GM 72350

Report on mise-a-la-masse and induced polarisation surveys performed ont the Lac Guéret extensions property

REPORT ON
MISE-A-LA-MASSE &
INDUCED POLARISATION SURVEYS
PERFORMED ON THE
LAC GUÉRET EXTENSIONS PROPERTY
MANICOUAGAN RCM, NORTH SHORE REGION, QUEBEC
SUBMITTED TO
BERKWOOD RESOURCES INC.
TORONTO, ONTARIO
Reference: 18C-313, November 2018

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MISE-A-LA-MASSE, BOREHOLE BK1-27-18
(Injection point #1 @ 130 m along hole)

Map C313-2A: Normalised Potential Value Profiles
Map C313-2B: Normalised Potential Value Contours
Map C313-2C: Geophysical Interpretation

MISE-A-LA-MASSE, BOREHOLE BK1-27-18
(Injection point #1 @ 170 m along hole)

Map C313-3A: Normalised Potential Value Profiles
Map C313-3B: Normalised Potential Value Contours
Map C313-3C: Geophysical Interpretation

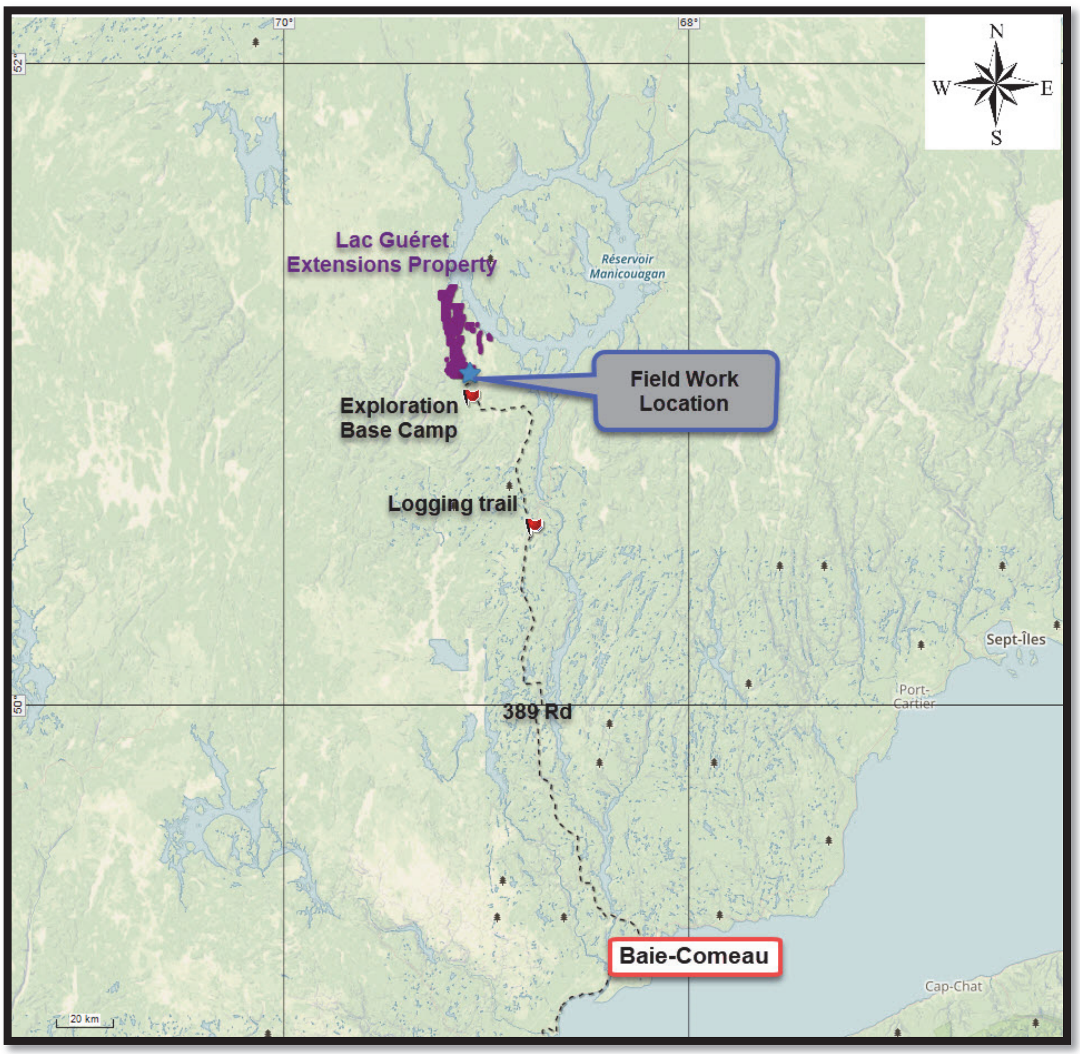
INDUCED POLARISATION SURVEY

IP Pseudo section (1 / 5, 000 Scale): Interpreted Apparent Resistivity and Chargeability Pole-Dipole Section (1) with 2-D Resistivity and Chargeability Inversion Models.

1. INTRODUCTION

As part of the ongoing exploration program, Berkwood Resources requested that Géophysique TMC carry out mise-à-la-masse (MALM) and induced polarisation (IP) surveys on their Lac Guéret Extensions property. The survey area is located 225 km NNW of the city of Baie-Comeau in the North Shore Region of the Province of Quebec (Figure 1). The fieldwork took place between October 17th and October 22nd, 2018 (see section 3.1).

Figure 1 General Location



The Lac Guéret Extensions Property is located in the Grenville Province and part of the Plan Nord region, Quebec's highly regarded sustainable development initiative. The known and sought-after mineralisations consist of graphite and we can note that the land owned by Berkwood is directly adjacent to Mason Graphite's significant Lac Guéret Project towards the east and south.

Mason Graphite's advanced Lac Guéret Project has an NI 43-101 compliant mineral resource estimate with measured and indicated mineral resources of 67.5 million tons grading 17.2% Cgr (Carbon as Graphite), including 9.7 million tons grading 31.2% Cgr.

