Pavey Ark, but has been renamed to reflect the fact that the majority of the claims are now located in Minnipuka Township.

Table 1. List of staked claims comprising the Minnipuka Property.

PORCUPINE Mining Division - 411465 - PAVEY ARK MINERALS INC.

Township/Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
MINNIPUKA	4265571	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
MINNIPUKA	4265572	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
MINNIPUKA	4265573	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
MINNIPUKA	4265574	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
MINNIPUKA	4265575	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
MINNIPUKA	4265576	2014-Jul-02	2016-Jul-02	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0
WALLS	4266190	2013-Oct-30	2016-Jan-04	A	100 %	\$ 6,400	\$ 0	\$ 0	\$ 0

4.0 Previous Work

There has been limited previous exploration on the Minnipuka Property. Most of the work has been concentrated on the west end of the property in Walls Township.

AMAX completed airborne geophysical surveys over the Project area including an airborne magnetic survey at 200 m line spacing in 1979 (AFRI 42G04SW0207).

Subsequent to the airborne survey, AMAX completed a seven hole diamond drilling program in Walls Township in 1981 (AFRI 42G04SW0217). One hole, 1039-06B-01 with a length of 66.5 m, was located on Pavey Ark’s claim 4266190 at the west end of the claim group. Hole 1039-06B-01 tested an airborne EM conductor and intersected a narrow interval of massive pyrite-pyrrhotite in biotite schist. No assay results were reported by AMAX, however, subsequent assessment work by Maurex Resources Limited (AFRI 42B13NW0202) reports that the interval from 32.0 to 33.4 m contained 6.02 ppm Au in massive sulphides.

Maurex Resources Limited conducted ground VLF-EM and magnetic surveys in 1987 (AFRI 42B13NW0202 and 42B13NE0211) to follow up on the AMAX drill results. Further work was recommended but no work is reported.

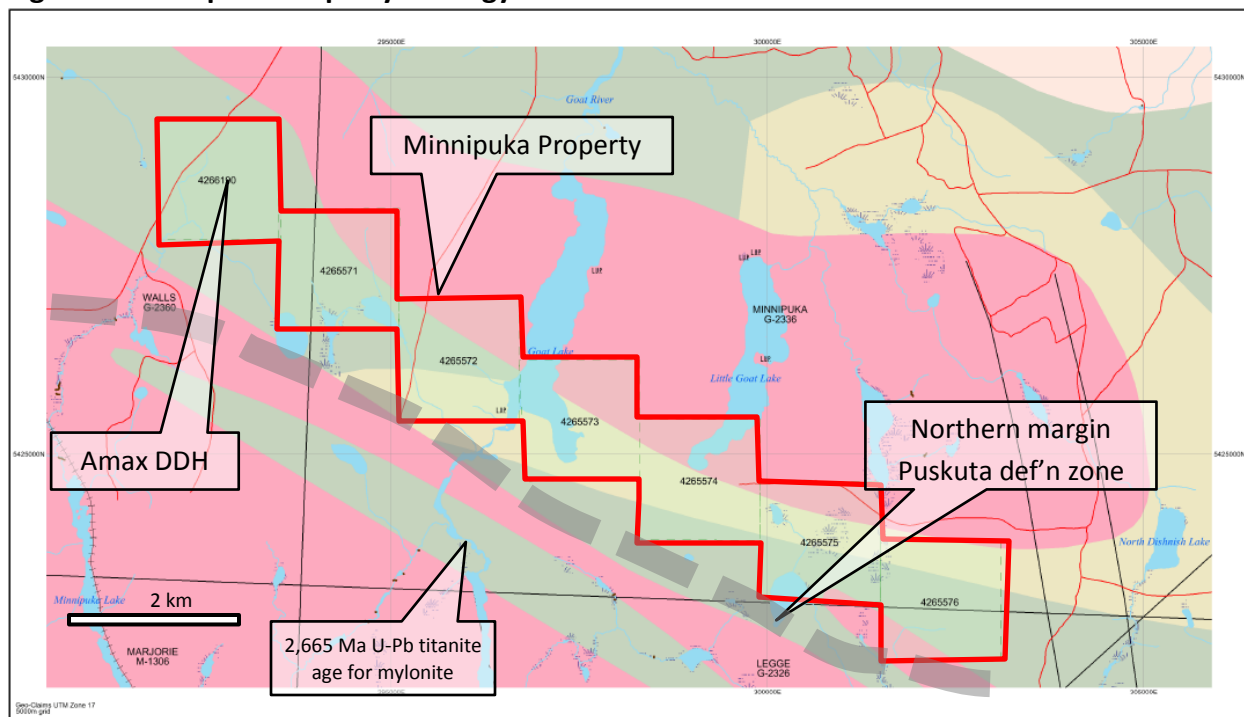
Golden Trio Minerals Ltd. conducted trenching on a number of EM targets in Minnipuka Township in 1988 (AFRI 42B13NE0204). Some of the trenches are located on claim 4265572 near the south end of the Goat Lake Road. No assay results are reported.

