

We are committed to providing [accessible customer service](#).

If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).

Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).

GEOPHYSICAL REPORT
FOR
NOBLE MINERAL EXPLORATION INC.
ON THE
WARK PROPERTY
CLAIM 320433
WARK TOWNSHIP
PORCUPINE MINING DIVISION
NORTHEASTERN, ONTARIO

JCGrant

Prepared by: J. C. Grant, CET, FGAC
July 2022

TABLE OF CONTENTS

HISTORY

INTRODUCTION.....	1
PROPERTY LOCATION AND ACCESS.....	1
CLAIM BLOCK.....	3
PERSONNEL.....	4
GROUND PROGRAM.....	4, 5
MAGNETIC SURVEY.....	5
VLF-EM SURVEY.....	5
MAGNETIC AND VLF –EM SURVEY RESULTS.....	7, 8
CONCLUSIONS AND RECOMMENDATIONS.....	9

REFERENCES

CERTIFICATE

LIST OF FIGURES:	FIGURE 1, LOCATION MAP	2
	FIGURE 2, PROPERTY LOCATION MAP	3
	FIGURE 3, CLAIM MAP/GRID MAP	4
	FIGURE 4, REGIONAL GEOLOGY MAP	6
	FIGURE 5, PROPERTY GEOLOGY MAP	7

APPENDICES: A: GEM GSM 19 MAG SYSTEM

REPORT MAPS:	TOTAL FIELD MAGNETIC SURVEY	1:2500
	VLF-EM SURVEY PROFILE MAP,	1:2500

History:

Since 1964 the area covered in the current program has received considerable attention by various Mining & Exploration companies, undertaking a variety of exploration work. This work is outlined chronologically below.

1964 Kenilworth Mines Ltd. T1253 Cl. #1213569

Completed a ground Mag and EM survey that revealed an EM conductor and weakly anomalous magnetics in the southwest portion of the property. This conductor was drilled in a follow-up program revealing only very minor pyrrhotite and pyrite. The source of the conductor was reported to be a shear zone or conductive overburden.

1964 Midlands Petroleum Ltd T895 Cl. #1209913

Completed a ground Mag and VLEM survey that revealed a weak, east-west trending EM conductor that was subsequently drilled. Three drill holes were completed totaling 484 meters and indicated the source of the conductor to be a graphitic shear hosted within a slate/tuff unit. Only minor pyrite was reported.

1965 Texas Gulf Sulphur Co. T461 Cl. #1237147

Completed two diamond drillholes totaling 274 meters. The holes intersected a thick section of overburden and then intermediate tuffs and graphitic shale with local nodular pyrite. No core sampling was indicated.

1968 Texmont Mines Ltd. T1148 Cl. #1213569

Completed a ground Mag and VLEM survey that revealed 3 weak conductors that were not recommended for drilling. They reported observing two outcrops of dacitic lava which strike east-west and dip vertically.

1969 Mespi Mines Ltd. T733 Cl. #1237147

Completed a ground VLEM survey that outlined 3 conductors. No follow-up drilling was reported.

1971 Texas Gulf Sulphur Co. T382 Cl. #1209913

Completed a Mag and HLEM survey. The Mag survey suggested an east-west mafic to ultramafic dyke or sill, faulted by a northwest trending fault in the center of the claim block. No follow-up drilling was reported.

1974 McIntyre Mines Ltd. T1626 Cl. #1237147

Completed a Mag and VLEM survey that was followed-up by 3 diamond drill holes during the following year to test two EM conductors outlined. Only minor amounts of pyrite and traces of pyrrhotite were reported.

1979 P. George T1698 Cl. #1213569

Completed a VLEM survey that identified two conductors along an inferred mafic-felsic contact. Two diamond drill holes were proposed but not drilled.

1980 P. Hunkin T2434 Cl. #'s 1237147, 1209913 & 1211577

Completed a Mag and VLEM survey over the area. No drill testing was done on the conductors identified.

1981 Placer Development Ltd. T2426 Cl. #'s 1237147, 1213569 & 1211577

Completed an airborne Mag survey. Indicated that the southern portion of Cl. #1213569 is underlain by basaltic rocks and that the low magnetic relief in the north may be a felsic-mafic contact.

1983 Golden Range Resources Ltd. T2758 Cl. #'s 1237147, 1213569, 1211577 & 1209913

Completed a compilation of the area's exploration data. The following year two diamond drill holes were completed. One hole tested an EM conductor on Cl. #12209913 that ended in slightly graphitic argillite with up to 10% pyrite. The other holes tested an EM conductor on Cl. #1211577. Quartz and/or carbonate veining was noted with up to 15% pyrite locally. Assays from both holes were suppressed. In 1985 a Mag and VLF survey was completed which included Cl. #'s 1237147, 1211577 and 1209913 in its coverage.

1988 Falconbridge Ltd. T3162 Cl. # 1213569

Completed a Mag and Max Min II HLEM survey. The survey indicated a number of EM conductors that are related to or influenced by a Mag feature running northeast through the property. No drill testing was done.

1990 Cominco Ltd. T3386 Cl. #'s 1209913, 1211577 & 1237147

Completed a Mag and HLEM survey. No follow-up diamond drilling was reported.