The MALM method was applied on this project on drill hole BK1-27-18, in order to specify the extent as well as the outlines of two graphite-rich beds intersected southwest of Lac Guéret in the southern part of the property. In addition, an induced polarisation (IP) pole dipole line (a = 50m, n =1 to 8) was done to the east of the borehole, the data of which were subjected to a 2D inversion in order to interpret, in a 2D section, the location and outlines of the conductive bodies likely indicative of these graphitic mineralisations.

2. THE LAC GUÉRET EXTENSIONS PROPERTY

2.1 Location and Access

The Lac Guéret Extension property is located in the North Shore region, part of the RCM (Regional County Municipality) of Manicouagan and 225 km NNW of the city of Baie-Comeau (Figure 1). Departing from Baie-Comeau, the project area is accessed by first taking Highway 389 North for about 180 km towards the Manicouagan Reservoir. We then continue along lumber roads towards the NNW for about 70 km, up to the Francofor logging camp where the geophysical crew was lodged for the duration of the geophysical survey. From there, it is approximately a 30-minute drive and a 20-minute walk along a muddy road to reach the project area. The final section is easier to access by using an ATV vehicle.

2.2 Description

The Lac Guéret Extensions property consists of 288 non-contiguous mining claims covering a total area of 15,552.34 hectares. They are wholly-owned by Berkwood Resources and located southwest of the Manicouagan Reservoir within the outlines of NTS sheet 1/50,000 22N03. The geophysical survey grid is illustrated in Figure 2 superimposed onto the mining claim map that is part of the southern portion of the property. The reader will find in Table 1 a list of claims that were either partially or totally, covered during this survey.