The Ontario Geological Survey (2015) released results of a helicopter mounted Geotech VTEM plus magnetic and electromagnetic surveys flown at 200 m line spacing that covered Minnipuka Township and adjacent townships.

5.0 Geology

The Minnipuka Property is underlain by predominately Archean rocks at the eastern end of the Kabinakagami Lake greenstone belt (Figure 2). The greenstone belt is intruded by Archean granite, megacrystic granodiorite, and tonalite plutons and by Proterozoic diabase dikes of the Hearst swarm. Walls Township was originally mapped by Maynard (1929). Subsequent Precambrian mapping was completed by Thurston et al. (1977) as part of a regional mapping program of the Chapleau area. There are no detailed maps of Minnipuka Township. The Puskuta Deformation zone is a 1 km wide, steeply dipping, dextral, transcurrent structure that on a regional scale bounds the south side of the Kabinakagami Lake greenstone belt and extends for over 30 km to the southeast through Minnipuka and Puskuta Townships (Leclair et al, 1993). LeClair and Sullivan (1991) report a U-Pb titanite age of 2,665 Ma for mylonite related to the Puskuta Deformation zone.

Figure 2. Minnipuka Property Geology



Base map source: OGS Claimaps 2015

6.0 Mapping Program

Geological mapping was conducted by R.H. Sutcliffe over a period of 6 days on August 15, Sept 24, 2014, and October 5 to 8, 2015. Mapping was done both along forestry roads, trails and by traverses through the bush. Outcrop exposure has been frequently enhanced along the sides of forestry roads due to excavation of ditches that has removed overburden over bedrock. Outcrops were located by a handheld Garmin Etrex GPS receiver and plotted on a digital map base map downloaded from the MNDM CLAIMaps application.

<http://www.geologyontario.mndmf.gov.on.ca/website/claimapsiii/viewer.asp>

Six (6) grab samples with the WA15 - prefix were collected for assay during the mapping program. The grab samples were analyzed for Au by FA and an additional 30 elements by ICP-OES. Results are discussed in section 8.0, however, no significant results were obtained for metals of interest.

6.1 Mafic Metavolcanic Rocks

Mafic metavolcanic rocks on the Property are dominantly amphibolite metamorphic facies mafic metavolcanics that are banded (unit 1a) to strongly foliated (unit 1b). Banded amphibolites are characterized by mm to cm scale feldspathic layers alternating with more mafic layers. The author interprets that these textures are probably metamorphic.

6.2 Felsic to Intermediate Metavolcanic Rocks

Felsic to intermediate metavolcanic rocks occur in an approximately 500 m thick unit striking northwest-southeast and extending across the claim group. These metavolcanic rocks are associated with biotite schists that have been mapped as metasedimentary in the present program. Several outcrops of white to light grey, highly siliceous, foliated and banded aphanitic rhyolite (unit 2a) are well exposed at the south end of the Goat Lake road. South of Little Goat Lake, a small outcrop of intermediate fragmental rocks (unit 2b) interpreted as lapilli tuff was observed. This lithological unit contains cm scale felsic-intermediate fragment in an intermediate matrix. On claim 4266190 at the western end of the property, layered intermediate amphibolite (unit 2c) was observed.

6.3 Biotite Schist

Biotite schist (unit 3a) interpreted to be of metasedimentary origin is associated with intermediate to felsic metavolcanic rocks. These rocks are well-foliated, commonly banded, medium grained, grey schists. Locally amphibole –rich calc-silicate layers are present (unit 3b). Muscovite biotite schist (unit 3c) was observed in the western end of the claim group.

6.4 Felsic Intrusive Rocks

Several different granitoid plutons have been identified on the property.

North of the unit of metavolcanic/metasedimentary rocks, the dominant lithology is massive, pink, megacrystic biotite granodiorite (unit 4a) with 1 to 2 cm microcline phenocrysts. This unit forms a relatively homogenous pluton centered on Goat Lake.

In the northwestern part of the area, inequigranular, medium- to coarse-grained, white biotite-muscovite leuco-granite/granodiorite (unit 4b) and associated pegmatite are intrusive into biotite schists (3a). Locally unit 4b is observed to intrude unit 4a.

In the south-western part of the area, south of the claim group, strongly foliated biotite tonalite (unit 4c) is intrusive into layered and foliated mafic amphibolite (units 1a and 1b). Adjacent to the tonalite, the mafic amphibolite contains numerous sills of felsite (unit 4d). This assemblage is similar to the rocks hosting gold mineralization in Hawkins township to the west.