1997 Pentland Firth Ventures Ltd. Cl. #'s 1213569, 1209913, 1237147 & 12211577

Completed a Mag and HLEM survey that outlined several EM conductors. The following year an I.P. survey was completed which covered Cl. #'s 1213569, 1237147 & 1209913. Several I.P. conductors were identified but no follow-up drilling was conducted.

INTRODUCTION:

The services of Exsics Exploration Limited were retained by Mr. Wayne Holmstead on behalf of the company, Noble Mineral Exploration Inc., to complete a ground geophysical program across a single claim unit located in the northwest corner of Wark Township of the Porcupine Mining Division in Northeastern Ontario.

The purpose of the program was to locate and outline and favorable horizon that would be considered a good geological environment for base metal deposition.

PROPERTY LOCATION AND ACCESS:

The claim unit is located in the northwest corner of Wark Township to the northeast of the Kidd Creek mine site and the Chance zinc, lead silver deposit. The Property is part of Noble's claim holdings in Wark, Kidd and Carnegie Townships that surrounds the mine operations that are ongoing in the area.

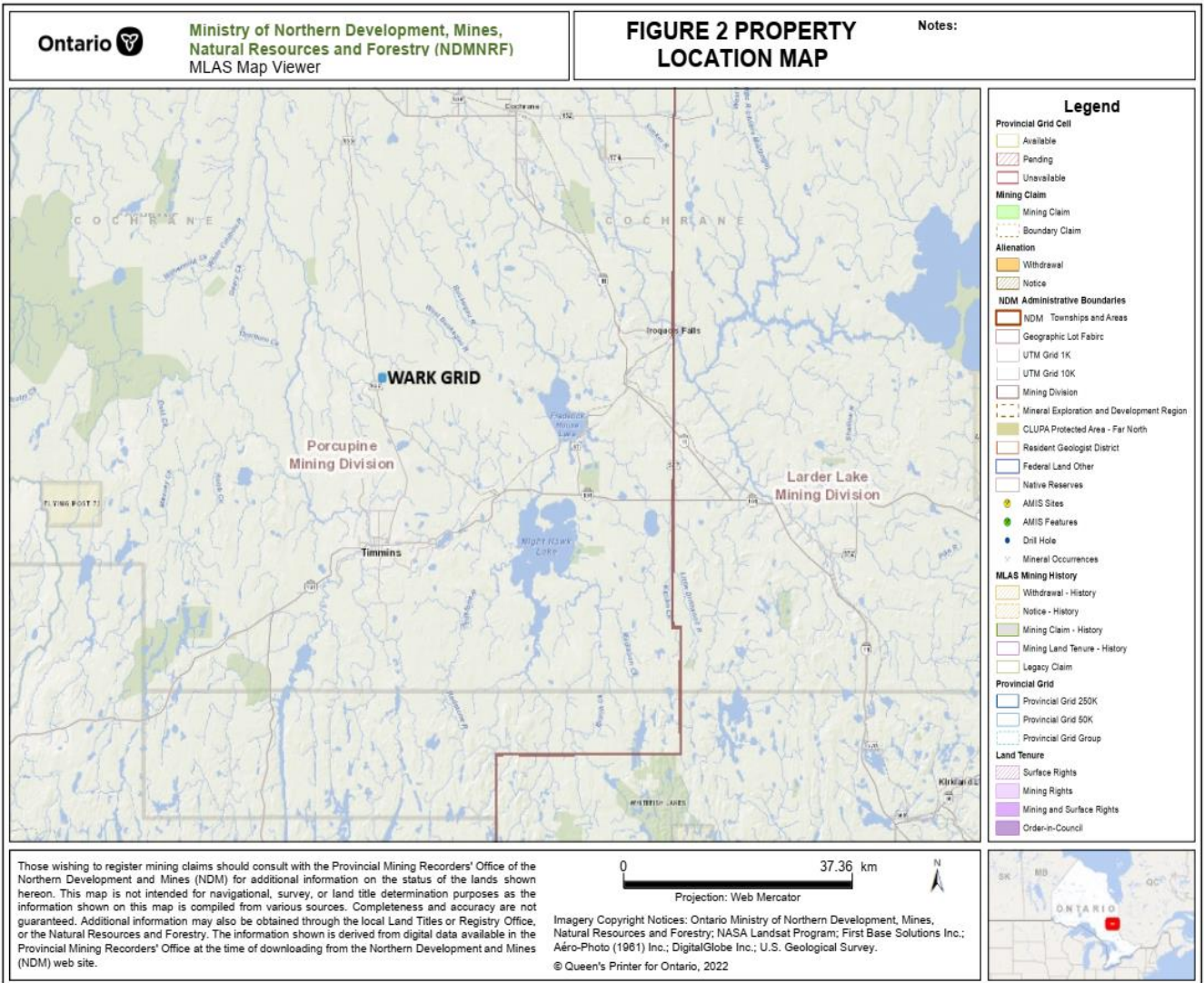
The claim unit lies about 900 meters east of Highway 655 and Boundary Lake runs along the western boundary of the claim.

Access to the property during the survey period was by a GPS controlled flagged line from Highway 655 to the southwest corner of the claim. Several heavily overgrown trails were visible throughout the traverse.

Traveling time from Timmins to the grid, including truck and foot access was about 2 hours. Refer to Figures 1 and 2.

