GM 73615

Technical report on an induced polarization survey completed on the Siscoe project

TECHNICAL REPORT ON AN
INDUCED POLARIZATION SURVEY
COMPLETED ON THE
SISCOE PROJECT
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SUBMITTED TO
03 MINING INC
TORONTO, ONTARIO
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TABLE OF CONTENTS

TABLES

FIGURES

LIST OF MAPS (5, 000 Scale)

GPS TOPOGRAPHICAL SURVEY

C672-1: Survey Grid & Topography

INDUCED POLARIZATION SURVEY

▲ **IP Pseudo Sections:** Apparent Resistivity and Chargeability Pole-Dipole Sections (8) with 2-D Inversion Models of Resistivity and Chargeability (1/ 5, 000 Scale)

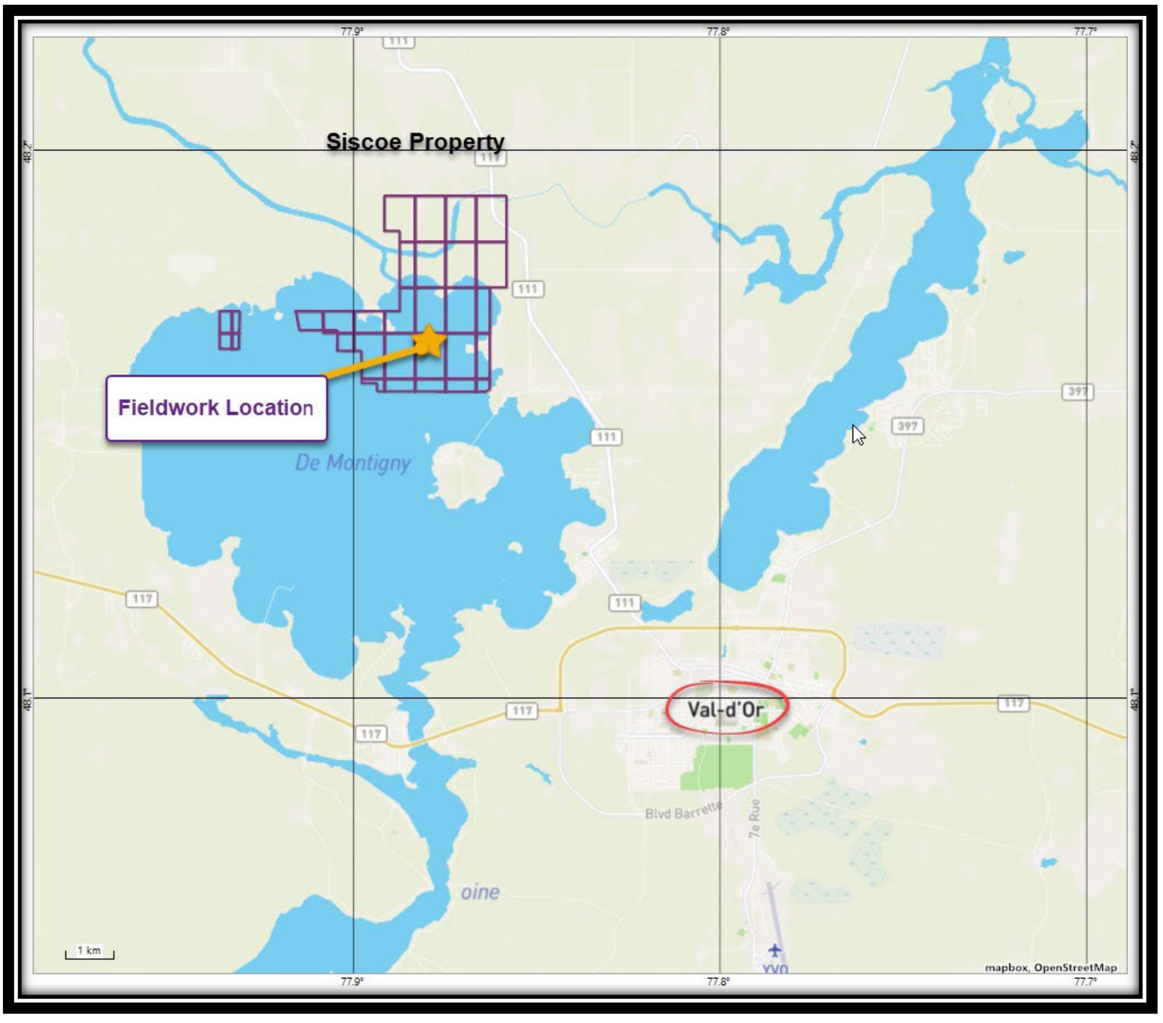
▲ **3D IP INVERSION**

Map C672-2A: Apparent Resistivity, Ground Model at 75 m of Vertical Depth
Map C672-2B: Apparent Resistivity, Ground Model at 150 m of Vertical Depth
Map C672-2C: Apparent Chargeability, Ground Model at 75 m of Vertical Depth
Map C672-2D: Apparent Chargeability, Ground Model at 150 m of Vertical Depth

1. INTRODUCTION

As part of the ongoing exploration program, O3 Mining Inc commissioned TMC Geophysics (Ref. contract Q-924) to carry out an induced polarization (IP) survey on their Siscoe Property, located 8 km to the northwest of the town of Val-d'Or. The campaign took place between January 29th and February 1st, 2024, and consisted of 14.41 line-km of IP using the pole-dipole electrode array (see section 3.1).

Figure 1 ***General Location***



The sought-after mineralization in this project is gold bearing linked to quartz/carbonate veining hosted in different geological settings and mostly found in association with pyrite, pyrrhotite or chalcopyrite. This survey aims to identify favorable IP-RES anomalies that could highlight new mineralized structures, lenses, or bodies that may represent interesting targets for follow-up work.

As a consulting geophysicist, I was given the following tasks related to the geophysical survey summarized in this report.

1) Monitoring and quality control of data collected in the field.

2) Final processing and plotting of the geophysical results.

3) Drafting a technical report.

2. THE SISCOE PROJECT

2.1 Location and Access

The Siscoe Property is located 8 km to the northwest of the city of Val-d'Or in the Abitibi region of northwestern Quebec (Figure 1). The IP survey was completed in the northern part of the Lake de Montigny. The eastern shore of this lake is accessible from different locations using secondary roads that are connecting with highway 111 a few km north of Val-d'Or. A snowmobile was then used, taking advantage of the frozen surface of the lake, to reach the fieldwork area.