6.5 Diabase Dikes

Medium-grained diabase dikes intrude the Archean metavolcanic and intrusive rocks. The dikes are weakly magnetic and equigranular. The mapped dikes have preferred orientations of approximately 140°.

6.6 Structure

The metavolcanic and metasedimentary rocks are characterized by strong penetrative fabrics and ductile deformation. Foliations in the rocks in the central part of the claim group are northwest-southeast striking with near vertical dips in the eastern part of the property and moderate to steep north dips in the west. Minor folds typically have a “Z” asymmetry suggesting a dextral displacement. This is consistent with Leclair et al.’s (1993) interpretation of movement on the Puskuta Deformation Zone.

The Puskuta Deformation Zone occurs in the southern part of the claim group and the approximate northern boundary of the deformation zone as defined by outcrops with features of high strain is indicated on Map 2. Typical high strain textures include protomylonite fabric with quartz ribbons, rootless “hook shaped” minor folds, boudinage, and augen or flaser-type textures with clasts of less deformed rock in strongly deformed matrix. Foliation in the Puskuta deformation zone is characterized by a broadly northwest-southeast strike and north dipping orientation. The northern limit of the Puskuta Deformation Zone is poorly exposed and generally covered by low lying swampy ground.

7.0 Core Sampling

AMAX hole 1039-06B-01 with a length of 66.5, was located on Pavey Ark’s claim 4266190 at the west end of the claim group. Hole 1039-06B-01 was drilled in 1981 and tested an airborne EM conductor and intersected a narrow interval of massive pyrite-pyrrhotite in biotite schist. Based on the MNDM Ontario Drill Hole Database, the hole is located at 17U 293205mE 5428415mN and drilled with an azimuth of 245° with an inclination of -45°. A ground check did not confirm this location.

No assay results were reported by AMAX, however, subsequent assessment work by Maurex Resources Limited (AFRI 42B13NW0202) reports that the interval from 32.0 to 33.4 m contained 6.02 ppm Au in massive sulphides.

The core for this hole was examined at the MNDM Core Library in Timmins on October 15, 2015. The AMAX logs indicate conductive zone was at 49.73 - 49.96 m which does not correlate with the interval in the Maurex report. Four samples were collected from the core.

These include:

- WA15-09 - Garnetiferous biotite schist above mineralized zone;
- WA15-10 - Siliceous metasediment, with massive pyrite-pyrrhotite, conductive, estimated 49.6 to 49.7 m;
- WA15-11 - Siliceous metasediment, with massive pyrite-pyrrhotite, conductive, estimated 49.9 to 50.0 m;
- WA15-12 - Biotite schist, 52.9 to 53.0 m.

The core is in fair condition and the depth markers are generally not readable, however, the 53 m core marker is clearly visible, so last sample has accurate depth. Conductivity was confirmed with a resistivity meter.

8.0 Assay Results

Sample preparation and analysis was done at Accurassay Laboratories in Thunder Bay. A total of 6 samples were submitted for assay. All samples were dried, crushed, split and pulverized. Samples were analyzed for gold by fire assay (FA) using 30 g aliquots with an atomic absorption spectrometry (AAS) finish. Additionally samples were analyzed for 30 additional elements using a multi-acid digestion procedure and inductively coupled plasma-optical emission spectrometry (ICP-OES). Sample locations are provided on Map 2. Assay certificates are attached as appendix 2.

No significant assay results for precious or base metals were obtained. In particular, samples WA15-10 and -11 from the massive sulphide intersection in the AMAX hole had Au of 6 ppb or less, low Ag, Cu, Pb, and slightly anomalous Zn.

9.0 Conclusions and Recommendations

Metavolcanic rocks on the property have been metamorphosed to amphibolite facies and have been strongly deformed. The mapping indicates that the Puskuta Deformation Zone is located immediately south of the claim group. Potentially gold mineralized alteration systems associated with large scale silicification, sericitization and sulphide mineralization were not identified in the present work. No anomalous results for gold were obtained.

The mapping program identified felsic to intermediate rocks south of Goat and Little Goat Lakes that may be prospective for base metals. These felsic rocks are coincident with at least 4 VTEM anomalies identified on the 2015 OGS airborne survey. The western-most anomaly is located on claim 4265571, was detected on 4 flight lines, and has a response up to 16.7 siemens. The largest anomaly is located on claim 4265572, southwest of Goat Lake. It was detected over 10 flight lines and has a response up to 20.5 siemens. A single line 12.7 siemen anomaly occurs in a similar stratigraphic position 700 m west of the south end of Little Goat Lake on the boundary between claims 4265573 and 4265574. The eastern-most anomaly is a relatively weak 2 line anomaly of less than 5 siemens that occurs on claim 4265575. None of these conductors have been drill tested and it is recommended that ground EM surveys be conducted to better define potential drill targets.