FIGURE 1 LOCATION MAP



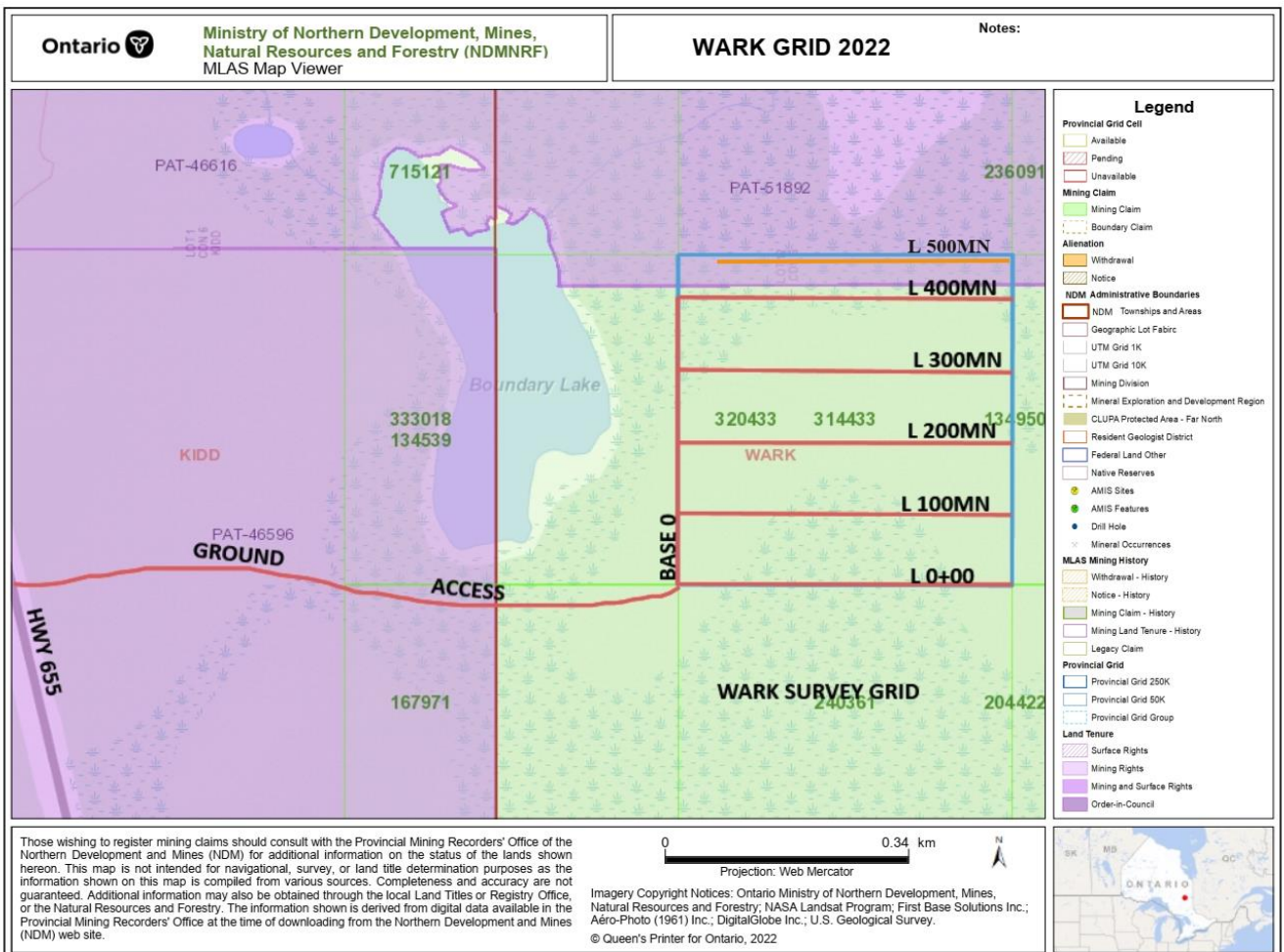


CLAIM BLOCK:

The claim number that represents the Wark Property covered by the current ground program was 320433. It is in the northwest corner of the Township to the immediate east of Boundary Lake.

Refer to Figure 3 copied from MNDM Plan Map of Wark Township for the positioning of the claim number within the Township. The grid covers the entire claim block.

CLAIM MAP/GRID MAP FIGURE 3



PERSONNEL:

The field crew directly responsible for the collection of all the raw data were as follows.

- | | |
|--------------|------------------|
| J. Hamelin | Timmins, Ontario |
| J. Francoeur | Timmins, Ontario |

The plotting and interpretation as well as the report was completed by J. C. Grant of Exsics Exploration Limited.

GROUND PROGRAM:

The ground program consisted of establishing a detailed metric grid across the claims using compass paced and GPS controlled lines that were spaced 100 meters apart and flagged with 25-meter station intervals. This grid layout was done in conjunction with a total field magnetic and VLF-EM survey using the Gem GSM 19 system.

These lines were controlled by a flagged base line that was first flagged along the western edge of the claim group commencing at the southwest corner of the claim unit and the number 4 post of claim. Line 0+00 ran across the southern boundary of the claim and additional lines were done at 100 meter intervals from line 0+00 to and including 500MN that represents the northern boundary of the claim.

The second portion of the program consisted of a detailed total field magnetic survey that was done in conjunction with a VLF-EM over the entire grid using the GEM GSM 19 system. Specifications for this unit can be found as Appendix A of this report.