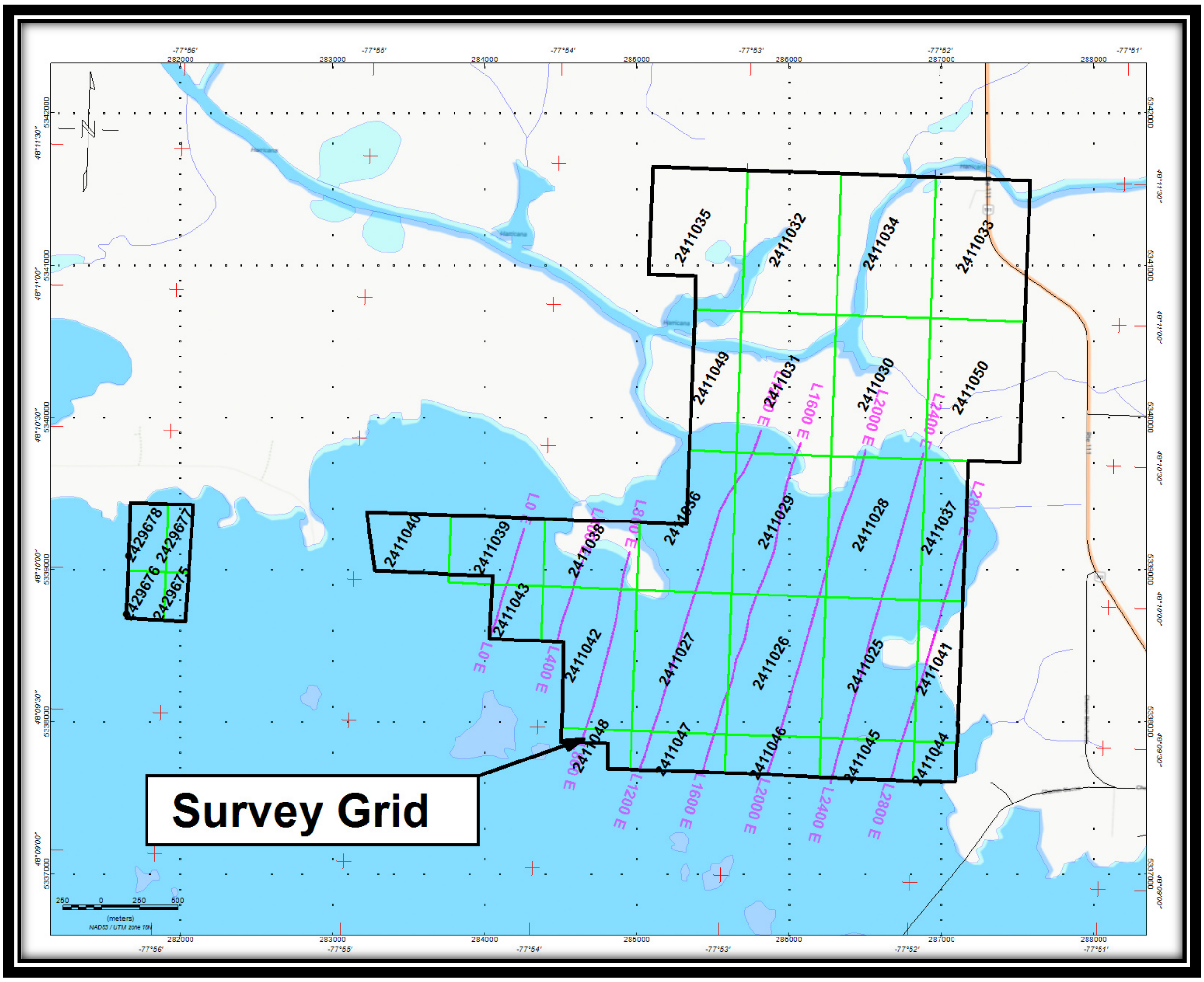
2.2 Description

The Siscoe Property consists of 30 mining claims spread over two blocks. They cover a total area of 1,031.93 hectares and are wholly owned by O3 Mining. These claims are situated in the Vassan township within the confines of 1/50,000 NTSC sheet 32C04. The IP survey was achieved on the eastern block of claims, as illustrated in Figures 1 and 2. The reader will find the details