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**Assessment Report on  
Geological Mapping and VLF Survey  
Chrome Property,  
Thunder Bay South District,  
Ontario**

Claims 4244587, 4254345  
Obonga Lake Area (G-0100), Thunder Bay Mining Division  
Latitude 49° 58' 23" N, Longitude 89° 29' 39" W;  
UTM WGS84 Zone 16U 321165 mE, 5538605 mN;  
NTS 52H 14 - Gull Bay

For:  
Pavey Ark Minerals Inc.  
Client number 41165

Prepared By:  
Richard Sutcliffe, P.Geo. (Client number 225603)  
100 Broad Leaf Crescent,  
Ancaster, ON, L9G 3R8

November 24, 2016

## Executive Summary

This assessment report documents grid cutting, geological mapping, sampling and VLF surveying of the Chrome Property, Thunder Bay South District, Thunder Bay Mining Division, Ontario. The exploration targets chromite, nickel, platinum group (PGM) and gold mineralization associated with the past producing Chrome Lake Mine, Puddy serpentinite and associated deformation zone.

The Chrome Property is located 179 km north of the city Thunder Bay, 49 km southwest of the town of Armstrong Station, and 1,043 km northwest of Toronto, Ontario. Highway 527, a paved highway that extends north from Thunder Bay to Armstrong, is located 25 km east of the Property. The property is accessed from the Obonga Lake and Scalp Creek roads and then a 2.2 km long hiking/snowmobile trail that extends SW to the Property from the west end of the Scalp Creek road.

Field work for this report was carried out September 25 to October 28, 2016 on claims 4244587, 4254345 and adjacent patented claims. Reporting was completed on November 18, 2016. The total length of the cut grid is 4.6 km. During the mapping a total of 10 samples were collected and assayed for PGM's and gold by fire assay and a multi-element ICP analysis at Accurassay Laboratories in Thunder Bay. Total expenditures were \$26,587.

The Chrome Property is underlain by the Chrome-Puddy serpentinite intrusion. Historically, exploration in the eastern portion of the Puddy serpentinite on which this work was performed has targeted chromite. Following the discovery of chromite at Chrome Lake in 1928, Consolidated Chromium Corporation completed trenching, drilling and shaft sinking at the Chrome Lake mine where 7,672 tons of chromite were mined between 1934 and 1938. The ultramafic rocks have been completely altered to serpentine, talc, chlorite, carbonate, magnetite, and amphibole. Medium-grained, biotite tonalite bounds the serpentinite to the north. South of Puddy Lake, the serpentinite intrusion is bound by mylonite and mixed metasedimentary and granitic rocks.

The VLF survey of the grid identified a strong VLF conductor on Lines 1+00W, 3+00W and 5+00W that is interpreted as a shallow conductor. The VLF conductor is coincident with an airborne EM response identified by the Dighem survey and is parallel to the serpentinite-tonalite contact within a magnetic low.

Geological mapping has defined the approximate northern boundary of the serpentinite with foliated tonalite. Structures within the tonalite and historical data from the Chrome mine indicate that the serpentinite-tonalite contact is south dipping. High chrome values of 26% Cr<sub>2</sub>O<sub>3</sub> have been documented in outcrop immediately west of the Chrome mine shaft. This program has defined a strong VLF conductor northwest of the Chrome mine shaft. The conductor parallels the interpreted serpentinite-tonalite contact and warrants drill testing for potential Cu-Ni sulphides.

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## **1.0 Introduction**

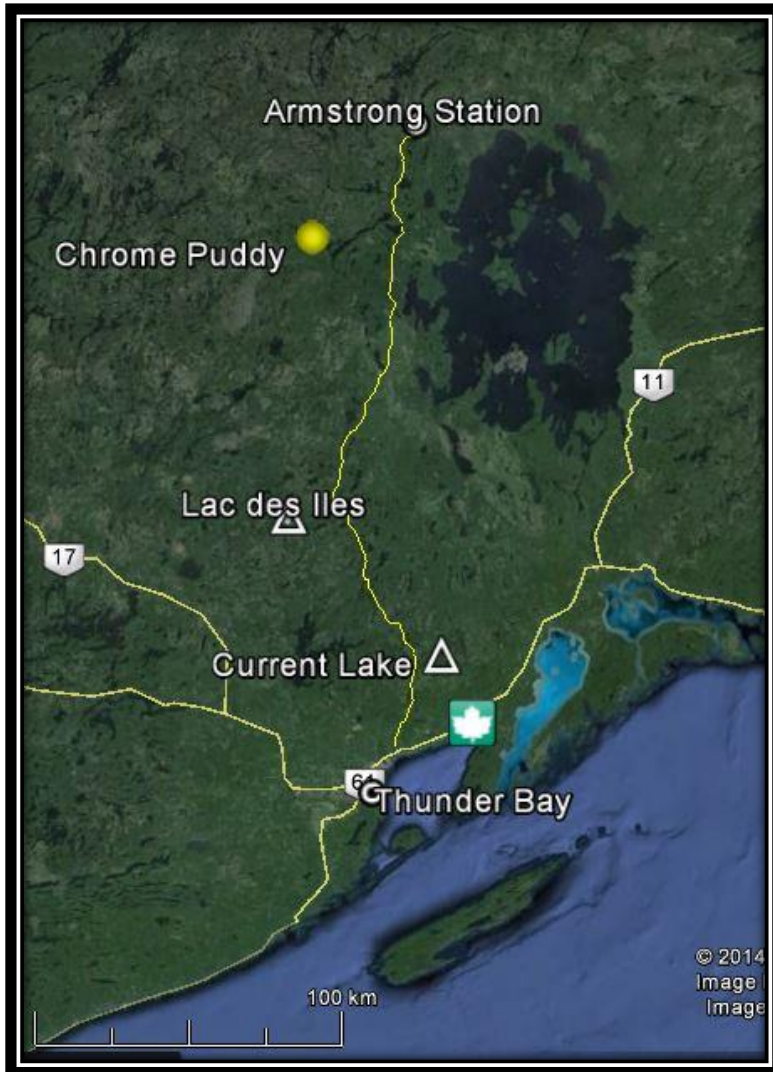
This assessment report documents grid cutting, geological mapping, VLF surveying and sampling on the Chrome Property, Thunder Bay Mining Division, Ontario. Field work for this report was carried out from September 25 to October 28, 2016 on claims 4244587, 4254345 and adjacent patented claims. Total expenditures were \$26,587. The exploration targets chromite, nickel, platinum group (PGM) and gold mineralization associated with the past producing Chrome Lake Mine, Puddy serpentinite and associated deformation zone.

## **2.0 Location and Access**

The Chrome Property is located in the Thunder Bay Mining District of northwestern Ontario. The property is 179 km north of the city Thunder Bay, 49 km southwest of the town of Armstrong Station, and 1,043 km northwest of Toronto, Ontario. Highway 527, a paved highway that extends north from Thunder Bay to Armstrong, is located 25 km east of the Property.

Logging roads east of the Property come to within 2.2 km of Chrome Lake. The logging road access route is from the "Obonga Lake Road" which is a signed gravel road west of highway 527 and located 30 km south of Armstrong Station. From the Obonga Lake Road, the property is accessed from the unmaintained Scalp Creek Road and then a hiking/snowmobile trail. The trail is approximately 2.2 km long and extends SW to the Property from the west end of the Scalp Creek road.

**Figure 1. Chrome Property Location**



*Source: Google Earth 2016*

### **3.0 Claim Holdings and Property Disposition**

The work for this assessment was completed on two contiguous staked claims (4244587, 4254345) and adjacent patented claims. Claims are 100% owned by Pavey Ark Minerals Inc., a private company owned by the applicant. The complete list of claims that forms the Chrome – Puddy Property is provided in Table 1 and 2.

