

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: EarthProbe Survey Interpretation Report, Decar Nickel Property, Mt. Sidney Williams, British Columbia

TOTAL COST: \$93,076.20

AUTHOR(S): Julie Palich, M.Sc., P. Geo., Wei Qian, Ph.D. P.Geo. SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-13-208/June 15, 2011 STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5127492

YEAR OF WORK: 2011 PROPERTY NAME: Decar Property CLAIM NAME(S) (on which work was done): 575675, 575677

COMMODITIES SOUGHT: Ni-Fe alloy

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Omineca Mining Division NTS / BCGS: 093/K14 54 52 LATITUDE: 36 ο LONGITUDE: 29 " (at centre of work) 125 21 UTM Zone: 10 EASTING: 348.718 NORTHING: 6.083.628

OWNER(S): First Point Minerals Corporation

MAILING ADDRESS: Suite 906 – 1112 West Pender Street Vancouver, BC V6E 2S1

OPERATOR(S) [who paid for the work]: Cliffs Natural Resources Canada Exploration Inc.

MAILING ADDRESS: 200 Public Square Cleveland, Ohio 44114

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**) borehole induced polarization, resistivity, chargeability, awaruite, peridotite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)		
GEOLOGICAL (scale, area)					
Ground, mapping					
Photo interpretation					
GEOPHYSICAL (line-kilometres)					
Ground					
Magnetic					
Electromagnetic					
Induced Polarization		575675 575677	34,903.57 58,172.63		
Radiometric					
Seismic					
Other					
Airborne					
GEOCHEMICAL (number of sample	es analysed for)				
Soil					
Silt					
Rock					
Other					
DRILLING (total metres, number of	holes, size, storage location)				
Core					
Non-core					
RELATED TECHNICAL					
Sampling / Assaying					
Petrographic					
Mineralographic					
Metallurgic					
PROSPECTING (scale/area)					
PREPATORY / PHYSICAL					
Line/grid (km)					
Topo/Photogrammetric (sca	le, area)				
Legal Surveys (scale, area)					
Road, local access (km)/trai	1				
Trench (number/metres)					
Underground development ((metres)				
Other		TOTAL	93,076.20		
		COST			

BC Geological Survey Assessment Report 33135

EARTHPROBE SURVEY INTERPRETATION REPORT

DECAR NICKEL PROPERTY

Mt. Sidney Williams, British Columbia



CLIFFS NATURAL RESOURCES EXPLORATION CANADA INC. 200 Public Square Cleveland, Ohio 44114 USA

February 10, 2012

Prepared By:

CARACLE CREEK INTERNATIONAL CONSULTING INC. Julie Palich, M.Sc., P.Geo – Geophysicist Wei Qian, Ph.D., P.Geo – Senior Geophysicist

Office Locations

Toronto 34 King Street East, 9th Floor Toronto, ON Canada, M5C 2X8

Tel: +1.416.368.1801 Fax: +1.416.368.9794 Canada@caraclecreek.com

Vancouver

409 Granville Street, Suite 1409 Vancouver, BC Canada, V6C 1T2

Tel: +1.604.637.2050 Fax: +1.604.602.9496 Canada@caraclecreek.com

Sudbury

25 Frood Road Sudbury, ON Canada, P3C 4Y9

Tel: +1.705.671.1801 TF: +1.866.671.1801 Fax: +1.705.671.3665 Canada@caraclecreek.com

Johannesburg

7th Floor The Mall Offices 11 Cradock Avenue, Rosebank South Africa

Tel: +1.27 (0) 11.880.0278 Fax: +1.27 (0) 11.447.4814 Africa@caraclecreek.com

www.caraclecreek.com

This report has been prepared by Caracle Creek International Consulting Inc. (Caracle Creek) on behalf of Cliffs Natural Resources Exploration Canada Inc.

2012

Issued by: Toronto Office

February 10, 2012

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	5
2.0	INTRODUCTION	7
3.0	PROJECT AREA BACKGROUND	7
3.1	SURVEY PROPERTY LOCATION, OWNERSHIP AND DESCRIPTION	7
3.2	GEOLOGICAL SETTING AND DEPOSIT TYPE	
3.3	2010 SURFACE DCIP SURVEY	
4.0	SURVEY DESIGN AND APPROACH	
4.1	IP THEORY	14
4.2	SYSTEM SPECIFICATIONS	15
4.3	VERTICAL PROFILING (VP)	
4.4	CROSS-HOLE TOMOGRAPHY	16
4.5	QA/QC	
5.0	DATA PROCESSING AND PRESENTATION	
5.1	DATA PROCESSING	
5.2	VERTICAL PROFILING (VP)	
5.3	CROSS-HOLE TOMOGRAPHY	
6.0	RESULTS AND INTERPRETATION	
6.1	BOREHOLE VP RESULTS	
6.2	CROSS-HOLE TOMOGRAPHY RESULTS	
6.3	DATA INTERPRETATION	27
6	.3.1 Correlation to 2010 surface IP survey	27
6	.3.2 Bulk Resistivity/Chargeability Correlation to Mineralogy	
7.0	CONCLUSIONS AND RECOMMENDATIONS	
8.0	REFERENCES	
9.0	STATEMENT OF AUTHORSHIP	

FIGURES

Figure 3-1. Location of the Decar Nickel Property, Mt Sidney Williams, British Columbia
Figure 3-2. Figure 3-2. Claim map of the Decar Nickel Property, Mt Sidney Williams, British Columbia
Figure 3-3. Location of boreholes surveyed with EarthProbe DCIP system at the Decar Nickel Property, Mt Sidney
Williams, British Columbia
Figure 3-4. Local geology of the Decar Nickel Property, Mt Sidney Williams, British Columbia
Figure 3-5. Contours of apparent chargeabilitiy (n=3) over the Baptiste and Sidney grids from the 2010 IP survey
Decar Nickel Property, Mt Sidney Williams, British Columbia13
Figure 4-1. Electrode configuration for the VP surveys
Figure 4-2. Tomography electrode configuration between two boreholes
Figure 5-1. Example VP apparent resistivity and chargeability striplog for borehole 11BAP03120
Figure 5-2. Theoretical example of a "bullseye" tomographic response indicating electrical connectivity between
borehole features
Figure 5-3. Theoretical example of a "linear" tomographic response indicating an absence of electrical connectivity
between borehole features
Figure 6-1. Scatter plots showing correlation between bulk apparent resistivity/chargeability and magnetically
separated Ni, Cr, and Fe ₂ O ₃

TABLES

Table 4-1: Specifications of the EarthProbe system	15
Table 4-2. VP survey summary	16
Table 4-3. Multi-bore tomography survey summary	17
Table 4-4. In-field QA/QC data verification criteria	18

APPENDICES

- Appendix 1 Caracle Creek Qualifications
- Appendix 2 Glossary of Terms and Units of Measure
- Appendix 3 EarthProbe Vertical Profiling Striplogs
- Appendix 4 EarthProbe Corss-Borehole Tomography
- Appendix 5 Production Log
- Appendix 6 EarthProbe Survey Project Costs

1.0 EXECUTIVE SUMMARY

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Cliffs Natural Resources Exploration Canada Inc. ("Cliffs") of Cleveland, Ohio, USA to conduct a borehole EarthProbe survey on the Decar Nickel Property (the "Property") located on Mt Sidney Williams in British Columbia, Canada. The work was undertaken at the request of Cliffs with the objective to correlate borehole results to the 2010 surface DCIP signature, to map the extent of the DCIP signature between boreholes within and outside the surface IP anomaly, and to correlate the DCIP signature of lithologies and varying awaruite concentrations within the borehole.