10.0 References

LeClair, A.D., Ernst, R.E., and Hattori, K. 1993. Crustal scale auriferous shear zones in the central Superior province, Canada. *Geology*, v. 21, pp. 399-402.

Leclair, A.D. and Sullivan, R.W. 1991. U-Pb zircon and titanite ages of upper and lower crustal rocks in the central Kapuskasing uplift, northern Ontario, in *Radiogenic age and Isotopic Studies, Report 4, Geological Survey of Canada, Paper 90-2*, p. 45-59.

Maynard, J.E. 1929, Oba Area, District of Algoma, Ontario Department of Mines, Annual Report 1929, v. 38, pt. 6, pp. 114-125.

Ontario Geological Survey, 2015. Airborne magnetic and electromagnetic surveys, colour-filled contours of the residual magnetic field and electromagnetic anomalies, Kabinakagami Lake area; Ontario, Geological Survey, Map 82 754, scale 1:50 000.

Thurston, P.C., Siragusa, G.M., Sage R.P. 1977. Geology of the Chapleau Area, Ontario Division of Mines, Geoscience Report 157, Accompanying Map 2221.

11.0 Statement of Qualifications

I, Richard H. Sutcliffe, of 100 Broadleaf Crescent, Ancaster, Ontario, do hereby certify that:

I am a graduate of University of Toronto (B.Sc. Geology, 1977, M.Sc Geology 1980), and a graduate of University of Western Ontario (Ph.D. Geology, 1986) and I have been practising my profession as a geologist since.

I am a member with the Association of Professional Geoscientists of Ontario (#852).

I have direct knowledge of the exploration work performed for this assessment and I am indirectly the owner of the claims on which the work was performed.

Signed

"R.H. Sutcliffe"

Richard H. Sutcliffe, Ph.D., P.Geo.

December 28, 2015

Ancaster, Ontario

Appendix 1. Sample Locations and Descriptions

Sample ID	Sampler	Wpt/ Name	To: (m)	From: (m)	Easting	Northing	Description
WA15-01	RHS	710			295156	5425680	Rhyolite chips off o/c, all sent for assay, no sample retained
WA15-02	RHS	711			295150	5425664	Foliated rhyolite
WA15-03	RHS	732			298917	5424607	Layered intermediate schist
WA15-04	RHS	734			298948	5424577	Intermediate schist, Quartz veinlets,
WA15-05	RHS	759			292855	5429512	Musc-bio Schist, locally crenulated, rusty
WA15-06	RHS	801			292529	5429077	Intermed banded amphibolite
WA15-07	RHS	802			292728	5429228	Layered mafic/intermed amphibolite, 2 cm bx vein
WA15-08	RHS	801			292529	5429077	Intermed banded amphibolite
WA15-09	RHS	1039-06B-01					Garnetiferous biotite schist above mineralized zone
WA15-10	RHS	1039-06B-01	49.6	49.7			Siliceous metasediment, with massive pyrite-pyrrhotite, conductive
WA15-11	RHS	1039-06B-01	49.9	50.0			Siliceous metasediment, with massive pyrite-pyrrhotite, conductive
WA15-12	RHS	1039-06B-01	52.9	53.0			Biotite schist
Samples in bold were assayed							

Appendix 2. Assay Certificates

See attachments

Appendix 3. Expenditures

Item	Units	Unit Cost	HST	Total
Geologist – R. Sutcliffe				
Field work – August 15, Sept 24, 2014, October 5, 6, 7, 8, 2015	6 days	\$650/day	507.00	4,407.00
Reporting – 2 days, Dec 28 to 29, 2015	2 days	\$650/day	169.00	1,469.00
Analytical - Accurassay				
Dry, crush, split, pulp,	6	6.95		
Au (FA/AAS 30g)	6	11.25		
Multi-acid digestion, ICP-OES	6	11.55		
Total			23.21	201.71
Travel				
Personal Vehicle – 1 trip Ancaster/Hearst/Ancaster	1,992 km	\$0.55/km		1,095.60
Hearst/Minnipuka Twp/Hearst	2 x 210	\$0.55/km		231.00
Ancaster/Timmins/Ancaster	1,536 km	\$0.55/km		844.80
Food and Accommodation				
Food	6 days	\$35/day		210.00
Accommodation Timmins – 1 night, Comfort Inn, October 2015			13.00	113.00
Office Supplies & Field consumables				
Copying			1.48	12.85
TOTAL EXPENDITURES				
				\$8,584.96

Assignment of Expenditure to Claims		
Claim	Percentage	Expenditure
4266190	40%	\$3,434
4265571		
4265572	20%	1,717
4265573		
4265574	30%	2,576
4265575	10%	858
4265576		
Total		\$8,585