In all, a total of 2.25 kilometers of grid lines were established across the claim and covered by the surveys between July 7 and the 9th.

The following parameters were kept constant throughout the magnetic surveys.

Magnetic Survey:

Line spacing.....	100 meters
Station spacing.....	25 meters
Reading intervals.....	25 meters
Diurnal monitor.....	base station
Base record intervals	30 seconds
Reference field.....	55,500 gammas
Datum subtracted.....	55,000 gammas
Unit accuracy.....	+/- 0.1 gamma

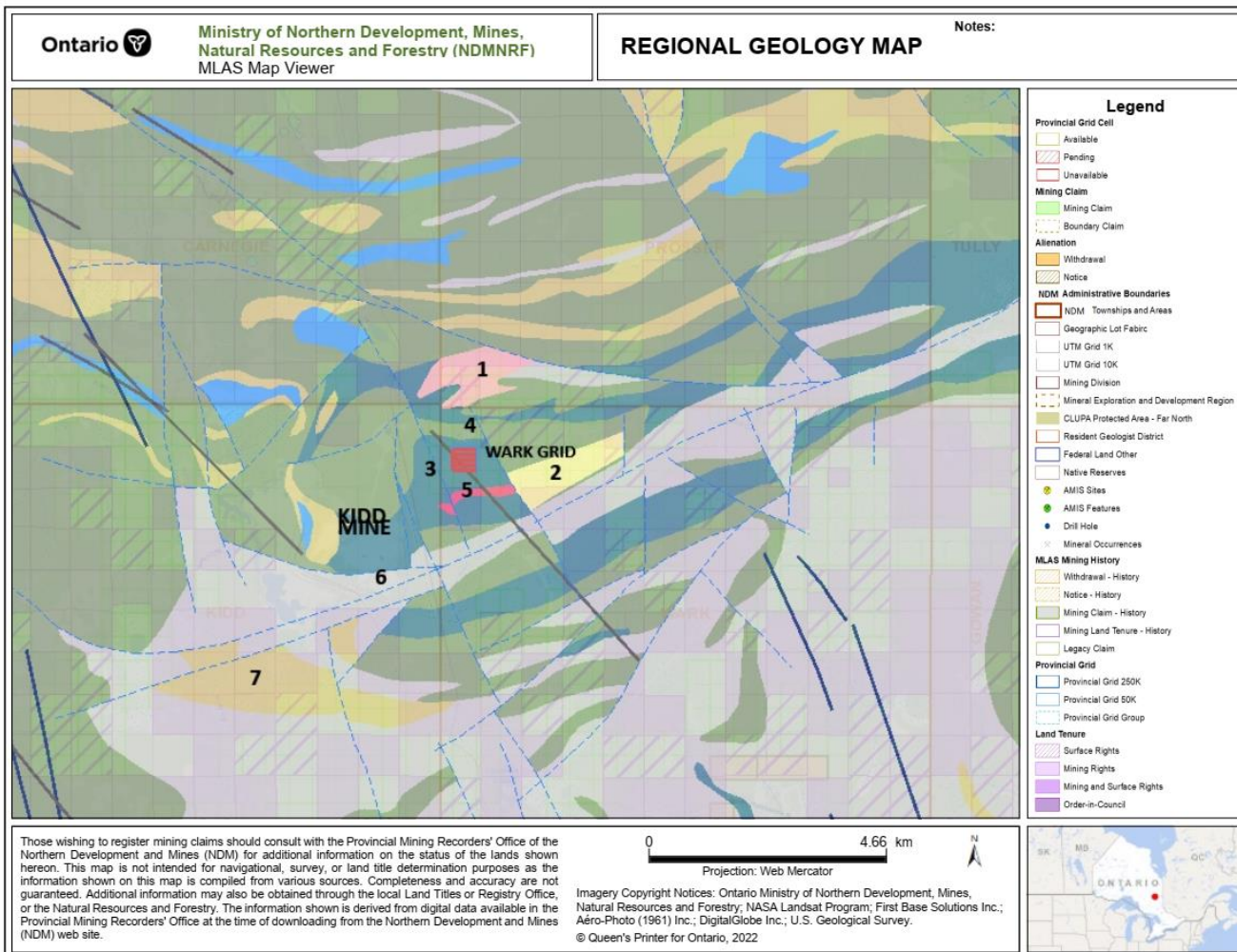
Once the survey was completed, the field data was plotted directly onto a base map at a scale of 1:2500. A datum level of 55000 gammas was removed from the data before it was plotted onto the base map. The data was then contoured at 25 gamma intervals wherever possible. A copy of the northern block color base map is included in the back pocket of this report.

VLF-EM Survey:

Line spacing.....	100 meters
Station spacing.....	25 meters
Reading intervals.....	25 meters
Transmitting station.....	Cutler, Maine
Transmitting frequency.....	24.0Khz
Parameters measured.....	In-phase and quadrature component of the secondary field
Transmitter direction.....	Azimuth 115 degrees
Parameters plotted.....	In-phase value.

Once the survey coverage on both claim blocks was completed, the field data was plotted directly onto a base map at a scale of 1:2500 and then profiled at 1cm= +/- 5 percent. Any and all conductor axis were then placed onto this base map. A copy of these color profiled maps is included in the back pocket of this report.