Figure 2 Fieldwork Location on the Southern Claim Block

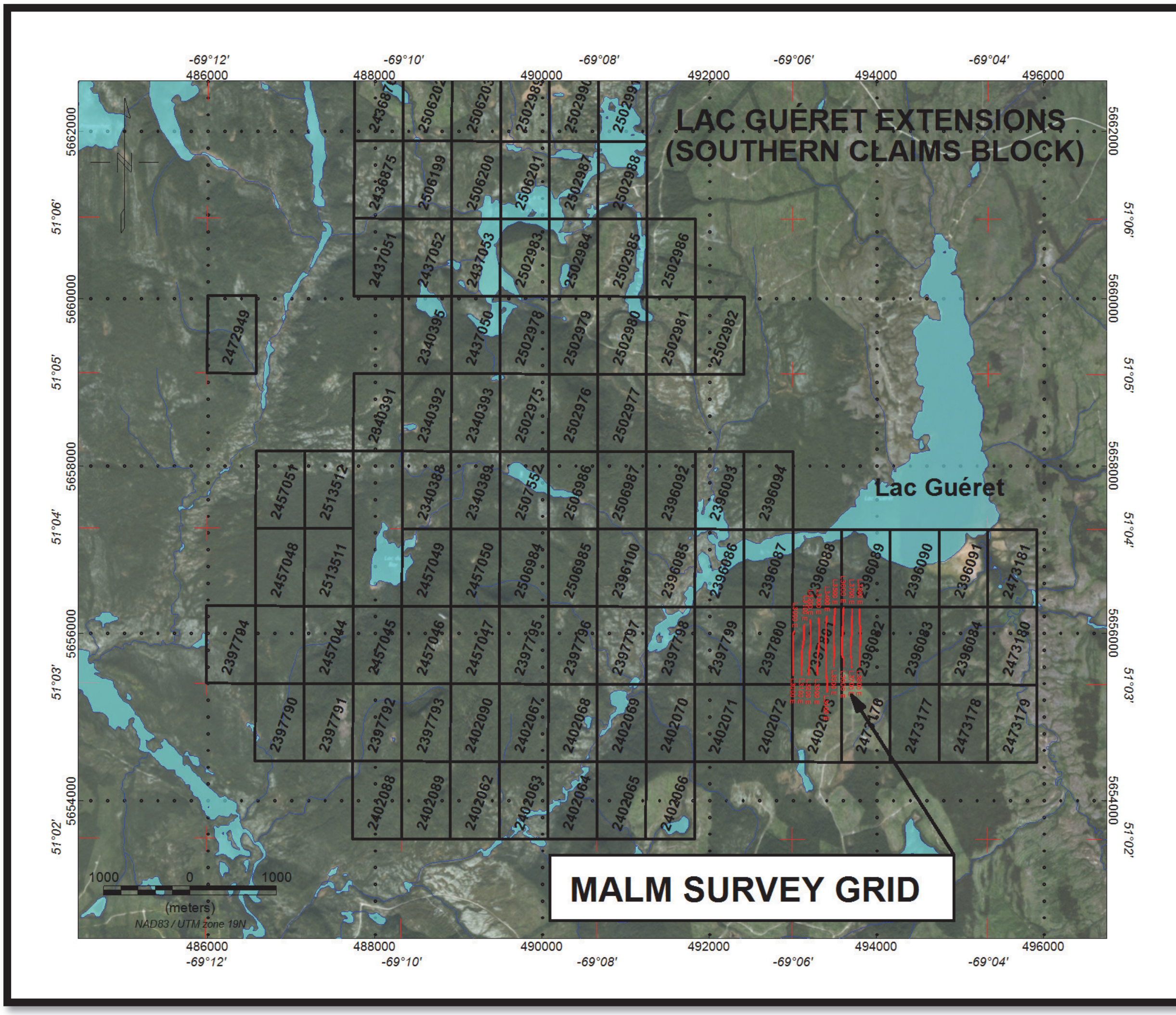


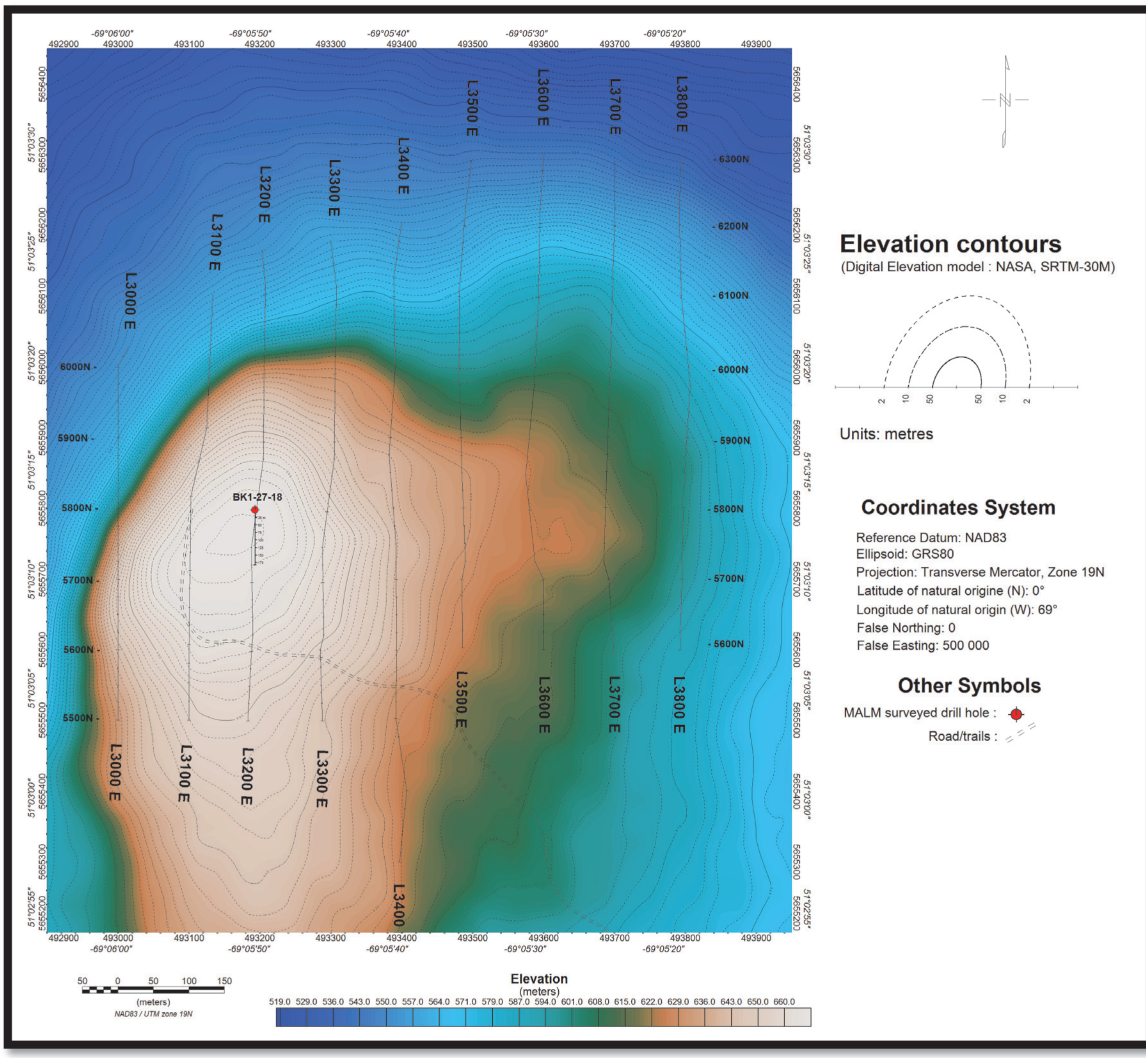
Table 1 List of Claims covered by the Geophysical Surveys

NTS SHEET	MINING CLAIMS
22N03	2396082; 2396089; 2397800 2397801; 2402073

2.3 Survey Grid

The geophysical grid consists of 9 N/S lines 100 m apart, with lengths ranging between 525m and 750 m. They were positioned in such a way as to intersect the western portion of an airborne EM conductive resistivity anomaly, likely to highlight the graphitic mineralisations, which is 400-500 m wide in this sector (Figure 3). The reference points along the lines are indicated every 25 m by flags attached to branches or fixed on wooden stakes. A GPS was used to determine the location of certain reference points following each of the lines, in order to allow geo-referencing of the geophysical databases to UTM19N_NAD83 coordinates.

Figure 3 Survey Grid and Topography



3. TECHNICAL SPECIFICATIONS OF THE SURVEYS

3.1 Overview

The implementation of the mise-à-la-masse (MALM) and induced polarization (IP) surveys was entrusted to Mr. Paul Mélançon, of TMC Geophysics of Val-d'Or. The fieldwork took place between October 17th and October 22nd, 2018 (Table 2).

Table 2 Fieldwork Timeline and Production Report

TYPE OF SURVEY	TIME FRAME	PRODUCTION
MALM Survey, Hole BK1-27-18 (Injection point @ 130 m along hole)	17/10 to 21/10/2018	L 3000E, St. 55+25N to 60+50N= 525 m L 3100E, St. 55+25N to 61+00N= 575 m L 3200E, St. 55+25N to 61+75N= 650 m L 3300E, St. 55+25N to 62+00N= 675 m L 3400E, St. 55+50N to 62+00N= 650 m L 3500E, St. 56+00N to 63+00N= 700 m L 3600E, St. 56+00N to 63+00N= 700 m L 3700E, St. 56+00N to 63+00N= 700 m L 3800E, St. 56+00N to 63+50N= 750 m **Total= 5.925 line-km**
MALM Survey, Hole BK1-27-18 (Injection point @ 170 m along hole)	18/10 to 21/10/2018	L 3000E, St. 55+25N to 60+50N= 525 m L 3100E, St. 55+25N to 61+00N= 575 m L 3200E, St. 55+25N to 61+75N= 650 m L 3300E, St. 55+25N to 62+00N= 675 m L 3400E, St. 55+50N to 62+00N= 650 m L 3500E, St. 56+00N to 63+00N= 700 m L 3600E, St. 56+00N to 63+00N= 700 m L 3700E, St. 56+00N to 63+00N= 700 m L 3800E, St. 56+00N to 63+50N= 750 m **Total= 5.925 line-km**
Induced Polarisation Survey (Pole-Dipole, a= 50m, n=1 to 8)	22/10/2018	L 3400E, St. 53+00N to 61+50N = 850 m **Total: 0.85 line-km**