The survey was completed from September 24 – October 27, 2011, and comprised vertical resistivity and chargeability profiling of 17 boreholes and cross-hole tomographic imaging of 8 borehole pairs within the Baptiste target area.

The vertical profiling results have been presented as resistivity and chargeability pseudosections correlated in striplog format to lithology, magnetically separated Ni, Cr and Fe₂O₃ (Fe), and magnetic susceptibility. Results of the vertical profiling indicated a general trend of low resistivity (less than 120 Ohm.m) and high chargeability (greater than 25 mV/V) in association with the peridotite-hosted awaruite in most boreholes, which is consistent with the findings of a surface IP survey previously conducted in 2010. Higher resistivity zones within the borehole, both with and without low chargeability correlations, were typically found in association with zones of low magnetically separated Ni, Cr and/or Fe concentrations, altered dykes, diorite and granodiorite.

Cross-hole tomography results have been presented as "pseudosections". Consistent with the results of the vertical profiling, peridotite-hosted awaruite shows up as a chargeability high and resistivity low and it dominates the cross-hole tomographic data. Several other features (low chargeability/high resistivity, low chargeability/low resistivity), representing dykes or zones of low magnetically separated Ni, Cr, and/or Fe concentrations, intersect this dominant signature in the cross-hole data. Those features associated with dykes do not exhibit connectivity between boreholes, which is consistent with the existing geologic interpretation of the dyke orientiation in the deposit. Zones of low magnetically separated Ni, Cr, and/or Fe concentrations also do not exhibit connectivity between boreholes, suggesting non-extensive distribution within the deposit.

February 10, 2012

Direct correlation of the borehole results to the extent of the 2010 surface IP anomaly was complicated by the impacts of topography and the variable depths within the boreholes that the EarthProbe survey was conducted. Where comparable data were collected, the EarthProbe borehole data, showed similar resistivity and chargeability characteristics to the 2010 surface IP data. The disappearance of the surface IP anomaly towards the south and west of the Baptiste target is caused by the overburden thickening that masks the underlying awaruite-bearing peridotite signature.

A weak negative correlation exists between EarthProbe apparent resistivity and magnetically separated Ni and Cr concentration (resistivity decreases with increasing Ni/Cr concentration). A similar weak positive correlation between apparent chargeability and magnetically separated Cr concentration is also apparent. It is probable that the apparent resistivity and chargeability do not have a first order relationship with the magnetically separated metals, and instead have a higher order relationship with other mineralization factors (e.g. grain size, multi-element concentration).

The following recommendations are made, based on the results of this survey:

- While pseudosection presentation of the data provides a general understanding of the location and potential extent of the identified features, 2D and/or 3D inversion of the data is recommended to provide improved understanding of the spatial extent/orientation of the anomalous features (dykes and zones of low magnetically separated metals);
- Further investigation into possible higher order mineralogical relationships to DCIP measurements is warranted to improve the value of borehole DCIP data as an exploration tool;
- Continued use of borehole DCIP vertical profiling and tomography as an exploration tool can be used to map non-economic geologic features such as dykes and zones of low awaruite/chromite concentration.

2.0 INTRODUCTION

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Cliffs Natural Resources Exploration Canada Inc. ("Cliffs") of Cleveland, Ohio, USA to conduct a borehole EarthProbe survey on the Decar Nickel Property (the "Property") located on Mt Sidney Williams in British Columbia, Canada. EarthProbe is a high resolution DC resistivity and induced polarization (IP) logging and tomography survey system. This report is intended to serve as an interpretation report to the EarthProbe survey and has been written in an appropriate format to file with the British Columbia Ministry of Energy and Mines (EMPR) for assessment credit if required. This report summarises the results of the EarthProbe borehole DCIP survey undertaken on the Property from September 27 – October 24, 2011.

The objectives of the survey were to:

- To correlate borehole results to the surface DCIP signature that was identified during the 2010 IP survey;
- To map the extent of the DCIP signature between boreholes within and outside the surface IP anomaly; and
- To correlate the DCIP signature of lithologies and varying awaruite concentrations within the borehole.

3.0 PROJECT AREA BACKGROUND

3.1 Survey Property Location, Ownership and Description

The Property is located on Mt Sidney Williams, approximately 85 km northwest of Fort St. James in central British Columbia (Figure 3-1). The Property is located approximately 5 km northwest of Trembleur Lake, east of Middle River and south of Takla Lake. Access to the Property is by primary forest roads and helicopter.

The Decar claim group comprises 59 claims totalling 23884.6 ha, centred on coordinate 6,085,000mN and 350,000 mE (Zone 10, NAD 83) on NTS map 93 K/12 (Figure 3-2). Cliffs and First Point Minerals Corp. ("First Point") are parties to an option agreement dated November 12, 2009 as amended. Effective

September 12, 2011, Cliffs owns 51 % interest in the Decar Property. Cliffs has the option to increase its interest to:

- 1. 60 % by completing a scoping study/preliminary economic assessment
- 2. 65 % by completing a prefeasibility study
- 3. 75 % by completing a bankable feasibility study.

Upon completion of Cliffs earn-in to the Project, the parties will enter into a joint venture. Cliffs is the current operator of the Decar Property.



Figure 3-1. Location of the Decar Nickel Property, Mt Sidney Williams, British Columbia.



The EarthProbe borehole IP survey covers portions of claims 575675 (446.6 Ha) and 575677 (465.2 Ha). The survey location is shown in Figure 3-3.



Figure 3-3. Location of boreholes surveyed with EarthProbe DCIP system at the Decar Nickel Property, Mt Sidney Williams, British Columbia.

3.2 Geological Setting and Deposit Type

The Decar Property covers a portion of the Cache Creek Complex that likely represents a portion of an obducted or imbricate sequence of upper Paleozoic and lower Mesozoic oceanic rocks that have been significantly deformed and sheared (Britten and Rabb, 2011). Four litho-techtonic units have been identified in the Cache Creek Complex, two of which, namely the Trembleur Ultramafics and North Arm Succession, occur within or adjacent to the Decar claims (Shiarizza and MacIntyre, 1999) (Figure 3-4). Lithologies of the Trembleur Ultramafic are dominated by pyroxene-phyric peridotite with lesser fine grained ultramafics and dunite. The lithologies of the North Arm Succession include chert, limestone, phyllite and greenstone comprising basalt, mafic dykes and gabbro. The two units are juxtaposed with the younger North Arm Succession overthrust by the Trembleur Ultramafic Unit.

The Decar ultramafic body measures more than 15 km northwest and averages 5.5 km wide and consists of pyroxene-phyritic peridotite, lesser fine grained ultramafics and relatively minor dunite. Dark greenblack peridotite contains 10 - 30% medium grained pyroxenes set in a fine to medium grained, olivine-rich matrix that is strongly serpentinized. Within the ultramafic body, gabbro forms medium to fine grained stocks and 5 - 10 m wide and up to 50 m long dykes that trend northeast and east in the southern end of the Decar claims.

Within the serpentinized peridotite, three major zones of relatively coarse-grained, disseminated awaruite (Ni-Fe alloy) occur in the Baptiste, Sydney and Van target areas. The Baptiste and Sidney target areas are encompassed by a continuous zone of fine-grained disseminated awaruite. The Baptiste target measures about 5 km long and reaches 2.9 km wide (Britten and Rabb, 2010).