REGIONAL GEOLOGY MAP FIGURE 4



GEOLOGY LEGEND:

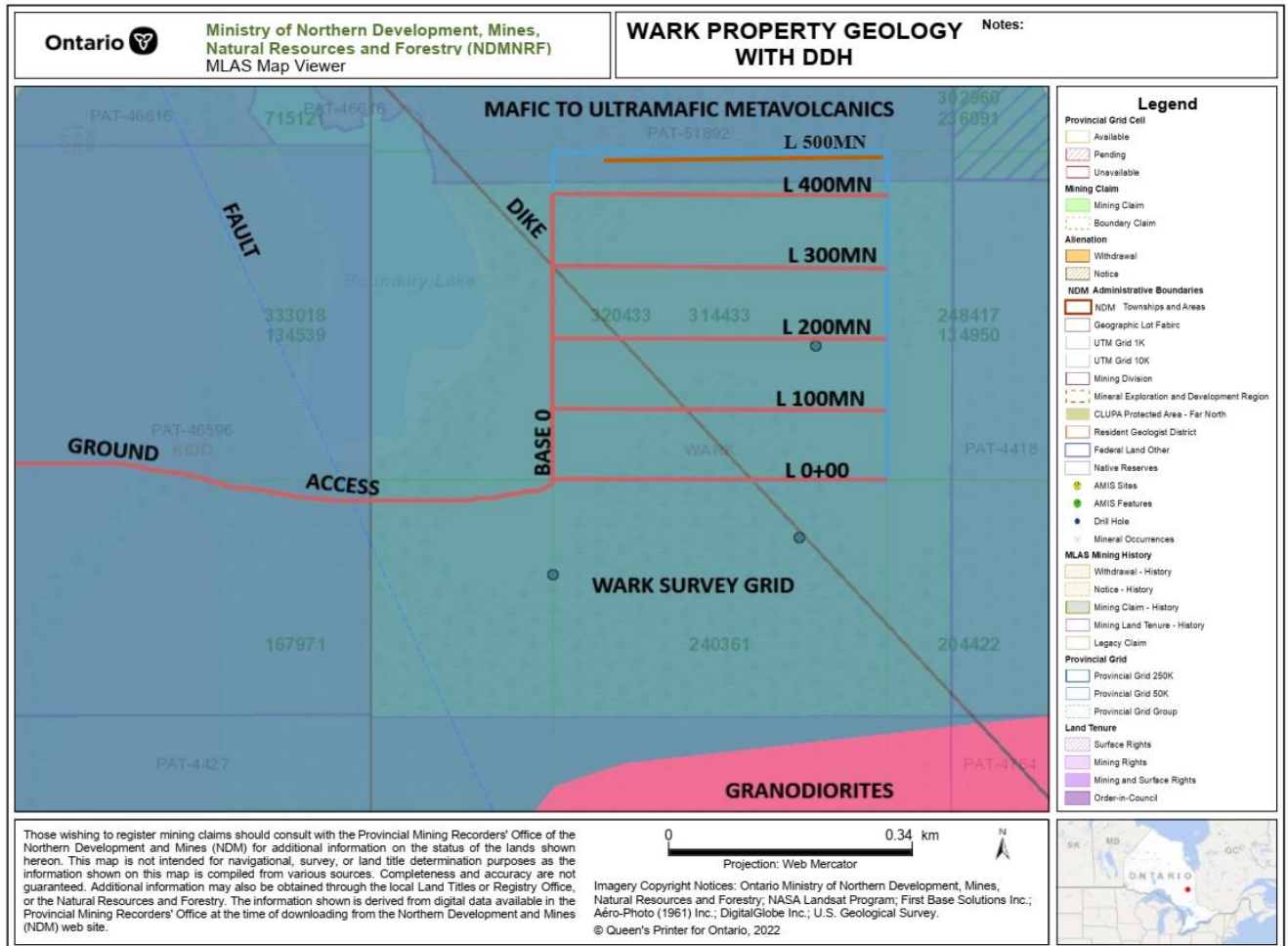
- 1, Tonolite to Granodiorite units 2, Mafic to Felsic metavolcanics
- 3, Mafic to ultramafic metavolcanics 4, mafic to intermediate metavolcanics
- 5, Massive Granodiorites, 6, metasedimentary rock unit
- 7, Felsic to intermediate metavolcanics

PROPERTY GEOLOGY:

Generally, the grid area is underlain by mafic to ultramafic rocks which have been cross cut by a northwest to southeast striking dike like unit.

A Granodiorite unit lies to the south southeast of the grid area. Refer to Figure 5.

PROPERTY GEOLOGY MAP, FIGURE 5



MAGNETIC and VLF-EM SURVEY RESULTS:

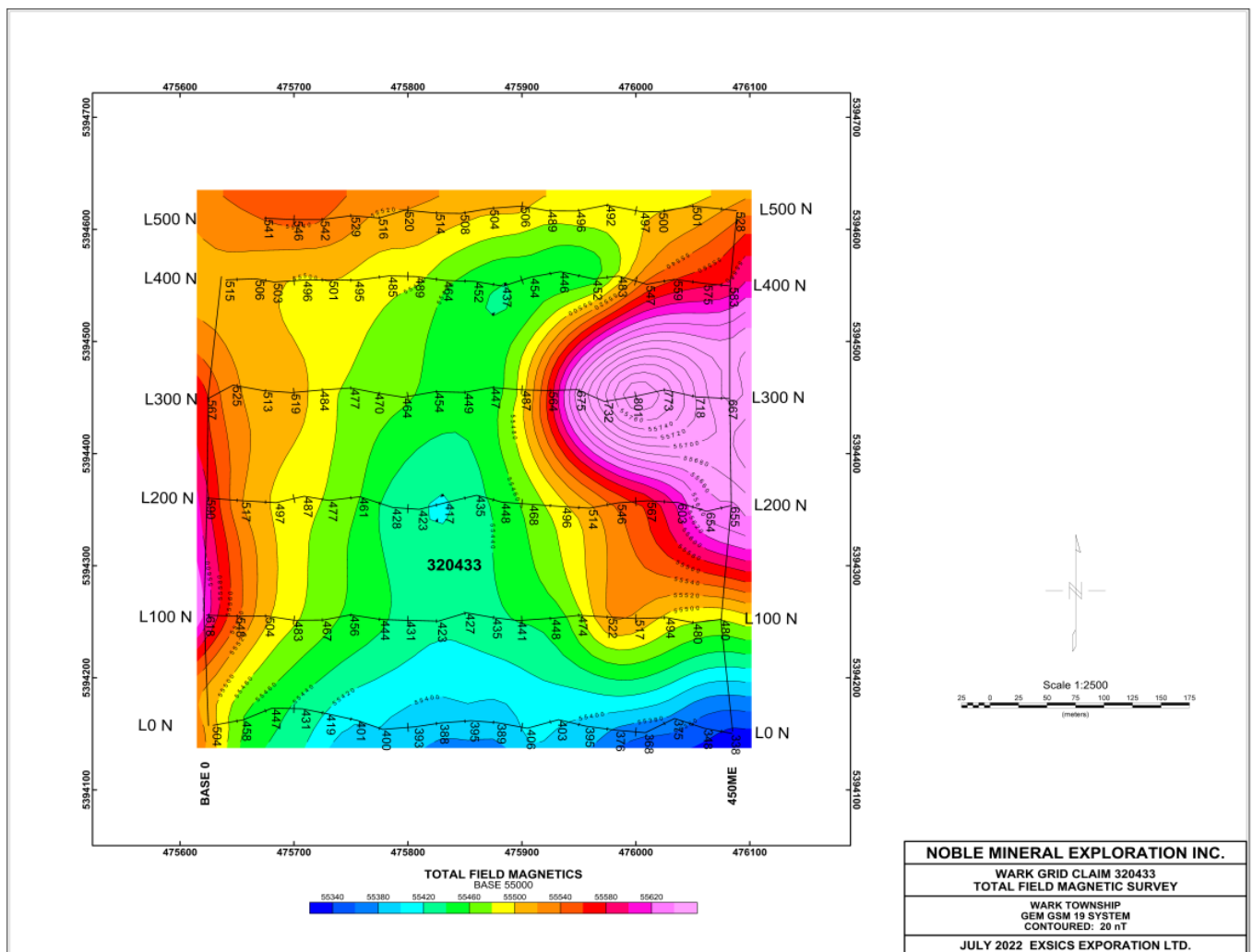
The ground magnetics was somewhat successful in outlining a modest and broad low that generally strikes into the grid from the south to at least line 300MN where it then appears to fold around the magnetic high that is striking into the grid from the east along line 300MN. The underlying geology is generally mafic to ultramafics. The drill hole that was completed by PCE Exploration Limited in 1964 encountered 163 feet of sand and clay overburden followed by peridotite stringers and serpentinite sections that were weakly magnetic and in some places more

magnetic throughout the hole length. (report #11, Wark Township, PCE Exploration Ltd., 1964, Drill logs).