3.2 Mise-à-la-Masse (MALM) Survey

Borehole BK1-27-18 was surveyed by using the mise-à-la-masse (MALM) method; in two specific locations along the hole where graphitic beds have been intersected. The survey methodology consists of inserting an electrode into the mineralised area, thus grounding it (mise-à-la-masse in French). The electrical circuit is then completed by positioning a second electrode sufficiently far away from the mineralised zone in such a way that it does not influence the readings (Figure 4). The injection point is chosen where the maximum current is obtained by moving the electrode within the confines of the graphitic bed. The (Vp) potential was measured every 25 metres at surface along 9 lines every 100 m and this grid, and surveyed twice from two distinct transmission points respectively located at 130 and 170 m along the hole. The current was generated by means of two interconnected GDD Instrumentation TX-II transmitters, used in the master-slave mode, allowing 3.6 kW of continuous power. The potential readings were done with an Iris Instruments Elrec Pro receiver (see Table 3).

Figure 4 Mise-à-la-Masse Survey

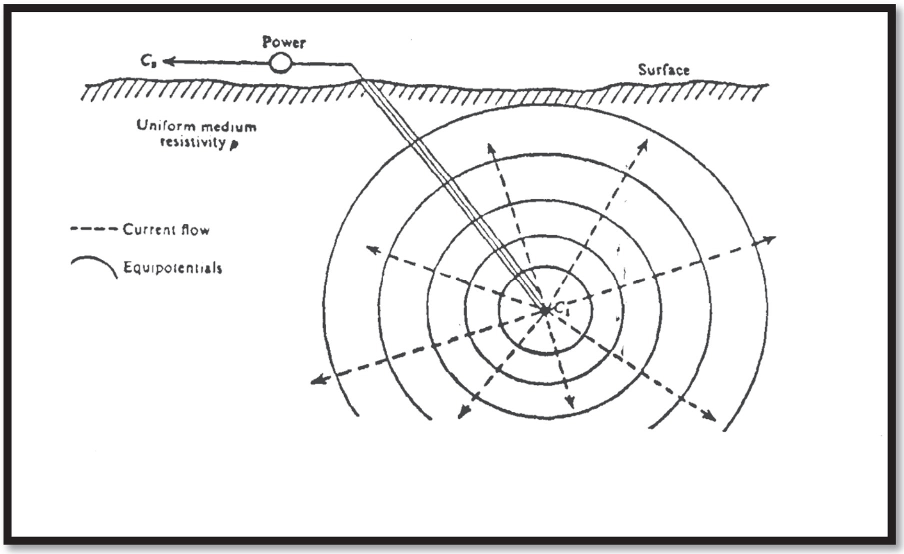


Table 3 Technical Specifications of the Mise-à-la-Masse Surveys

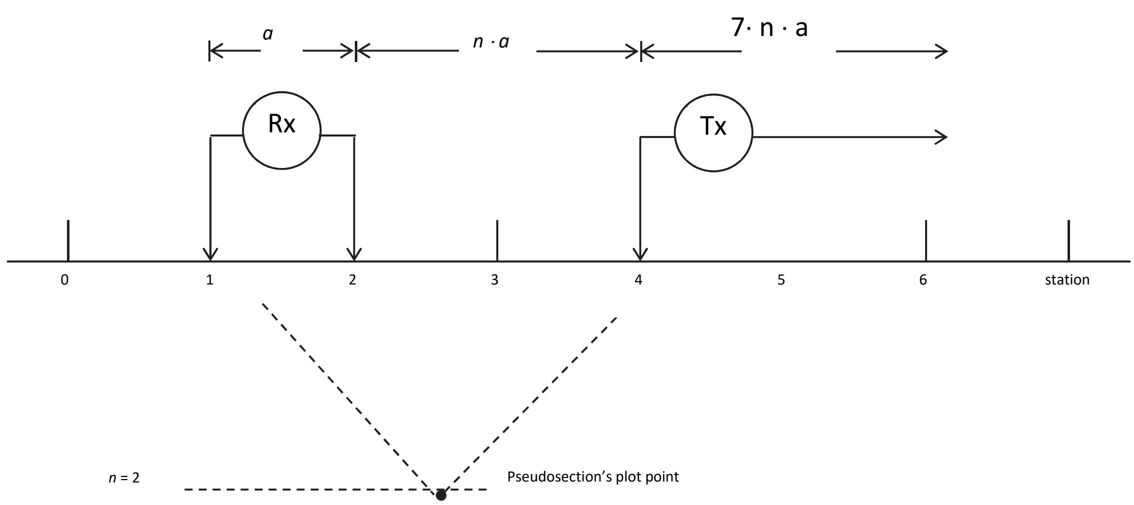
BOREHOLE	SURVEY SPECIFICATIONS
BK1-27-18 (I.P. 130 m)	Location of the drill collar: X=493193; Y=5655798; Z=667.68 Azimuth: 180º, Dip: -65º, Length drilled: 183.0 m Injection Point (C-1): **130m**, Transmitted current: 1.57 **Amp**. Location of the current reference electrode (C-2): X= 493650; Y= 5653292 Location of the potential reference electrode (P-2): X= 492973; Y= 5656952
BK1-27-18 (I.P. 170 m)	Location of the drill collar: X=493193; Y=5655798; Z=667.68 Azimuth: 180º, Dip: -65º, Length drilled: 183.0 m Injection Point (C-1): **170m**, Transmitted current: 1.53 **Amp**. Location of the current reference electrode (C-2): X= 493650; Y= 5653292 Location of the potential reference electrode (P-2): X= 492973; Y= 5656952

3.3 Induced Polarisation Survey

3.3.1 Electrode Array

Only line 3400E was surveyed with induced polarisation using the pole-dipole (dipole-pole) array, as an add-on to assist with the interpretation of the MALM survey (see Figure 5). The nominal *a* spacing between the electrodes was set to 50 meters and eight (8) dipoles were read.