of the claims included within the surveyed area listed in Table 1.

Table 1 List of Claims covered by the IP Survey

CLAIMS COVERED	TOWNSHIP	NTSC 1/50,000 SHEET
2411025, 2411026, 2411027, 2411028, 2411029, 2411030, 2411031, 2411036, 2411037, 2411038, 2411039, 2411041, 2411042, 2411043, 2411045, 2411046, 2411047, 2411048	Vassan	32C04

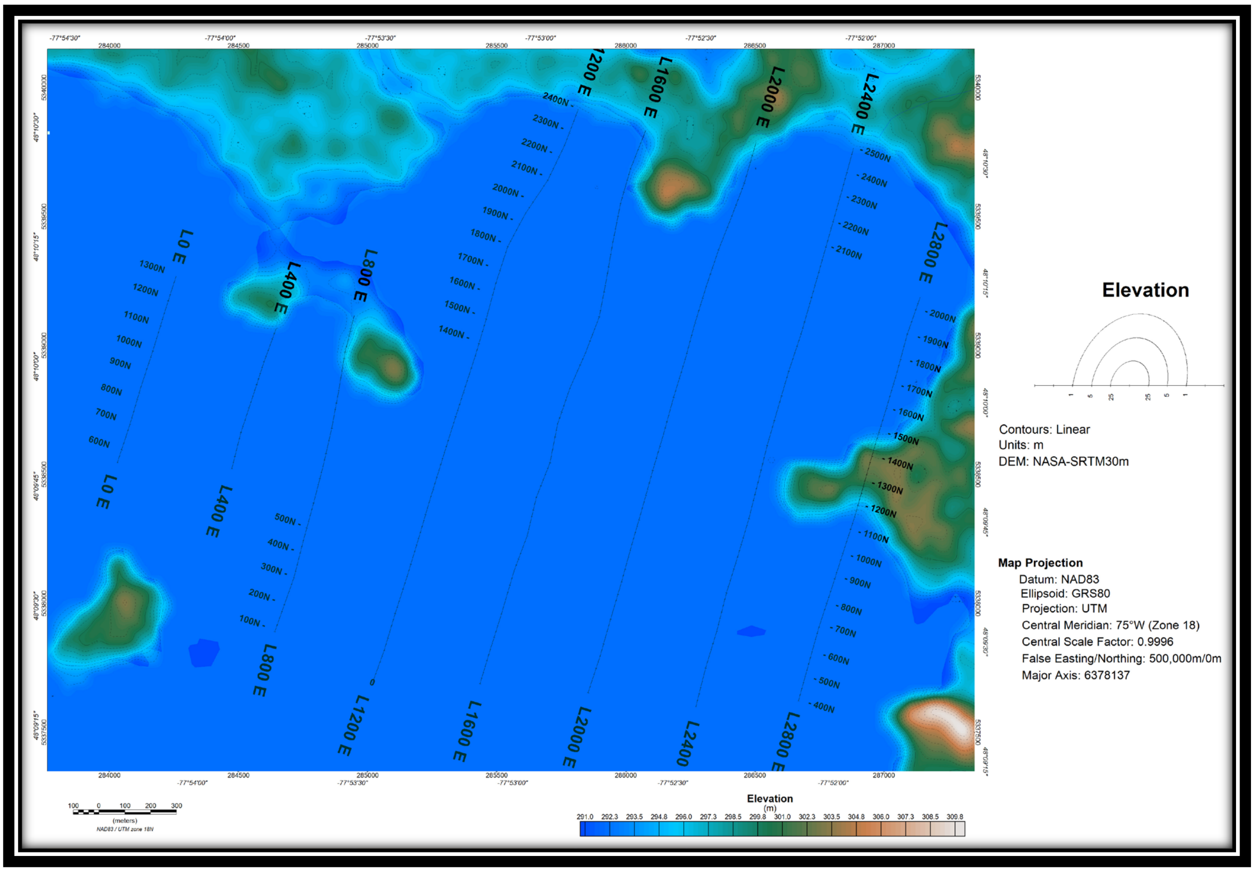
Figure 2 Field Work Location on the Siscoe Property