**Table 1. List of Patented Claims owned by Pavey Ark**

Patent Number	Recorded Claim Number	Area (acres)	Area (hectares)
TB 8420	TB 14414 & TB14413	88.55	35.84
TB 8421	TB 14415	50.91	20.60
TB 8422	TB 14412	33.90	13.72
TB 8423	TB 10835	66.41	26.88
TB 8424	TB 10836	69.24	28.02
TB 8425	TB 10826	44.63	18.06
TB 8426	TB 10827	41.87	16.94
TB 8427	TB 10828	31.88	12.90
TB 8428	TB 10883	17.83	7.22
TB 8814	TB 8814	74.67	30.22
TB 9294	TB 19207	40.56	16.41
		<b>Total 560.45</b>	<b>226.81</b>

**Table 2 List of Staked Claims comprising the Chrome Puddy Property**

Township/Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
OBONGA LAKE AREA	<a href="#">4244587</a>	2012-Oct-22	2016-Dec-22	A	100 %	\$800	\$1,600	\$0	\$0
OBONGA LAKE AREA	<a href="#">4254345</a>	2012-Nov-27	2016-Nov-27	A	100 %	\$2,400	\$4,800	\$0	\$0
OBONGA LAKE AREA	<a href="#">4254346</a>	2012-Nov-27	2016-Nov-27	A	100 %	\$2,657	\$6,943	\$124	\$0
PUDDY LAKE AREA	<a href="#">4254343</a>	2012-Nov-27	2016-Nov-27	A	100 %	\$4,000	\$8,000	\$0	\$0
PUDDY LAKE AREA	<a href="#">4265978</a>	2013-Mar-21	2017-Mar-21	A	100 %	\$400	\$800	\$0	\$0
PUDDY LAKE AREA	<a href="#">4265979</a>	2013-Mar-21	2017-Mar-21	A	100 %	\$400	\$800	\$0	\$0
PUDDY LAKE AREA	<a href="#">4265980</a>	2013-Mar-21	2017-Mar-21	A	100 %	\$400	\$800	\$0	\$0
PUDDY LAKE AREA	<a href="#">4265987</a>	2012-Oct-22	2016-Dec-22	A	100 %	\$5,057	\$12,943	\$494	\$0
PUDDY LAKE AREA	<a href="#">4265988</a>	2012-Oct-22	2016-Dec-22	A	100 %	\$2,800	\$5,600	\$0	\$0

#### 4.0 Previous Work

Historically, exploration and development in the eastern portion of the Chrome-Puddy serpentinite has targeted chromite, while the western portions of the intrusion have been explored for nickel and precious metals. Historic exploration activity on the property, as documented by Puumala et al. (2012) is summarized below.

Chromite was first discovered in the vicinity of Chrome Lake in 1928 by W.K. Keefe and R.A. MacDonald who staked the occurrence and transferred ownership to Golden Centre Mines Inc. of New York. In 1930 Consolidated Chromium Corporation, a subsidiary of Golden Centre Mines, began development work, including stripping, trenching, drilling and shaft sinking. The shaft was sunk to a depth of 350 feet, with levels at 100 and 225 feet. Operations ceased in late fall of 1930 and did not resume until 1933, when new owner Chromium Alloy Co. sent 70 tons of ore to Niagara Falls, New York, for beneficiation tests. Chromium Mining and Smelting Corp. Ltd. was formed and took control of the property in 1934 and re-commenced operations in 1936. Underground work was discontinued in 1937 because of poor ore recovery, and all activities on the site ceased in 1938. The Chrome property has been inactive since 1938.

Between 1964 and 1967, Commerce Nickel Mines carried out the first significant exploration program targeting nickel in the western portion of the Puddy serpentinite, including trenching, geological mapping, geochemical and geophysical surveys and diamond drilling (24 diamond-drill holes, totalling 5,590 feet). Between 1967 and 1968, Newmont Mining Corp. of Canada completed trenching, electromagnetic surveying and diamond drilling (10 holes, totalling 3106 feet). By the mid- to late-1980s, the area began to receive attention for its PGE potential. Between 1985 and 1993, K. Kuhner carried out prospecting, outcrop stripping, surface sampling and ground geophysical surveys on claims located on the south side of Puddy Lake. The property was transferred to Obongo Precious Metals Ltd. in 1993, and Obongo completed approximately 20 diamond-drill holes between 1993 and 1996. Imperial Platinum Corp. carried out geological mapping, sampling and ground geophysical surveys in 1987 and 1988 over an adjacent property encompassing areas west, north and southeast of Puddy Lake.

The OGS completed airborne magnetic and electromagnetic surveys with the Dighem EM system in 2000 with 200m line spacing and a nominal 58m terrain clearance (OGS 2000). The most recent exploration activity includes ground magnetic and electromagnetic surveys conducted by Vale Inco Ltd. in 2007 over a property covering the western half of the Puddy Lake serpentinite that identified a number of east west trending conductors, particularly north of Puddy Lake. D. Plumridge has carried out prospecting and sampling of a claim near the southeast end of Puddy Lake since 2004. Pavey Ark Minerals Inc reported results of mapping, portable XRF analysis and prospecting in 2014 and 2015.

Samples analyzed by the Government Resident Geologist's Office in Thunder Bay (Lavigne et al. 1991) revealed values as high as 5.02% Cu, 2.1% Ni, 0.42 g/t Au, 1.5 g/t Pt and 3.75 g/t Pd. Obonga Precious Metals also reports several high PGM values including up to 2.6 g/t Ru, 1.1 g/t Rh, 1.3 g/t Os, and 1.3 g/t Ir.

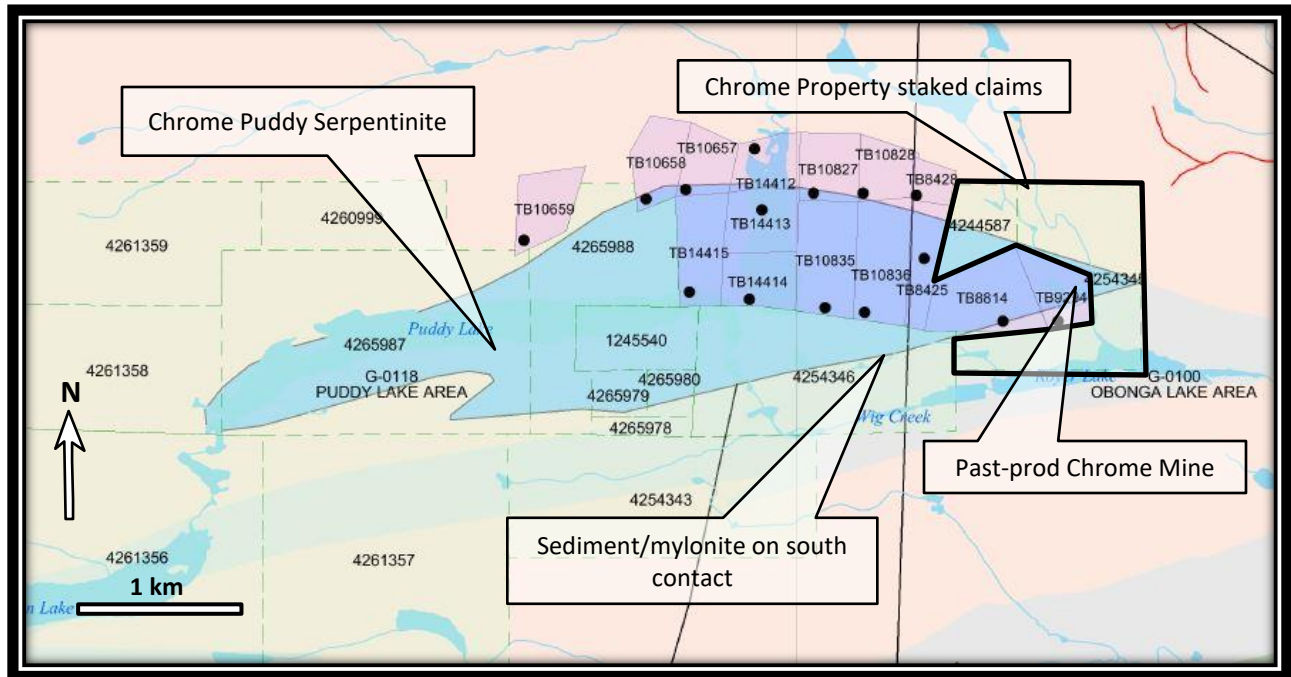
## 5.0 Geology

The Chrome-Puddy Property is located in the Obonga metavolcanic and metasedimentary greenstone belt of the Archean Superior Province. The Obonga greenstone belt is a relatively small (approximately 10 x 40 km) greenstone belt, situated between the Sturgeon-Savant belt on the west and the Onaman-Tashota belt to the east, and has been considered to be part of the Wabigoon Subprovince (Percival and Stott 2000).