Overburden covers large portions of the Decar property and includes talus, scree, glacial till, glacial fluvial, alluvial and other general cover. These units mask the exploration potential of the larger mineralized targets.



Figure 3-4. Local geology of the Decar Nickel Property, Mt Sidney Williams, British Columbia.

3.3 2010 Surface DCIP Survey

In July 2010 a DCIP surface survey was conducted by Peter E. Walcott & Associates Limited comprising 19.1 line-km over the Baptiste target and 9.0 line-km over the Sidney target areas (Walcott, 2011). The survey was conducted using a pole-dipole configuration with an electrode spacing of 100 m (a = 100 m) for electrode separations n=1 to 6. The main objective of the IP survey was to differentiate coarse grained versus fine grained awaruite using either chargeability or resistivity properties. Preliminary testing on surface samples indicated that rock mineralized by awaruite exhibited low resistivity.

February 10, 2012

IP plan maps (Figure 3-5) showed strong chargeability readings ranging from 35 - 70 mV/V in the northern end of the Baptiste and Sidney grids, with chargeability seen to decrease to the south. Apparent resistivity was seen to mimic the chargeability patterns. Initial drill holes into both target areas showed no obvious correlation between IP response and awaruite mineralization although the highest chargeability readings on the northeast end of the Baptiste target correlated with massive serpentinized peridotite containing chromite, magnetite and minor fine-grained awaruite.



Figure 3-5. Contours of apparent chargeability (n=3) over the Baptiste and Sidney grids from the 2010 IP survey Decar Nickel Property, Mt Sidney Williams, British Columbia.

4.0 SURVEY DESIGN AND APPROACH

The geophysical survey was undertaken using the EarthProbe high resolution DCIP system. The system can be configured for the collection of high resolution surface IP data, vertical profiles (VP), and/or multibore/surface-to-bore tomographic data. For this survey, data were collected using the high resolution borehole VP and borehole-to-borehole configurations.

In this report, conventional electrode nomenclature is used whereby "A" denotes the positive current electrode, "B" the negative current electrode, "M" the positive potential electrode and "N" the negative potential electrode.

4.1 **IP** Theory

When a voltage is applied to the ground, electrical current predominantly flows in the electrolyte-filled capillaries within the rock. If certain mineral particles that transport current by electrons (e.g. most sulphides, some oxides, and graphite) are also present, then the ionic charges build up at the particleelectrolyte interface. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and results in induced polarization effects even in the absence of mineralized conductors.

Most IP surveys for mineral exploration are carried out by taking measurements in the time-domain and measure the combined IP effects of electrode and membrane polarization. Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive the apparent chargeability (M_a), which is a measure of the strength of the induced polarization effect. At the same time as chargeability measurements are collected, apparent resistivity (ρ_a) measurements can be derived from the constant current on-time of the waveform after the initial IP charging effects are over, providing further information about the presence or absence of conductive minerals within the host rocks.

February 10, 2012

4.2 System Specifications

A summary of the survey specifications can be found in Table 4-1.

Survey Item	Specifications
Contractor	Caracle Creek International Consulting Inc.
Survey Type	Direct current resistivity and induced polarization survey
Geophysical System	EarthProbe High Resolution borehole DCIP system
Data Type	Full-waveform, 2048 ms on-time and 2048 ms off-time, castle waveform
Survey Configuration	Vertical profiling of 17 boreholes using a 24 electrode Schlumberger array Borehole-to-borehole tomography between 8 borehole pairs using array described in Section 4.4
Voltage Input	800 V
Electrode Spacing	4 m

Table 4-1: Specifications of the EarthProbe system

4.3 Vertical Profiling (VP)

Vertical resistivity and chargeability Profiling (VP) is achieved by placing a standard current and potential electrode array down a single borehole. The bore setup is the same as for a surface Schlumberger survey (Figure 4-1). The measured voltage is converted into apparent resistivity through a geometric factor that takes into account the earth-air interface. The apparent resistivity pseudosection is then created by assigning the apparent resistivity using the standard Schlumberger-array convention of AB/4 to approximate distance away from the borehole.

IP and resistivity measurements were taken in the time-domain mode using an 8,192 millisecond (ms) current injection square waveform (2,048 ms positive charge, 2,048 ms off, 2,048 ms negative charge, 2,048 ms off).

The survey was conducted using a downhole Schlumberger array as shown in Figure 4-1. The electrode separation ('A'-spacing) was 4 m and there are 24 electrodes on each cable. Based on the maximum electrode separations, a theoretical formation penetration of about 25 m was achieved. Table 4-2 summarizes the borehole survey details for the VP. Figure 3-3 depicts the locations of the boreholes surveyed.



Figure 4-1. Electrode configuration for the VP surveys

Borehole ID	Easting	Northing	Elevation	Azimuth	Dip	Hole Depth (mbg)	Logged Interval (mbg)	Dipole Length (m)
11BAP002	348671	6083305	1028	0	-50	309.0	34.2 - 126.2	4
11BAP003	348419	6083210	1072	333	-50	310.9	76 – 168	4
11BAP006	348966	6083637	1020	333	-50	305	32 - 124	4
11BAP010	349264	6083556	1016	300	-48	302	78 - 170	4
11BAP011	349092	6083443	1025	330	-50	302	56 - 148	4
11BAP012	348283	6083398	1092	333	-50	301.5	34.7 - 126.7	4
11BAP014	349346	6083393	998	333	-50	301.4	76.5 - 168.5	4
11BAP015	349517	6083486	1037	1	-50	304.6	61 – 153	4
11BAP016	348797	6083555	1039	345	-50	302	24.7 - 116.7	4
11BAP017	348524	6083552	1080	10	-50	302	75.5 - 167.5	4
11BAP019							1.1 - 281.1	16 (run in 4 m
	347703	6083452	1257	28	-50	301.4		intervals)
11BAP021	349173	6083736	1028	333	-50	302	1.53 - 93.53	4
11BAP022	347891	6083372	1206	28	-55	302	77.6 - 161.6	4
11BAP024	349084	6083911	1065	345	-50	302	36.65 - 128.65	4
11BAP026	348902	6083816	1065	333	-50	302	48.2 - 140.2	4
11BAP031	348740	6083741	1079	345	-50	302	7.2 - 99.2	4

Table 4-2. VP survey summary

4.4 Cross-hole Tomography

Borehole tomography, in which both current electrodes and potential electrodes are placed across two regions, can provide detailed information about resistivity and chargeability distribution between the boreholes (Daniels 1977; Daniels and Dyck 1984; Shima 1992). Daniels and Dyck (1984) demonstrated a variety of applications of borehole resistivity measurements to mineral exploration including assessment of the continuity of intersected mineralization between boreholes and detection of off-hole mineralized sources.

Tomographic measurements for current and potential electrodes straddled across two boreholes can assist in identifying conductor extensions between two boreholes. To measure the apparent resistivity and chargeability between two boreholes, electrical current is injected between two electrodes across two boreholes and the potential difference at the two electrodes is measured immediately below the current injection electrodes, as shown in Figure 4-2. This measurement configuration is very sensitive to detect and delineate sub-horizontal thin conductive or resistive beds. Table 4-3 summarizes the multi-bore tomography configurations undertaken during this survey. Borehole locations are depicted in Figure 3-2.

IP and resistivity tomographic measurements were taken in the time-domain mode using an 8,192 millisecond (ms) current injection square waveform (2,048 ms positive charge, 2,048 ms off, 2,048 ms negative charge, 2,048 ms off).