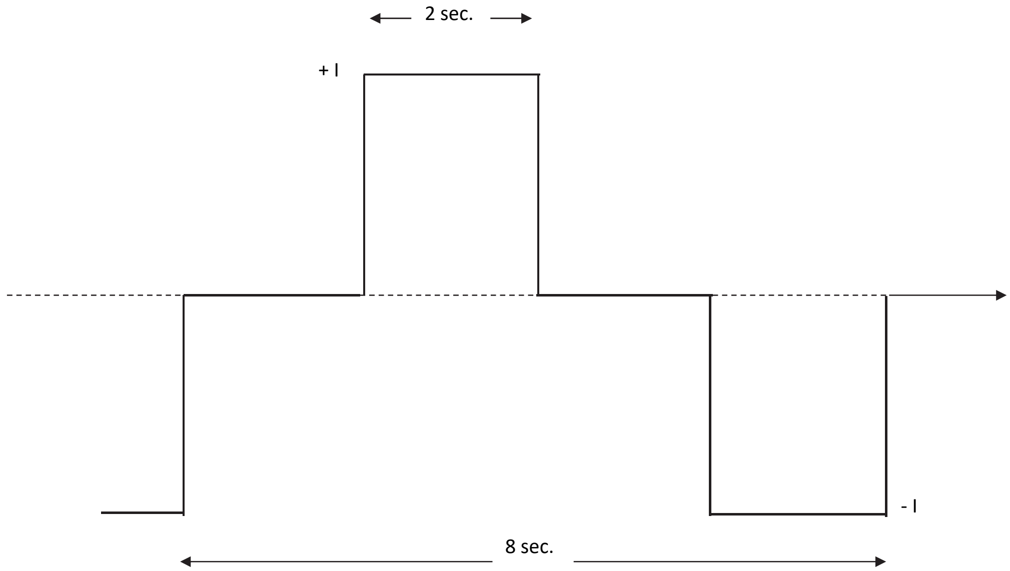
Figure 5 The Dipole-Pole Electrode Array



3.3.2 Equipment Used

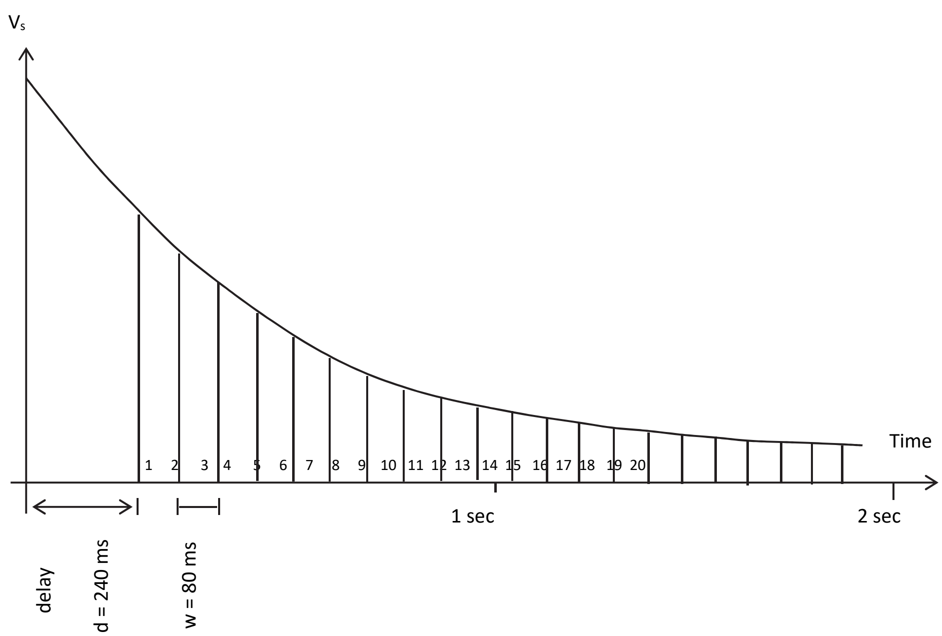
The induced polarization equipment consisted of a transmitting and receiving apparatus using a commuted signal. A motor generator drove the two GDD Instrumentation TX-II transmitters used in master-slave mode, thus allowing it to supply 1.8 kW of continuous power. Stainless steel electrodes were used to inject a stable current. The bipolar current waveform had an 8-second period with a 50% duty cycle (Figure 6).

Figure 6 Transmitted Signal at C_1-C_2



The primary voltage, denoted *Vp* and chargeability, denoted *M* were measured by using an Iris Instruments Elrec Pro Time Domain Receiver. The recorded decay curve was separated into 20 pre-programmed slices (Figure 7). The chargeability *M* corresponds to the integral of the decay curve as a function of time and is calculated by using a weighted average of the decay slices.

Figure 7 Decay Curve Integration Windows at P_1-P_2



3.3.3 Calculation of the Apparent Resistivity and Chargeability

Apparent resistivity was calculated according to the following formula:

Pole-dipole Array: $\rho_a = 2\pi\, n\, (n+1)\, a\, V_P/I$ *(in ohm-m)* where:

a = dipole separation (a = 50 meters)
n = multiple of dipoles (n = 1 to 8)
Vp = Primary Voltage (mV)
I = Transmitted Current (mA)

Chargeability *M* corresponds to the weighted average of twenty (20) chargeability windows and is expressed in mV/V.

4. DATA PROCESSING AND REPRESENTATION

4.1 Coordinate System

The maps that are submitted in this report, as well as the final databases transmitted to the Customer, are referenced to the UTM, Zone 19N in the NAD83 datum (Table 4).

Table 4 Local Projection Parameters

PROJECTION PARAMETERS	
Datum	NAD83, Zone 19N
Ellipsoid	GRS80
Major Axis Radius	6,378,137.00 m
Inverse flattening	298.257223563
Type	Transverse Mercator
Central Meridian	69° W
Latitude of origin	0° N
False easting	500,000 m
False northing	0 m
Scale factor	0.9996

4.2 Mise-à-la-Masse Data Processing and Plotting

Surface potential measurements from the MALM done at 130m and 170m along borehole BK1-27-18 are initially illustrated as shaded profile maps. Gridding of this data was subsequently realised in order to generate contour maps. This was performed by using a non-directional algorithm called ‹‹kriging››, that determines the weight of each cell and ultimately the preferential interpolation direction after a geostatistical analysis of the entire database. The objective being to highlight the different strikes of the mineralised conductive beds. The size of the primary cell was set to 1/8 of the line spacing (e.g. 12.5 m).