The Chrome Puddy Property is underlain by the Chrome-Puddy serpentinite intrusion that is exposed for 7 km along strike and is approximately 1 km in width (Figure 2). Whittaker (1986) reports that rocks of the intrusion include dunite, peridotite, and minor pyroxenite, all of which are serpentinitized. Medium-grained, biotite tonalite bounds the Serpentinite to the north. South of Puddy Lake, the serpentinite intrusion is bound by mylonite and mixed metasedimentary and granitic rocks. North-striking and east-striking diabase dikes of probable middle Proterozoic age cut the Serpentinite.

The ultramafic rocks have been completely altered to serpentine, talc, chlorite, carbonate, magnetite, and amphibole. The alteration, metamorphism and deformation of the serpentinite has made the interpretation of protoliths in the intrusion difficult (Graham 1930; Hurst 1931; Simpson and Chamberlain 1967; Whittaker 1986). Although no ultramafic rocks with primary mineralogy remain, the original rock types in some areas can be inferred with some confidence by comparison with the results of studies on known types of serpentine pseudomorphs.

**Figure 2. Chrome Puddy Property geology.** Chrome Property staked claims that are the subject of the current assessment report are outlined in black.



Base map source: MNDM Claimaps 2015

## 6.0 Grid

For the present program a 4.6 km grid was cut by A-Star Prospecting of Thunder Bay and was started on September 25, 2016. BL1+00W is located at 321348mE 5538340mN with the grid origin being coincident with the Chrome Mine shaft. The baseline extends from 1+00mW to 7+00mW at azimuth 120° relative to UTM grid. Lines are cut orthogonal to the baseline at 030°, spaced at 200 m, from 1+00mW to 7+00mW and are picketed at 25 m intervals.

## 7.0 Mapping Program

Geological mapping (Map 2) was conducted by R.H. Sutcliffe during the period October 24 to 28, 2016. Mapping was done on the 200m grid lines and incorporated some bush traverses. Outcrop exposure is limited in the area of the serpentinite. Much of the grid is characterized by very large boulders and blocks making it very difficult to conclusively identify bedrock. North of the baseline, large angular tonalite boulders and heaved blocks in excess of 10 m diameter are common. In the vicinity of the baseline the boulders are more rounded but commonly up to several meters in diameter. Outcrops and station locations were located by a handheld Garmin Etrex GPS receiver and plotted on a digital map base map previously downloaded from the MNDM CLAIMaps III application.

## 6.1 Amphibolite

Amphibolite (Unit 1a) and amphibolite schist (1b) is probably derived from mafic metavolcanic rocks. Amphibolite outcrops are localized east of the grid at the east end of the Chrome-Puddy serpentinite near Scalp Creek. Amphibolite also occurs as inclusions in foliated and gneissic tonalite.

## 6.2 Chrome Puddy Serpentinite

The Chrome Puddy intrusion (unit 2) is highly serpentinitized. In the area of the grid the unit is poorly exposed and occurs within the area strewn with large mainly granitoid boulders. A trenched outcrop of serpentinite (2a) and locally serpentinite with disseminated chromite (2b) is exposed immediately west of the Chrome Mine shaft. Small outcrops of rusty weathering serpentinite with talc-carbonate alteration (2c) are present east of the shaft and on L1+00W just south of the baseline.

The primary ultramafic lithologies are difficult to determine due to the high degree of alteration,

## 6.3 Biotite Tonalite

Strongly foliated, medium grained biotite tonalite (Unit 3a) occurs north of the Chrome-Puddy serpentinite in the vicinity of Scalp Creek.

## 6.4 Mylonite, biotite schist

Strongly foliated biotite schist (unit 4a) of possible metasedimentary origin occurs south of the Chrome-Puddy serpentinite south of Puddy Lake and at the east end of the serpentinite at Scalp Creek. This unit is "flaggy" weathering and may possibly be a mylonite zone that forms the southern contact of the serpentinite.

## 6.5 Diabase Dikes

Diabase dikes intrude the Archean rocks. Based on a linear magnetic feature, a major 020° trending dike is interpreted to intrude the serpentinite at Chrome Lake. A massive, brick-red, porphyritic felsite dike intrudes the sedimentary rocks at the east end of the serpentinite at Scalp Creek.

## 6.6 Structure

The data indicate that the east end of the Chrome-Puddy intrusion has a moderate (approximately 45°) south-dipping orientation. North of the interpreted contact of the serpentinite, the host rocks are biotite tonalite with a strongly penetrative foliation that has a moderate to shallow, southwest dip and a west plunging lineation.

Underground workings at the #1 shaft of the Chrome Lake Mine also document that both the northern and southern contacts of the serpentinite dip south at approximately 45° (Hurst, 1931).

Approximately 100 m south of the Chrome Lake mine waste dump, the serpentinite-tonalite contact appears to be truncated by an east-west trending mylonite zone that dips at approximately 45° south.

## **8.0 VLF Survey**

The Chrome grid was surveyed on October 25 and 26, 2016 with a Geonics EM16 (serial number 3353) using NAA Cutler, Maine as the transmitter. Data was collected by Mr. Garrett Appleman (A-Star Prospecting) under the supervision of R.H. Sutcliffe. In-Phase and Quadrature measurements were collected at picketed 25m station intervals in a north facing direction. All four grid lines were surveyed.

In-Phase and Quadrature measurements were recorded manually and entered into a spreadsheet for processing. The data were plotted and evaluated by Dr. Colin Bowdidge. Map 3 plots data postings and Map 4 plots the data profiles.

The survey identified a strong VLF conductor on Lines 1+00W, 3+00W and 5+00W that is interpreted as a shallow conductor.

The VLF conductor identified in the current study is coincident with an airborne EM response identified by the Dighem survey (OGS, 2000). The position of the VLF conductor relative to the Dighem conductor and total magnetic field is shown on Map 5.

## **9.0 Assay Results**

A total of 10 samples were submitted for assay. Sample preparation and analysis was performed at Accurassay Laboratories in Thunder Bay. All samples were dried, crushed, split and pulverized. The samples were analyzed for 30 elements using a multi-acid digestion procedure and inductively coupled plasma-optical emission spectrometry (ICP-OES). One sample was over-limit for Cr with ICP-OES and was analyzed by whole rock XRF to provide a quantitative result for Cr<sub>2</sub>O<sub>3</sub>. Samples were analyzed for platinum, palladium and gold by fire assay (FA) using 30 g aliquots with an atomic absorption spectrometry (AAS) finish. Sample locations are provided on Map 2. Assay certificates are attached as appendix 2.

The sampling confirmed high chrome values in the historical trench immediately west of the Chrome Mine shaft with one grab sample returning 26% Cr<sub>2</sub>O<sub>3</sub>. At the time of assessment submission results for Pt, Pd and Au had not been received.