Figure 4-2. Tomography electrode configuration between two boreholes.

Primary Borehole	Borehole Pairings	Survey Interval – Primary Borehole (mbg)	Survey Interval – Secondary Borehole (mbg)
11BAP003	11BAP002	78 – 170 m	36.2 – 128.2 m
	11BAP012	1.5 – 93.5 m	36.7 – 128.7 m
11BAP010	11BAP011	80 – 172 m	33 – 125 m
11BAP016	11BAP17	26.7 – 118.7 m	77.5 – 169.5 m
	11BAP006	16 – 108 m	67 – 159 m
11BAP026	11BAP021	0.77 – 84.77 m	1 – 65 m
	11BAP024	0.9 – 84.9 m	38.65 – 130.65 m
	11BAP031	50.2 – 142.2 m	9.2 – 101.2 m

Table 4-3. Multi-bore tomography survey summary

4.5 QA/QC

Several QA/QC criteria were applied during the survey to assess the quality of the data. Acceptable thresholds for the survey were established by the operator based on industry accepted practices and site specific conditions. The QA/QC criteria used for this survey are summarised in Table 4-4.

At the end of each survey day, the full waveform data are dumped from the field computer to a laptop. The data are then emailed to the office, and subsequently processed and loaded into TQIPDB (<u>http://www.scicomap.com/TQIPdb.htm</u>) for waveform quality assessment and removal of noisy data points. The data in TQIPDB format are then output into Geosoft format for plotting (<u>www.geosoft.com</u>). All the maps are subsequently created in Geosoft.

Table 4-4. In-field QA/QC data verification criteria

Survey Component	QA/QC Measure	Acceptable Threshold
	Current and voltage waveform must be a castle	
Waveform	shape and the correlation of the current and	0.0
wavelonn	voltage time series must be above a defined	0.9
	threshold	
Injection current	Injected current must be within a defined range	Above 1 mA
Measured voltage	Measured voltage must be within a defined	
	range	5 – 10,000 mV
Stacked voltages	Standard deviation of stacked voltage data must	
	be below a defined threshold	5%
Self-potential	System self-potential must be below a defined	
	threshold	100 mV

5.0 DATA PROCESSING AND PRESENTATION

5.1 Data Processing

From the time domain data, data binning starts at 50 ms and finishes at 1,650 ms. There are total of 21 windows with width of 80 ms. The apparent chargeability (Mx) is derived from an integration of these 21 windows. It is noted that the chargeability presented by the EarthProbe system will differ from chargeability reported using traditional DCIP systems due to differences in the sampling windows, which impacts the Mx calculation. Due in part to collection of data from earlier shut-off times, made possible by a cleaner shut-off decay compared to traditional systems, chargeability from the EarthProbe system will in general be higher than that reported by traditional DCIP systems. The wider range of chargeability values returned from the EarthProbe system should in theory lead to better anomaly discrimination.

February 10, 2012

Apparent resistivity is calculated from the primary voltage and transmitted current using K factors based on the methodology presented by Qian et al (2007).

5.2 Vertical Profiling (VP)

VP data collected for this survey are presented in striplog format with comparison to lithology magnetically separated nickel, chromium and iron fractions (%) and magnetic susceptibility (SI units). All data are presented in Appendix 3 with an example presentation depicted in Figure 5-1. Depth from the surface is plotted along the y-axis in meters (m). Distance from the borehole is plotted on the x-axis and has been approximated based on application of the formula:

$$\mathbf{D} = \mathbf{A}\mathbf{B}/4$$

whereby D is the approximate distance of reading from the borehole (m) and AB is the distance between the current electrodes (m). This assumption is typically used as a rule-of-thumb for the Schlumberger array. True distances of responses however will be dependent upon the resistivity of the media and can only be determined with reasonable accuracy by undertaking a 2D or 3D inversion, as applicable.

It is noted that while the pseudosection has been presented to the right of the borehole, vertical profiling does not confine the location of an anomaly within 3D space and therefore may represent the electrical response at that depth and distance from anywhere within a 360° radius of the bore.



Figure 5-1. Example VP apparent resistivity and chargeability striplog for borehole 11BAP031.

5.3 Cross-hole Tomography

Multi-bore tomography data are presented in Appendix 4 with an example shown in Figure 5-4. In this presentation depth of the reading along borehole A is plotted on the y-axis as the midpoint between electrodes AM and depth of the reading along borehole B is plotted on the x-axis as the midpoint of electrodes BN.

Interpretation of the data considers the strength of the resistivity/chargeability response between each electrode pairing within each borehole. Tomographic responses are typically characterized as either a "bullseye" feature or a "linear" feature. "Bullseye" features indicate electrical connectivity between boreholes (Figure 5-2). "Linear" responses indicate a lack of electrical connectivity (Figure 5-3).



Figure 5-2. Theoretical example of a "bullseye" tomographic response indicating electrical connectivity between borehole features.



Figure 5-3. Theoretical example of a "linear" tomographic response indicating an absence of electrical connectivity between borehole features.

6.0 **Results and Interpretation**

6.1 Borehole VP Results

Results of the vertical profiling indicated a general trend of low resistivity (less than 120 Ohm.m) and high chargeability (greater than 25 mV/V) in association with the peridotite-hosted awaruite in most boreholes. Higher resistivity zones, both with and without low chargeability correlations, were typically found in association with zones of low magnetically separated metal concentrations, altered dykes, diorite and granodiorite. Specific features of interest for each borehole are detailed below.

11BAP002: A zone of moderate resistivity (300 - 1,000 Ohm.m) and low chargeability (less than 15 mV/V is present from 100 - 125 m (bottom of logged zone), coincident with a region of low magnetically separated metal concentrations (Ni, Cr and Fe). A second zone of moderate resistivity (300 - 1,000 Ohm.m) was present above 80 m and is associated with a low chargeability feature (less than 20 mV/V) above 60 m; the source of this feature is less apparent although magnetically separated Cr was slightly low over this region.

11BAP003: Three zones of low resistivity (less than 120 Ohm.m) are present in and extending away from the borehole between 90 - 95 m, 122 - 130 m, and below 142 m in association with peridotite-hosted awaruite. These zones are broken by in- and off-hole zones of moderate to high resistivity (greater than 300 Ohm.m) at depths above 85 m, between 95 - 122 m, and 130-142 m in association with an unknown source, a zone of lower Fe and Cr, and a zone of low Ni, Cr and Fe, respectively. High chargeability (greater than 25 mV/V) is observed throughout the profile, with in-hole lows potentially reflecting destruction of the in-hole mineralization integrity due to the drilling method (e.g. residual drilling fluid in the near borehole formation masks in-hole response).

11BAP006: This borehole is predominantly characterized by low resistivity and high chargeability over the entire length of the logged interval. A zone of moderate resistivity (500 - 1,200 Ohm.m) and moderate chargeability (15 - 20 mV/V) is present at depths between 65 - 75 m, coincident with a zone of low magnetic susceptibility.

11BAP010: This borehole is characterized by high resistivity (greater than 1,000 Ohm.m) from 90 - 120 m, coincident with an interval of altered dykes and low magnetically separated metal concentrations. The steeply dipping nature of the dykes is reflected in the off-hole response. Resistivity gradationally

decreases to less than 120 Ohm.m by a depth of 135 m, coincident to the presence of high magnetically separated metal concentrations. Chargeability predominantly remained high (greater than 40 mV/V) throughout the profile, with a slight decrease in chargeability noted in association with some of the thicker dykes.

11BAP011: This borehole is characterized by low resistivity and an off-hole high chargeability response between 70 - 132 m; the off-hole nature of the high chargeability response may be associated with a destruction of the in-hole mineralization integrity due to the drilling method (e.g. residual drilling fluid in the near borehole formation masks in-hole response). A high resistivity (greater than 1,300 Ohm.m) and low chargeability (less than 10 mV/V) response is present below 132 m in association with a zone of altered dykes.

11BAP012: This borehole is characterized by a low resistivity (less than 150 Ohm.m)/high chargeability (greater than 30 mV/V) feature broken by several zones of moderate resistivity and/or low chargeability associated with narrow bands of diorite and low Ni at 50 m, 72 m, and 85 m, and a zone of low magnetic susceptibility between 89 - 102 m. The off-hole response of both resistivity and chargeability suggests a complex lithology and potentially varying awaruite abundance within a 25 m radius of the borehole.

11BAP014: This borehole is characterized by low resistivity (less than 100 Ohm.m) both in-hole and offhole throughout the logged interval. A slight increase in resistivity and decrease in chargeability is apparent at 138 m, in association with a very narrow altered dyke. Chargeability remains low (less than 20 mV/V) between 138 m and 160 m; the source of this decrease is not evident.

11BAP015: This borehole is characterized by moderate resistivity (300 - 1,000 Ohm.m) from 70 - 105 m, coincident with an interval of altered and mafic dykes and low magnetically separated metal concentrations. Zones of awaruite-bearing peridotite within and below this interval exhibited low resistivity (less than 200 Ohm.m) and high chargeability (greater than 30 mV/V).

11BAP016: A narrow zone of low magnetically separated Ni around 40 m is delineated in this borehole by a coincident high resistivity/low chargeability feature. A second high resistivity/low chargeability feature is present at the base of the logged interval (~105 m) highlighting the presence of diorite/low magnetically separated metal concentrations at/below this depth. A third high resistivity/low chargeability feature is present at 62 m, coincident with a zone of relatively lower magnetically separated Cr and Fe; this feature appears to extend approximately 20 m off-hole.

11BAP017: The logged interval of this profile is predominantly characterized by an in-hole low resistivity (less than 150 Ohm.m) zone coincident with peridotite-hosted awaruite with high magnetically separated metals concentrations and an off-hole zone of high chargeability (greater than 25 mV/V); the off-hole nature of the high chargeability response may be associated with a destruction of the in-hole mineralization integrity due to the drilling method (e.g. residual drilling fluid in the near borehole formation masks in-hole response). Two zones of moderate resistivity (300 – 700 Ohm.m) are seen in-hole at 90 – 98 m in association with a slight decrease in magnetically separated Ni, Cr and Fe concentrations, and below 158 m in association with a felsic dyke. A third moderate resistivity feature is present 12 m off-hole at a depth of 110 m projecting away from the borehole with depth; this feature is likely to be associated with the presence of an off-hole dyke.

11BAP019: A low resistivity (less than 100 Ohm.m)/high chargeability (greater than 30 mV/V) signature is seen in association with the conglomerate unit present between 20 - 78 m. An atypical high resistivity (greater than 400 Ohm.m)/low chargeability (less than 15 mV/V) signature is present at depths below 130 m in association with a continuous zone of peridotite-hosted awaruite with high magnetically separated metal concentrations; the cause of this atypical signature is not clear. Two narrow zones of low resistivity (less than 120 Ohm.m) separated by mafic dykes are present at 100 m and 125 m in association with peridotite-hosted awaruite with high magnetically separated metal concentrations; the latter feature extends off-hole over a distance of 75 m, projects to a depth of 190 m, and is associated with a zone of high chargeability (greater than 40 mV/V).

11BAP021: The logged interval in this borehole reflects a low resistivity (less than 120 Ohm.m) and low chargeability (less than 20 mV/V) associated with the peridotite. A high resistivity (greater than 1,200 Ohm.m), low chargeability (less than 10 mV/V) interval is present at 20 m, reflecting the overburden.

11BAP022: The logged interval in this borehole reflects an atypical high resistivity (greater than 1,200 Ohm.m)/high chargeability (greater than 25 mV/V) signature in association with a continuous zone of peridotite-hosted awaruite with high magnetically separated metal concentrations; the cause of this atypical signature is not clear but is similar to the high resistivity signature seen in adjacent borehole 11BAP019. A narrow interval of sediment, logged at the top of the profile, suggests this lithology is characterized by low resistivity (less than 150 Ohm.m) and low chargeability (less than 5 mV/V).

11BAP024: The logged interval in this borehole reflects a low resistivity (less than 120 Ohm.m) and offhole high chargeability (greater than 40 mV/V) associated with the peridotite; the off-hole nature of the high chargeability response may be associated with a destruction of the in-hole mineralization integrity due to the drilling method (e.g. residual drilling fluid in the near borehole formation masks in-hole response). The zone of low magnetically separated metal concentrations between 60 – 80 m was not reflected in the vertical profile.

11BAP026: The logged interval in this borehole suggests a moderate resistivity (300 -700 Ohm.m) and high chargeability (greater than 25 mV/V) coincident with a zone of low magnetically separated Ni (80 – 130 m). Lower resistivity/high chargeability zones are seen above 60 m and below 130 m, coincident with higher magnetically separated Ni concentrations. A high resistivity/low chargeability zone is seen from 60 - 80 m, coincident with a zone of diorite and low magnetically separated Ni and Fe.

11BAP031: A low resistivity (less than 150 Ohm.m) zone is present in-hole between 15 - 58 m, coincident with a zone of awaruite bearing peridotite; this feature extends off-hole to a depth of approximately 70 m, and is broken by a moderate resistivity zone at 25 m (cause uncertain). A more limited high chargeability (greater than 25 mV/V) zone is present in-hole between 15 - 42 m and extends off-hole to a depth of approximately 70 m; in-hole chargeability lows are seen at 25 m (cause uncertain) and between 42-58 m, coincident with a region of lower magnetically separated Ni, Cr and Fe concentrations. A high resistivity (greater than 1,200 Ohm.m)/low chargeability (less than 10 mV/V) zone is present between 58 - 90 m, coincident with the presence of several zones of granodiorite that disrupt the peridotite continuity.

6.2 Cross-hole Tomography Results

The borehole-to-borehole tomography results are presented in Appendix 4. In the following discussion, reference is made to specific alphanumeric features (e.g. 2A) that are labeled within this appendix; the numeric component references the borehole ID from which the feature relates (e.g. "2" for borehole 11BAP002) and a sequential alphabetical label is used to distinguish each independent feature.

Consistent with the results of the vertical profiling, peridotite-hosted awaruite shows up as a chargeability high and resistivity low and it dominates the cross-hole tomographic data. Several other features (low chargeability/high resistivity, low chargeability/low resistivity) intersect this dominant signature in the

February 10, 2012

cross-hole data. This data interpretation focuses on the intersecting high resistivity/low chargeability features, most of which represent dykes, or zones of low magnetically separated Ni, Cr, and/or Fe concentrations.

11BAP003 – **11BAP002:** Three features have been identified in borehole 11BAP003 at 80 m (C3 – moderate resistivity/low chargeability, source unknown), 115 m (D3 – moderate resistivity and chargeability, zone of lower Fe and Cr), and 145 m (E3 – moderate resistivity, source unknown). 11BAP002 exhibits a zone of moderate resistivity at 40 m (A2 – lower Fe and Cr), and a zone of high resistivity/moderate chargeability between 100 - 125 m (B2 – low Ni, Cr and Fe). None of these features are connected between 11BAP002 and 11BAP003.