2.3 Survey Grid

The grid surveyed during this campaign consists of eight (8) profiles that were self-positioned over the frozen surface of the Lake de Montigny using GPS. These lines are 400 m apart and oriented N15º/N195º. They were read over distances ranging from 0.712 to 2.45 km. Surveying of reference points along these profiles was done using a handheld non-differential GPS receiver. This information was used to geo-reference the geophysical IP database to the UTM18N_NAD83 coordinate system (see section 4.1).

Figure 3 Survey Grid and Topography



3. TECHNICAL SPECIFICATIONS OF THE IP SURVEY

3.1 Overview

The geophysical campaign was commissioned to TMC Geophysics on behalf of O3 Mining and lasted from January 29th to February 1st, 2024. The induced polarization survey was completed by Mr. Jonathan Melançon under the technical supervision of Mr. Simon McCrory, field operation coordinator for TMC (Table 2).

Table 2 Fieldwork Production Report

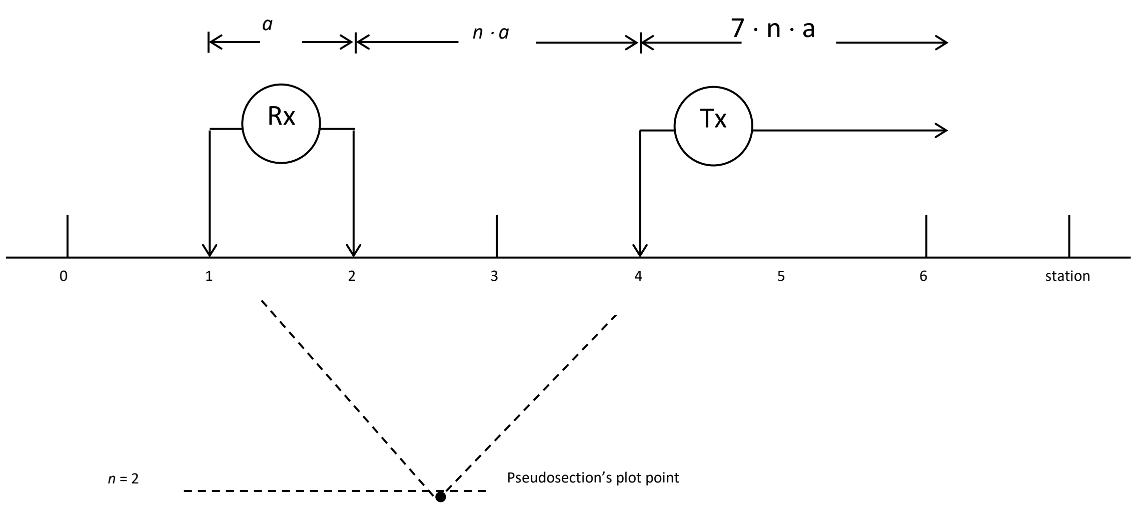
SURVEY GRID	LINE	STATION	PRODUCTION
Induced Polarization (PLDP, a= 37.5 m, n= 1 to 10)	L-0E	5+50N to 13+75N	0.825 km
	L-400E	6+50N to 13+62.5N	0.712 km
	L-800E	1+00N to 13+75N	1.275 km
	L-1200E	0+00 to 24+00N	2.400 km
	L-1600E	1+00N to 23+50N	2.25 km
	L-2000E	2+00N to 24+50N	2.25 km
	L-2400E	2+50N to 25+00N	2.25 km
	L-2800E	4+00N to 20+50N	2.45 km
			Total: 14.41 line-km

3.2 Induced Polarization Survey

3.2.1 Electrode Array

The IP survey was carried out by using the pole-dipole electrode array (Figure 4), with a nominal ''a'' spacing of 37.5 m and a separation factor (n) ranging from 1 to 10 (e.g. a= 37.5 m, n= 1 to 10).

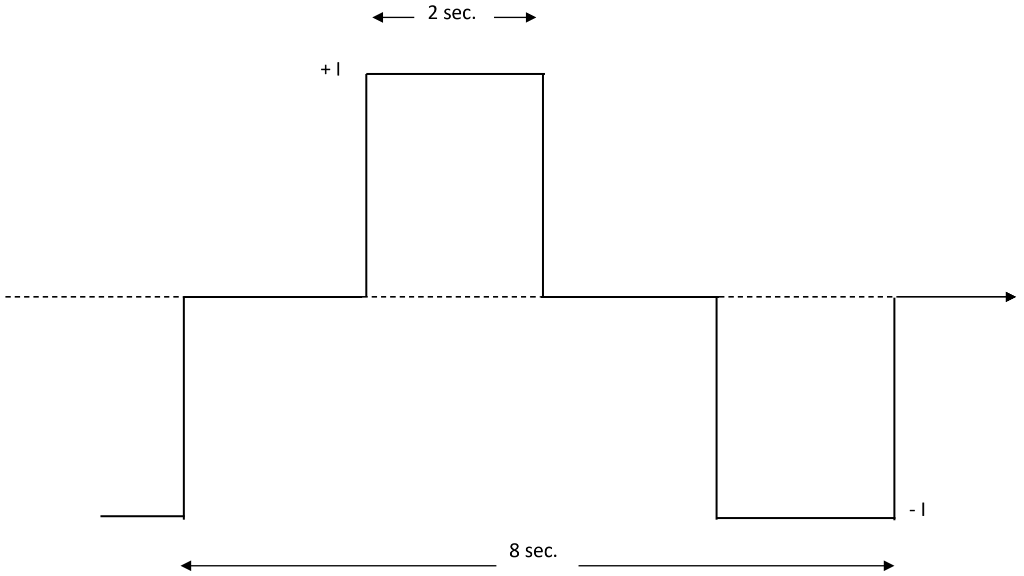
Figure 4 The Pole-Dipole Electrode Array



3.2.2 Equipment Used

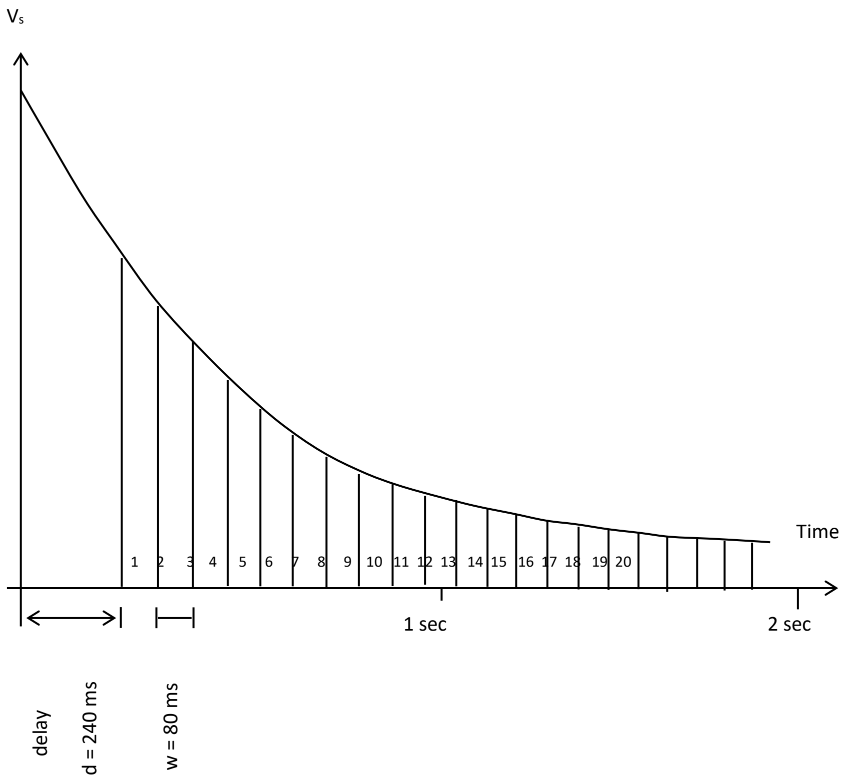
The induced polarization equipment consisted of a transmitting and a receiving apparatus using a commuted signal. A motor-generator drove the GDD Instrumentation TX-II transmitter capable of supplying 5.0 kW of continuous power. Stainless steel electrodes were used to inject a stable current. The bipolar current waveform had an 8-second period with a 50% duty cycle (Figure 5).

Figure 5 Transmitted Current Signal at C1-C2



The primary voltage denoted *Vp* and chargeability denoted *M* were measured every 37.5 meters using an Iris Instruments Elrec Pro Time Domain Receiver. The decay curve was separated into 20 pre-programmed slices (Figure 6).

Figure 6 Decay Curve Integration Windows at P1-P2



3.2.3 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 = 37.5 meters)
n = multiple of dipoles (n = 1 to 10)
Vp = primary voltage (mV)
I = transmitted current (mA)

Chargeability *M* is the weighted average of the twenty (20) normalized chargeability windows, 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 delivered to the Customer, are referenced to the UTM, Zone 18N in the NAD83 datum (Table 3).

Table 3 Local Projection Parameters

PROJECTION PARAMETERS	
Datum	NAD83, Zone 18N
Ellipsoid	GRS80
Major Axis Radius	6,378,137.00 m
Inverse flattening	298.257223563
Type	Transverse Mercator
Central Meridian	75° W
Latitude of origin	0° N
False easting	500,000 m
False northing	0 m
Scale factor	0.9996

4.2 Data Processing

▲ **2D resistivity and chargeability inversion models:** For each line that was surveyed, the data's quality was initially checked, and the information was saved in separate Geosoft databases. Part of this information was then subsequently exported to RES2DINV-compatible file formats to carry out the inversions with the software program developed by M.H. Loke. The 2D models used by the inversion process consist of a series of blocks having their distribution and size automatically generated by the program using the distribution of the points in the pseudo sections, which is a function of the electrode array. The depth of the bottom row of blocks is set to be approximately equal to the equivalent depth of investigation (Edwards 1977). During the initial loading of the files and when the information was supplied, a correction was applied to the RES/IP data for the surface topography effects. The inversion routine itself basically uses a non-linear least-square optimization technique and most parameters are automatically fixed by the software program.

▲ **3D resistivity and chargeability inversion models:** The data obtained along the different IP lines that were surveyed with the pole-dipole array were initially merged into a single database. True UTM (X, Y, Z) coordinates were also tied to each theoretical electrode location. Part of the information contained in this database was then exported to a RES3DINVcompatible file to carry out the inversion. Insofar as the inversion program considers doubled-up values as distinct, each was then kept for repeated readings.

During the RES3DINV inversion of the data, the readings were initially corrected to compensate for topographic effects and then processed per parameters that were optimized based on the local geological setting. The inversion process was stopped after five iterations and the results were then exported to a Geosoft *.XYZ ASCII file format. Due to the electrode array that was used and associated survey specifications, the model was extended to approximately 175 m beneath the surface (e.g., vertical depth).

The inverted resistivity and chargeability values were subsequently inserted into a database matrix where each value was associated with its X, Y, and Z coordinates. Three-dimensional gridding was done using an algorithm called 'kriging'. This algorithm determines the weight of each cell, and ultimately, the preferential interpolation direction based on a geostatistical analysis of all data. The 3D voxel images that were obtained following these inversions contain the information associated with each cell along with its coordinates.

● ***Comments/Remarks:***

- The inversion algorithm does not create information that is not in the raw data (2D pseudo-sections). In other words, the software solution is limited by the method and electrode configuration used during the survey.

- The inversion results will provide an estimate of the dips of the anomalous targets under certain conditions, likely when they are ''isolated''. Thus, if there are two proximal targets, the two images may merge at depth, potentially giving a wrong estimate of their specific or general dip.

▲ **Representation of the Pole-Dipole IP data**

● **IP Pseudo-sections:** The measured values of resistivity and chargeability are initially illustrated as pseudo-sections at a 1/5,000 scale. On each of these sections, the 2D resistivity and chargeability inversion models have been displayed with the vertical depth in meters as the vertical axis. Overall, 8 pseudo-sections were generated to illustrate the IP lines that were surveyed during this campaign.

● **IP Maps:** Resistivity (R)/chargeability (C) slices at 75 and 150 meters of vertical depth were extracted from the 3D inversion models to generate the contour maps at a 1/5, 000 scale (see section 4.4).

4.3 Digital Elevation Model

The digital elevation model (DEM) used to estimate the local surface topography is the SRTM-30m released by NASA following a worldwide radar survey completed aboard the Space Shuttle Endeavour in 2000. The vertical datum is the EGM-96 and associated elevations are above mean sea level (Table 4). Topographic information is used in the 3D inversion process of the IP data.

Table 4 Elevation Model Specifications (SRTM-30m)

Original Projection	Geographic
Horizontal Datum	WGS84
Vertical Datum	EGM96 (Earth Gravitational Model 1996)
Vertical Units	metres
Spatial Resolution	1 arc-second for global coverage (30 m)
Raster Size	1-degree tiles
C-Band Wavelength	5-6 cm

4.4 Deliverable Maps, Grids & Voxels

The Geosoft Oasis Montaj software package was used to process the geophysical data as well as to generate the maps at a 1/5,000 scale. For each of them, the outlines of the townships, the road network, and the watershed are illustrated. This information was either received from the customer representative or downloaded through the National Topographic Database (NTDB), which is accessible online and regularly updated by a Federal Government agency. The different documents that are included with this report were also submitted in JPEG, and PDF formats, as well as geo-referenced *.tiff. Table 5 summarizes the different maps that were produced for this report, as well as the *.grd or voxel format digital files generated by processing the geophysical data.

Table 5 List of Maps, Grids, and Voxels

Map	Description	Grid and Voxel Files (UTM18N_NAD83)	Units
C672-1	Survey Grid and Topography (SRTM-30m)	DEM SISC_SRTM30M.grd	meters
C672-2A	IP, Ground Model of Resistivity at 75 m of Vertical Depth	IP SISC DS_RES_-75m.grd	ohm-m
C672-2B	IP, Ground Model of Resistivity at 150 m of Vertical Depth	IP SISC DS_RES_-150m.grd	ohm-m
C672-2C	IP, Ground Model of Chargeability at 75 m of Vertical Depth	IP SISC DS_RES_-75m.grd	mV/V
C672-D	IP, Ground Model of Chargeability at 150 m of Vertical Depth	IP SISC_DS DCHA_-150m.grd	mV/V
-	3D-IP Resistivity Inversion	IP SISC_RES_Geosoft.voxel	ohm-m
-	3D-IP Chargeability Inversion	IP SISC_CHA_Geosoft.voxel	mV/V

5. CONCLUSION

The present survey allowed for the acquisition of 14.41 line-km of IP data on the Siscoe property. This report is only intended as a technical description of the work completed during the present geophysical campaign. It includes additional details on the processing done on the geophysical data and describes the deliverable products and associated files. The complementary review of the data will be carried out by the Customer.

Respectfully submitted,

Joël Simard, P.Geo./Geoph.

O.G.Q. # 1350

QUALIFICATION CERTIFICATE

I am a consulting geologist/geophysicist and currently reside at 103 chemin du lac Blanc, St-Donat, Québec, Canada, J0T 2C0. Tel. 1-819-217-5909 / Email: jo.simard@cgocable.ca.

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 36 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 induced polarization survey carried out from January 29th to February 1st, 2024 by TMC Geophysics on the Siscoe Property.

I do not own any block of shares, nor do I have any financial interest whatsoever in 03 Mining Corporation.

Respectfully submitted,

Joël Simard, P.Geo./Geoph.

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