## **10.0 Conclusions and Recommendations**

Geological mapping has defined the approximate northern boundary of the serpentinite with foliated tonalite, however, the precise location of the contact is obscured by overburden and large boulders. Structures within the tonalite and historical data from the Chrome mine indicate that the serpentinite-tonalite contact is south dipping. High chrome values with 26% Cr<sub>2</sub>O<sub>3</sub> have been documented in outcrop immediately west of the Chrome mine shaft, however, elsewhere on the grid the serpentinite is poorly exposed.

This program has defined a strong VLF conductor north west of the Chrome mine shaft. The conductor parallels the interpreted serpentinite-tonalite contact, however, it appears to be located within a magnetic low on the published airborne maps. The conductor warrants drill testing for potential Cu-Ni sulphides.

### **Acknowledgements**

Field support by Greg Smith and Garrett Appleman of A-Star Prospecting was greatly appreciated. Dr. Colin Bowdidge provided guidance on the VLF instrument and an interpretation of the results. Financial support from the Ontario Exploration Corporation is gratefully acknowledged.

## 11.0 References

Graham, A.R., 1930, Obonga Lake Chromite Area, District of Thunder Bay, in the Thirty-Ninth Annual Report of the Ontario Department of Mines, Vol. XXXIX, Part II, pp. 51-60.

Hurst, M.E., 1931, Chromite Deposits of the Obonga Lake Area, District of Thunder Bay, in the Fortieth Annual Report of the Ontario Department of Mines, Vol. XL, Part IV, pp. 111-119.

Lavigne, M.J., et al. 1991, Report of Activities 1990, Resident Geologists, Ontario Geological Survey Miscellaneous Paper, MP152.

Ontario Geological Survey, 2000, Airborne magnetic and electromagnetic surveys, Garden-Obonga area, Ontario Geological Survey, Map 82-097, Scale 1:20,000.

Percival, J.A., and Stott, G.M. 2000, toward a revised stratigraphy and structural framework for the Obonga Lake greenstone belt, Ontario, Geological Survey of Canada, Current Research 2000-C22, 8 p.

Puumala, M., et al. 2013, Report of Activities 2012, Resident Geologists Program, Thunder Bay South District, Ontario Geological Survey P6285.

Simpson, P.R., and Chamberlain, J.A., 1967: Nickel Distribution in Serpentinities from Puddy Lake, Ontario; Geo. Assoc. Canada Proceedings, Vol. 18, p.67-91.

Whittaker, P.J., 1986, Chromite Deposits in Ontario, Ontario Geological Survey, Study 55, 97p.

## 12.0 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.

November 24, 2016

Ancaster, Ontario

## Appendix 1. Sample Locations and Descriptions

Map ID	Assay Cert ID	Sampler	Easting	Northing	Description
CP-01	234534	RHS	321923	5538165	Flaggy mylonite, possibly metasediment
CR16-01	234535	RHS	321335	5538326	Rusty serpentinite with talc carbonate alteration, immediately south of BL1W, only probable serpentinite o/c mapped on grid
CR16-02	234536	RHS	321505	5538561	Foliated tonalite with quartz veinlets to 1 cm, north end of L1W
CR16-03	234537	RHS	321438	5538280	Rusty Serpentinite from west side of shaft, toward NW corner
CR16-04	234538	RHS	321438	5538280	Rusty Serpentinite with chromite, from area where trench joins west side of shaft
CR16-05	234539	RHS	321438	5538280	Rusty Serpentinite, north side of trench
CR16-06	234540	RHS	321438	5538280	Grey serpentinite, muck from trench
CR16-07	234541	RHS	321438	5538280	Grey serpentinite, muck from trench
CR16-08	234542	RHS	321438	5538280	Grey serpentinite, muck from trench
CR16-09	234543	RHS	321444	5538266	Gabbro with 1% sulphides from south waste pile

## Appendix 2. Assay Certificates

Thursday, November 17, 2016

## Final Certificate

 Pavey Ark Minerals Inc.  
 100 Broadleaf Cres.  
 Ancaster,, ON, Can  
 L9G 3R8  
 Ph#: (905) 304-4499  
 Fax#: (905) 920-0436  
 Email: rhsutcliffe@paveyarkminerals.com

 Date Received: 11/08/2016  
 Date Completed:  
 Job #: 201642320  
 Reference:  
 Sample #: 10

Acc #	Client ID	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
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234535	CR16-01	<1	<0.01	<2	<1	<2	<1	1.67	<4	59	2247	<1	5.25	0.31	<10	7.06	1272	<1	483	<100	<1	9	1	<10	13	<100	<2	41	<10	<2	64
234536	CR16-02	<1	4.20	11	152	<2	<1	0.96	<4	8	47	19	1.40	0.06	19	0.47	201	5	40	306	11	6	<1	<10	320	1330	<2	31	<10	4	42
234537	CR16-03	<1	<0.01	15	<1	<2	<1	5.25	<4	8	2652	<1	1.91	0.39	<10	7.65	568	<1	677	<100	2	<5	<1	<10	<3	<100	<2	11	<10	<2	<1
234538	CR16-04	<1	<0.01	20	<1	<2	<1	<0.01	<4	9	>5000	<1	1.59	0.36	<10	6.15	573	3	676	<100	4	43	9	<10	<3	<100	<2	28	<10	<2	34
234539	CR16-05	<1	<0.01	6	<1	<2	<1	3.22	<4	8	4062	<1	1.35	0.23	<10	8.47	459	<1	813	<100	<1	19	<1	<10	<3	<100	<2	16	<10	<2	5
234540	CR16-06	<1	<0.01	11	<1	<2	<1	<0.01	<4	101	3932	3	6.57	0.26	<10	9.20	604	<1	888	<100	<1	9	<1	<10	<3	605	<2	80	<10	<2	49
234541	CR16-07	<1	<0.01	<2	<1	<2	4	<0.01	<4	97	3712	<1	6.07	0.27	<10	9.00	634	<1	873	<100	<1	17	<1	<10	<3	584	<2	73	<10	<2	42
234542	CR16-08	<1	<0.01	13	<1	<2	<1	<0.01	<4	97	3793	60	6.30	0.29	<10	8.70	593	<1	870	<100	<1	7	<1	<10	<3	513	<2	74	<10	<2	35
234543	CR16-09	<1	4.99	18	225	<2	<1	2.35	<4	26	288	23	3.69	0.27	24	1.87	385	<1	83	816	16	<5	<1	<10	802	3098	<2	94	<10	8	39
234544D	CR16-09	<1	4.80	4	215	<2	<1	2.33	<4	26	292	23	3.65	0.38	24	1.81	381	<1	84	820	14	<5	<1	<10	809	3072	<2	93	<10	8	38

PROCEDURE CODES: ALP1, ALPG1, ALMA1

The results included on this report relate only to the items tested.  
 The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.


 Certified By: Jason Moore, VP Operations, Assayer

Tuesday, November 22, 2016

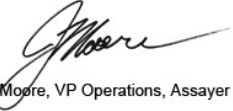
## Final Certificate

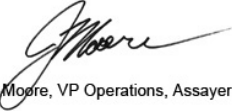
 Pavey Ark Minerals Inc.  
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 Ancaster,, ON, Can  
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 Fax#: (905) 920-0436  
 Email: rhsutcliffe@paveyarkminerals.com

 Date Received: 11/18/2016  
 Date Completed:  
 Job #: 201642392  
 Reference: 201642320  
 Sample #: 1

Acc #	Client ID	Fe2O3 %	SiO2 %	Al2O3 %	Na2O %	MgO %	K2O %	CaO %	P2O5 %	MnO %	TiO2 %	Cr2O3 %	V2O5 %	SO3 %	LOI %	Mass Balance %
238000	CR16-04	12.06	20.48	7.12	0.28	24.05	0.30	0.91	0.01	0.88	0.14	26.23	<0.01	0.05	7.56	100.09
238001Dup	CR16-04	12.02	19.44	7.09	0.08	24.94	0.25	0.93	0.02	0.91	0.16	26.59	<0.01	0.08	7.62	100.12

APPLIED SCOPES: ALM1, ALXR1

**Reviewed By:**
**Verified By:**
**Validated By:**
**Certified By:**
**Authorized By:**
  
 Jason Moore, VP Operations, Assayer

  
 Jason Moore, VP Operations, Assayer

  
 Derek Demianiuk, VP Quality

The results included on this report relate only to the items tested.