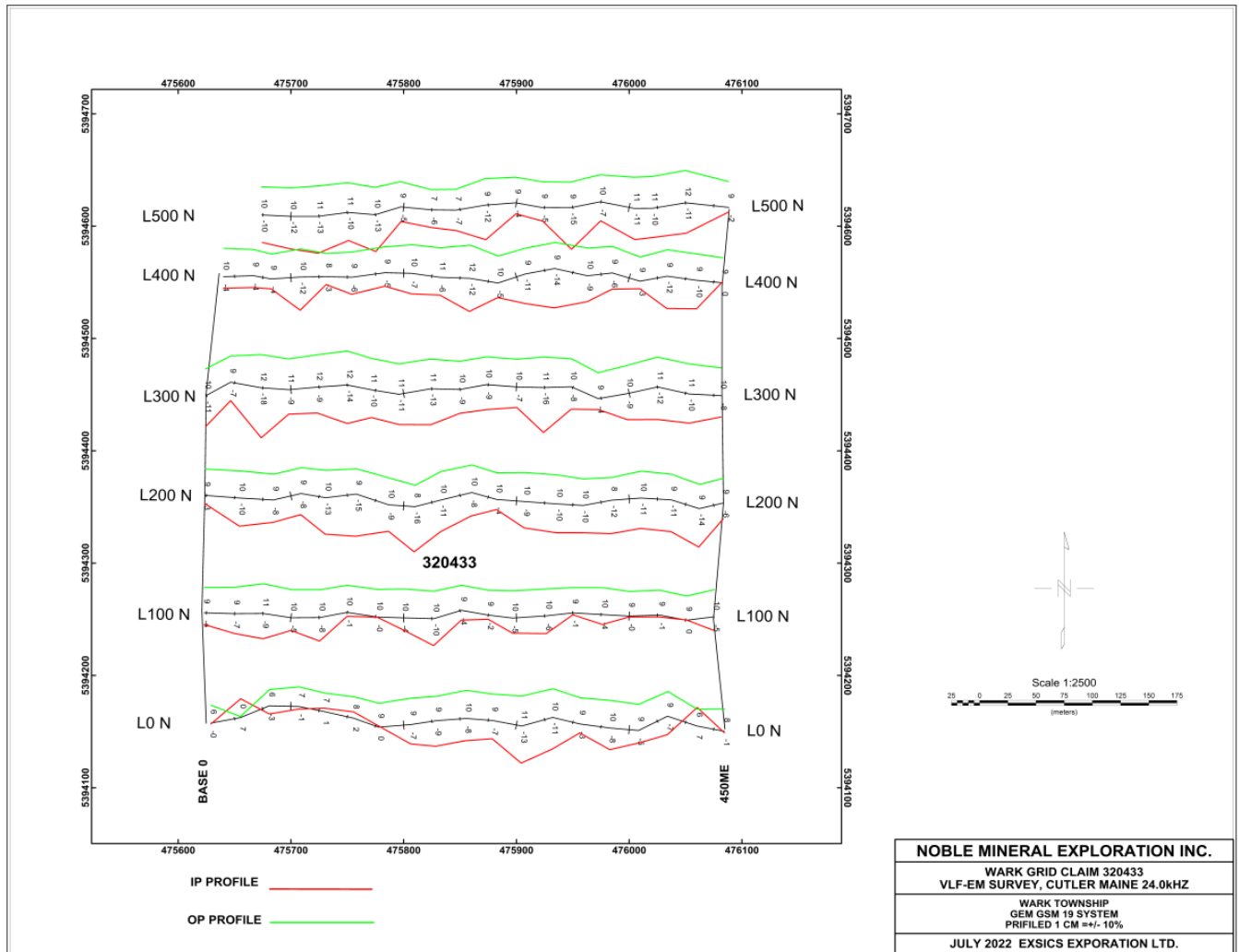
A weak magnetic high is also building at the extreme western tios of lines 100Mn and 200MN.

The VLF-EM survey did not outline any area of interest over the grid possibly due to the heavy layer of clays and swamp. The claim is mainly covered by a bog like mix of tag alders, spruce and minor cedar.

TOTAL FIELD MAGNETIC PLAN MAP



VLF-EM PLAN MAP



CONCLUSIONS AND RECOMMENDATIONS:

The ground magnetics was somewhat successful in outlining a modest and broad low that generally strikes into the grid from the south to at least line 300MN where it then appears to fold around the magnetic high that is striking into the grid from the east along line 300MN.

At this writing I do not see a need for further follow up surveys unless an IP survey is considered to better penetrate the overburden layering.

Respectfully submitted

JC Grant

J. C. Grant

July 2022.

REFERENCES

Berger, B.R., 1999

Geology of Murphy and Wark Townships, District of Cochrane; Ontario Geological Survey, Open File Report 5994, 64p.

Grant, J.C., November 1997

Geophysical Report for Pentland Firth Ventures Ltd. on the Prosser, Wark Properties, Assessment File

Morley, L.W., Ed., 1967

Mining and Groundwater Geophysics, 1967, Proceedings of the Canadian Centennial Conference on Mining and Groundwater Geophysics

Pegg, R., August 1999

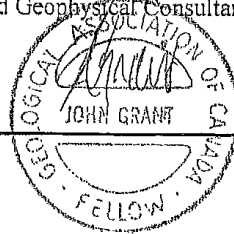
Compilation Report on the Wark/Prosser Project, Private Report, Pegg Geological Consultants Ltd.

CERTIFICATION

I, John Charles Grant, of 108 Kay Crescent, in the City of Timmins, Province of Ontario, hereby certify that:

- 1). I am a graduate of Cambrian College of Applied Arts and Technology, 1975, Sudbury Ontario Campus, with a 3 year Honors Diploma in Geological and Geophysical Technology.
- 2). I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years, 1975 to 1980), and currently as Exploration Manager and Chief Geophysicist for Exsics Exploration Limited, since May, 1980.
- 3). I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984.
- 4). I am in good standing as a Fellow of the Geological Association of Canada, (FGAC), since 1986.
- 5). I have been actively engaged in my profession since the 15th day of May, 1975, in all aspects of ground exploration programs including the planning and execution of field programs, project supervision, data compilation, interpretations and reports.
- 6). I have no specific or special interest nor do I expect to receive any such interest in the herein described property. I have been retained by the property holders and or their Agents as a Geological and Geophysical Consultant and Contract Manager.

John Charles Grant, CET., FGAC.



APPENDIX A

v7.0



Overhauser

Magnetometer / Gradiometer / VLF (GSM-19 v7.0)

GEM's unique Overhauser system combines data quality, survey efficiency and options into an instrument that matches costlier optically pumped Caesium devices.