11BAP003 – **11BAP012**: Three features have been identified in borehole 11BAP003 at 35 m (A3 – moderate resistivity and chargeability, source unknown), 57 m (B3 – moderate resistivity/low chargeability, source unknown), and 80 m (C3 – moderate resistivity, source unknown). In borehole 11BAP012, two high resistivity/low chargeability features are present at 58 m and 90 m (B12 and C12, respectively, associated with dioritic dykes), and a high resistivity/moderate chargeability zone is present at 105 m (A12, associated with a magnetic susceptibility low). None of these features are connected between 11BAP003 and 11BAP012.

11BAP010 – **11BAP011:** Three high resistivity/low chargeability features have been identified in borehole 11BAP010 at 80 m (D10 – zone of low Cr), 100 - 120 m (C10 – zone of altered dykes and low), and 125 - 130 m (B10 – zone of altered dykes and low Ni, Cr and Fe); these features are not connected to 11BAP011. A fourth moderate resistivity/high chargeability feature is present below 160 m (A10 – zone of lower Ni and Cr); A10 appears to project towards 11BAP011 at depths 40 m, 60 – 80 m, 90 m and 110 m.

11BAP016 – 11BAP006: A high resistivity/low chargeability zone is present in 11BAP016 between 18 - 30 m (A16 – source unknown as interval not sampled) and a moderate resistivity/high chargeability zone is present at 58 m in 11BAP016 (B16 – high Ni and Fe); neither of these features are electrically connected to 11BAP006. A narrow cross-cutting moderate resistivity/moderate chargeability feature (C6-16) is present between 120 - 140 m in 11BAP006 and 60 - 100 m in 11BAP016; this feature may reflect an off-hole dyke. A zone of moderate resistivity/moderate chargeability (D6-16), associated with slightly reduced magnetically separated metal concentrations compared to the surrounding peridotite, is present

February 10, 2012

in- and off-hole of both 11BAP006 and 11BAP016 between approximately 60 - 100 m and appears to be connected.

11BAP016 – 11BAP017: A high resistivity/low chargeability feature is present in 11BAP017 from 80 – 90 m (A17) associated with a narrow zone of low Ni, Cr, Fe. A second high resistivity/moderate chargeability feature (B17) is present in 11BAP017 at 160 m associated with a felsic dyke. A17 and B17 are not connected to 11BAP016. Feature B16 does not extend towards 11BAP017. Feature A16 is reflected in this tomographic plot above 40 m and does not extend towards 11BAP017.

11BAP026 – **11BAP021**: Two broad low chargeability regions have been identified in 11BAP026. Feature A26 exhibits low resistivity/moderate chargeability (source unknown) between 15 - 30 m. Feature B26 exhibits high resistivity/low chargeability between 65 - 80 m associated with a diorite/zone of low magnetically separated metal concentrations. A26 and B26 do not extend towards 11BAP21.

11BAP026 – **11BAP024**: Features A26 and B26 are reflected again in the cross-hole tomography between 11BAP026 and 11BAP024. These features also do not extend towards 11BAP24.

11BAP026 – 11BAP031: Feature B26 is reflected in the cross-hole tomography between 11BAP026 and 11BAP031; this feature does not extend towards 11BAP031, suggesting the zone of low magnetically separated metal concentrations between 65-80 m in 11BAP026 is local to the borehole. 11BAP031 shows two zones of high resistivity/low chargeability at 65 m and 85 m (A31 and B31 respectively) associated with granodioritic dykes. These features do not appear to be connected to 11BAP026.

6.3 Data Interpretation

6.3.1 Correlation to 2010 surface IP survey

The results from the EarthProbe DCIP survey predominantly showed a low resistivity/high chargeability response associated with the awaruite-mineralized peridotite. These results are consistent with the findings of the 2010 surface IP survey. Direct correlation of the borehole results to the extent of the anomaly was complicated by the impacts of topography and the variable depths within the boreholes that the EarthProbe survey was conducted. Despite these limitations, the following correlations can be made in consideration of both the EarthProbe DCIP response and the drillhole lithology:

February 10, 2012

- The shallow borehole data from 11BAP021, 11BAP016 reflect the changes in anomaly strength observed in the surface chargeability anomaly with 11BAP016 exhibiting a high chargeability response and 11BAP021exhibiting low chargeability response.
- The extent of the surface chargeability anomaly correlates to the combined thickness of the overburden and low Ni, Cr, and Fe in peridotite at shallow depths. As shown by drilling, this thickness progressively increases from north to south and from east to west, coincident with what is observed for the distribution of the chargeability anomaly for n=3.
- The very low chargeability response observed in the western portion of the Baptiste target is likely associated with the thick overburden/conglomerate cover as observed in 11BAP019 and 11BAP022.

6.3.2 Bulk Resistivity/Chargeability Correlation to Mineralogy

A preliminary assessment of bulk resistivity/chargeability trends within the peridotite was undertaken by comparing the "in-hole" EarthProbe DCIP response (defined as the smallest electrode spacing, whereby the AMNB distance = 12 m) to concentrations of magnetically separated Ni, Cr and Fe. In preparing the dataset for analysis, the bulk resistivity/chargeability was defined at the mid-point of the AMNB array. This value was compared to the nearest laboratory analytical sample result, or discarded from the data set if no analytical result was taken within 2 m of the AMNB-midpoint. Using this methodology, a total of 267 bulk resistivity data and 163 bulk chargeability data were used in the analysis. It is noted that correlation error will be introduced using this methodology due to the scale difference between the laboratory analysis of the core (typically over a 1 m interval) and the fact that the bulk resistivity represents the response over 12 m. As a result, if any significant lithological or mineralogical variances occur over the 12 m interval, these become "averaged" into the bulk resistivity/chargeability response.

Results of the analysis are presented graphically in Figure 6-1. A weak negative correlation exists between apparent resistivity and magnetically separated Ni and Cr concentration (resistivity decreases with increasing Ni/Cr concentration), although the limited number of data above 500 Ohm.m resistivity and below 0.05% Ni and Cr may render this correlation statistically insignificant. A similar weak positive correlation between apparent chargeability and magnetically separated Cr concentration is also apparent. No clear correlation exists between magnetically separated Fe_2O_3 and either apparent resistivity or chargeability.

February 10, 2012

The significant amount of scatter in the correlation data may result from the inconsistency of sample scale between the bulk resistivity/chargeability values and the assay data; however the consistency of metal concentrations suggests this is unlikely to be the only factor. It is probable the scatter is indicative of the fact that apparent resistivity and chargeability do not have a first order relationship with the magnetically separated metals, and instead have a higher order relationship with other mineralization factors. For example, the combination of components such as grain size and/or total magnetically separated Ni+Cr+Fe concentration may have a more direct correlation to apparent resistivity and chargeability. Further investigation into possible mineralogical relationships to DCIP measurements is warranted.



Figure 6-1. Scatter plots showing correlation between bulk apparent resistivity/chargeability and magnetically separated Ni, Cr, and Fe₂O₃.

February 10, 2012

CARACLE CREEK INTERNATIONAL CONSULTING INC.