The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.

Tuesday, November 22, 2016

## Final Certificate

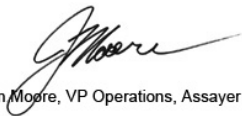
 Pavey Ark Minerals Inc.  
 100 Broadleaf Cres.  
 Ancaster,, ON, Can  
 L9G 3R8  
 Ph#: (905) 304-4499  
 Fax#: (905) 920-0436  
 Email: rhsutcliffe@paveyarkminerals.com

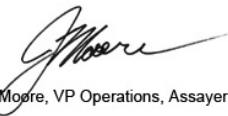
 Date Received: 11/18/2016  
 Date Completed:  
 Job #: 201642392  
 Reference: 201642320  
 Sample #: 1


**Control Standards**

QC Type	Element	Method Blank	QC Performance	Mean	Std Dev	Recovery
SY41	xti	<100	0.278 %	0.287	0.005	95.5%
SY41	xmn	<100	0.114 %	0.108	0.002	107.5%
SY41	xp	<100	0.148 %	0.131	0.004	110.6%
SY41	xca	<100	7.630 %	8.05	0.13	91.9%
SY41	xk	<100	1.760 %	1.66	0.03	108.3%
SY41	xmg	<100	0.512 %	0.54	0.01	93.0%
SY41	xna	<100	7.231 %	7.1	0.12	102.7%
SY41	xal	<100	21.072 %	20.69	0.34	102.8%
SY41	xsi	<100	49.195 %	49.9	0.83	97.9%
SY41	xfe	<100	6.185 %	6.21	0.1	99.4%

APPLIED SCOPES: ALM1, ALXR1

**Reviewed By:**
**Verified By:**
**Validated By:**
**Certified By:**
**Authorized By:**
  
 Jason Moore, VP Operations, Assayer

  
 Jason Moore, VP Operations, Assayer

  
 Derek Demianiuk, VP Quality

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### Appendix 3. Expenditures

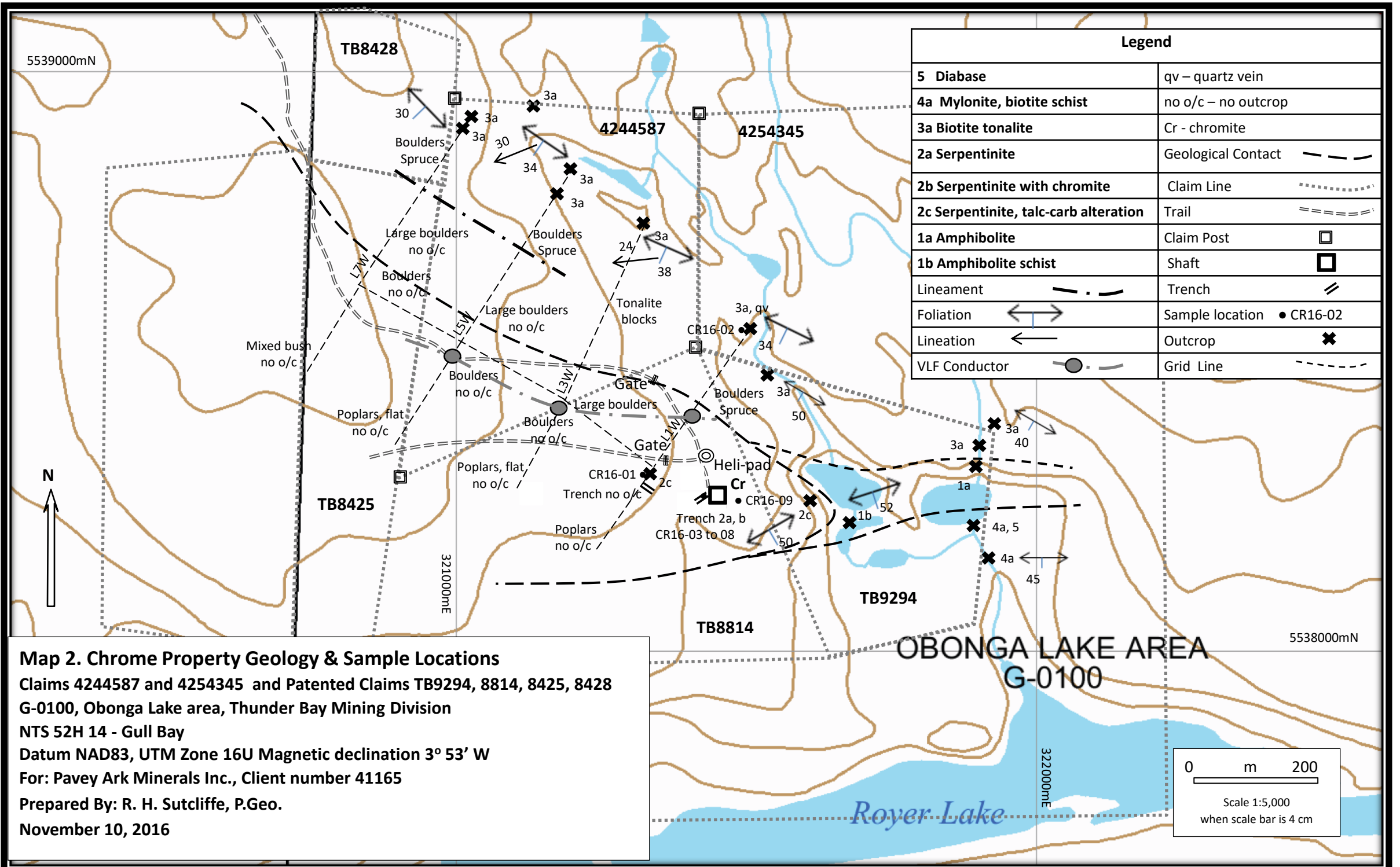
Item	Units	Unit Cost	HST	Total
<b>Line Cutting – Sept 25 to 30, 2016</b>				
A-Star Prospecting - Line cutting, plus mob/demob/camp costs, trail	4.5 km	\$875/km	1,032.85	<b>\$8,977.85</b>
<b>Geologist – R. Sutcliffe</b>				
Field work – Sept 25, 26, October 24 to 27, 2016	6 days	\$650/day	507.00	4,407.00
Reporting – 3 days, Nov 10, 11, 18, 2016	3 days	\$650/day	253.50	2,203.50
				<b>6,610.50</b>
<b>Contract Labour – Oct 23 to 28, 2016</b>				
A-Star Prospecting, Mob/demob, camp, gear, access, prospecting, VLF data collection	2 men x 6 days		870.35	<b>\$7,565.35</b>
<b>Geophysics – Colin Bowdidge</b>				
Data plotting and interp	1 day			<b>\$750.00</b>
<b>Analytical - Accurassay</b>				
Dry, crush, split, pulp, Au (FA/AAS 30g), MA (ICP/OES)	10	29.88	38.84	<b>\$337.64</b>
<b>Travel</b>				
Personal Vehicle – 1 trip Ancaster/T Bay/Armstrong/Ancaster	3,402 km	\$0.50/km		1,701.00
Armstrong/Property/Armstrong x 2	240 km	\$0.50/km		120.00
				<b>1,821.00</b>
<b>Food and Accommodation</b>				
Groceries	6 days	\$35/day		<b>210.00</b>
Hotel, Thunder Bay, Oct 23	1 night		14.95	<b>149.94</b>
<b>Office Supplies &amp; Field consumables</b>				
Copies			3.64	<b>\$31.65</b>
Courier – Accurassay			6.46	<b>\$56.14</b>
Sat Phone – In Reach			8.89	<b>\$77.29</b>
<b>TOTAL EXPENDITURES</b>				<b>\$26,587.36</b>

<b>Assignment of Expenditure to Claims</b>					
<b>Claim</b>	<b>Percentage</b>	<b>Expenditure</b>	<b>Applied</b>	<b>Banked</b>	<b>Order to be Cut back</b>
4244587	50%	\$13,293	\$1,600	4,873	5
4254345	15%	3,988	\$4,400		6
TB9294	10%	2,659	0		
TB8814	15%	3,988	0		
TB8425	10%	2,659	0		
<a href="#">4254346</a>	0		\$2,657		9
<a href="#">4254343</a>	0		\$4,000		4
<a href="#">4265978</a>	0		\$400		1
<a href="#">4265979</a>	0		\$400		2
<a href="#">4265980</a>	0		\$400		3
<a href="#">4265987</a>	0		\$5,057		7
<a href="#">4265988</a>	0		\$2,800		7
<b>Total</b>		\$26,587	21,714	4,873	



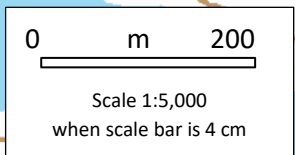


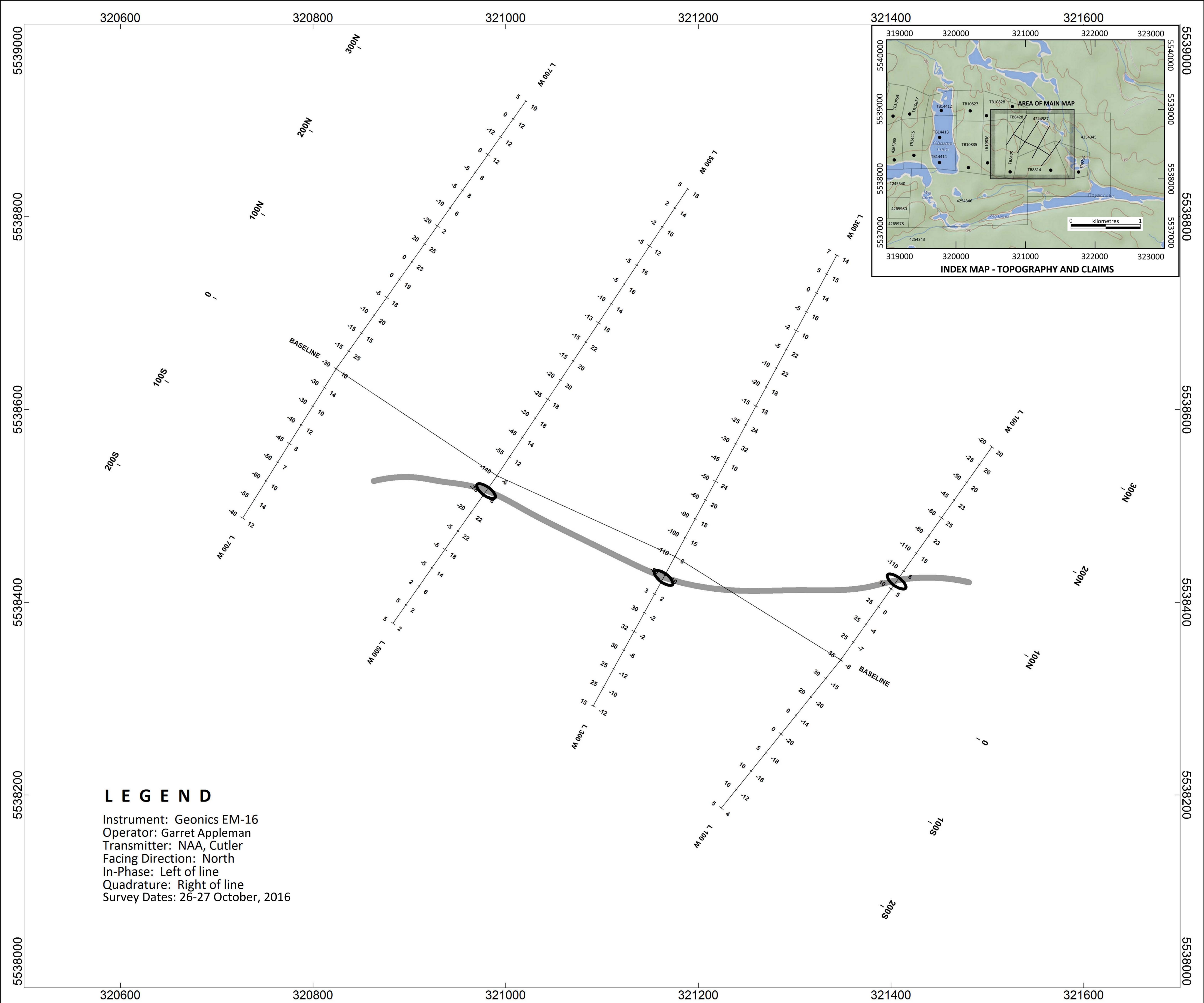




Legend	
5 Diabase	qv – quartz vein
4a Mylonite, biotite schist	no o/c – no outcrop
3a Biotite tonalite	Cr - chromite
2a Serpentinite	Geological Contact
2b Serpentinite with chromite	Claim Line
2c Serpentinite, talc-carb alteration	Trail
1a Amphibolite	Claim Post
1b Amphibolite schist	Shaft
Lineament	Trench
Foliation	Sample location  CR16-02
Lineation	Outcrop
VLF Conductor	Grid Line

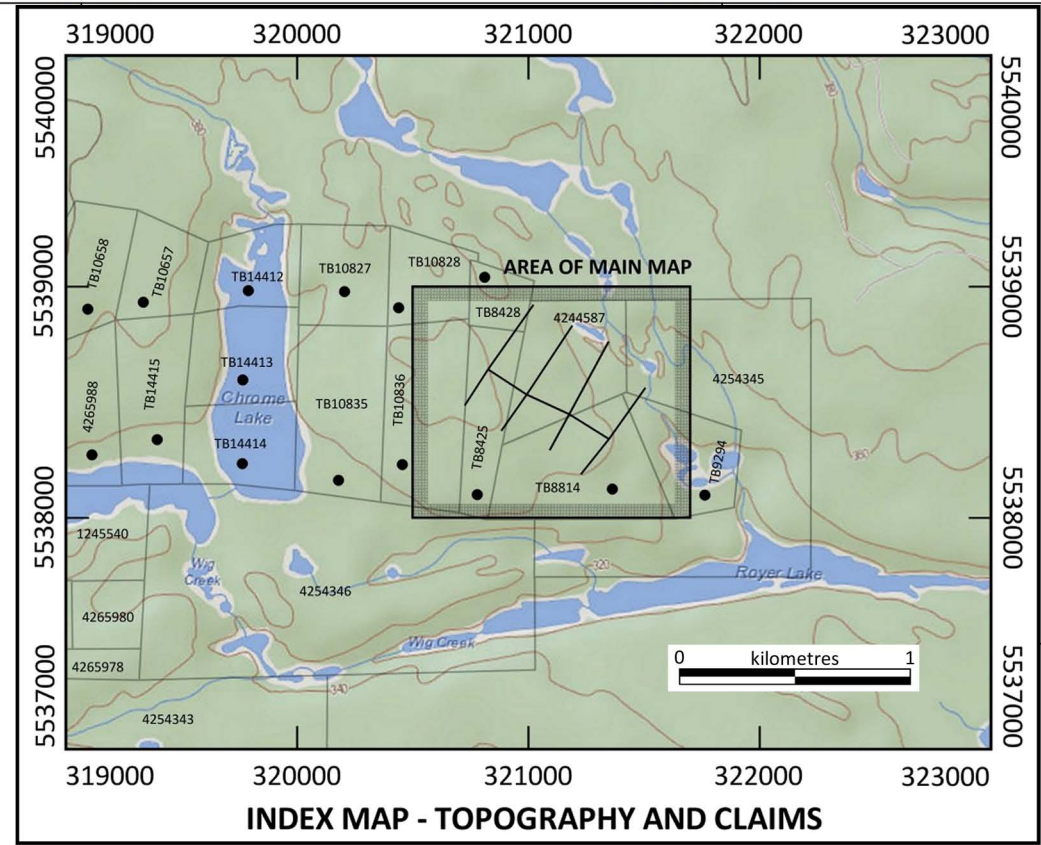
**Map 2. Chrome Property Geology & Sample Locations**  
 Claims 4244587 and 4254345 and Patented Claims TB9294, 8814, 8425, 8428  
 G-0100, Obonga Lake area, Thunder Bay Mining Division  
 NTS 52H 14 - Gull Bay  
 Datum NAD83, UTM Zone 16U Magnetic declination 3° 53' W  
 For: Pavey Ark Minerals Inc., Client number 41165  
 Prepared By: R. H. Sutcliffe, P.Geo.  
 November 10, 2016



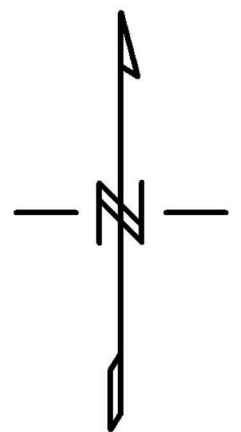
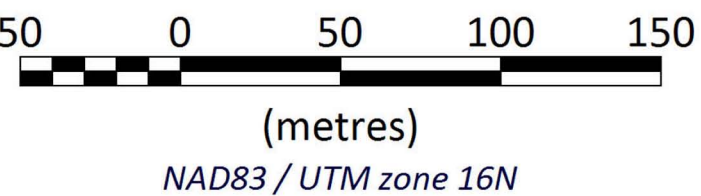


**LEGEND**

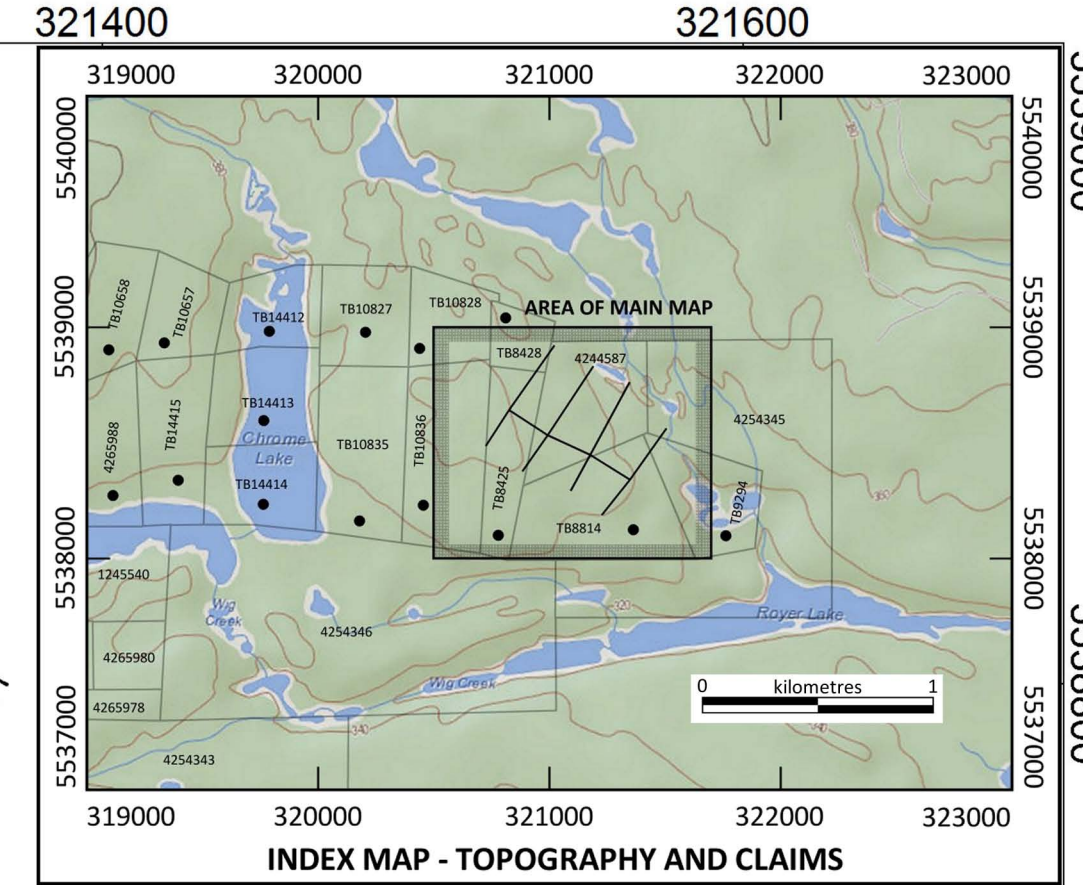
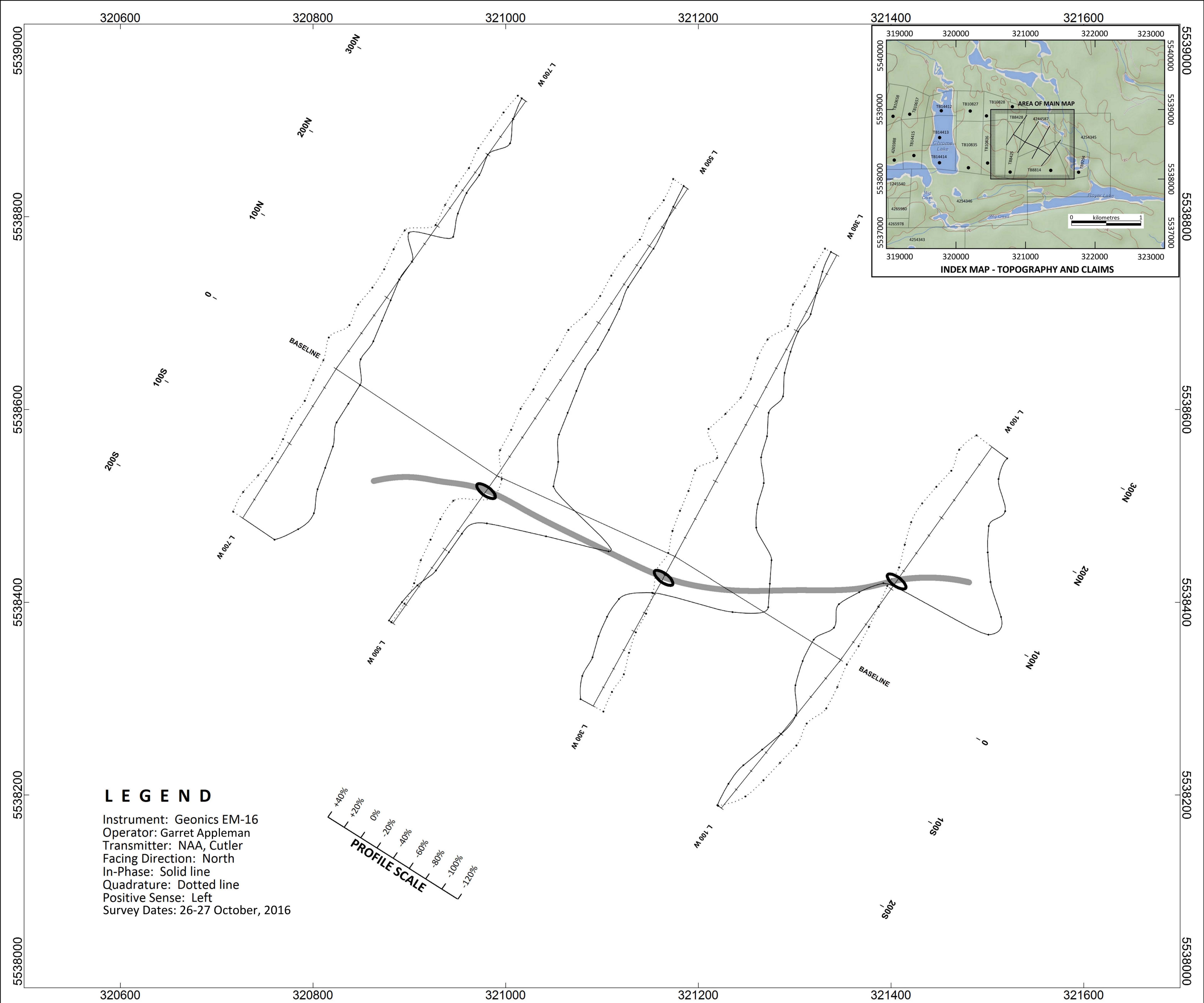
Instrument: Geonics EM-16  
 Operator: Garret Appleman  
 Transmitter: NAA, Cutler  
 Facing Direction: North  
 In-Phase: Left of line  
 Quadrature: Right of line  
 Survey Dates: 26-27 October, 2016