4.3 IP Data Processing and Plotting

The apparent resistivity/chargeability values taken along line 3400E are illustrated as interpreted pseudo sections at a 1/5,000 scale. On this section, the 2D resistivity and chargeability inversion models have been shown with the vertical depth in metres as the vertical axis.

4.4 Deliverable Maps and Associated Grid Files

The Geosoft Oasis Montaj software package was used to process the geophysical data as well as to generate the maps at a 1/2,500 scale, which were subsequently exported in the JPEG, PDF and geo referenced *.tiff formats. Table 5 summarizes the different maps submitted with this report, as well as the *.grd generated by processing the MALM data.

Table 5 List of deliverable Maps and Associated Grid Files

Map	Description	Grid and Voxel Files (UTM_19N-NAD83)	Units
C313-1	Survey Grid & Topography	DEM_SRTM30M.grd	meters
C313-2A	MALM BK1-27-18 @ 130 m along hole, Vp/I Normalised Profiles	-	normalised Vp/I
C313-2B	MALM BK1-27-18 @ 130 m along hole, Vp/I Normalised Contours	VPI_130M.grd	normalised Vp/I
C313-2C	MALM BK1-27-18 @ 130 m along hole, Geophysical Interpretation	VPI_130M.grd	normalised Vp/I
C313-3A	MALM BK1-27-18 @ 170 m along hole, Vp/I Normalised Profiles		normalised Vp/I
C313-3B	MALM BK1-27-18 @ 170 m along hole, Vp/I Normalised Contours	VPI_170M.grd	normalised Vp/I
C313-3C	MALM BK1-27-18 @ 170 m along hole, Geophysical Interpretation	VPI_170M.grd	normalised Vp/I

5. INTERPRETATION

5.1 Mise-à-la-Masse Survey

The area targeted by the current ground geophysical survey coincides with a conductive EM resistivity anomaly delineated during an airborne survey, which stretches over 2.4 km E/W and is 300 to 500 m wide N/S. This anomaly is located in the southern part of the property, southwest of Guéret Lake. Recent drilling has already determined that this anomaly is probably caused by graphite-rich mineralisations. The MALM method was applied in drillhole BK1-27-18, in order to determine the extent and the outlines of two graphite-rich beds intersected in the western part of the EM anomaly. The review of this data will also try to confirm if they are electrically interconnected.

Upper graphitic bed #1 (MALM @ 130m): From 119 to 147 ≈ 20% Cgr (variable medium to high grade)

Lower graphitic bed #2 (MALM @ 170 m): From 161 to 183 m low grade Cgr (ending within graphitic schist)

Based on theoretical considerations, the normalised potential (Vp/I) does not diminish inside the grounded body. The apex of the Vp/I value of the measured potential will then be located at the shortest distance between the grounded body and the surface. For example, if the body is small, then the current equipotential curves that are measured at surface will decrease in intensity as a series of iso-concentric circles.

The semi-qualitative interpretation of a MALM survey is then based on the distribution at surface of equipotential values, which are partly conditioned by the shape of the mineralised body, its physical extent as well as its dip and depth. In order to help in visualising the potential decrease from the apex point, five (5) colour schemes were chosen on the interpretation maps to illustrate the results obtained from the two mineralised beds that were grounded in hole BK1-27-18 (Figures 8 and 9). Regarding the review of the acquired MALM data and according to the survey objectives, we can highlight the following points:

a) From each current injection points used along the borehole, the area where the Vp is stable at surface is 250 to 500 m wide N/S and stretches over a distance of 800 in an ENE direction.

b) The outlines of the areas where the Vp is maximum are similar for both surveys, as are the potential values that characterize them. This result indicates that these two graphite-rich beds are electrically interconnected; the current diffusing from one to the other when grounded.

c) At first glance, the MALM data would therefore mainly map the extent of the first graphitic bed. However, and this is important, we cannot exclude that the current spread through faults to highlight another graphitic bed located at a shallower depth. If this is the case, the results of each MALM survey would then essentially illustrate the boundaries of the graphitic bed which is the closest to surface.

Figure 8 MALM Interpretation @ 130m along hole BKI-27-18 (Upper graphitic bed)