Page | 30

Toronto - Vancouver - Sudbury- Johannesburg

7.0 CONCLUSIONS AND RECOMMENDATIONS

The high resolution EarthProbe borehole DCIP survey at the Decar property has successfully delineated and correlated resistivity and chargeability features to lithologic features in the boreholes. The following conclusions are derived from this study:

- Results of the vertical profiling indicated a general trend of low resistivity (less than 120 Ohm.m) and high chargeability (greater than 25 mV/V) in association with the peridotite-hosted awaruite in most boreholes, which is consistent with the findings of a surface IP survey previously conducted in 2010.
- Higher resistivity zones within the borehole, both with and without low chargeability correlations, were typically found in association with zones of low magnetically separated Ni, Cr and/or Fe concentrations, altered dykes, diorite and granodiorite, indicating that resistivity is a useful mapping indicator for non-economic geologic features at the Decar property.
- Cross-hole tomography results are dominated by the low resistivity/high chargeability signature indicative of the peridotite-hosted awaruite. Several other features (low chargeability/high resistivity, low chargeability/low resistivity), representing dykes or zones of low magnetically separated Ni, Cr, and/or Fe concentrations, intersect this dominant signature.
- Cross-hole tomographic features associated with dykes do not exhibit connectivity between boreholes, which is consistent with the existing geologic interpretation of the dyke orientiation in the deposit.
- Cross-hole tomographic zones of low magnetically separated Ni, Cr, and/or Fe concentrations also do not exhibit connectivity between boreholes, suggesting non-extensive distribution within the deposit.
- Direct correlation of the borehole results to the extent of the 2010 surface IP anomaly was complicated by the impacts of topography and the variable depths within the boreholes that the EarthProbe survey was conducted. Where comparable data were collected, the EarthProbe borehole data, showed similar resistivity and chargeability characteristics to the 2010 surface IP data. The disappearance of the surface IP anomaly towards the south and west of the Baptiste target is caused by the overburden thickening that masks the underlying awaruite-bearing peridotite signature.

A weak negative correlation exists between EarthProbe apparent resistivity and magnetically separated Ni and Cr concentration (resistivity decreases with increasing Ni/Cr concentration). A similar weak positive correlation between apparent chargeability and magnetically separated Cr concentration is also apparent. It is probable that the apparent resistivity and chargeability do not have a first order relationship with the magnetically separated metals, and instead have a higher order relationship with other mineralization factors (e.g. – grain size, multi-metal combinations).

The following recommendations are made, based on the results of this survey:

- While pseudosection presentation of the data provides a general understanding of the location and potential extent of the identified features, 2D and/or 3D inversion of the data is recommended to provide improved understanding of the spatial extent/orientation of the anomalous features (dykes and zones of low magnetically separated metals);
- Further investigation into possible higher order mineralogical relationships to DCIP measurements is warranted to improve the value of borehole DCIP data as an exploration tool;
- Continued use of borehole DCIP vertical profiling and tomography as an exploration tool can be used to map non-economic geologic features such as dykes and zones of low awaruite/chromite concentration.

8.0REFERENCES

- Britten, R. and Rabb, T (2011) Field Season 2010: Airborne gradient magnetic and IP geophysical surveys, Decar Property, BC. Prepared for Cliffs Natural Resources.
- Loke, M.H. and Barker, R.D. (1995) Least-squares deconvolution of apparent resistivity pseudosections, Geophysics, 60, 1682-1690.
- Loke, M.H. and Barker, R.D. (1995) Rapid Least-squares inversion of apparent resistivity pseudosections by quasi-Newton method, Geophysics, 60, 1682-1690.
- McIntyre, D. and Schiarizza, P. (1999) Open File 1999-11 bedrock Geology 199-11 (1:100,000 scale).
- Mwenifumbo, C.,J. (1997) Electrical Methods for Ore Body Delineation, in: Proceedings of Exploration 97: Fourth Decennial International Conference on Mineral Exploration, A.G. Gubbins (edt.), 667-676.
- Qian, W., Milkereit, B. and Gräber, M. (2007) Borehole Resistivity Tomography for Mineral Exploration, Fifth Decentennial International Conference on Mineral Exploration, Toronto, Expanded Abstract (4p).
- Walcott, P. (2011) A logistical report on magnetic and induced polarization surveying, Decar Property, Trembleur Lake Area, Omineca Mining Division, B.C. Prepared for First Point Minerals Corp.

9.0STATEMENT OF AUTHORSHIP

This Report, titled "EarthProbe Survey Interpretation Report, Decar Nickel Property, Mt Sidney Williams, British Columbia", and dated February 10, 2012 was prepared and signed by the following authors:

1.1

Julie Palich Geophysicist, M.Sc., P.Geo. February 10, 2012 Toronto, Ontario



Wei Qian Senior Geophysicist, Ph.D., P.Geo February 10, 2012 Toronto, Ontario


CARACLE CREEK QUALIFICATIONS

CARACLE CREEK INTERNATIONAL CONSULTING INC.

Caracle Creek International Consulting Inc. is an international consulting company with the head office of Canadian operations based in Sudbury, Ontario, Canada. Caracle Creek provides a wide range of geological and geophysical services to the mineral industry. With offices in Canada (Sudbury and Toronto, Ontario and Vancouver, British Columbia) and South Africa (Johannesburg), Caracle Creek is well positioned to service its international client base.

Caracle Creek's mandate is to provide professional geological and geophysical services to the mineral exploration and development industry at competitive rates and without compromise. Caracle Creek's professionals have international experience in a variety of disciplines with services that include:

- Exploration Project Generation, Design and Management
- Data Compilation and Exploration Target Generation
- Property Evaluation and Due Diligence Studies
- Independent Technical Reports (43-101)/Competent Person Reports
- Mineral Resource/Reserve Modelling, Estimation, Audit; Conditional Simulation
- 3D Geological Modelling, Visualization and Database Management

In addition, Caracle Creek has access to the most current software for data management, interpretation and viewing, manipulation and target generation.

The primary author of this Report is Ms. Julie Palich, M.Sc, P.Geo. Ms. Palich, a geophysicist with Caracle Creek. Preparation of this report was also assisted by Dr. Wei Qian, PhD., P.Geo, Senior Geophysicist for Caracle Creek. The qualifications of Dr. Wei Qian, and Ms. Julie Palich are provided herewith.

Statement of Qualifications

- I, WEI QIAN, of the City of Markham, in the Province of Ontario, do herby certify that:
- 1. I am a registered professional geoscientist of Ontario (#1126), with license to practice in the Province of Ontario.
- I am a Consulting Senior Geophysicist of Caracle Creek International Consulting Inc. in the office located at 34 King Street East – 9th Floor, Toronto, Ontario.
- 3. I hold a Ph.D. in Exploration Geophysics, from University of Uppsala, Sweden (1992).
- 4. I have been practicing my profession continuously since 1992.
- I am a member of the Society of Exploration Geophysicists (SEG), European Association of Geoscientist and Engineers (EAGE) and past President of the Canadian Exploration Geophysics Society (KEGS).
- 6. I have published more than 30 papers on international peer-reviewed journals in exploration geophysics and worked on more than 50 projects in mineral exploration worldwide.
- This report is compiled from data obtained from the EarthProbe DCIP survey carried out on the Decar Nickel Property by a crew of Caracle Creek personnel. This survey was conducted between September 27 – October 24, 2011.
- 8. I do not hold any interest in Cliffs Natural Resources Exploration Canada Inc. nor in the property discussed in this report, nor in any other property held by this company, nor do I expect to receive any interest as a result of writing this report.