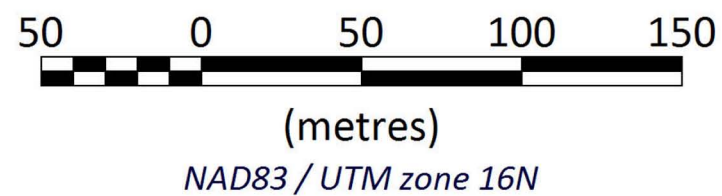
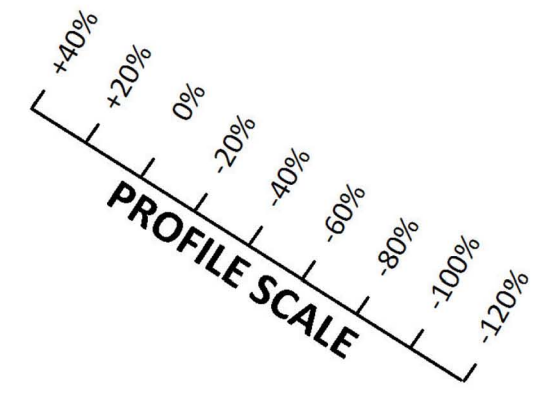
**CHROME PROJECT  
 VLF ELECTROMAGNETIC SURVEY  
 DATA POSTINGS**



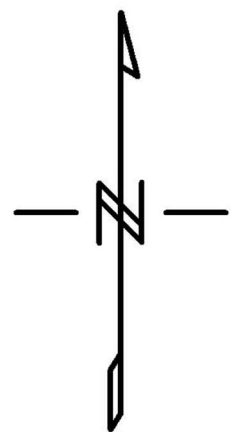




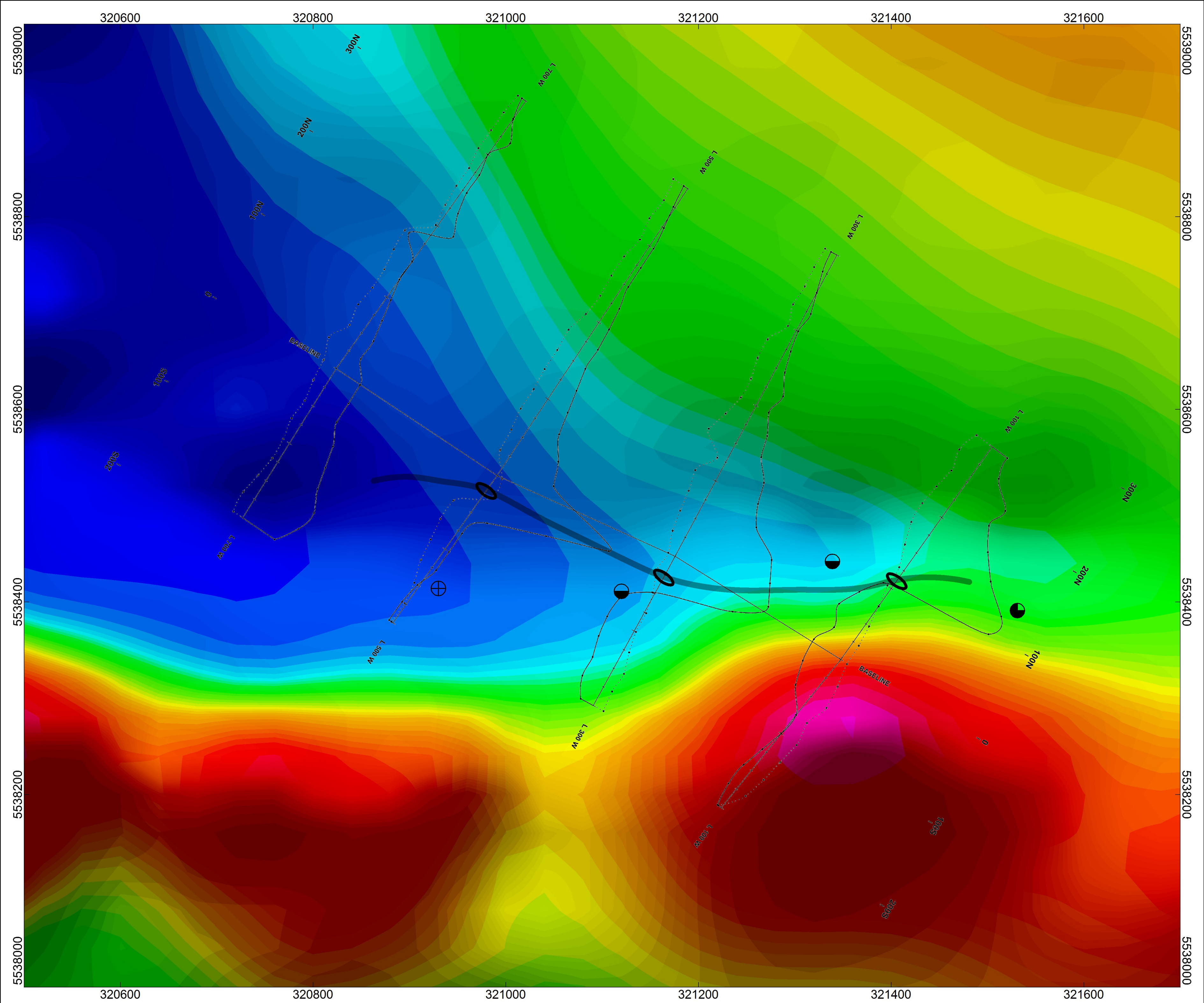
**LEGEND**  
 Instrument: Geonics EM-16  
 Operator: Garret Appleman  
 Transmitter: NAA, Cutler  
 Facing Direction: North  
 In-Phase: Solid line  
 Quadrature: Dotted line  
 Positive Sense: Left  
 Survey Dates: 26-27 October, 2016



**CHROME PROJECT  
 VLF ELECTROMAGNETIC SURVEY  
 PROFILE MAP**







**CHROME PROJECT**  
**VLF ELECTROMAGNETIC SURVEY**  
**VLF CONDUCTOR AND AIRBORNE**  
**MAGNETICS AND ANOMALIES**