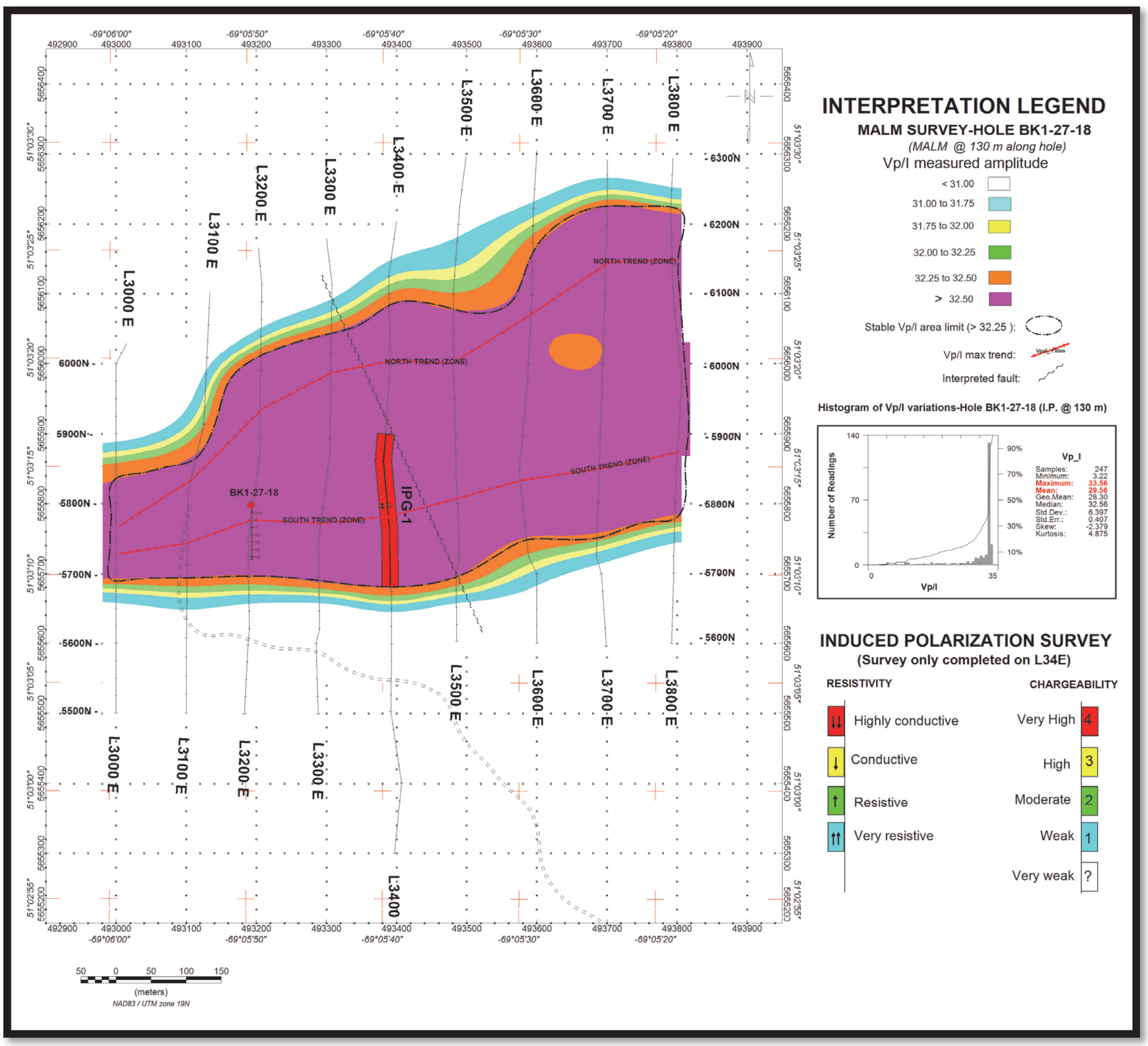
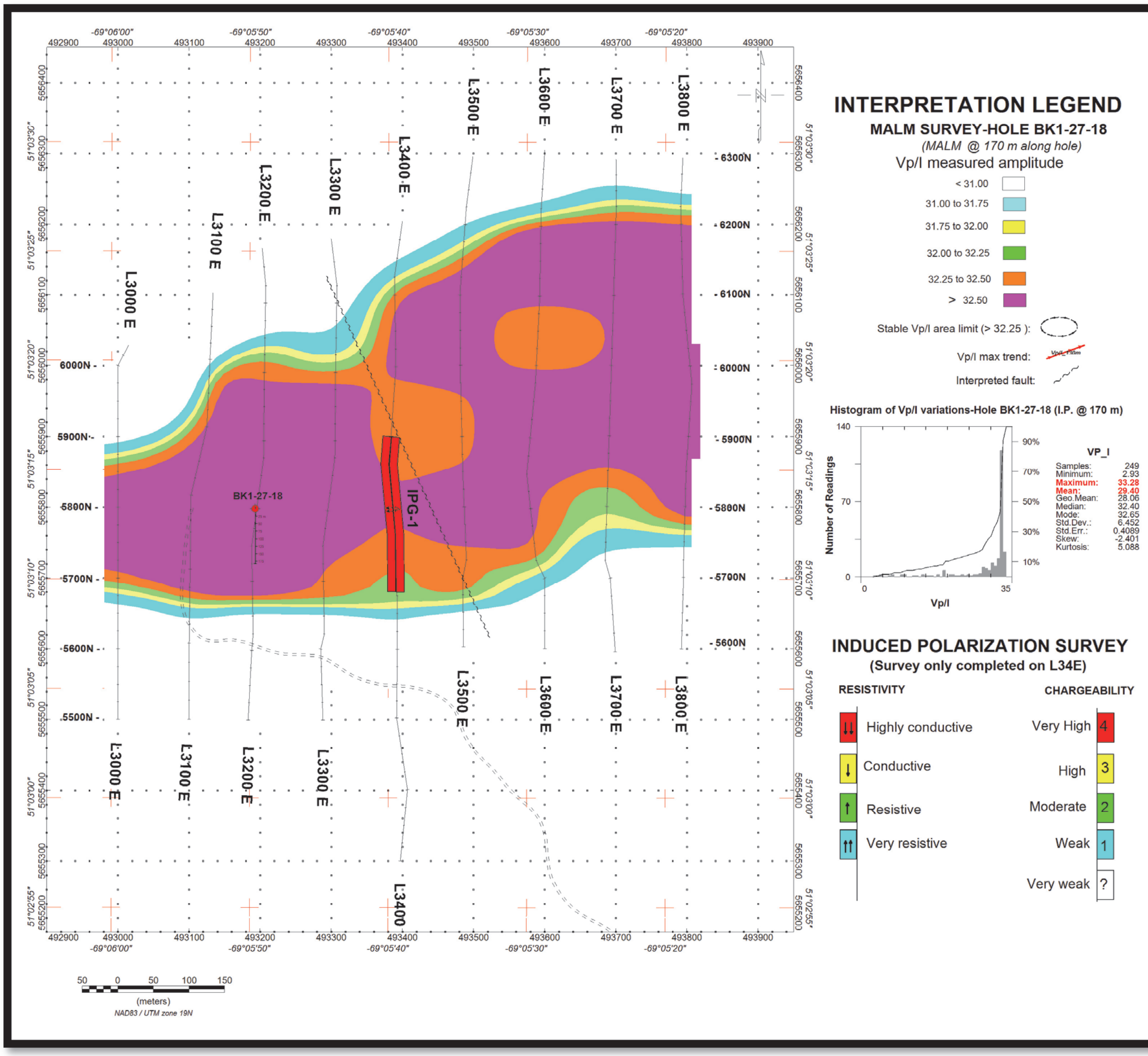


Figure 9 MALM Interpretation @ 170m along hole BKI-27-18 (Lower graphitic bed)



5.2 Induced Polarisation Survey

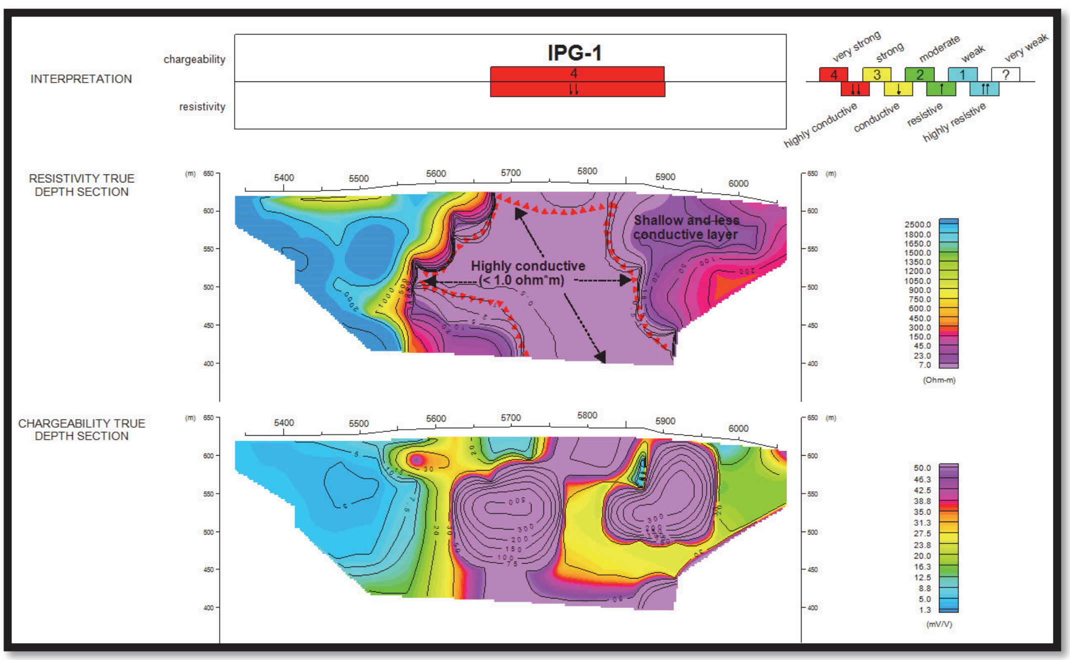
Additionally, an induced polarisation (IP) pole dipole line (a= 50m, n= 1 to 8) was done 200 m to the east of the borehole on L-3400E, the results of which were subjected to a 2D inversion in order to illustrate, as a section, the location and extents of the conductive graphitic beds. In the induced polarization method, graphite causes strong chargeability anomalies, but the associated signatures are difficult to ascertain, mostly due to the weakness of the signal received when these mineralisations are intersected. Referring to the resistivity inversion model shown in Figure 10, a few comments can be made in order to support the interpretation of the MALM data;

a) The southern half of the MALM anomaly (labelled IPG-1) is explained by a rather thick and very conductive layer, starting close to surface and extending at depth, which is likely caused by graphitic mineralisations. The inversion model allows us to better visualize their extent and morphology. This conductive layer also seems to extend northward but is less conductive as well as quite superficial and much less thick.

b) The southern half of the conductive layer is in fact the probable signature of several closely spaced graphitic beds of variable thicknesses and Cgr grades, which are difficult to distinguish for one another.

c) Keeping this model in mind, it is reasonable to assume that the current flowed along faults to surface from the two injections points used for the MALM surveys, which would highlight a graphitic bed located at a shallower depth.

Figure 10 2D IP Resistivity and Chargeability Inversion Models, L-3400E



6. CONCLUSION

The data acquired from the mise-à-la-masse surveys, indicate that the graphite beds intersected by drillhole BK1-27-18 are electrically interconnected. The IP inversion results of line 3400E also strongly suggested the presence of mineralised areas located uphill from the two areas that were surveyed by the MALM method. On that point, the current that was transmitted into each of the mineralised beds could have migrated towards the surface along faults and thus *delineate* a shallower graphitic bed. If such is the case, then the MALM potential maps should have mapped essentially the outline of the shallower bed and not the deeper ones.

The 2D inverted resistivity model of line 3400E indicates that graphitic mineralisations are clearer and extend at depth in the southern half of the MALM anomaly. Therefore, we recommend that the follow-up drilling program be restricted to this sector for now. A high-definition electrical imaging survey should be considered in order to better define the extent and location of the conductive bodies, and thus allow us to better define drill targets.

The interpretation of the data embodied in this report is essentially a geophysical appraisal on the Lac Guéret Project. As such, it incorporates only as much geo-scientific information as the author has on hand currently. Berkwood geologists thoroughly familiar with this area are in a better position to assess the geological significance of the various geophysical signatures. Moreover, as time passes by and information provided by follow-up exploration programs is compiled, the exploration targets recognized in this study might be down-graded or up-graded.

Respectfully submitted,

Joël Simard
P. Geo./Geoph.

QUALIFICATION CERTIFICATE

I am a consulting geologist/geophysicist and currently residing at 103 chemin du lac Blanc, St-Donat, Québec, Canada, J0T 2C0

I obtained a Bachelor's degree (B. Sc. A.) in Geology at Université de Montréal in 1988;

I am a geologist/geophysicist that has been involved in mineral exploration for 30 years;

I am a registered member with l'Ordre des Géologues du Québec (member #1350);

I hereby certify that, to the best of my knowledge, this report represents a truthful description of the data acquired from the geophysical surveys carried out from October 17th to 22nd, 2018 by Géophysique TMC on the Lac Guéret Extensions Property;

I do not own any block of shares, nor do I have any financial interest whatsoever in Berkwood Resources Inc.

Respectfully submitted,

Joël Simard

GÉOLOGUE GEOLOGIST JOËL SIMARD #1350 QUÉBEC

Joël Simard, P.Geo./Geoph.

O.G.Q. # 1350