Wei Qian, Ph.D., P.Geo Senior Geophysicist February 10, 2012



Statement of Qualifications

- I, JULIE PALICH, of the City of Toronto, in the Province of Ontario, do herby certify that:
- 1. I am a registered professional geoscientist of Ontario (#1880), with license to practice in the Province of Ontario.
- I am a Geophysicist and Geochemist employed by Caracle Creek International Consulting Inc. in the office located at 34 King Street East – 9th Floor, Toronto, Ontario.
- I hold a B.Sc. in Geophysical Engineering from the Colorado School of Mines (1996) and a M.Sc. in Geophysics/Geochemistry from Monash University (2001).
- I have been a practitioner in the fields of geophysics and geochemistry continuously since 1996 and have worked on a variety of properties including gold, nickel sulfides, Cu-Pb-Zn, coal, and mineral sands.
- This report is compiled from data obtained from the EarthProbe DCIP survey carried out on the Richardson Lake Property by a crew of Caracle Creek personnel. This survey was conducted between September 27 – October 24, 2011.
- 6. I do not hold any interest in Cliffs Natural Resources Exploration Canada Inc. nor in the property discussed in this report, nor in any other property held by this company, nor do I expect to receive any interest as a result of writing this report.

]P/il

Julie Palich, M.Sc., P.Geo Geophysicist February 10, 2012



GLOSSARY OF TERMS AND UNITS OF MEASURE

CARACLE CREEK INTERNATIONAL CONSULTING INC.

Apparent resistivity (ρ_a) A measurement of resistivity which is calculated as the product of the measured resistance (*R*) and a geomagnetic factor (K_g) such that $\rho_a = K_g R$, in units of Ω/m .

Apparent chargeability ($\mathbf{M}_{\mathbf{x}}$) A measure of the over- or applied voltage over the observed voltage defined by the area (A) beneath the voltage-time decay curve over a defined time interval (t_1 to t_2) and normalized by the supposed steady-state primary voltage, V_p , such that $M_x = A/V_p$, in units of mV/V.

QA/QC: Quality Assurance/ Quality Control

Quality Assurance (QA): information collected to demonstrate and quantify the reliability of data. Quality assurance provides a measurement of the uncertainty in the underlying data.

Quality Control (QC): procedures used to maintain a desired level of quality in the data. Quality Control leads to corrections of errors or changes in procedures that improve overall data quality.

Units of Measure

The Metric System is the primary system of measure used in this report. Applicable units of measure are presented in Table 1. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to www.maden.hacettepe.edu.tr/dmmrt/index.html for a glossary.

Units	of Measure	
-------	------------	--

Measure	Units
Length	kilometres (km), metres (m) and centimetres (cm)
Area	hectares (ha)
Volume	cubic metres (m ³)
Current	milliamperes (mA)
Apparent Resistivity (p)	ohm metres (Ω .m)
Chargeability (m)	millivolts per volt (mV/V)

EARTHPROBE VERTICAL PROFILING STRIPLOGS

CARACLE CREEK INTERNATIONAL CONSULTING INC.

































EARTHPROBE CROSS-BOREHOLE TOMOGRAPHY

CARACLE CREEK INTERNATIONAL CONSULTING INC.



Figure A4.1: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP003 – 11BAP002.



Figure A4.2: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP003 – 11BAP012.



Figure A4.3: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP010 – 11BAP011.



Figure A4.4: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP016 – 11BAP006.



Figure A4.5: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP016 – 11BAP017.



Figure A4.6: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP026 – 11BAP021.



Figure A4.7: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP026 – 11BAP024.



Figure A4.8: Cross-hole resistivity (left) and chargeability (right) tomography for 11BAP026 – 11BAP031.

PRODUCTION LOG

CARACLE CREEK INTERNATIONAL CONSULTING INC.

Date	Activity	Boreholes Surveyed		
September 27, 2011	EarthProbe Survey	Dummy probed 4 boreholes		
September 28, 2011		VRP: 11BAP002, 11BAP003		
	EarthProbe Survey	Tomo: 11BAP002-11BAP003		
September 29, 2011	EarthProbe Survey	Dummy probed 6 boreholes		
September 30, 2011	EarthProbe Survey	VRP: 11BAP001 (blocked), 11BAP010, 11BAP011		
October 1, 2011	EarthProbe Survey	Tomo: 11BAP010 – 11BAP011		
October 2, 2011		Dummy probed 2 boreholes		
		VRP: 11BAP012		
	EarthProbe Survey	Tomo: 11BAP003 – 11BAP012		
October 3, 2011		Dummy probed 2 boreholes		
	EarthProbe Survey	VRP: 11BAP014		
October 4, 2011		Dummy probed 3 boreholes		
	EarthProbe Survey	VRP: 11BAP015		
October 5, 2011		VRP: 11BAP016, 11BAP017		
	EarthProbe Survey	Tomo: 11BAP016 – 11BAP017		
October 6, 2011		VRP: 11BAP006, 11BAP016		
	EarthProbe Survey	Tomo: 11BAP016 – 11BAP006		
October 7, 2011	EarthProbe Survey	Dummy probed 4 boreholes		
October 8, 2011	EarthProbe Survey	VRP: 11BAP021		
October 9, 2011	EarthProbe Survey	VRP: 11BAP019		
October 10, 2011		VRP: 11BAP025 (blocked)		
	EarthProbe Survey	Tomo: 11BAP019 – 11BAP025 (blocked)		
October 11, 2011	EarthProbe Survey	Dummy probed 3 boreholes		
October 12, 2011	Standby			
October 13, 2011	EarthProbe Survey	VRP: 11BAP031		
October 14, 2011	SCIP survey			
October 15, 2011	EarthProbe Survey	Attempted VRP 11BAP026, inadequate access		
October 16, 2011	SCIP survey			
October 17, 2011	SCIP survey			
October 18, 2011	SCIP survey			
October 19, 2011	SCIP survey			
October 20, 2011	SCIP survey			
October 21, 2011	Standby	Logistics planning for 11BAP026, 11BAP024, 11BAP031		
October 22, 2011		VRP: 11BAP026, 11BAP031		
	EarthProbe Survey	Tomo: 11BAP031 – 11BAP026		
October 23, 2011		VRP: 11BAP024		
	EarthProbe Survey	Tomo: 11BAP021 – 11BAP026, 11BAP024 – 11BAP026		
October 24, 2011	SCIP survey	Probe recovery		

Production Log – EarthProbe DCIP survey

EARTHPROBE SURVEY PROJECT COSTS

CARACLE CREEK INTERNATIONAL CONSULTING INC.

				Rate per		
Exploration Work type	Company/Personnel	No.	Amt	Units	Unit	Totals
Borehole IP Survey						
Mobilization/Demobilization	Caracle Creek, Ben StOnge & Allison	1 x	8	days	\$2,400.00	\$19,200.00
	Carson					
Program Design	Caracle Creek, Julie Palich	1 x	2.75	days	\$1,265.00	\$3,478.75
Field Labour & Logging Equipment	Caracle Creek, Ben StOnge & Allison	1 x	16.0	days	\$2,600.00	\$41,600.00
	Carson (Sept 27 - Oct 24, 2011)					
Standby Rate	Caracle Creek, Ben StOnge & Allison	1 x	5.0	days	\$1,235.00	\$6,175.00
	Carson (Sept 29, Oct 7, 11, 12, 21, 2011)					
Report Writing						
Data Processing & Reporting	Caracle Creek, Wei Qian, Julie Palich	1 x	10.0	days	\$1,265.00	\$12,650.00
HST		1 x	12.0	percent		\$9,972.45
						\$93,076.20