And the latest v7.0 technology upgrades provide even more value:

Data export in standard XYZ (i.e. line-oriented) format for easy use in standard commercial software programs

Programmable export format for full control over output

GPS elevation values provide input for geophysical modeling

Enhanced GPS positioning resolution
<1.5m standard GPS for high resolution surveying
<1.0m OmniStar GPS
<0.7m for newly introduced CDGPS

Multi-sensor capability for advanced surveys to resolve target geometry

Picket marketing / annotation for capturing related surveying information on-the-go

And all of these technologies come complete with the most attractive savings and warranty in the business!



Overhauser (GSM-19) console with sensor and cable. Can also be configured with additional sensor for gradiometer (simultaneous) readings.

The GSM-19 v7.0 Overhauser instrument is the total field magnetometer / gradiometer of choice in today's earth science environment -- representing a unique blend of physics, data quality, operational efficiency, system design and options that clearly differentiate it from other quantum magnetometers.

With data quality exceeding standard proton precession and comparable to costlier optically pumped cesium units, the GSM-19 is a standard (or emerging standard) in many fields, including:

- o Mineral exploration (ground and airborne base station)
- o Environmental and engineering
- o Pipeline mapping
- o Unexploded Ordnance Detection
- o Archeology
- o Magnetic observatory measurements
- o Volcanology and earthquake prediction

Taking Advantage of the Overhauser Effect

Overhauser effect magnetometers are essentially proton precession devices -- except that they produce an order-of-

magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field.

The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal -- that is ideal for very high-sensitivity total field measurements.

In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and eliminates noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously -- which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

Other advantages are described in the section called, "GEM's Commercial Overhauser System" that appears later in this brochure.

Key System Components

Key components that differentiate the GSM-19 from other systems on the market include the sensor and data acquisition console. Specifications for components are provided on the right side of this page.

Sensor Technology

GEM's sensors represent a proprietary innovation that combines advances in electronics design and quantum magnetometer chemistry.

Electronically, the detection assembly includes dual pick-up coils connected in series opposition to suppress far-source electrical interference, such as atmospheric noise. Chemically, the sensor head houses a proprietary hydrogen-rich

liquid solvent with free electrons (free radicals) added to increase the signal intensity under RF polarization.

From a physical perspective, the sensor is a small size, light-weight assembly that houses the Overhauser detection system and fluid. A rugged plastic housing protects the internal components during operation and transport.

All sensor components are designed from carefully screened non-magnetic materials to assist in maximization of signal-to-noise. Heading errors are also minimized by ensuring that there are no magnetic inclusions or other defects that could result in variable readings for different orientations of the sensor.

Optional omni-directional sensors are available for operating in regions where the magnetic field is near-horizontal (i.e. equatorial regions). These sensors maximize signal strength regardless of field direction.

About GEM Advanced Magnetometers

GEM Systems, Inc. delivers the world's only magnetometers and gradiometers with built-in GPS for accurately-positioned ground, airborne and stationary data acquisition. The company serves customers in many fields including mineral exploration, hydrocarbon exploration, environmental and engineering, Unexploded Ordnance Detection, archeology, earthquake hazard prediction and observatory research.

Key products include the QuickTracker™ Proton Precession, Overhauser and SuperSenser™ Optically-Pumped Potassium instruments. Each system offers unique benefits in terms of sensitivity, sampling, and acquisition of high-quality data. These core benefits are complemented by GPS technologies that provide metre to sub-metre positioning.

With customers in more than 50 countries globally and more than 20 years of continuous technology R&D, GEM is known as the only geophysical instrument manufacturer that focuses exclusively on magnetic technology advancement.

"Our World is Magnetic"



GEM Systems, Inc.
52 West Beaver Creek Road, 14
Richmond Hill, ON
Canada L4B 1L9
Tel: 905-764-8008
Fax: 905-764-2949
Email: info@gemsys.ca
Web: www.gemsys.ca

Specifications

Performance

Sensitivity: < 0.015 nT / $\sqrt{\text{Hz}}$ @ 1 Hz
Resolution: 0.01 nT
Absolute Accuracy: +/- 0.1 nT
Range: 10,000 to 120,000 nT
Gradient Tolerance: > 10,000 nT/m
Samples at: 60+, 5, 3, 2, 1, 0.5, 0.2 sec
Operating Temperature: -40C to +55C

Operating Modes

Manual: Coordinates, time, date and reading stored automatically at minimum 3 second interval.

Base Station: Time, date and reading stored at 3 to 60 second intervals.

Remote Control: Optional remote control using RS-232 interface.

Input / Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Storage - 16 MB (# of Readings)

Mobile: 738,769
Base Station: 2,708,821
Gradiometer: 625,112
Walking Mag: 1,354,410

Dimensions

Console: 223 x 69 x 240 mm
Sensor: 175 x 75mm diameter cylinder

Weights

Console with Belt: 2.1 kg
Sensor and Staff Assembly: 1.0 kg

Standard Components

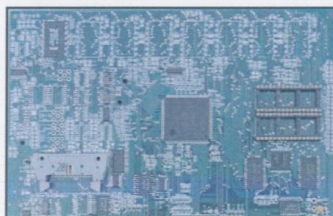
GSM-19 console, GEMLinkW software, batteries, harness, charger, sensor with cable, RS-232 cable, staff, instruction manual and shipping case.

Optional VLF

Frequency Range: Up to 3 stations between 15 to 30.0 kHz

Parameters: Vertical in-phase and out-of-phase components as % of total field. 2 components of horizontal field amplitude and total field strength in pT.

Resolution: 0.1% of total field



Represented By: