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## **Onaman Property**

### **2021 Assessment Report Ground Magnetic and VLF Geophysics & Review and model of historic geophysics**

Thunder Bay Mining District, Ontario  
Coughlin Lake Area (G-0026) & Castlewood Lake Area (G-00022)  
NTS: 0421/04 & 042/E13

#### Claims

,156508,247039,247745,247761,256313,256314,276433,275780,156503,211080,188944,14448  
5,181505,190414,247800,137684,144486

504103,504105,504107,504108,504109,504110,504111,504112,504113,504115,504116,50411  
7,518257,518262,518263,518264,518265,518266,518267,518268,518271,518272,518277,518  
280,518282,518283,518288,518289,518290,518292,518293,518295,518296,518297,518298,5  
18299,518300,518301,518303,518304,518305,518306,518308,518398,518399,518400,518405  
,518411,518412,533639

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December 10, 2021

By Cathy Salo. P.Geol

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## 1. SUMMARY

Noronex Resources Ltd. Onaman Aug property, is situated within the Onaman-Tashota Greenstone belt, a subdivision of the larger Wabigoon subprovince. Bedrock in the area is mainly Early Precambrian in age, with similar volcanic-granitic assemblages elsewhere in the Superior Province of the Canadian Shield.

The Onaman assemblage is located within the 2692-2968 Ma Onaman-Tashota greenstone belt located between the younger, Eastern Wabigoon Domain and the older Winnipeg River Terrane, both of which are sub-divisions of the Superior Province (Stott, 2010). The Onaman-Tashota belt comprises Neoproterozoic (2691-2784 Ma) metamorphosed basaltic and dacitic flows, auto-breccia, and pyroclastic rocks with rhyolites being less common (Stott et al., 2002). Mesoarchean (2922-2968 Ma) metavolcanic rocks are present along the western margin of the belt (Stott et al., 2002). Metasedimentary rocks of the Albert-Gledhill assemblage (<2710 Ma) and the Conglomerate assemblage (<2707 Ma) form the youngest supracrustal assemblages and are interpreted to represent orogenic exhumation and erosion of the underlying volcanic and plutonic rocks (Stott et al., 2002). The Onaman-Tashota belt has been interpreted as an ocean island arc-like setting in which the southern and northern portion of the belt formed during arc volcanism, and the middle (including the Onaman assemblage) formed during back-arc extensional volcanism (Stott and Davies, 1999; Stott et al., 2002; Tomlinson et al., 2003).

Historic geophysical surveys, consisting of HeliGEOTEM II, ZTEM, HLEM (MaxMin) and ground magnetics, from the Onaman Lake property were reviewed by David Johnson, who identified several EM anomalies warranting further investigation. The purpose of the study was to identify areas for investigation by a prospecting crew. The available geophysical datasets were assessed to identify the most useful for targeting VHMS mineralization and a set of targets was picked. This information can be seen in the report "Onaman Property – Review of historic geophysical data" by David M. Johnson on May, 2020.

Zion Geophysics, Inc. was involved in the planning of the fixed-loop EM survey done by Abitibi Geophysics in June of 2021. Additional Zion completed study of previous geophysics survey the interpretation from this can be found in appendixes, D, E & F

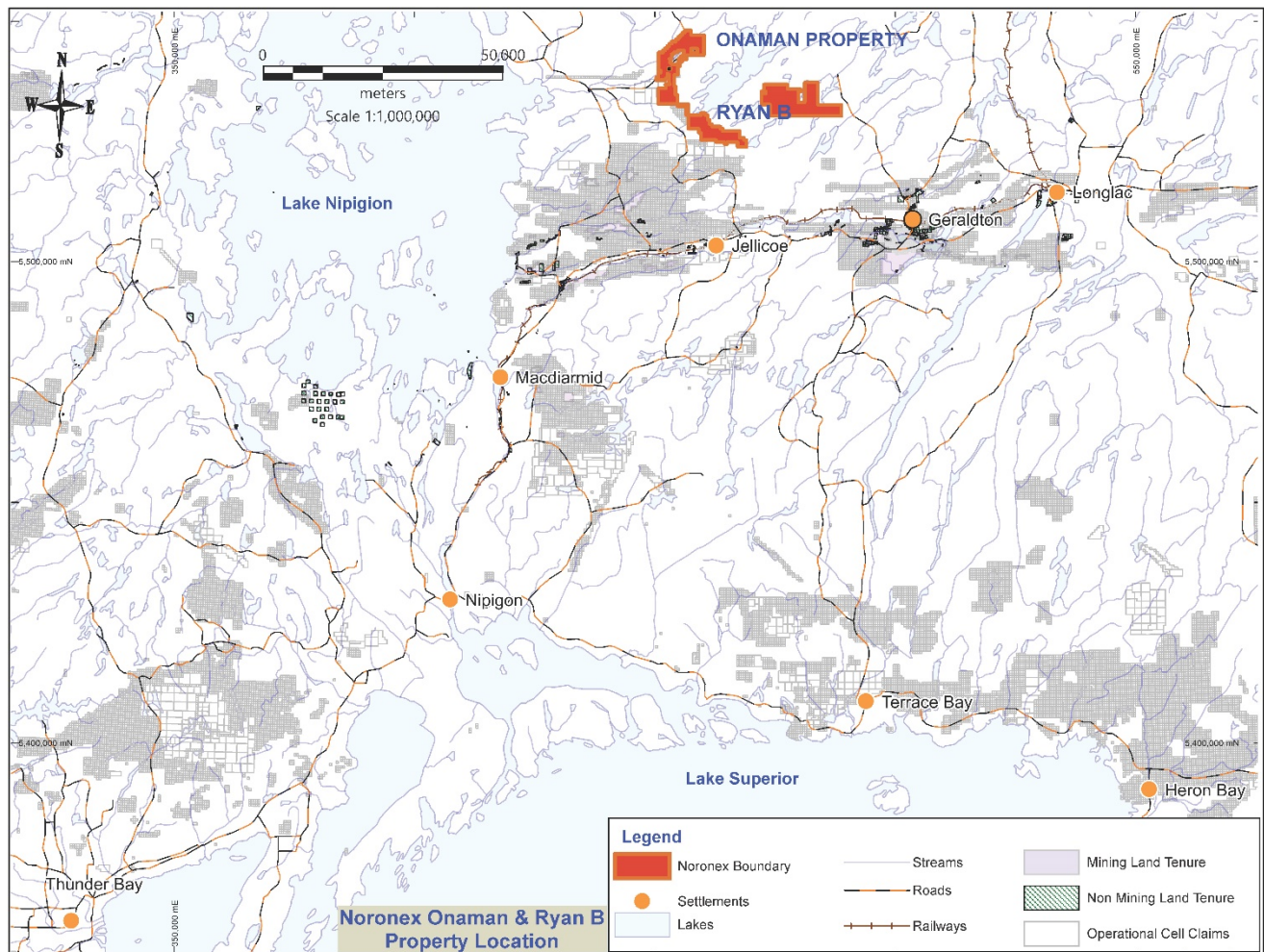
The data Lynx fixed loop EM survey was review and modelling and drill hole design was completed.

In March of 2021 Line cutting of 13 kms of line was completed for the upcoming ground geophysics which was done by Abitibi Geophysics.

A TDEM (Time Domain Electromagnetic) Configuration, Fixed conventional loop (in-loop) started on June 19th to 21st, 2021. The survey had a nominal station spacing of 50 m with 25 m infills and covered a total of 7.4 km over 9 lines ranging from 600 to 1000 metres in length. This report can be found in appendix G.

Figure 1a - Ontario Location Map





## 2. PROPERTY DESCRIPTION

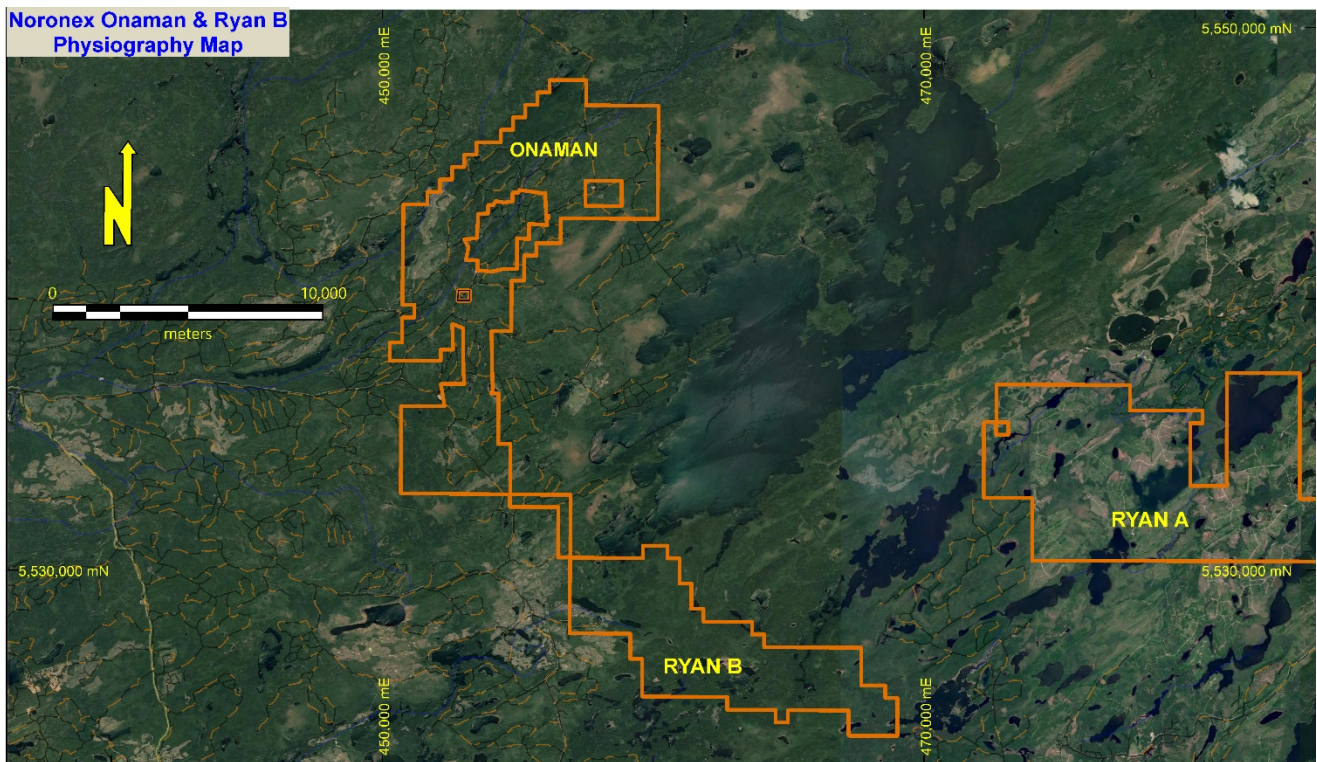
The Onaman Property is situated within the Thunder Bay Mining Division of northwestern Ontario on National Topographic System (NTS) maps 42E13NE & 42L4SE within g plans Coughlin Lake area, (G-0026) and Castlewood Lake area (G.-0022). The property is located 40 km north of Jellicoe (the Trans-Canada Highway (highway 11), and 200 km north-east of Thunder Bay (Figure 2). The property can be accessed by a 65km all-weather gravel 6 km West of Jellicoe on highway. The Onaman and Ryan B are contiguous and consists of 349 single cell claims, 77 boundary cell claims, 2 leases and 8 patents totaling 9.946 hectares (ha). A complete listing of all holdings is given in Appendix C. The Property is 100% owned by Noronex Resources Ltd. See Claim map 1 in appendix B.

### 3. ACCESSIBILITY, PHYSIOGRAPHY, AND INFRASTRUCTURE

The Property can be accessed on gravel roads which off highway 11 directly to the northern boundary. There is a road which runs the length of the Property, from the south-west to the north-eastern which is referred to as the Tashota Mine Road, originally constructed to former Tashota-Nipigon gold-copper mine 6 km east of the north end of the Property

The topography on the Property is relatively flat with some small hills in some area. Outcrop is not abundant.

The Property lies within the Boreal Forest Region. The main tree species are jackline, black spruce, white birch and with aspen on riverbanks. Tamarack and black spruce occur in the swampy areas. The towns of Beardmore, Jellicoe and Geraldton are in close proximity and provide most of the services required for exploration property. The port city of Thunder Bay is located just 200 km west.



#### 4. EXPLORATION HISTORY

**1916:** Gregory Brennan, a prospector, panned free gold.

**1922-1925:** Canadian Mines and South Onaman Mines Syndicate completed Stripping and trenching

**Late 1930's:** Canadian Mines Syndicate trenches were cleaned and re-sampled and the Johnson Vein tested by six drill holes.

**1949:** Hopkins' claims were acquired by Coulee Lead and Zinc Mines and 24 holes were drilled in various zinc-lead-silver zones.

**1949:** Headway Red Lake Gold Mines discovered the Headway Main.

**1950:** The Coulee property was optioned to McIntyre Porcupine Mines, and 26 holes were drilled.

**1951:** The McIntyre option on the Coulee claims was dropped and the Coulee claims were assigned to the Chubb-Stuart Syndicate until about 1968 reporting no work.

**1951-1952:** Headway drilled 139 holes totaling about 10,000m on the Headway Main Zone, and other targets.

**1972-1974:** Noranda held the Headway and Coulee claims under option and staked additional claims in the surrounding area. They carried out magnetic, vertical loop EM, and IP surveys, geological mapping, and a soil geochemical survey, recleaning of some trenches and drilled 17 holes and 1672m.

**1974:** Lynx-Canada Explorations optioned claims. A horizontal loop EM survey was carried out.

**1975-1976:** Lynx, and partners Dejour Mines and Canadian Reynolds Metals optioned the Headway and Coulee claims and completed a horizontal loop EM and magnetometer covering most of the property, prospecting and stripping and 55 holes totaling 5160m were drilled resulting in the discovery of the No.1 and No. 2 Zones, along with other Cu-Au-Ag zones.

**1976-1977:** the Lynx and Reynolds were assigned to the Dighem Syndicate, which, in joint venture with Dejour Mines, carried out magnetic and HLEM surveys and geological mapping. Dighem Syndicate re-assigned its interest back to Lynx and Reynolds in late 1977.

**1981-1982:** Mattagami Lake Mines optioned Six claims just south of the Headway Main Zone completing magnetic, HLEM and soil geochemical surveys along with 5 drill holes totaling 612m.

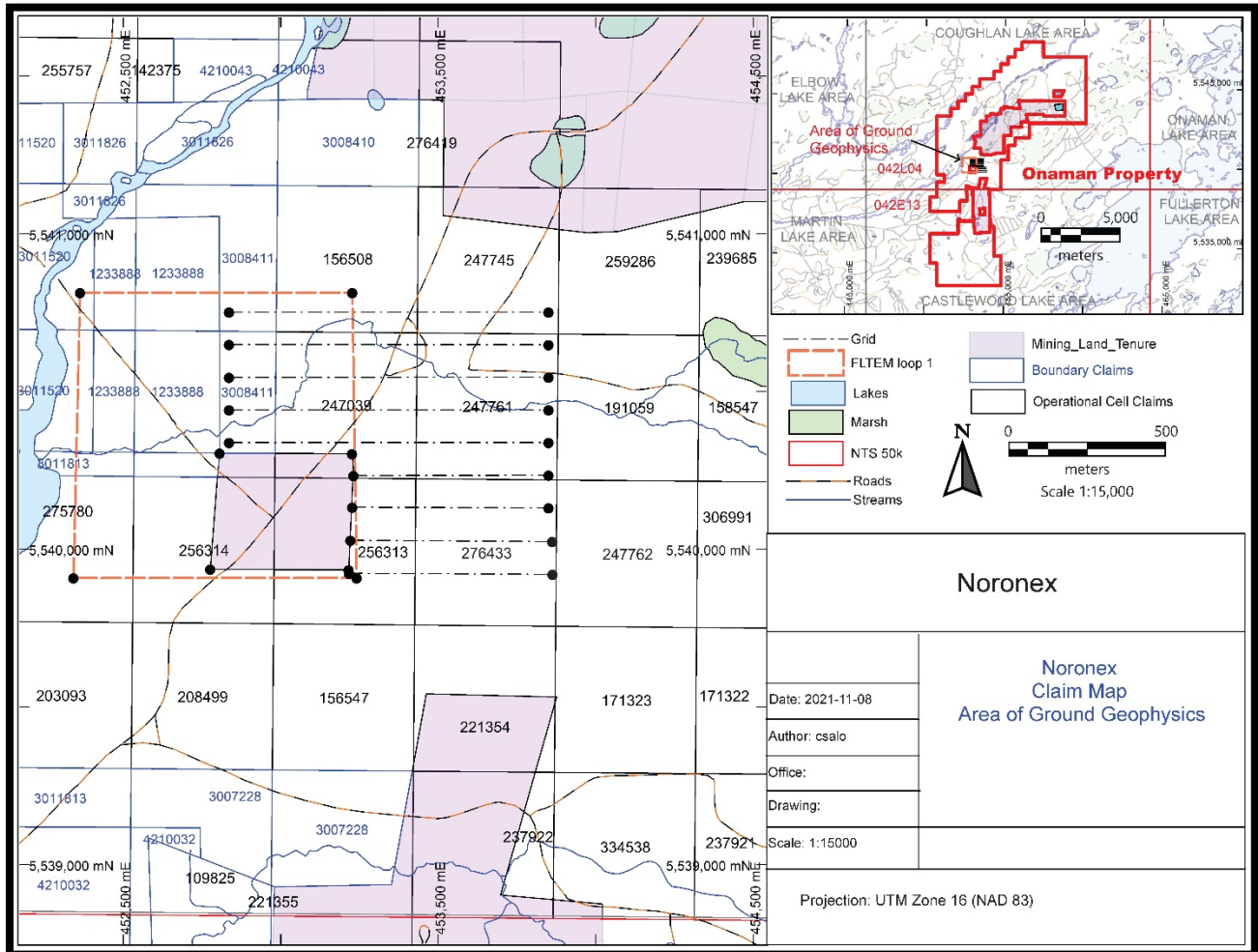
**1988:** Goldbrook optioned to acquire 50% interest in the property and carried out an airborne magnetic and VLF survey following up on some of targets by stripping.

**1990:** Goldbrook and Castlewood (in joint venture) carried out line cutting, magnetic, and VLF EM surveys on claims acquired in 1988 adjoining the Onaman River claims to the north-west.

**1991:** Goldbrook and Castlewood (in joint venture) acquired the option on the property from CS - Line cutting, magnetic and VLF-EM surveys were carried out, an airborne EM/magnetic survey was flown, geological mapping and stripping program was completed.

**2006:** Sage Gold Inc. conducted an exploration program consisting of stripping & channel sampling, detailed mapping, and diamond drilling on multiple showings.





## 5. REGIONAL GEOLOGY

The Onaman assemblage occupies a narrow 10 km by 17 km wedge along the flank of the Onaman Batholith in the centre of the belt (Thurston, 1980; Stott et al., 2002). U-Pb zircon geochronology indicates that volcanic rocks of the assemblage range from 2769 +6/-5 Ma to 2780 +/-1.68 Ma (Stott et al., 2002). The assemblage is composed of low TiO<sub>2</sub> tholeiitic mafic volcanic rocks with trace element profiles consistent with oceanic plateaus to mixed primitive island-arc/back-arc affinities (Stott et al., 2002). Chert-magnetite facies iron formations are intercalated with the mafic volcanic rocks. A thin (350 m) unit of highly altered, calc-alkalic, felsic volcanic rocks comprising abundant volcanoclastic units intercalated with dacitic flows and domes occurs within the center of the mafic assemblage.

Base-metal mineralization occurs within three distinct occurrences. These occurrences include: The Lynx Cu-Au stringer zone, the Headway polymetallic zones, and the Big Mac pyrite-pyrrhotite zones. (Osterberg et al., 1987).

The Onaman assemblage is overprinted by a ~2.7 km by 800 m oblate metamorphosed alteration zone comprising distinct alteration mineral associations and cross cutting relationships. Mapped mineral associations include: chlorite, calcite-chlorite, Fe-chlorite-sericite, chloritoid, kyanite and Fe-carbonate. (Strongman, 2019)

Figure 5 - Regional Geology

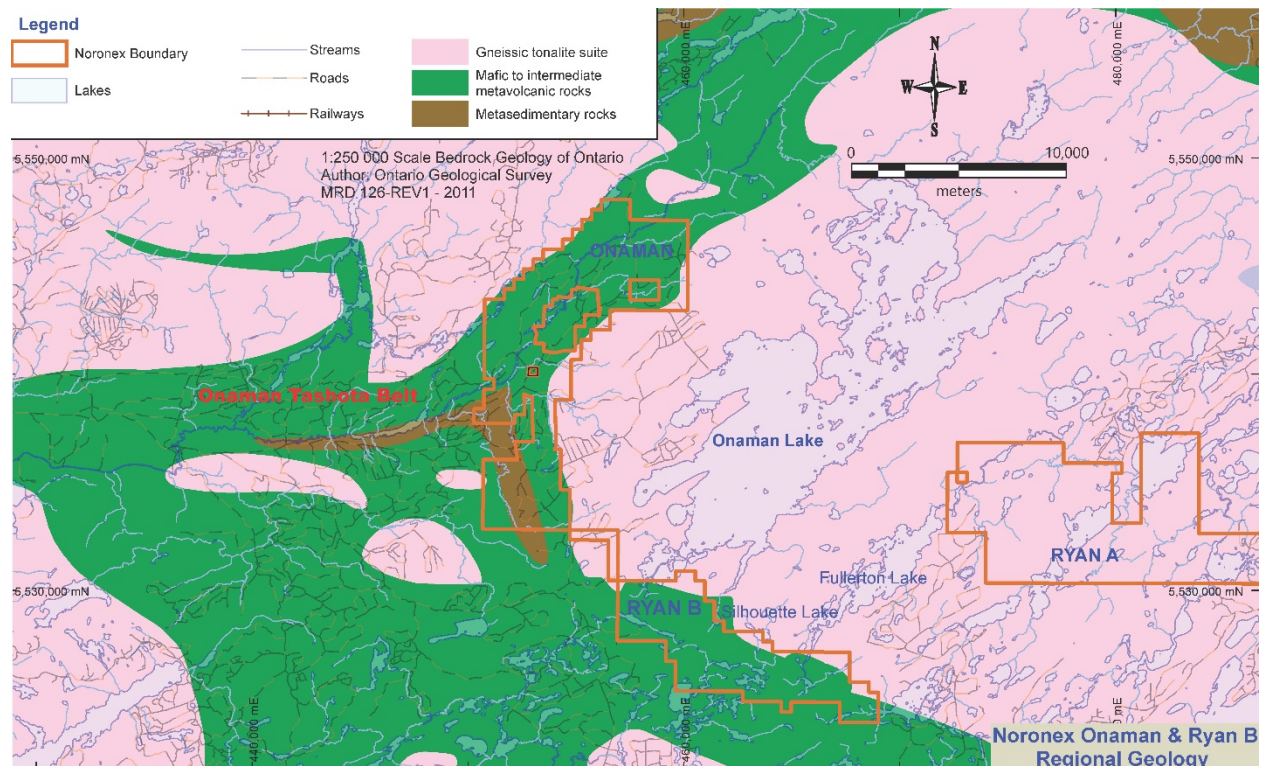


Figure 5; General geology map, based on MDR 126REV.1

## 6. 2021 GROUND GEOPHYSICS

A TDEM (Time Domain Electromagnetic) Configuration, Fixed conventional loop (in-loop) was carried out from June 19th to 21st, 2021 by Abitibi Geophysics. The survey had a nominal station spacing of 50 m with 25 m infills and covered a total of 7.4 km over 9 lines ranging from 600 to 1000 metres in length. This report can be found in appendix G

## 7. RECOMMENDATIONS AND CONCLUSIONS

Multiple drill targets have been identified for follow both in the area of new Abitibi ground EM geophysics which was located in the vicinity of the Lynx showings as well as the study which was conducted on the historic survey in the Silhouette Lake region. For more details see recommendations made by Abitibi Geophysics and Zion Geophysics

## 8. REFERENCES

Amukun, S.E. 1977a: Geology of the Tashota Area, District of Thunder Bay; Ontario Geological Survey, Report 167, 90p. Accompanied by Map 2354, scale 1 inch to ½

Mile.Ayres, L.D. 1974: Geology of the Trout Lakes Area, district of Kenora (Patricia Portion); Ontario Div. Mines, GR113, 197p.

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Morrison, D.R., Stott, G.M., Gale, V., Wachowiak, N. 1996, Precambrian Geology of the South-Central Onaman-Tashota Greenstone Belt.

Sinclair, D.G., Cleland, R.H. Keeley, E.C., Jarrett, G.D., and Webster, A.R. 1929: Mines of Ontario in 1928; Ontario Department of Mines, Vol. 38, p. 69-183 (Published 1930).

Stott, G.M., Davis, D.W, Parker, J.R., Straub, K.H. and Tomlinson, K.Y. 2002. Geology and tectonostratigraphic assemblages, eastern Wabigoon Subprovince, Ontario; Ontario Geological Survey, Preliminary Map P .3449, Scale 1:250,000.

Stott, G.M. , Morrison, D. , Gale, V. and Wachowlak, N. 1996. Precambrian geology of the south-central Onaman Tashota greenstone belt; Ontario Geological Survey, Preliminary Map P.3352, scale 1 :50 000.

Thomlinson, K.Y., Davis, D.W., Stone, D., Hart, T.R., 2003. U–Pb age and Nd isotopic evidence for Archean terrane development and crustal recycling in the southcentral Wabigoon subprovince, Canada. *Contrib. Mineral. Petrol.* 144, 684–702

## 9. CERTIFICATION OF QUALIFICATIONS

I, Cathy Salo, of 475 Francis St. East, Thunder Bay, Ontario, do hereby certify that:

1. I hold a Bachelor of Science Degree in Earth Science (1989) from Memorial University of Newfoundland, St. John's, Newfoundland and Labrador.
2. I have practiced my profession in Ontario since 1989 and have been employed directing by Ontario mining exploration companies for the last 20 years as the sole proprietary of Salo Geoscience Services.

A handwritten signature in cursive script that reads "Cathy Salo". The signature is written in black ink and is positioned above the printed name.

Cathy Salo, P.Ge

Date: November 11, 2021

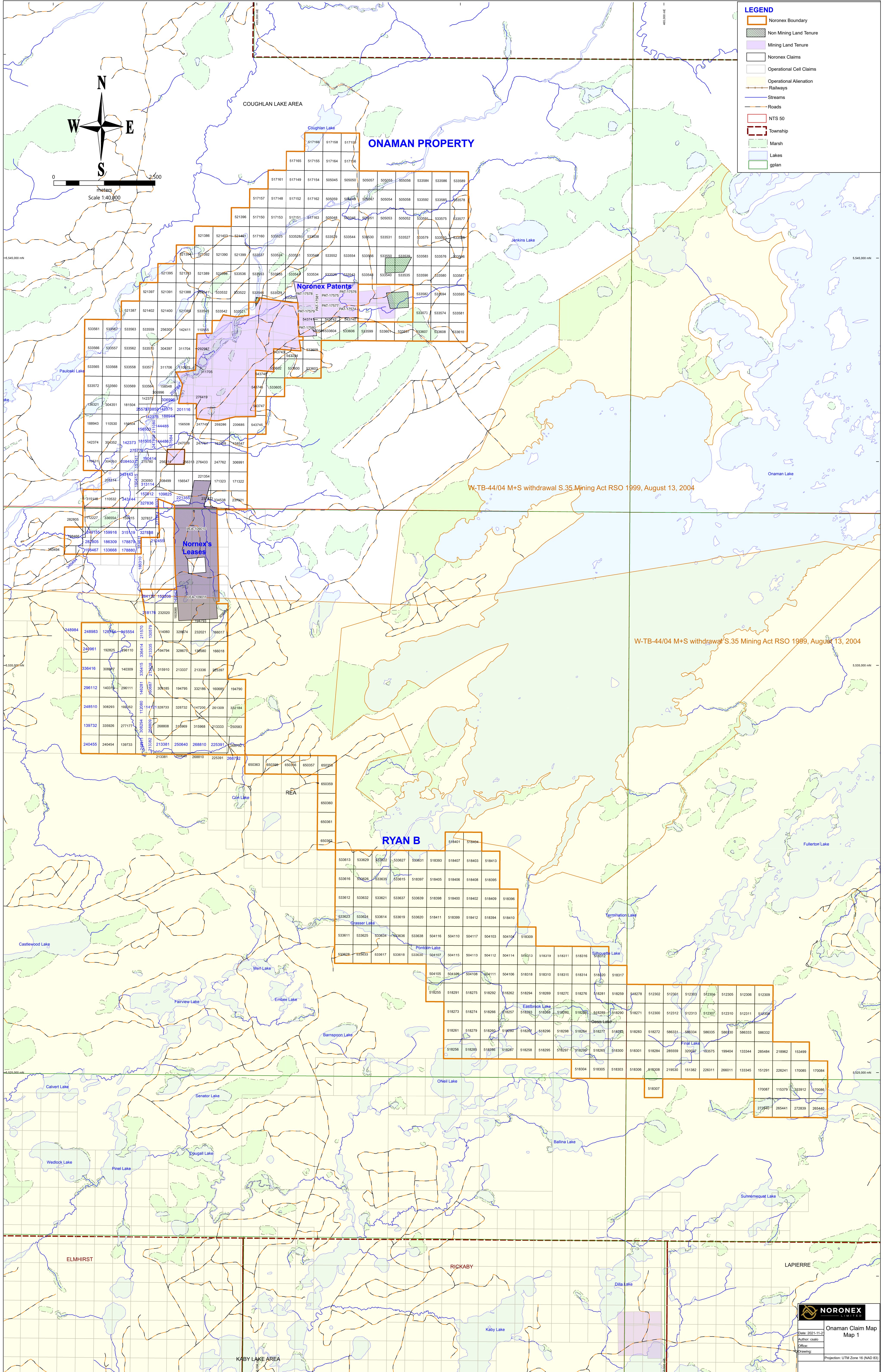
## Appendix A

### List of Personnel

Employee/Contractor	Activities
Dennis Arne	Supervisor
Zion Geophysics, Inc., 246 S. Twin River Loop, Alpine UT 84004	Interpretation of Abitib Gp
Cliff Hickman(Hickman Prospecting Services)	Line cutting
Cathy Salo (Salo Geoscience)	GIS Compilation & Report
Abitibi Geophysics 1740 Sullivan Rd. Suite 1400, Val d'Or, QC	ARMIT Fixed Loop TDEM Survey

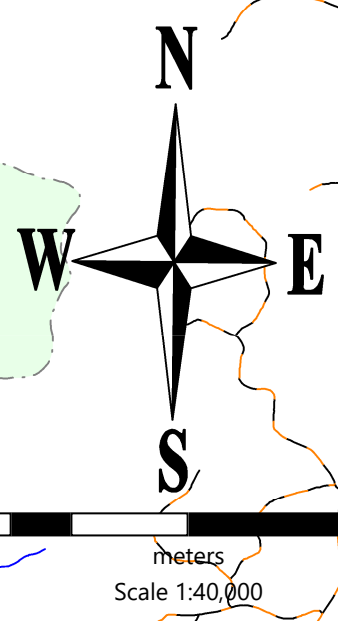
# APPENDIX B

## Claim Map



**LEGEND**

- Noronex Boundary
- Non Mining Land Tenure
- Mining Land Tenure
- Noronex Claims
- Operational Cell Claims
- Operational Alienation
- Railways
- Streams
- Roads
- NTS 50
- Township
- Marsh
- Lakes
- gplan



**NORONEX LIMITED**

Onaman Claim Map  
Map 1

Date: 2021-11-2  
 Author: cealo  
 Office:  
 Drawing:

Projection: UTM Zone 18 (NAD 83)



# Appendix C

## List of Claims

Onaman Claims				
Tenure Num	type	Issue date	Anniversary	Holder
156508	Single Cell Mining Claim	20180410	20220809	(100) Noronex Limited
247039	Single Cell Mining Claim	20180410	20220809	(100) Noronex Limited
247745	Single Cell Mining Claim	20180410	20220809	(100) Noronex Limited
247761	Single Cell Mining Claim	20180410	20220721	(100) Noronex Limited
256313	Single Cell Mining Claim	20180410	20220721	(100) Noronex Limited
256314	Single Cell Mining Claim	20180410	20220220	(100) Noronex Limited
276433	Single Cell Mining Claim	20180410	20220721	(100) Noronex Limited
275780	Single Cell Mining Claim	20180410	20220213	(100) Noronex Limited
137684	Boundary Claim	20180410	20220809	(100) Noronex Limited
144485	Boundary Claim	20180410	20220910	(100) Noronex Limited
144486	Boundary Claim	20180410	20220910	(100) Noronex Limited
156503	Boundary Claim	20180410	20220601	(100) Noronex Limited
181505	Boundary Claim	20180410	20220601	(100) Noronex Limited
188944	Boundary Claim	20180410	20220809	(100) Noronex Limited
190414	Boundary Claim	20180410	20220213	(100) Noronex Limited
211080	Boundary Claim	20180410	20220910	(100) Noronex Limited
247800	Boundary Claim	20180410	20220910	(100) Noronex Limited

Claims Ryan B					
Tenure Num	Type	Status	Issue date	Anniversary	Holder
504103	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504105	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504107	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504108	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504109	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504110	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504111	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504112	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504113	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited
504115	Single Cell Mining Claim	Active	20180410	20220410	(100) Noronex Limited



## Appendix D

### Silhouette Lake geophysics review VTEM survey by Zion Geophysics



**LUSTRUM**  
MINERALS LIMITED

# Silhouette Lake geophysics review

VTEM survey

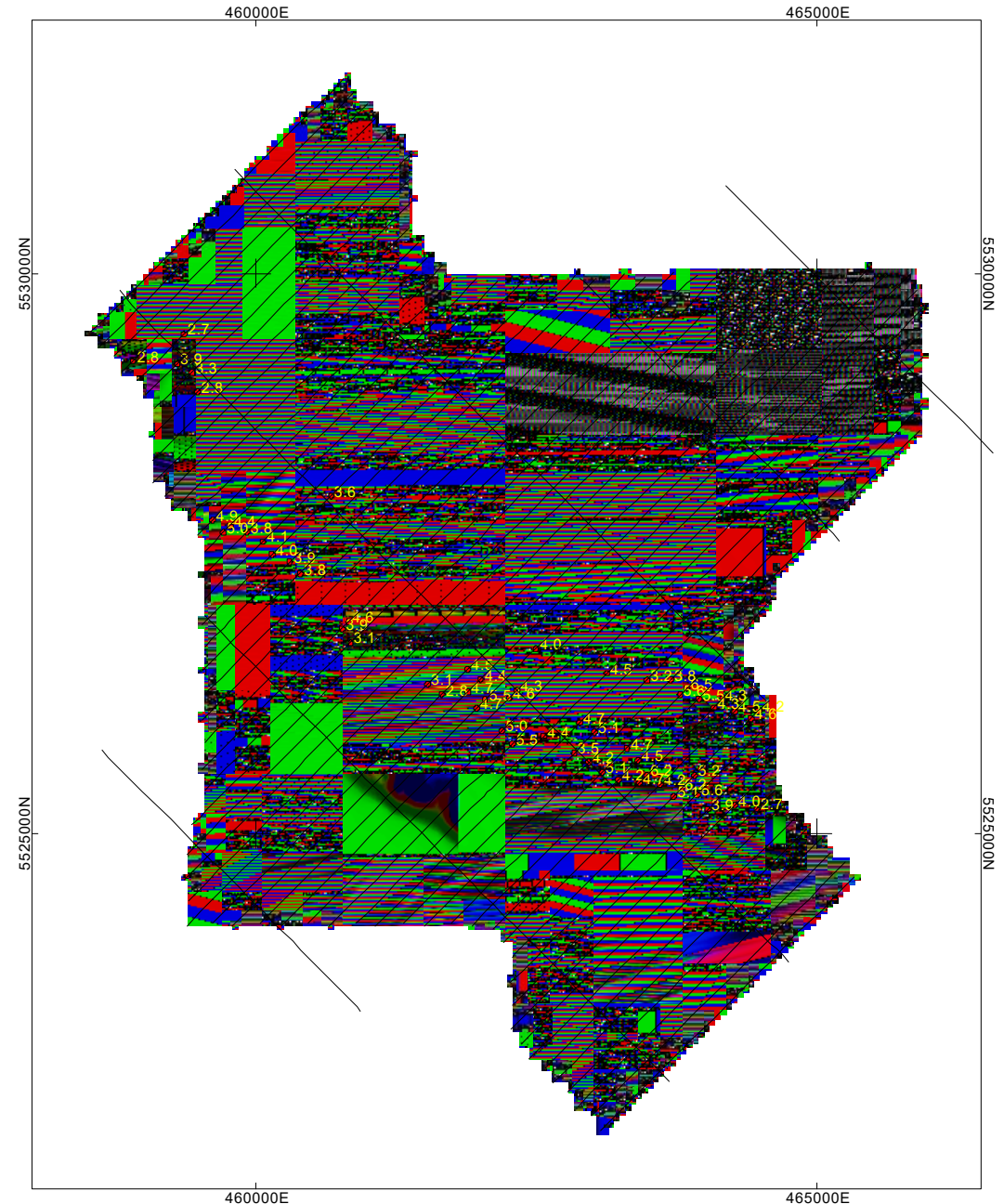
Zion  
Geophysics

# VTEM anomaly picks

Anomalies were auto-picked using Geosoft based on the channel 20 B-field response.

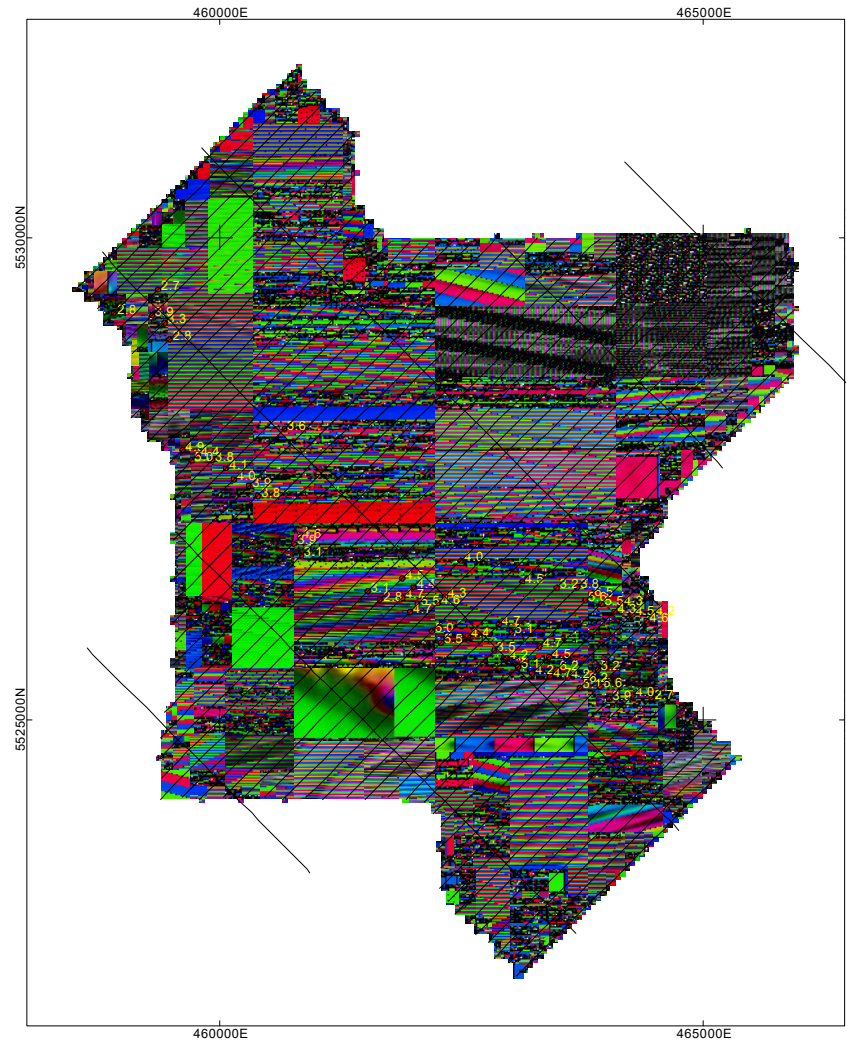
Anomaly locations are marked with estimated anomaly decay time constant (in milliseconds)

Most of the anomalies fall in linear zones coincident with magnetic anomalies (see next slide), consistent with sulphidic iron formation. However, there are some anomalies with short strike length, offset from the main trends. These are assigned priority for follow-up.



# VTEM anomalies vs magnetic response

VTEM responses  
offset from magnetic  
trends are highlighted  
in the next slide

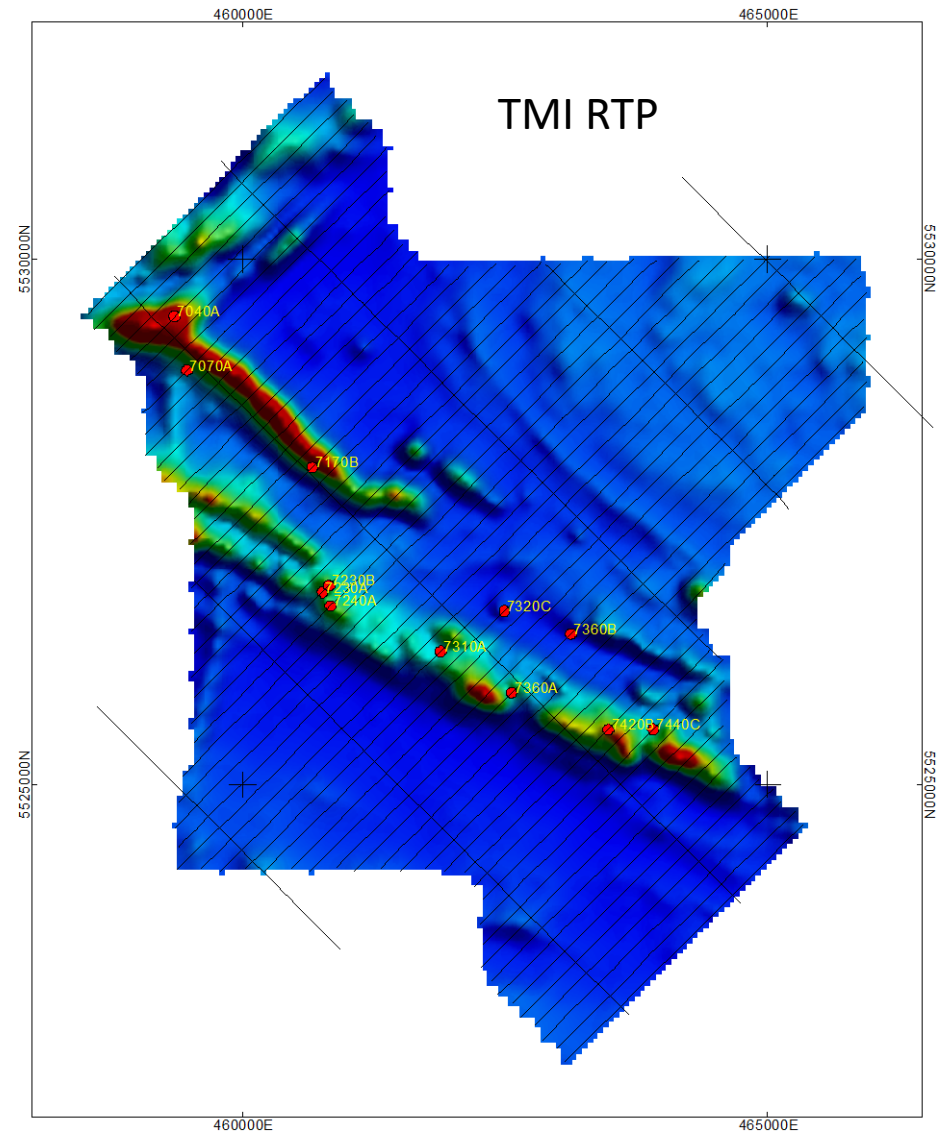
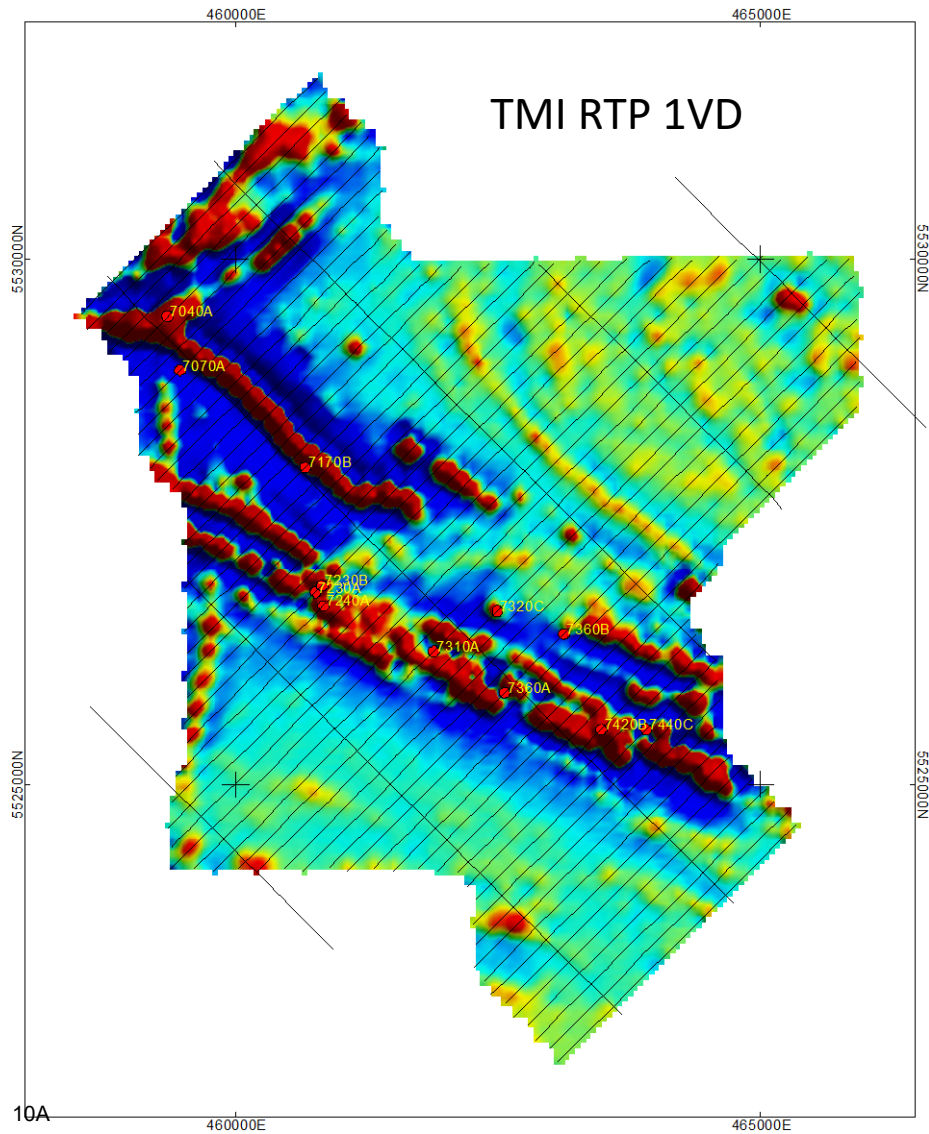


TMI (reduced to pole)

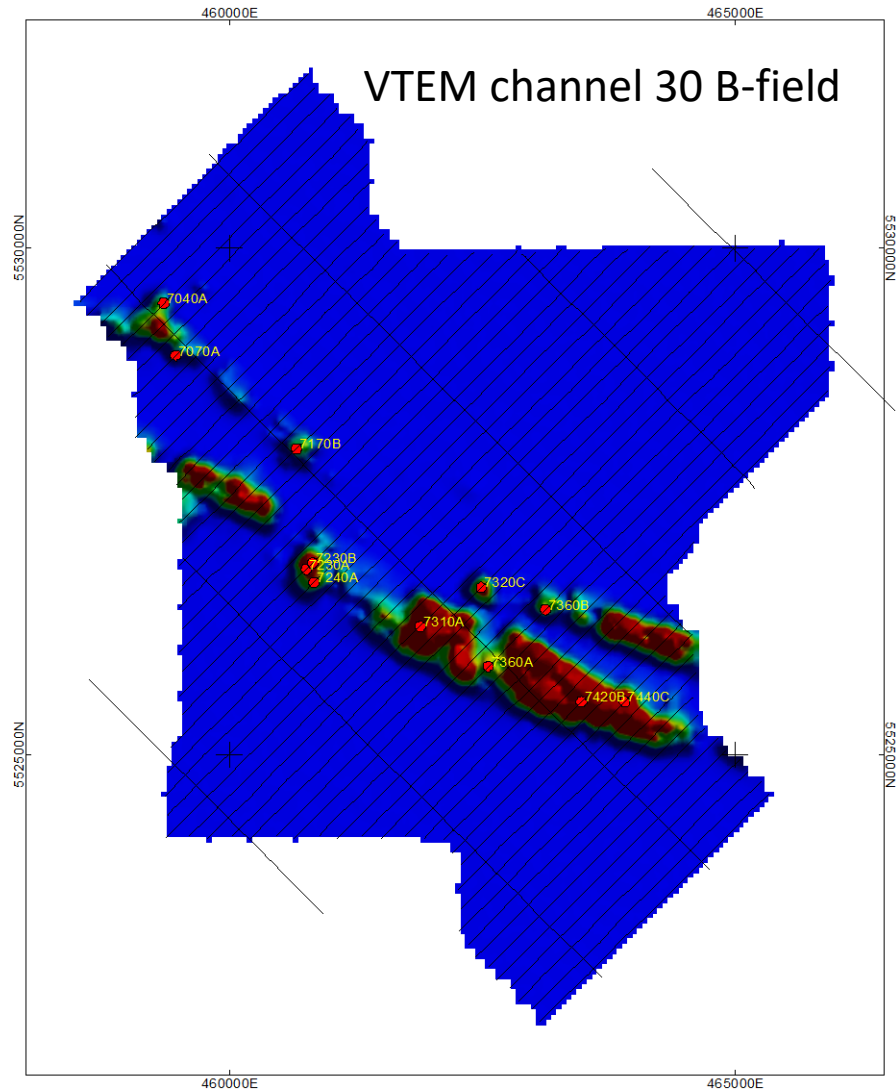


RTP 1VD

# Priority VTEM anomalies



# Priority VTEM anomalies *cont.*





## Appendix E

Onaman Property – Review of historic geophysical data  
technical report by Zion Geophysics.

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*Onaman Property – Review of  
historic geophysical data*

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Author(s)	David M. Johnson
Project	Onaman Project, Central Ontario, Canada
Client	Lustrum Minerals
Date	5/10/2020
Copies to	Dennis Arne

## Summary

Historic geophysical surveys, consisting of HeliGEOTEM II, ZTEM, HLEM (MaxMin) and ground magnetics, from the Onaman Lake property that includes the Lynx VHMS deposit were reviewed. Several EM anomalies warranting further investigation were identified.

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## 1 Introduction

### 1.1 Project description and location

The Onaman Property forms the most significant part of a package of properties in the Thunder Bay region held by Noronex Limited, from which Lustrum Minerals Limited is purchasing the rights to the properties. The Onaman Project is prospective for volcanic-hosted massive sulphide (VHMS) mineralization and contains the Lynx deposit, with an Inferred Mineral Resource of 1.63 Mt at 1.61% Cu, 0.66 g/t Au and 39.7 g/t Ag (Leggo 2020).

The project is located about 25 km east of Lake Nipigon (Figure 1) and 60 km WNW of Geraldton ON.

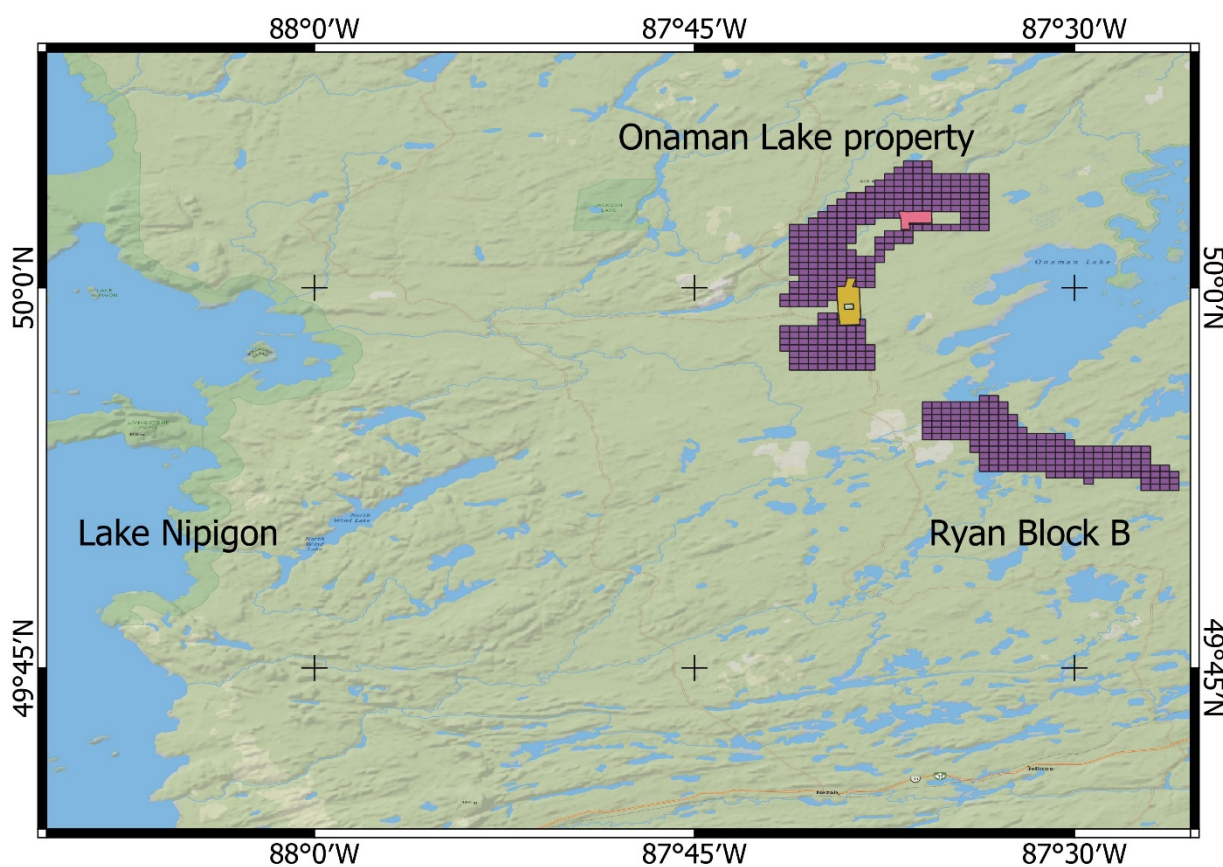


Figure 1 Onaman Lake property location

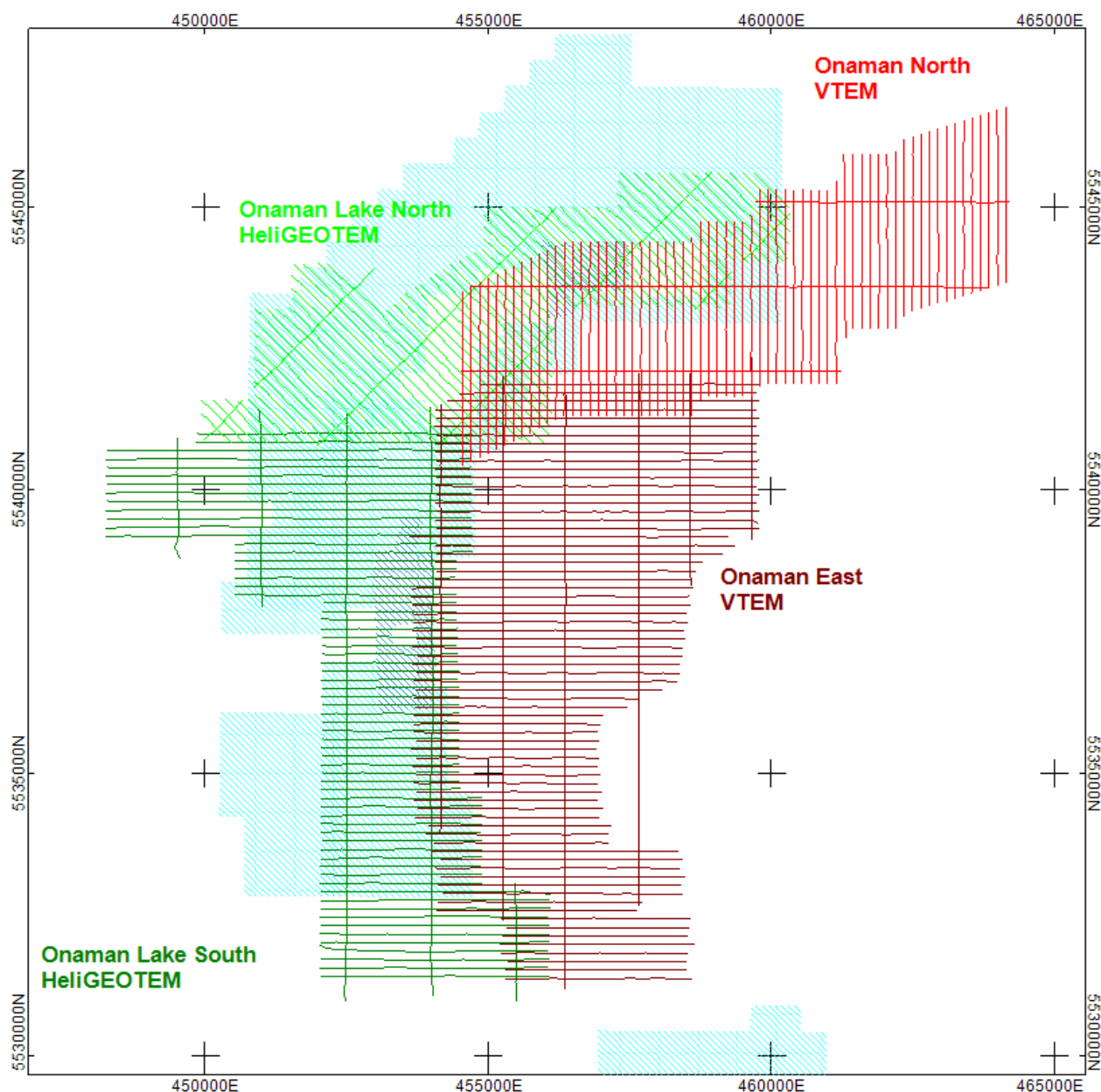
### 1.2 Scope of work

The purpose of the current study was to identify areas for investigation by a prospecting crew. The available geophysical datasets were assessed to identify the most useful for targeting VHMS mineralization and a set of targets was picked. A total of five days was allocated to the study.

## 1.3 Datasets reviewed

### 1.3.1 Helicopter TEM surveys

The Onaman tenure is covered by four surveys (Figure 2) flown in two projects: HeliGEOTEM II (Fugro job no. 07310, flown Nov-Dec 2007) and VTEM (Geotech job no. 8107, flown Jun-Jul 2008). In each project, the northern and southern parts of the area were flown separately, with different flight line directions.



**Figure 2 Helicopter EM survey flight paths over tenure (hatched areas).**

Specifications of the surveys (Table 1) are significantly different and unfortunately the HeliGEOTEM surveys covering the prospective areas have fewer desirable characteristics compared to the VTEM surveys which mainly cover granite. The HeliGEOTEM II survey was flown using a higher base frequency than the VTEM survey (90 Hz vs 30 Hz), resulting in poorer resolution of target conductance. The HeliGEOTEM II survey had a higher EM sensor height than the VTEM survey (90 m vs 40 m), resulting in greater geometric attenuation of signal from discrete conductors.

**Table 1 Helicopter EM survey specifications**

	<b>HeliGEOTEM II</b>	<b>VTEM</b>
<b>Traverse line spacing</b>	150 m	150 m
<b>Traverse line direction</b>	135° - 315° (Onaman Lake North) 090° - 270° (Onaman Lake South)	0° - 180° (Onaman North) 090° - 270° (Onaman East)
<b>Tie line spacing</b>	1500 m	1500 m (Onaman North) 1100 m (Onaman East)
<b>Tie line direction</b>	045° - 225° (Onaman Lake North) 000° - 180° (Onaman Lake South)	090° - 270° (Onaman North) 0° - 180° (Onaman East)
<b>Nominal Tx terrain clearance</b>	55 m	40 m
<b>Nominal Rx terrain clearance</b>	90 m	40 m
<b>Sensor</b>	Multicoil (X, Y, Z)	Z component only
<b>Tx base frequency</b>	90 Hz	30 Hz
<b>Tx dipole moment</b>	$\sim 5.5 \times 10^5 \text{ Am}^2$	373,585 $\text{Am}^2$
<b>Survey speed</b>	30 m/s	22 m/s
<b>Sampling</b>	0.25 s	0.1 s

Overall, the HeliGEOTEM II survey is adequate for a first-pass investigation of the area, but it would be worthwhile to re-fly using a more modern system with a larger dipole moment, smaller terrain clearance and lower base frequency. The 150 m line spacing is barely adequate for VHMS targets.

### 1.3.2 ZTEM survey

A ZTEM survey (Geotech project 10207) was flown in October 2010, covering most of the prospective stratigraphy. The survey was flown with 200 m spaced flight lines (no tie lines flown) in 135°/315° orientation in the north and 090°/270° in the south (Figure 3). This line spacing (50m greater than that used for the helicopter EM surveys) is also barely adequate for anything other than reconnaissance (Figure 4). Bearing this in mind, single-line anomalies will be considered worthy of follow-up.



Figure 3 ZTEM flight lines (black) over tenure and outlines (magenta) of the HeliGOTEM II surveys



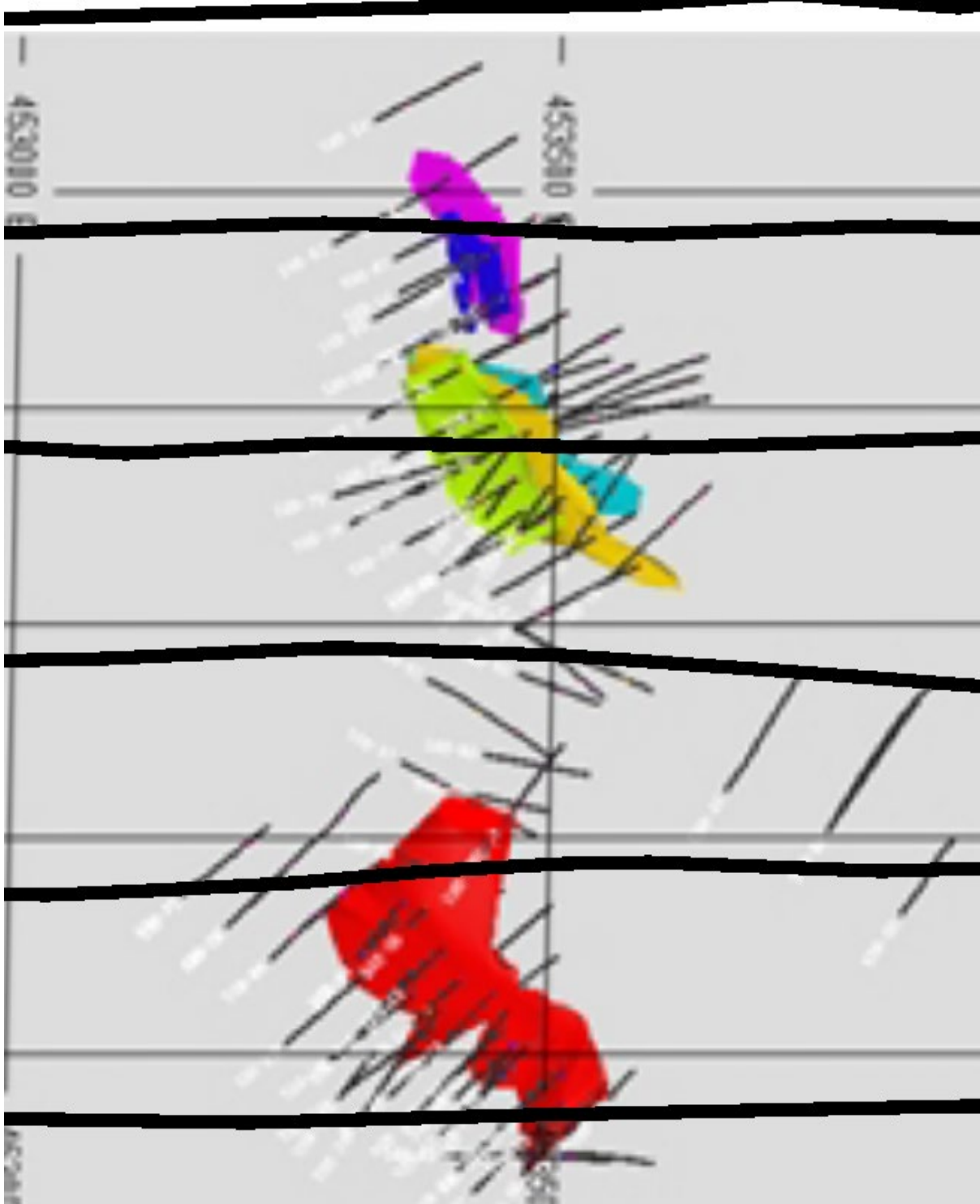
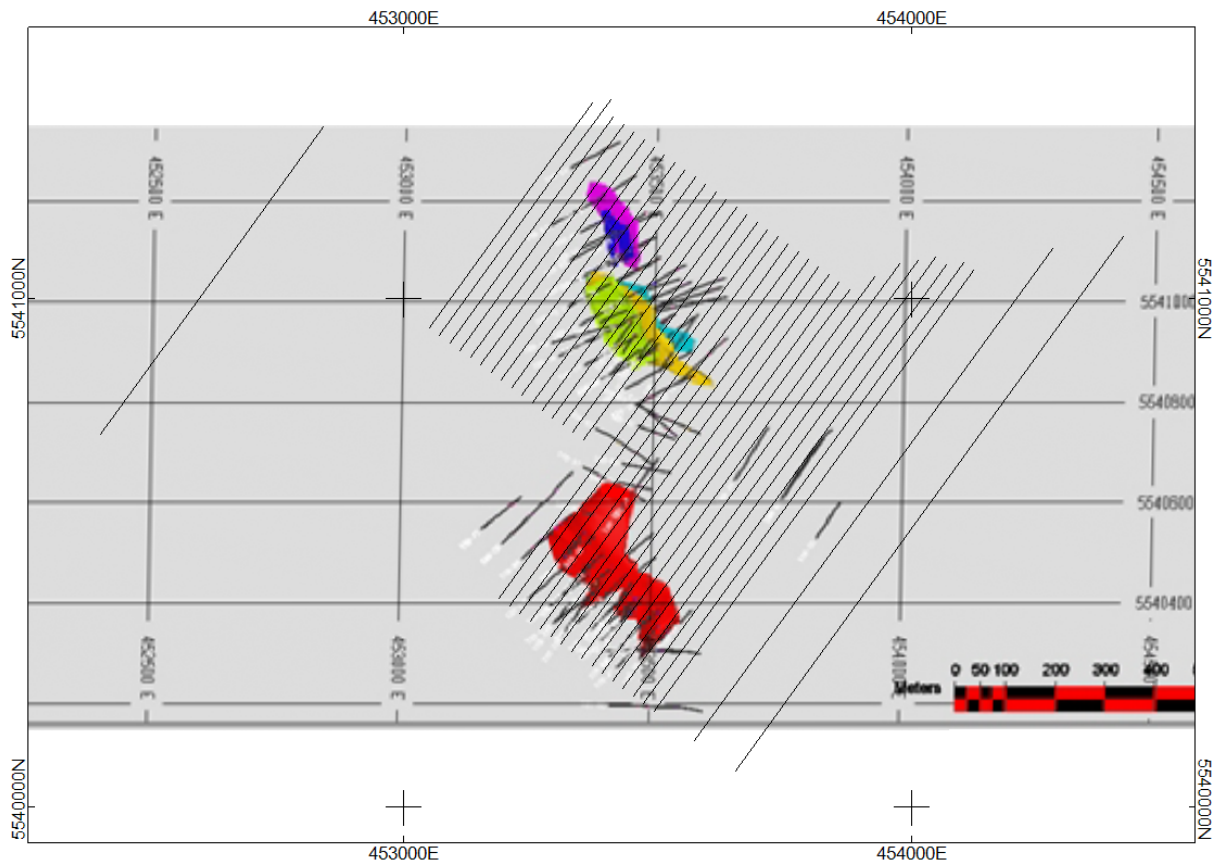


Figure 4 ZTEM flight lines crossing the Lynx resource model. At the 200 m line spacing, the northern pods are covered by one flight line each and the southern pod by two flight lines.

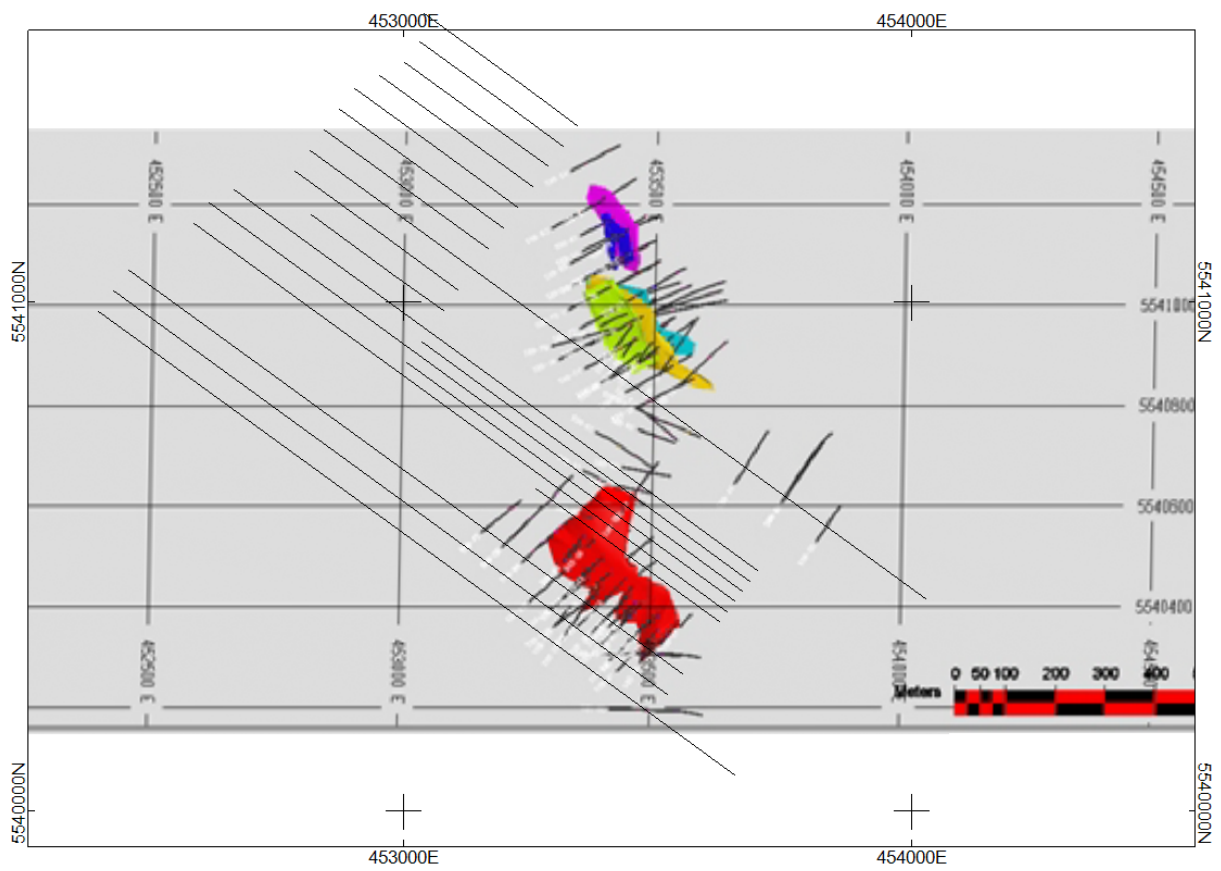
### 1.3.3 Horizontal loop electromagnetic (HLEM) surveys

MaxMin surveys were run by TMC Geophysics in 2006 using 100 m, 150 m and 200 m cables and orthogonal sets of lines (Figure 5 and Figure 6). The set of frequencies was 444 Hz, 888 Hz, 1777 Hz and 3555 Hz. The lines run with 200 m cables form the most complete coverage of the survey area.

A regular grid of 25m spaced local grid N-S lines was read over the resource. But the E-W line spacing is irregular, with large gaps in key areas.



**Figure 5 Local grid N-S MaxMin lines (200m coil separation) with surface projection of the Lynx resource model**



**Figure 6 Local grid E-W MaxMin lines (200m coil separation)**

### 1.3.4 Ground magnetics

A detailed ground magnetic survey was read over approximately the same area (Figure 7) covering the Lynx resource as the HLEM survey.

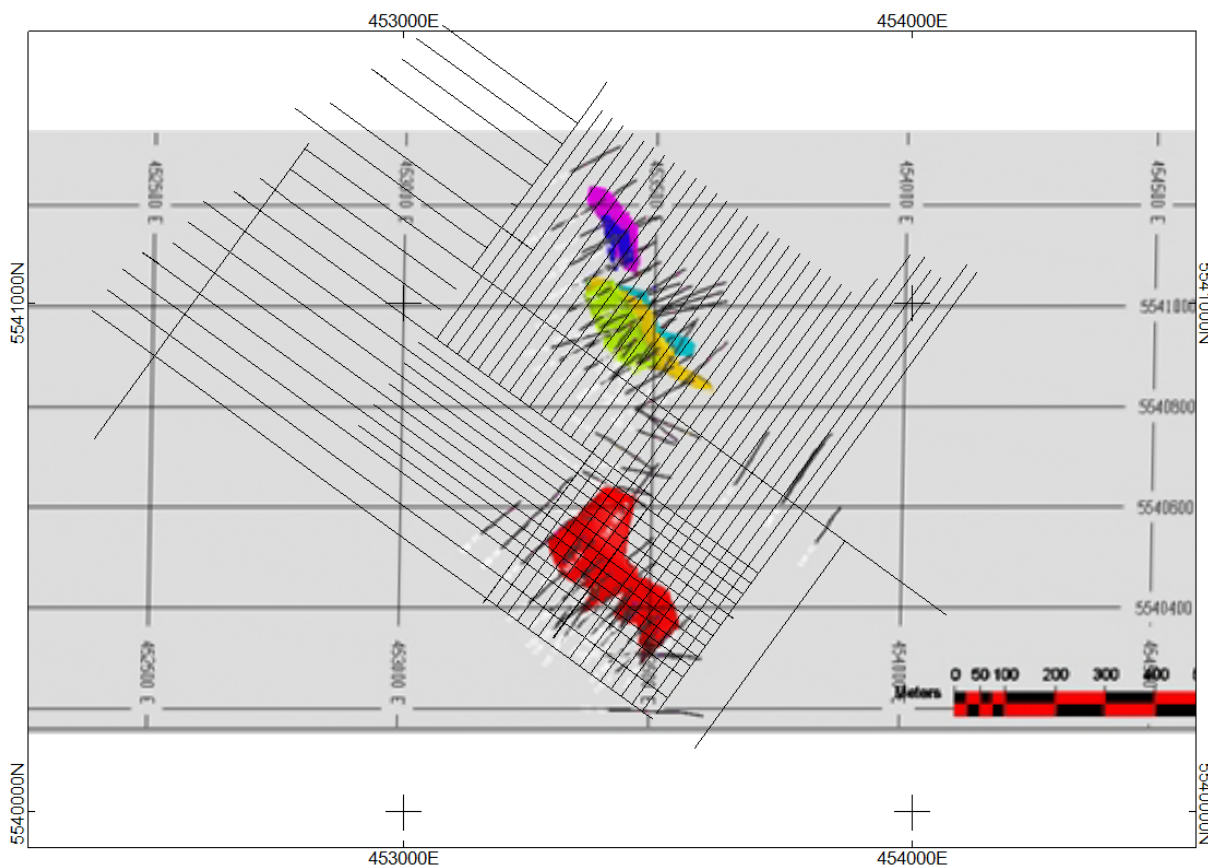


Figure 7 Ground magnetic traverses over a surface projection of the Lynx resource model

## 2 Lynx deposit geophysical responses

### 2.1 Helicopter TEM (HeliGEOTEM II)

The southern lobe of the Lynx No. 2 deposit has the most well-defined EM response (the northern lobe falls between two flight lines of the Onaman Lake North survey, so its response has not been measured adequately). The Lynx No. 1 deposit to the south has a weak EM response, and parts of the anomaly are probably contributed by nearby iron formation.

Lynx No. 2 is traversed by two flight lines of the Onaman Lake South survey: 20010 covering the northern end and 20020 crossing the southern tip (Figure 8), giving rise to target picks 20010A (tau = 1.7 ms) and 20020B (tau = 1.5 ms). Although the decay time constants<sup>1</sup> for these anomalies are

<sup>1</sup> Time constant (or “tau”) is a parameter estimated from transient responses at individual stations along a flight line and is usually taken from the peak of the anomaly of interest. It measures the rate of decay of the EM response and is proportional to both the surface area and conductance of a discrete conductor. Tau is estimated by fitting a function  $A(t) = A_0 e^{-t/\tau}$  to the transient response in the later channels where the host response has decayed to low levels and the remaining response is dominated by the fields induced by currents flowing in the target conductor. In practice, the value of tau estimated from a given EM dataset is influenced by survey parameters such as the base frequency, pulse width and off-time, as well as the depth of investigation determined by the transmitter moment, terrain clearance, ambient noise levels, etc.

above the average for priority targets picked from this survey, they are not particularly large in absolute terms. So, target ranking using the HeliGEOEM II surveys is not wholly dependent on the decay characteristics and factors such as EM response strike length and magnetic response are important.

The Lynx No. 2 EM response would be picked as a target due to:

1. Discrete, 2-flight line EM anomaly with significant decay time constant (Figure 9)
2. EM response associated with very weak magnetic anomaly (Figure 10) in contrast to the iron formation responses to the east and west

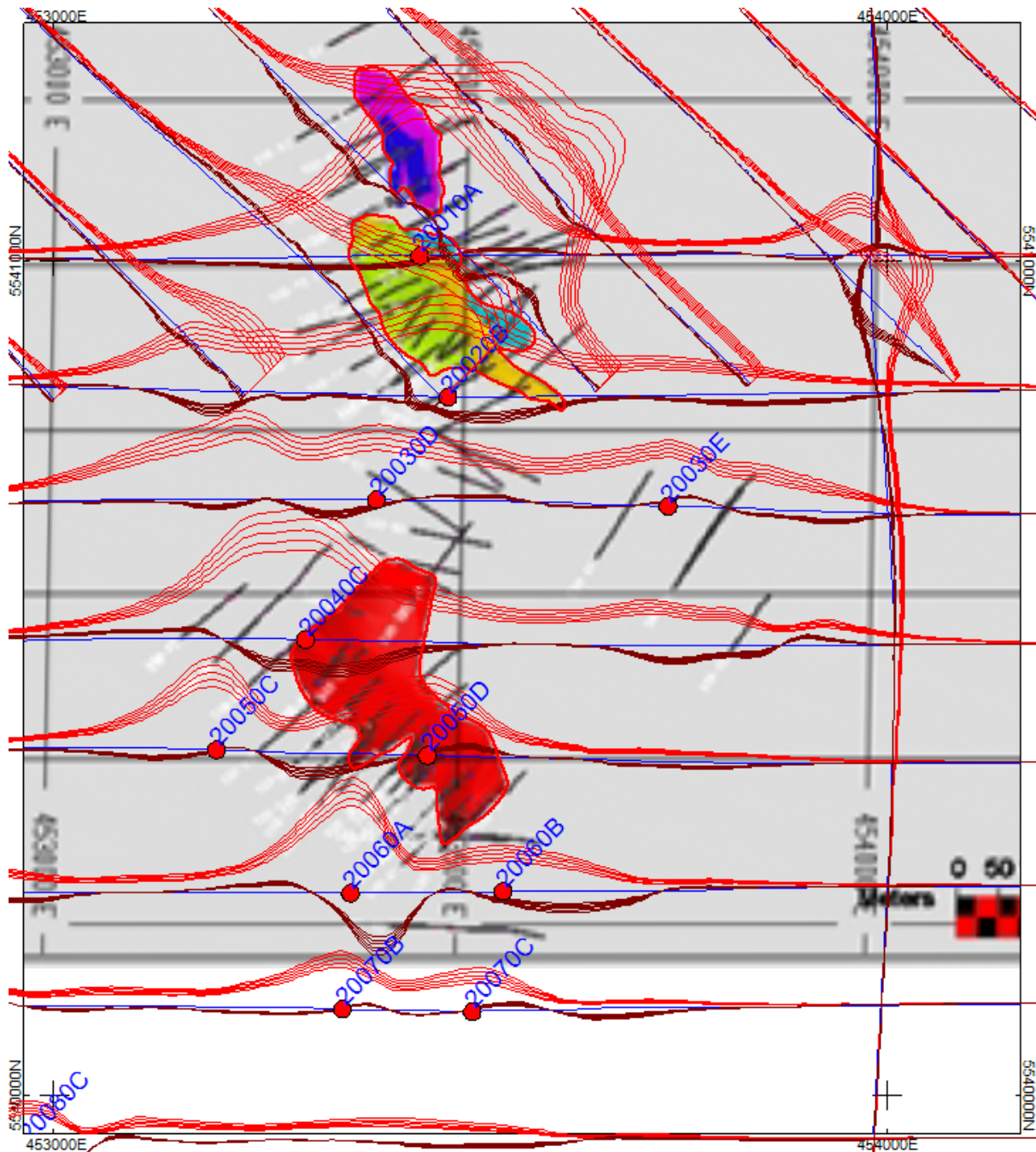
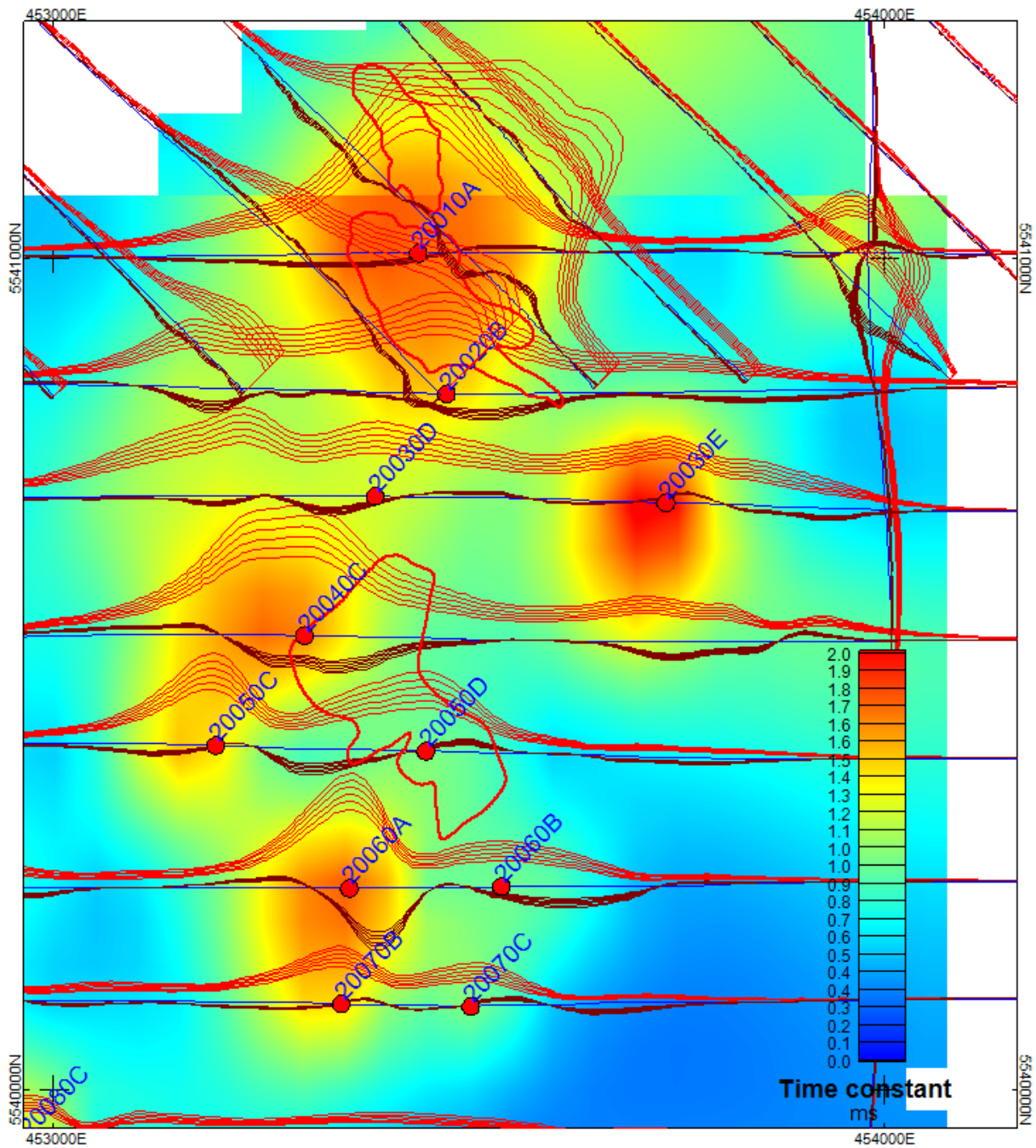


Figure 8 HeliGEOEM II flight lines (blue) with stacked profiles of channels 10-15 Z component (red) and X component (brown) over a surface projection of the Lynx resource model with target picks



**Figure 9 HeligEOTEM time constant ("tau") image with stacked profiles and target picks**

In contrast to Lynx No. 2, the anomaly associated with the Lynx No. 1 deposit (target pick 20050D) is weak and rapidly decaying. The anomaly on the flight line to the north (target pick 20040C) is stronger ( $\tau = 1.7$  ms) but is probably a superposition of responses from the VHMS mineralization and the iron formation to the west (Figure 10) – anomaly 20050C ( $\tau = 1.5$  ms) is probably wholly due to the iron formation.

The EM responses to the south of Lynx No. 2, particularly the stronger anomalies 20060A and 20070B that have no coincident magnetic response (Figure 10), are of great interest, assuming that they have not been tested by drilling. These conductors are also evident in the HLEM data.

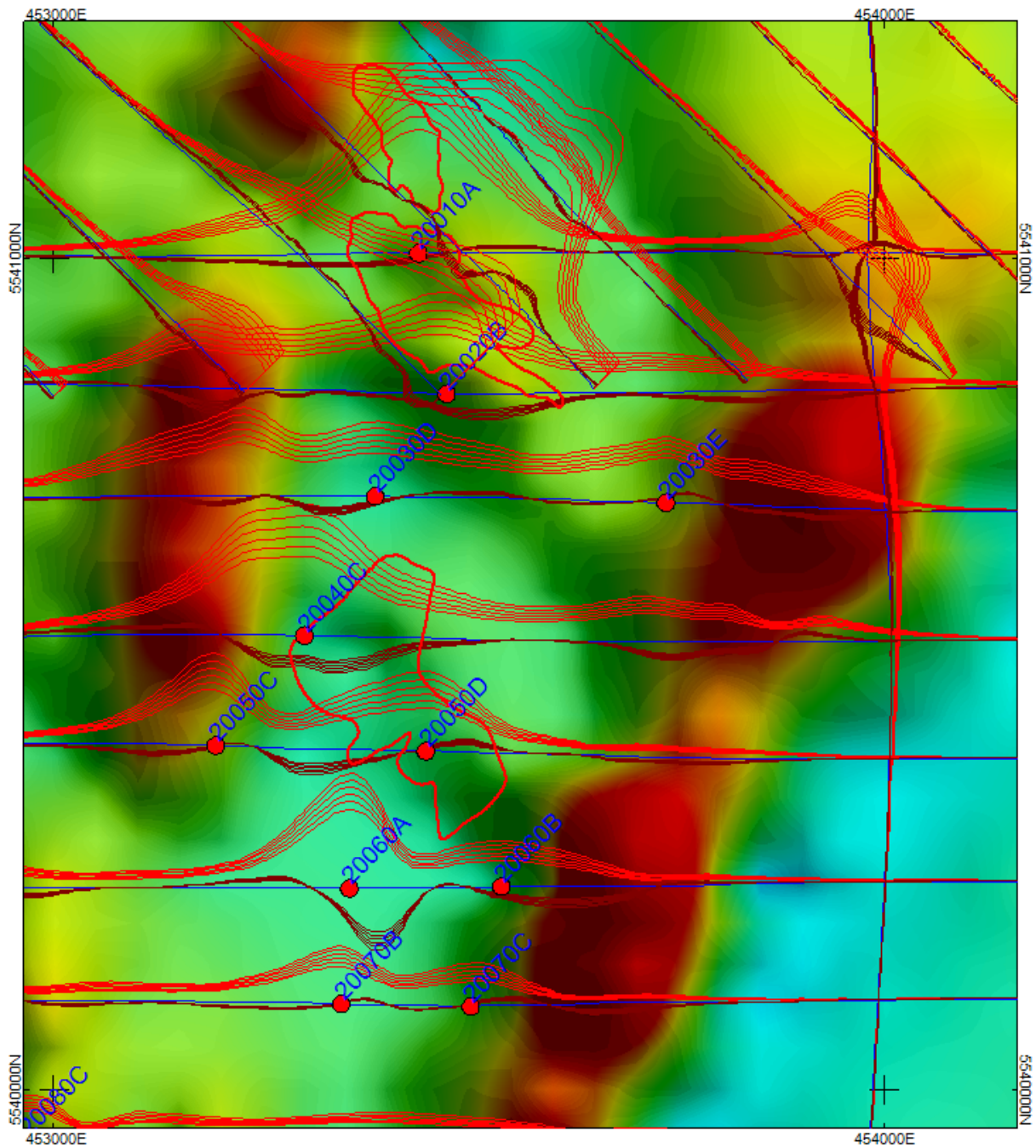


Figure 10 Magnetic RTP 1VD image with HeligEOTEM II stacked profiles and target picks over outlines of resource surface projection

## 2.2 ZTEM

Two alternative processing products are available for transforming the dipolar tipper response of a steeply dipping conductor into a single-peaked feature:

- Total divergence (DT), given by:  $DT = (\partial T_{zx})/\partial x + (\partial T_{zy})/\partial y$ . This product is more noisy and suppresses long wavelength components by virtue of being a combination of horizontal derivatives, but provides better resolution. It is plotted with a reversed color mapping.
- Total phase rotation (TPR) is the sum of the 90° phase rotated (presumably using a Hilbert transform – Geotech documentation does not describe the exact processing

technique) tipper components:  $TPR=PR(T_{zx})+PR(T_{zy})$  This product preserves more long-wavelength information and is less prone to noise in the underlying data.

The less-smoothed (more noisy?) DT image (Figure 11) defines a subtle response over the Lynx No. 2 mineralization that is not evident in the TPR image (Figure 12).

The Lynx No. 1 mineralization has a well-defined response, in contrast to its weak helicopter TEM response (Section 2.1). This is paradoxical, but the ZTEM response may be caused by a larger body of mineralization at depth beyond the detection of the HeliGEM II survey. The apparent continuation of the ZTEM response to the northwest beyond the resource boundary is interesting. This feature may simply result from under-sampling of two separate anomalies (e.g. conductor NW of Lynx No. 1 detected by HLEM – Section 1.3.3) but could also represent a deeper extension of the mineralization. Further investigation is warranted.

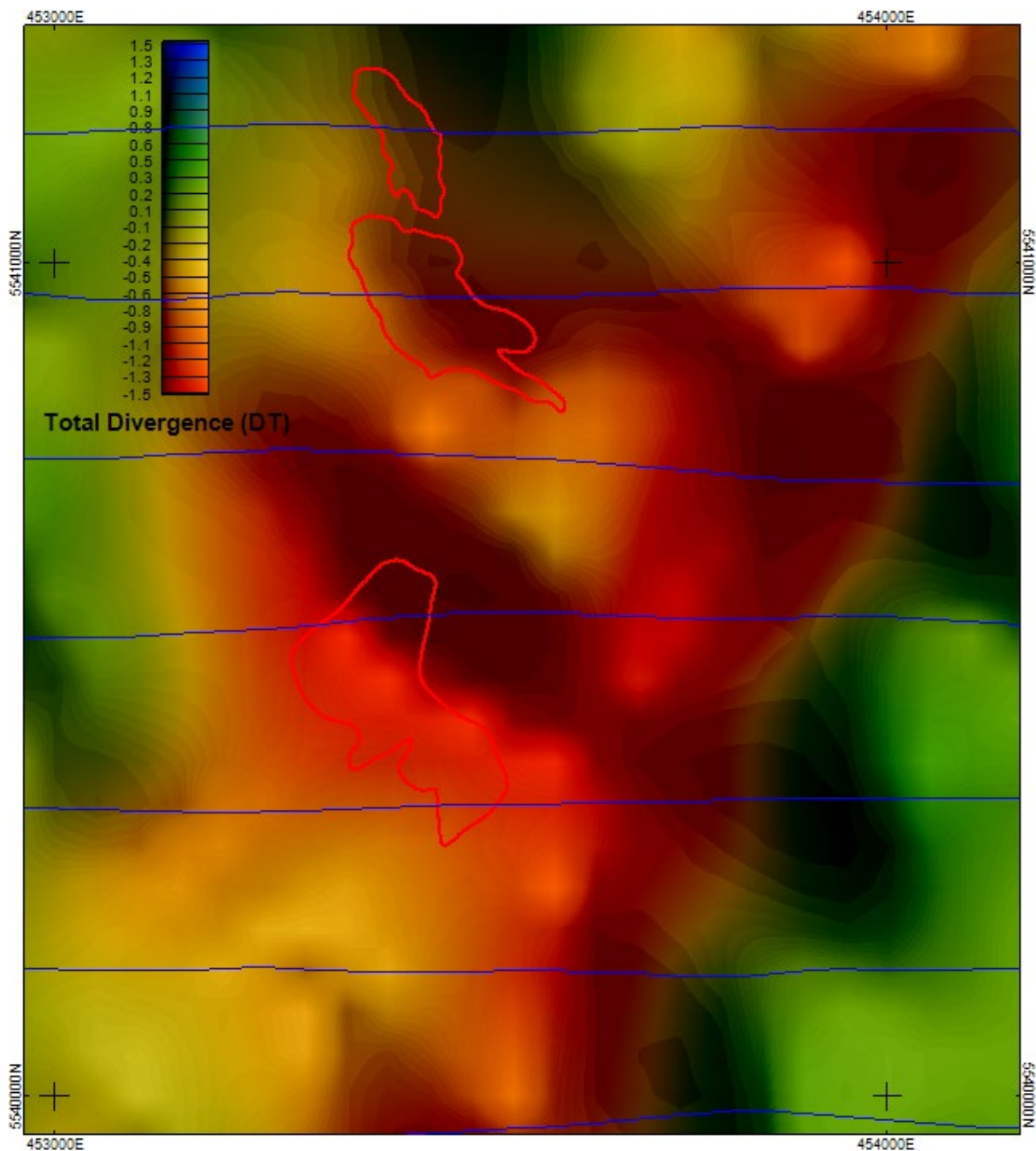
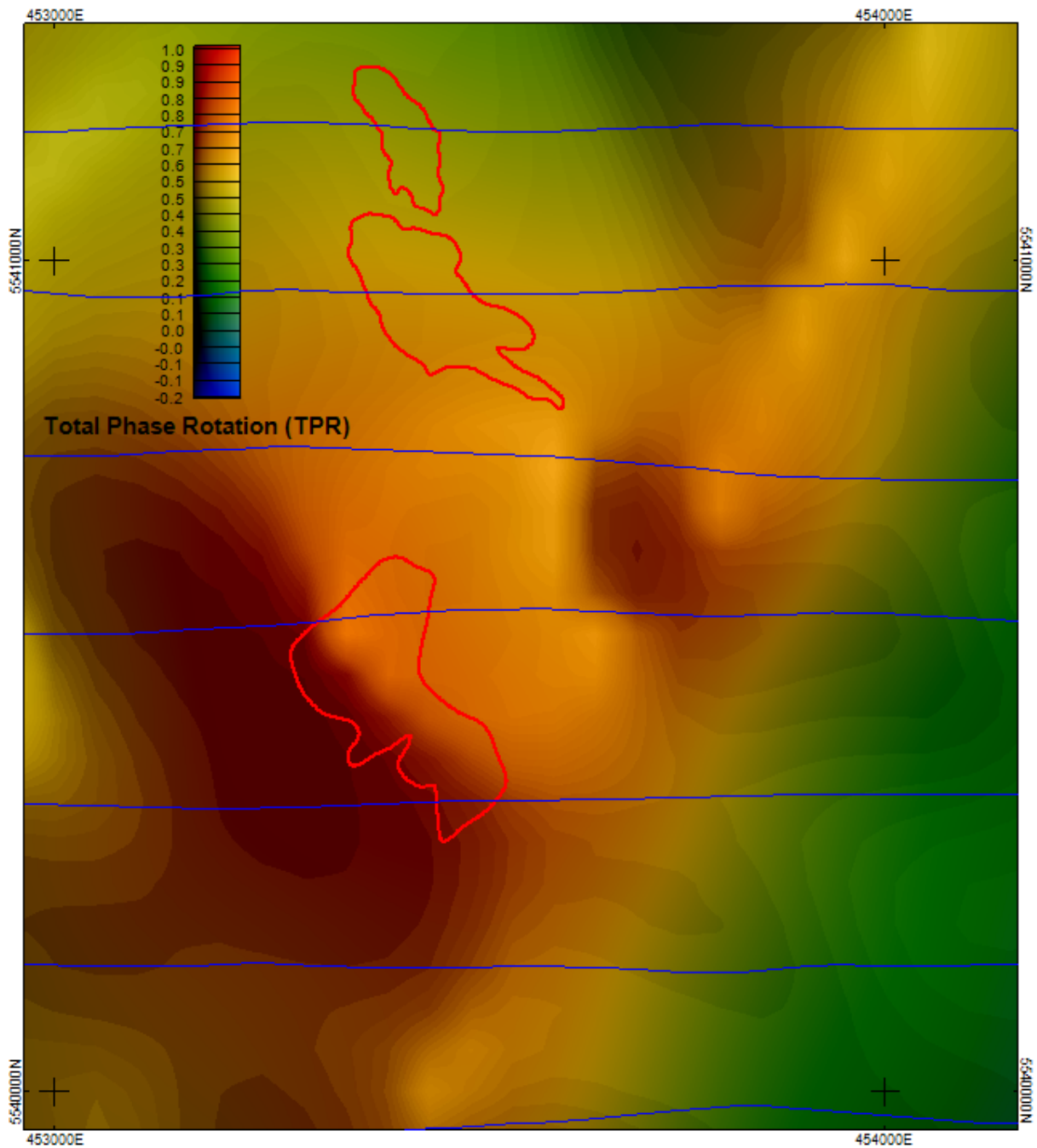


Figure 11 ZTEM Total Divergence (DT) image generated from 180 Hz in-phase tipper responses with flight lines and outlines of the resource model surface projections



**Figure 12 ZTEM Total Phase Rotation (TPR) image generated from 180 Hz in-phase tipper responses with flight lines and outlines of the resource model surface projections**

ZTEM responses are biased toward conductors with large strike extents. For instance, the iron formation east of Lynx has a weak response in the HeliGEOTEM data but produces a prominent anomaly in the DT and TPR images above. Mineralization with a short strike length will generally produce a more subtle response, making the technique difficult to apply effectively to VHMS exploration, particularly with the large flight line spacing used in the Onaman surveys.

### 2.3 HLEM

The HLEM response of the Lynx deposits is extraordinarily complex and there are several conductors that fall outside the resource boundaries that may warrant further investigation.

The southern lobe of the Lynx No. 2 mineralization has anomalies (Figure 13) over its southern edge and part of the northern edge, with a weak response extending to the east that warrants



further investigation. Similarly, the northern lobe of Lynx No. 2 has a stronger anomaly extending to the east of the end of the resource model. The response over the northern lobe itself is hard to characterize since the central line has bad data. It is unfortunate that this area was not properly covered by the HeliGEO TEM II surveys either (mineralization fell between flight lines). This area should probably be covered by a ground EM survey.

A broad anomaly defined by the local grid E-W lines (Figure 14) overlaps the western edge of the Lynx No. 1 resource model surface projection. This zone extends to the south of the resource into the area where HeliGEO TEM anomalies were picked and should be investigated further. The short strike length anomaly NW of Lynx No. 1 is possibly related to the iron formation, although it lies about 77m to the east of the magnetic anomaly peak and probably warrants investigation.

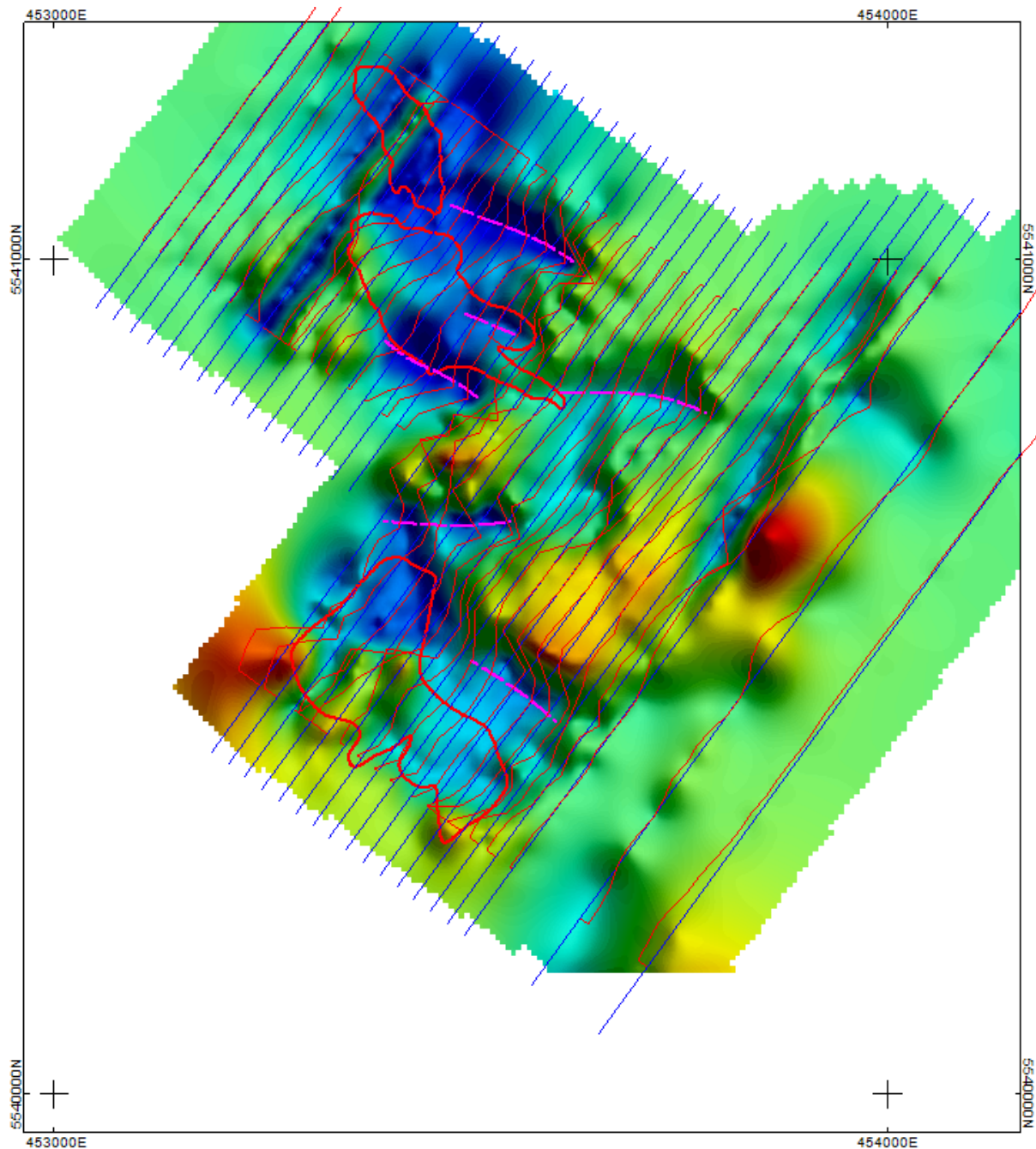
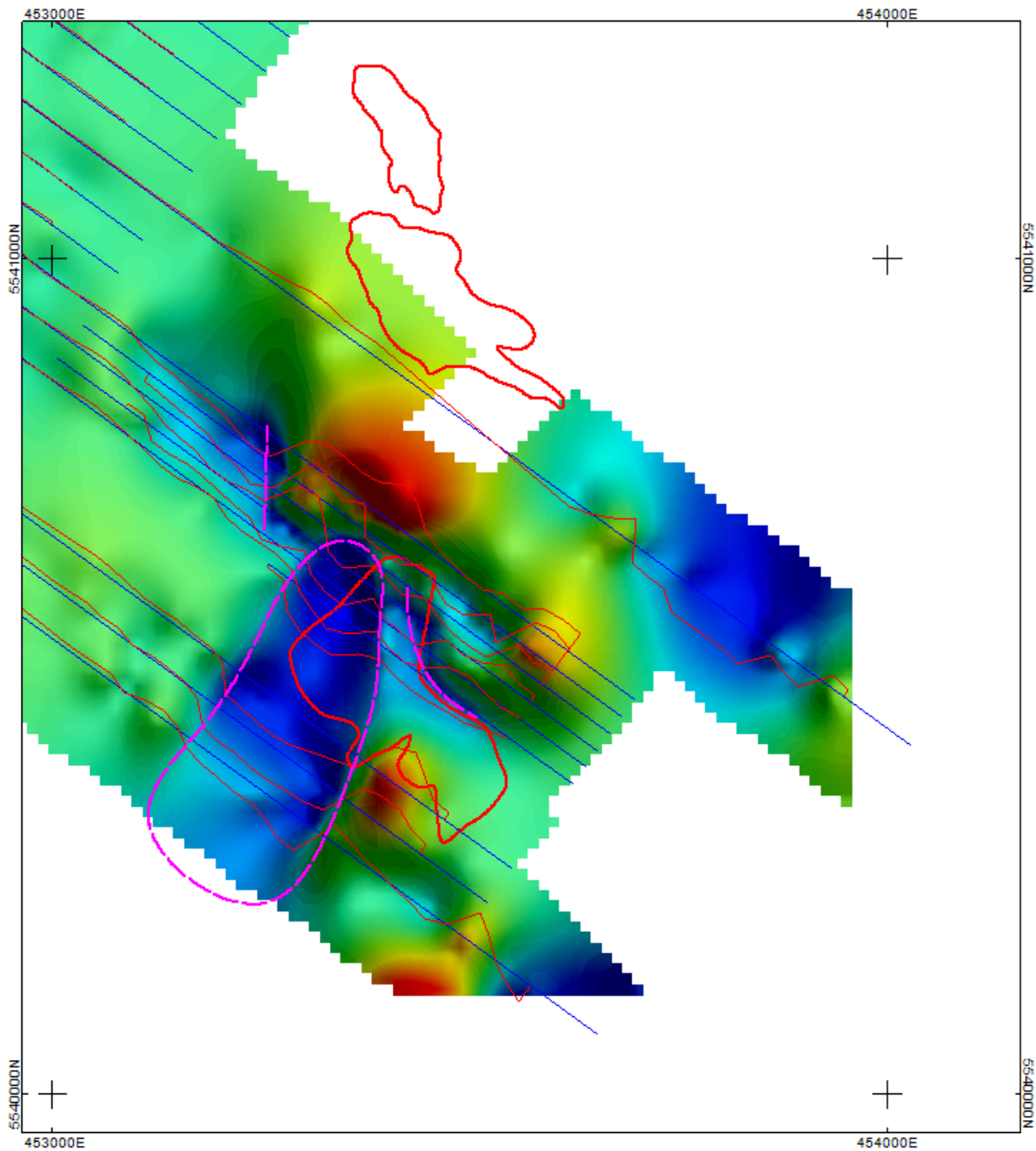


Figure 13 Lynx HLEM in-phase 3555 Hz (200m coil separation) response on local grid North-South traverses with outlines of the resource surface projections. Interpreted conductor locations are shown as dashed magenta lines. These are qualitative interpretations not based on any numerical modelling.



**Figure 14** Lynx HLEM in-phase 3555 Hz (200m coil separation) response on local grid East-West traverses with outlines of the resource surface projections. Interpreted conductor locations are shown as dashed magenta lines. A broad anomaly outlined with dashed magenta line (zone contains multiple conductors) overlaps the western side of the Lynx No. 1 resource model surface projection.

The abundance of EM anomalies around the Lynx resource justifies a more detailed examination using surface EM data (fixed-loop TEM with several loop locations to provide magnetic coupling to conductors in different orientations) and integration with the drill hole data. The parlous state of the historic drilling database in this area will make the task difficult.

## 2.4 Ground magnetics

The Lynx deposits generally lack a magnetic response, with the exception of the central part of the southern Lynx No. 2 lobe (Figure 15), which has a weak magnetic response that is also evident in the airborne magnetic data. It is perhaps noteworthy that the magnetic response of the iron

formation west of the Lynx deposits is attenuated near the southern lobe of Lynx No. 2. Perhaps this reflects hydrothermal alteration of the iron formation destroying magnetite.

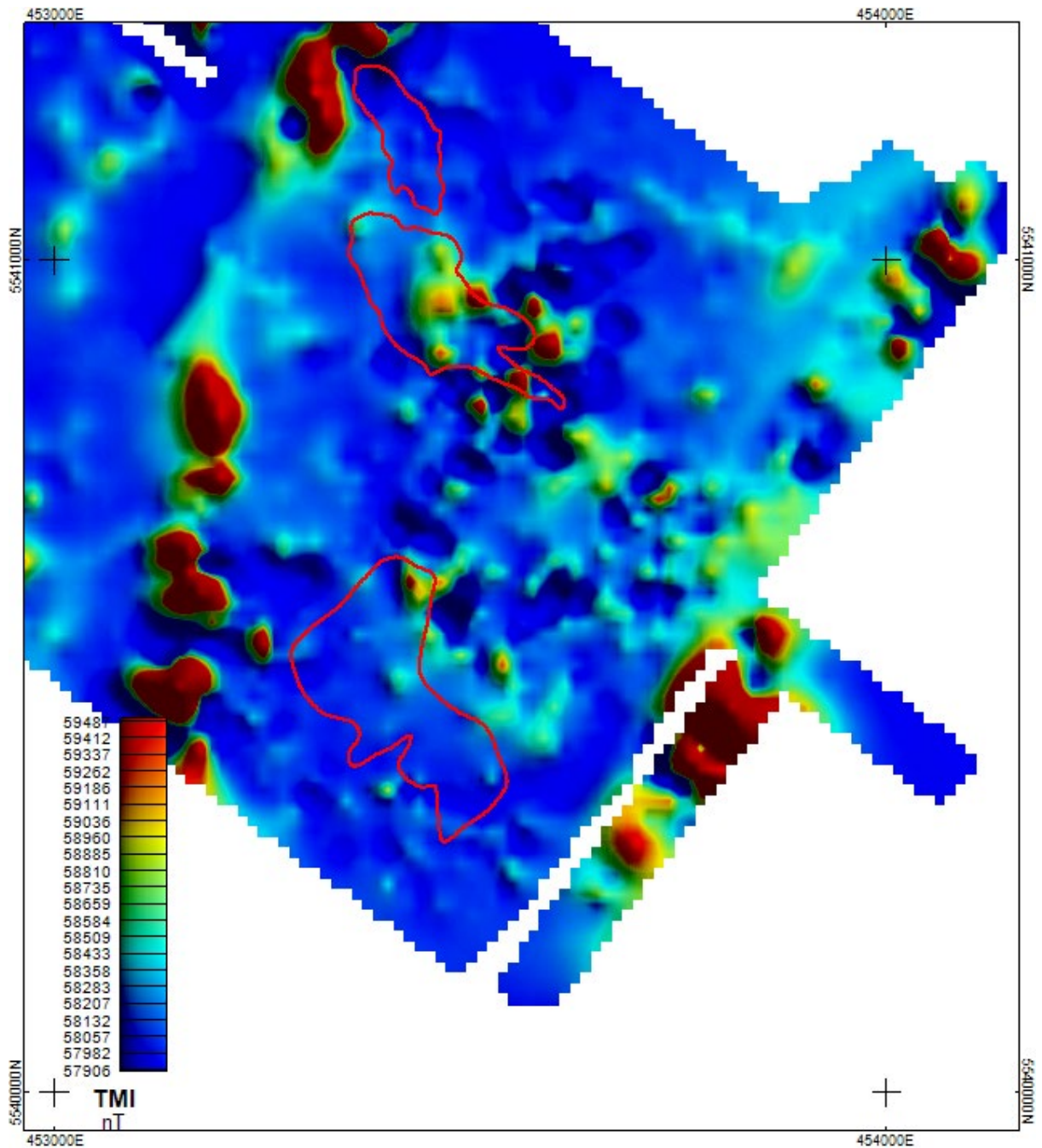


Figure 15 Lynx ground magnetic (TMI) image

### 3 Key results and targets

The geophysical responses in the immediate vicinity of the Lynx deposits are discussed above (Section 2) and key observations are:

- Potential extension of Lynx No. 1 deposit to the south evident in HeliGEOTEM and HLEM data
- HLEM anomalies east of Lynx No. 2 and north of Lynx No. 1

- Poorly resolved ZTEM response over Lynx No. 2 extending to the NW. New target or poorly sampled response from separate conductor associated with iron formation?

These responses should be followed up with a high-resolution ground EM survey with better depth of investigation than HLEM – i.e. fixed-loop TEM.

In addition to these targets near Lynx, a set of project-scale targets were picked from the ZTEM and HeliGEM surveys.

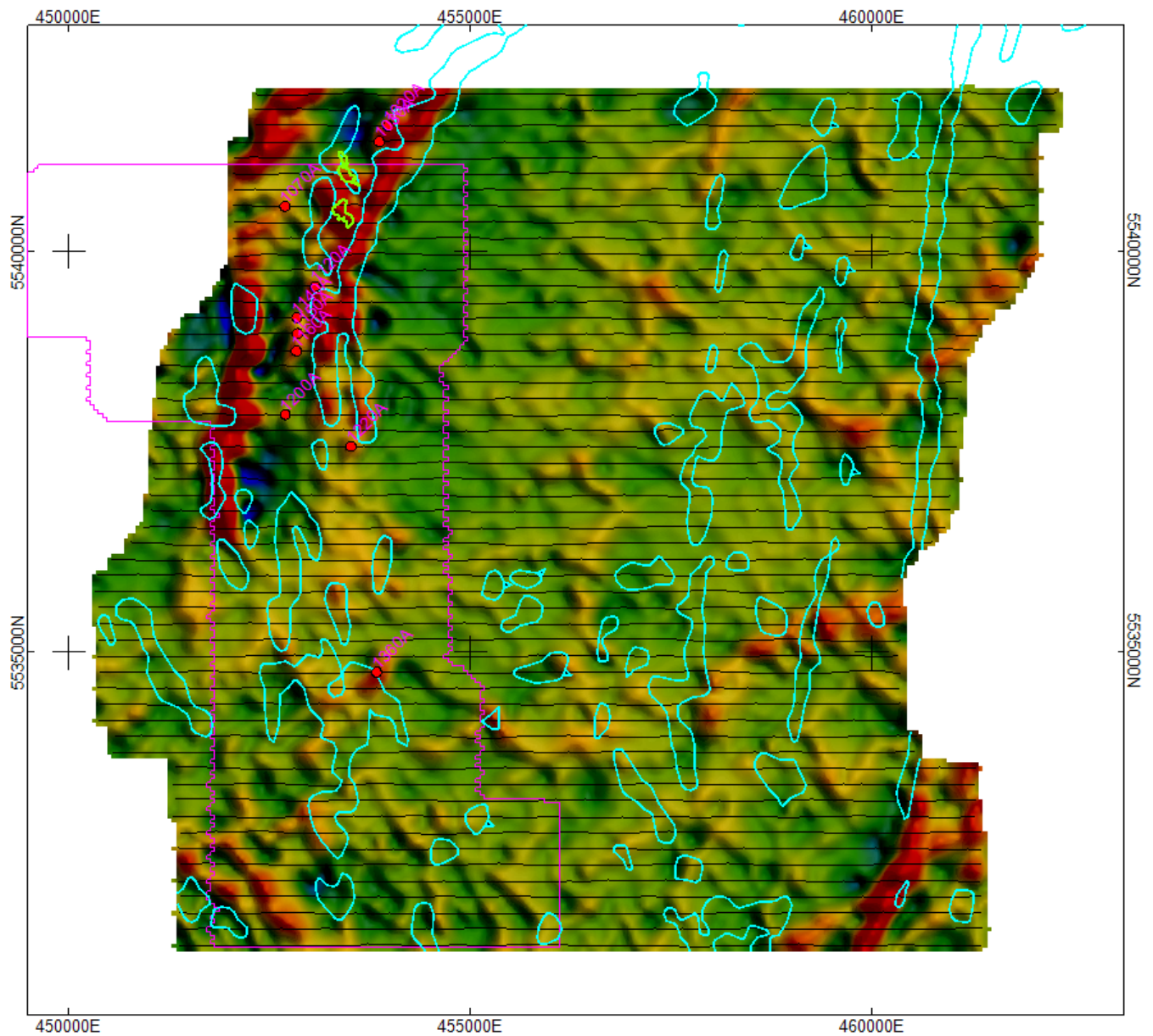
### 3.1 ZTEM targets

Short strike length conductive ZTEM anomalies (occurring over 3 or fewer flight lines) located off the iron formation trends defined by the magnetic data are considered targets for further investigation.

Conductors picked from the Onaman Lake South ZTEM survey are tabulated (Table 2) and mapped (Figure 16) below. The highest priority targets are the north-south trending set 1140A, 1150A and 1160A located about 1400 m to the SSW of Lynx No. 1, and the isolated anomaly 1120A. Targets 1020A and 1030A to the north of Lynx No. 2 are defined by a subtle peak on the flank of a larger anomaly evidently related to iron formation, but these targets warrant further work due to their location in relation to known mineralization. Anomaly pick 1070A coincides with the Headway Pb-Zn-Ag B Shoot occurrence and its subtlety is a good indication of how difficult it is to target this style of mineralization using ZTEM. The remaining anomaly picks are not high priority, but should be examined in the field as time and resources permit.

**Table 2 Onaman Lake South ZTEM targets**

Line	Target	East	North
L1020	1020A	453976.4	5541558
L1030	1030A	453870.1	5541363
L1070	1070A	452697.5	5540556
L1120	1120A	453074.9	5539557
L1140	1140A	452843.4	5539170
L1150	1150A	452849.4	5538971
L1160	1160A	452837.9	5538754
L1200	1200A	452700.8	5537962
L1220	1220A	453517.9	5537565
L1360	1360A	453834.8	5534756

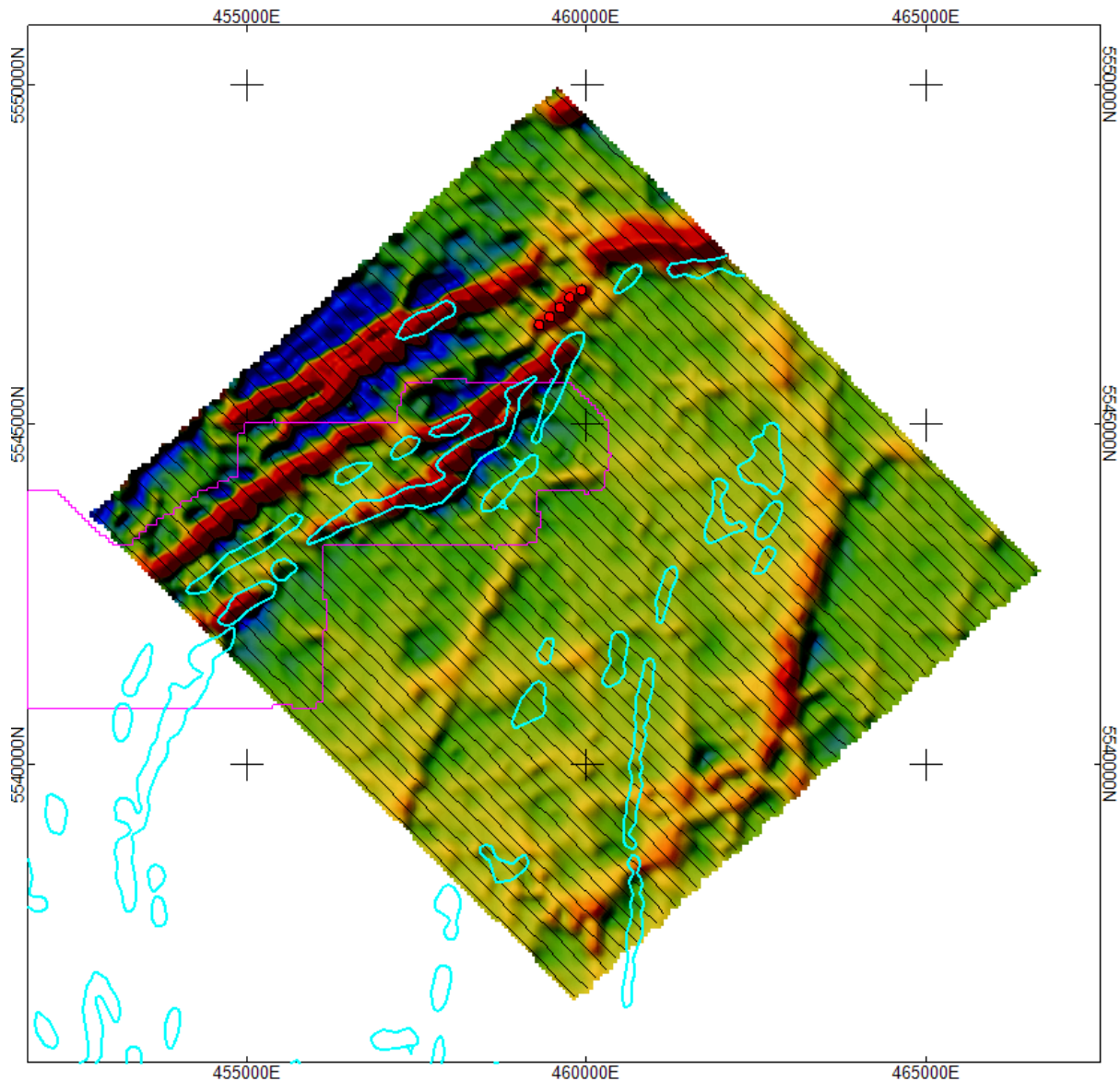


**Figure 16 Onaman Lake South ZTEM anomaly picks on high-pass filtered in-phase 180 Hz TPR image. Contour of first vertical derivative at 0.5 nT/m is shown in blue to indicate the locations of magnetic iron formations in relation to conductors. The surface projections of the Lynx resource models are shown in bright green.**

Owing to the tendency of ZTEM to exhibit stronger responses to conductors with larger strike length, the features identified as targets are fewer in number than those picked from the HeliGEO TEM surveys. The northern ZTEM survey seems particularly lacking in short strike length anomalies (Figure 17) and the >800 m long string of anomalies listed in the tabulation of targets below (Table 3), while located off the main magnetic iron formation trends, seems more likely to be a formational conductor than a VHMS deposit. These anomaly picks are located outside the HeliGEO TEM survey (outline shown in magenta). None of the HeliGEO TEM picks are easy to distinguish in the ZTEM images, again highlighting the difficulty involved in using this technique for VHMS reconnaissance.

**Table 3 Onaman Lake North ZTEM targets**

Line	Target	East	North
L2330	2330A	459303.4	5546471
L2340	2340A	459458.3	5546589
L2350	2350A	459607.6	5546720
L2360	2360A	459751.7	5546872
L2370	2370A	459927.4	5546983



**Figure 17 Onaman Lake North ZTEM anomaly picks on high-pass filtered in-phase 180 Hz TPR image. Contour of first vertical derivative at 0.5 nT/m is shown in blue to indicate the locations of magnetic iron formations in relation to conductors.**

### 3.2 HeliGEOTEM II targets

HeliGEOTEM II priority anomaly picks from the Onaman Lake South survey, based on assessment of the anomaly shape, decay characteristics, strike length and location in relation to interpreted iron formations, are tabulated (Table 4) and mapped (Figure 18) below. Of particular interest are the

anomalies (20060A and 20070B) immediately south of Lynx No. 1 (Figure 19). The priority ZTEM anomalies (1140A, 1150A and 1160A) discussed in the preceding section seem related to HeliGEOTEM anomaly 20130C and a spur projecting westward from the north-south trending iron formation response to the south.

**Table 4 Onaman Lake South HeliGEOTEM II priority anomaly picks**

Line	Target	Comment	East	North
20010	20010A	Lynx No. 2 Zone	453439	5541006
20020	20020B	Lynx No. 2 Zone	453473	5540837
20030	20030D		453387	5540714
20030	20030E	OJV-12	453737	5540706
20040	20040B	Headway Main Zone Pb-Zn-Ag	452700	5540541
20040	20040C	Lynx No. 1 Zone	453302	5540546
20050	20050B		449683	5540389
20050	20050C	Lynx No. 1 Zone	453195	5540414
20050	20050D	Lynx No. 1 Zone	453448	5540407
20060	20060A	Sage Gold S06-12 hole - mineralized	453356	5540242
20060	20060B	Sage Gold S06-07 hole	453539	5540244
20070	20070A		448674	5540102
20070	20070B	On trend with S06-12 hole	453346	5540103
20070	20070C		453502	5540100
20080	20080A		448649	5539962
20080	20080C	Noranda H-72-9	452967	5539939
20100	20100D	HLEM anomaly	453473	5539652
20130	20130C	HLEM anomaly	452945	5539210
20140	20140B	NW of Goldbrook hole 95-14 drilled on ironstone	453133	5539042
20150	20150B	ironstone	453114	5538908
20160	20160A		451699	5538753
20170	20170A		450944	5538599
20170	20170B	W of Geoph Engineering Ltd hole K-1	451638	5538598
20170	20170C		452082	5538600
20180	20180A		452074	5538445
20200	20200A		452716	5538155
20210	20210A		453034	5538003
20210	20210C	ironstone north of D9	453662	5538004
20220	20220B	D9 Cu-Au-Ag	453692	5537853
20230	20230A	Abitibi Zn-Pb-Ag	453455	5537695
20240	20240A	ironstone	453118	5537541
20270	20270A	ironstone	452876	5537111
20300	20300A		452078	5536625

20310	20310A		452107	5536494
20320	20320A	Noramco hole ON-90-03 - mineralized	453933	5536360
20420	20420A		453814	5534854
20430	20430A		453722	5534711
20560	20560A		453225	5532765



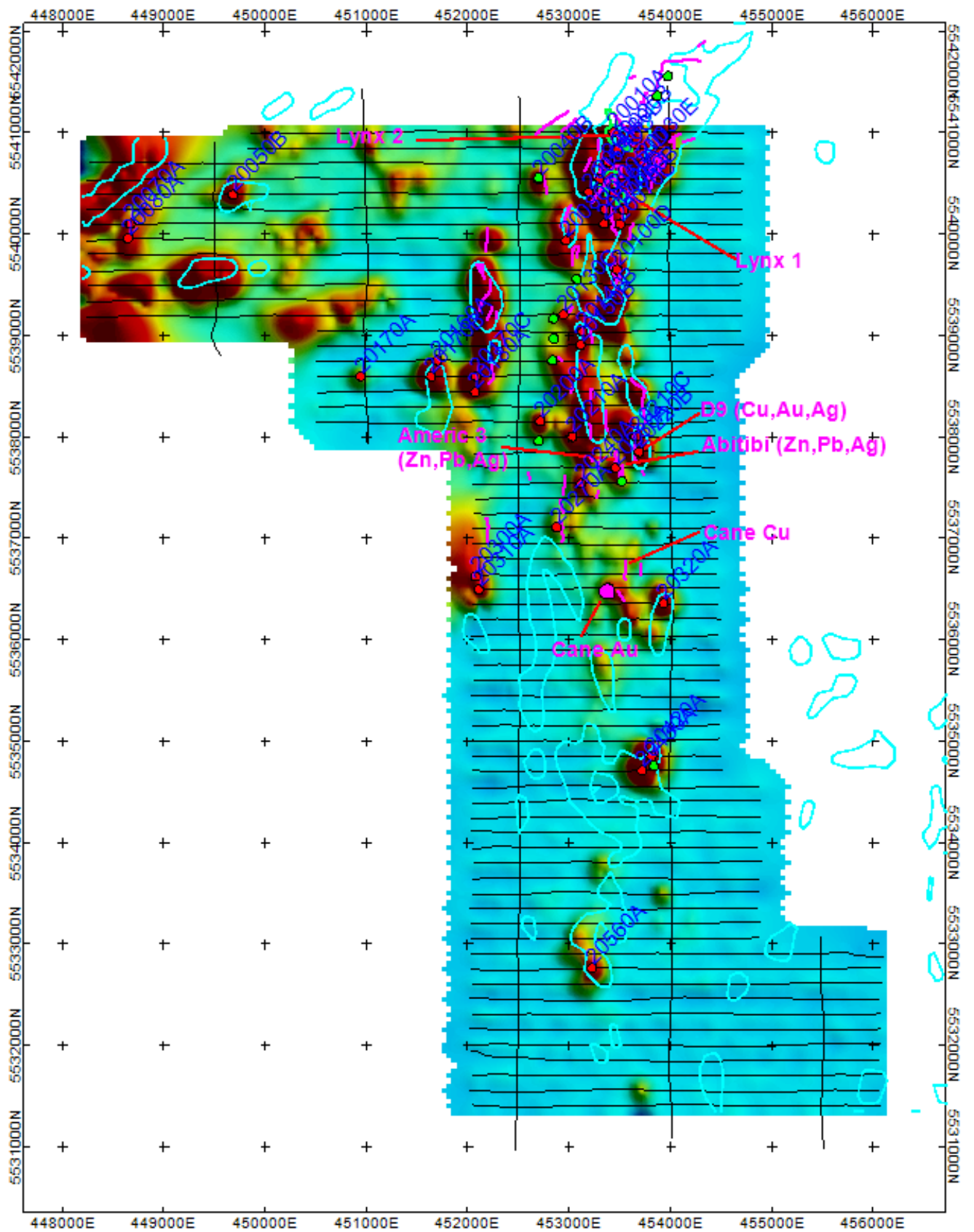


Figure 18 Onaman Lake South HeliGEM target picks (red dots). The ZTEM anomaly picks are shown in green for comparison. Contour of first vertical derivative at 0.5 nT/m is shown in blue to indicate the locations of magnetic iron formations in relation to conductors.

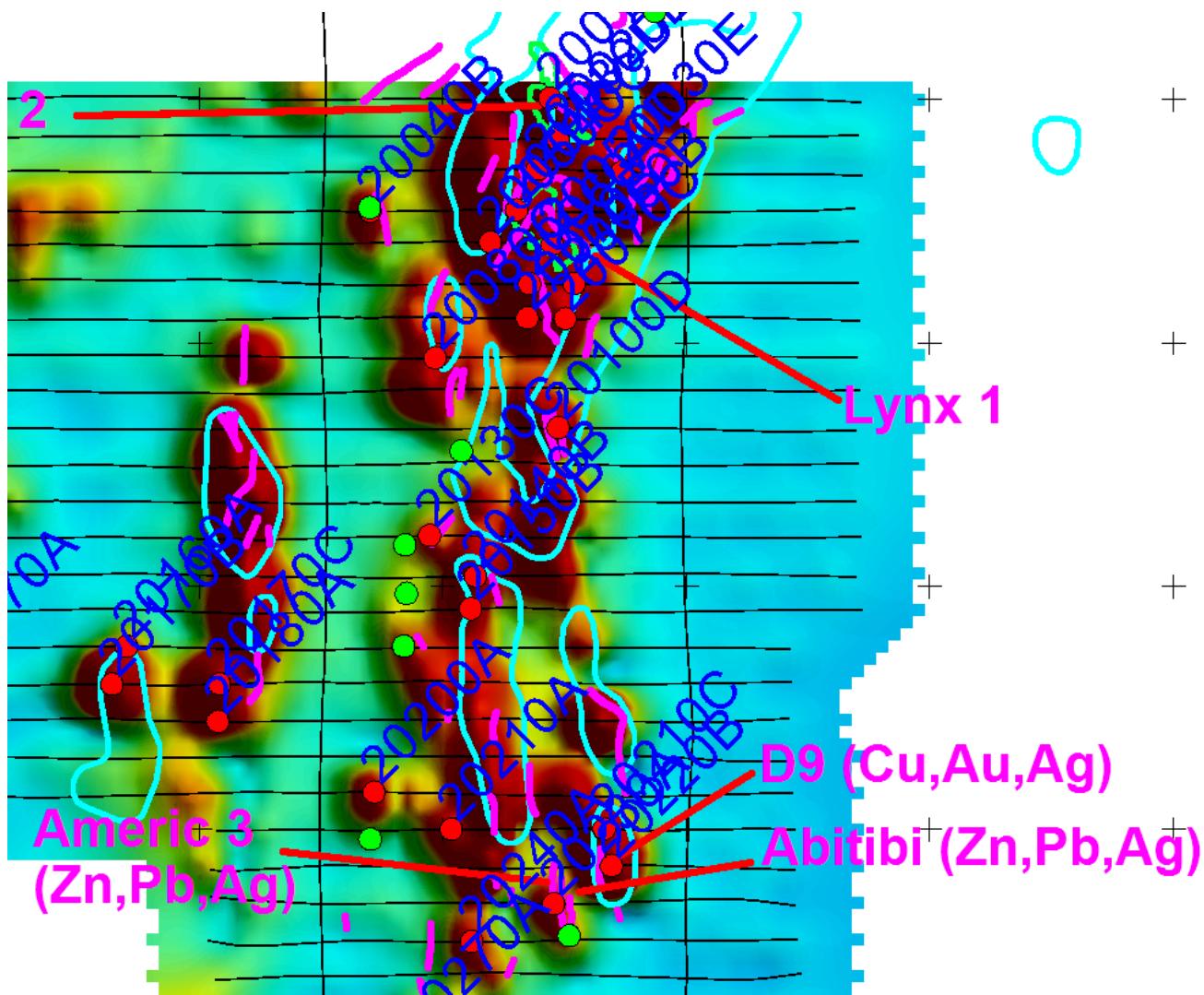


Figure 19 Figure 18 zoomed into the area around the Lynx deposits and occurrences to the south.

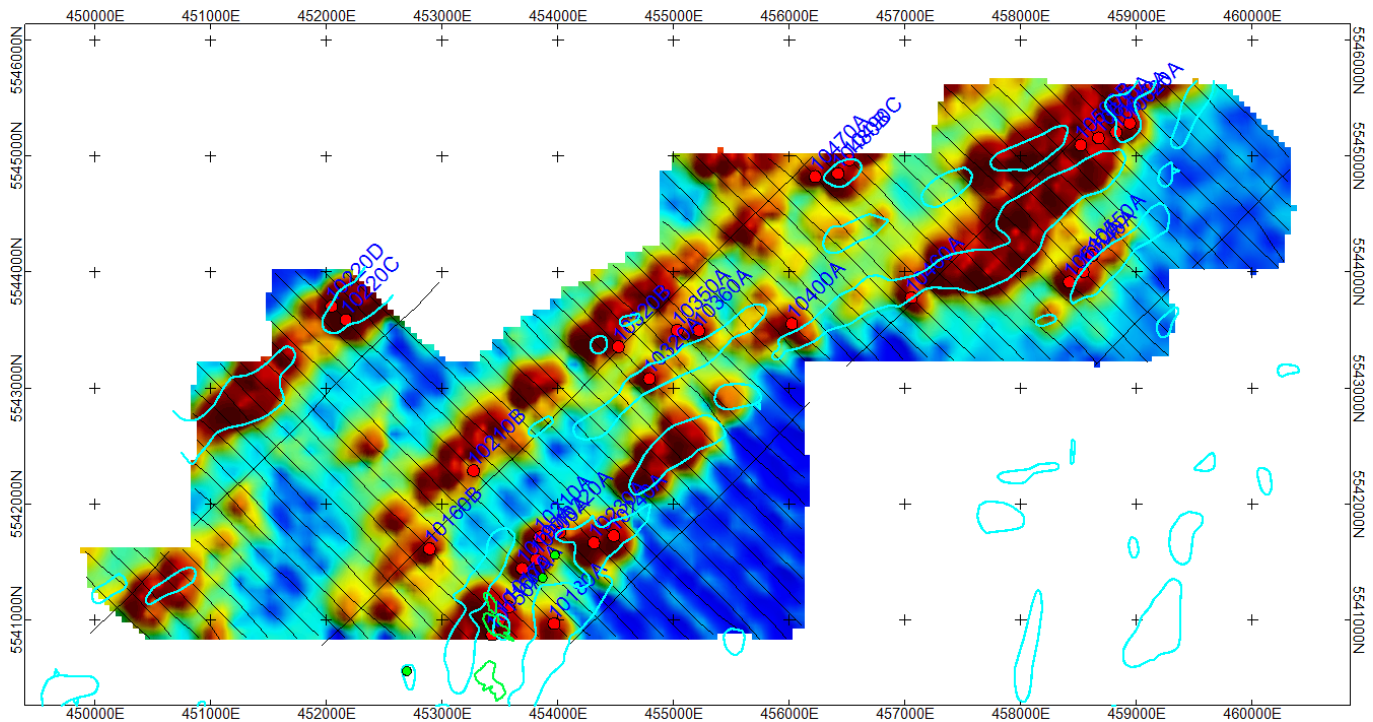
The Onaman Lake North HeliGEOEM II priority anomalies (Table 5 and Figure 20) relate to EM anomalies that fall off the iron formation trends defined by magnetic data. However, there are a few instances where the EM anomalies locally define a higher conductance along one of the iron formation trends. These anomalies were picked primarily as potential gold targets, possibly reflecting secondary sulphide deposited by hydrothermal alteration of the iron formation, rather than VHMS targets.

The highest priority targets picked from the Onaman Lake North HeliGEOEM II survey were 10190A, 10200A, 10210A and 10220A located to the NE of Lynx No. 2.

Table 5 Onaman Lake North HeliGEOEM II priority anomaly picks

Line	Target	Comment	East	North
10150	10150A	Lynx No. 2	453433	5540870
10160	10160A	Lynx No. 2	453498	5541003
10160	10160B	140m SW of Noranda hole HC-72-1 and 220m NW of Headway	452894	5541612
10170	10170A	Lynx No. 2	453577	5541110
10180	10180A	approx 500m east of Lynx No. 2	453969	5540966
10190	10190A		453693	5541442

10200	10200A		453814	5541520
10210	10210A		453845	5541714
10210	10210B		453273	5542287
10220	10220A		454018	5541754
10220	10220C		452173	5543588
10220	10220D		452047	5543706
10230	10230A		454314	5541664
10240	10240A		454484	5541726
10320	10320A		454793	5543080
10320	10320B		454524	5543357
10350	10350A	Possibly tested by Carndesson Mines hole S-28	455032	5543499
10360	10360A	Possibly tested by Carndesson Mines hole S-28	455219	5543497
10400	10400A		456022	5543555
10460	10460A		457054	5543780
10470	10470A		456224	5544825
10480	10480B		456421	5544852
10490	10490C		456517	5544970
10530	10530A		458419	5543915
10540	10540A		458540	5544004
10550	10550A		458617	5544145
10590	10590B		458518	5545097
10600	10600A		458671	5545159
10610	10610A		458824	5545209
10620	10620A		458942	5545287



**Figure 20** Onaman Lake North HeliGEM target picks (red dots). The ZTEM anomaly picks are shown in green for comparison. Contour of first vertical derivative at 0.5 nT/m is shown in blue to indicate the locations of magnetic iron formations in relation to conductors.

## 4 Recommendations

The geophysical targets described in this report have scant support from geological or geochemical data. Despite the large amount of work completed by previous explorers, the historic geoscientific database is currently non-existent. Therefore, the first logical step in assessing the geophysical anomalies is to field-check the surrounding areas for evidence to support or eliminate the targets. Priority targets are identified in the relevant sections.

The electromagnetic methods employed to date are unsuitable for detecting and defining deep, discrete conductors. The immediate vicinity of the Lynx deposits should be surveyed using a high-powered, deep-penetrating ground EM system with several fixed transmitter loops positioned to couple with conductors in differing orientations. In instances such as the Pick Lake deposit, this kind of EM survey has been able to detect mineralization several hundred metres below surface where the airborne EM surveys had only been able to detect shallow mineralization like the Anderson showing up-dip from Pick Lake. Any deep drill holes in this area that remain open should be surveyed by a borehole EM system.

## 5 References

Leggo, N., 2020, Independent Technical Assessment Report Canadian and Namibian Mineral Assets of Lustrum Minerals Limited: CSA Global Report N° R127.2020, 3 September 2020.

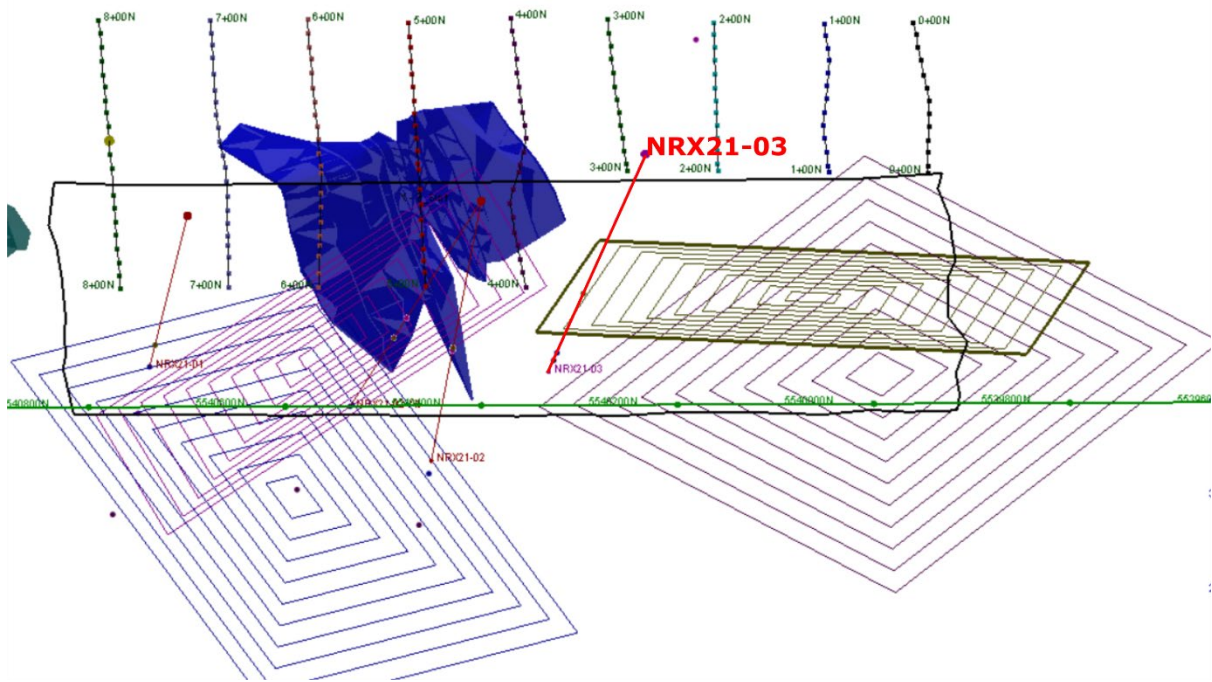


Figure 5 Proposed hole NRX21-03 would likely miss both conductors ON-02A and ON-01C. However, the main objective is to test for depth extensions of Lynx evident in the helicopter EM data, so the hole should not be modified.

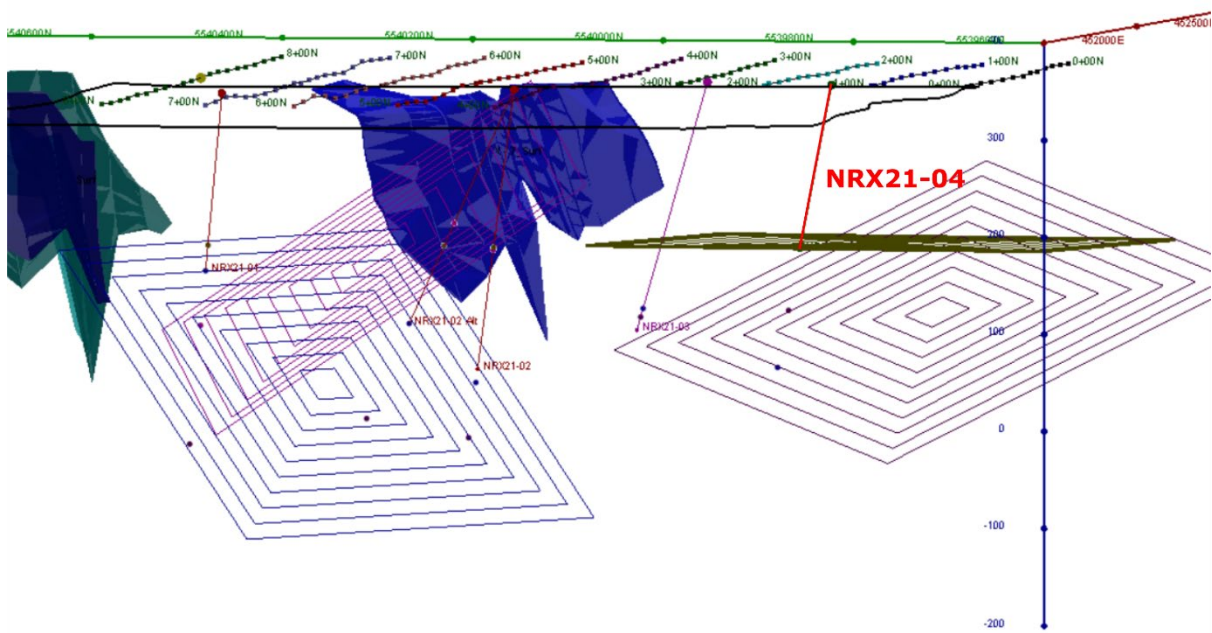


Figure 6 Proposed hole NRX21-04 would probably intersect conductor model ON-02A and would intersect ON-01C if extended to 280m EOH.

Appendix F  
Lynx deposit FLTEM target drilling recommendations.

## Memorandum

To: Dennis Arne

Cc.

Date: 3<sup>rd</sup> September, 2021

From: David Johnson

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**Subject:** Lynx deposit FLTEM target drilling recommendations

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Conductor models (Figure 1) interpreted by Marc Auclair were reviewed using the Maxwell modelling software. Each conductor model was activated and deactivated in the Maxwell project, re-calculating the EM response, and comparing the calculated and observed profile data on each survey line. Observations of the changes in calculated response and their relative significance are summarized below (Table 1). The main contributors to the anomalous responses, apart from the minor plates that were introduced to fit sharp, spurious anomalies along the loop edge, are plates ON-01A, ON-03C, ON-02A and, to a lesser extent, ON-01C.

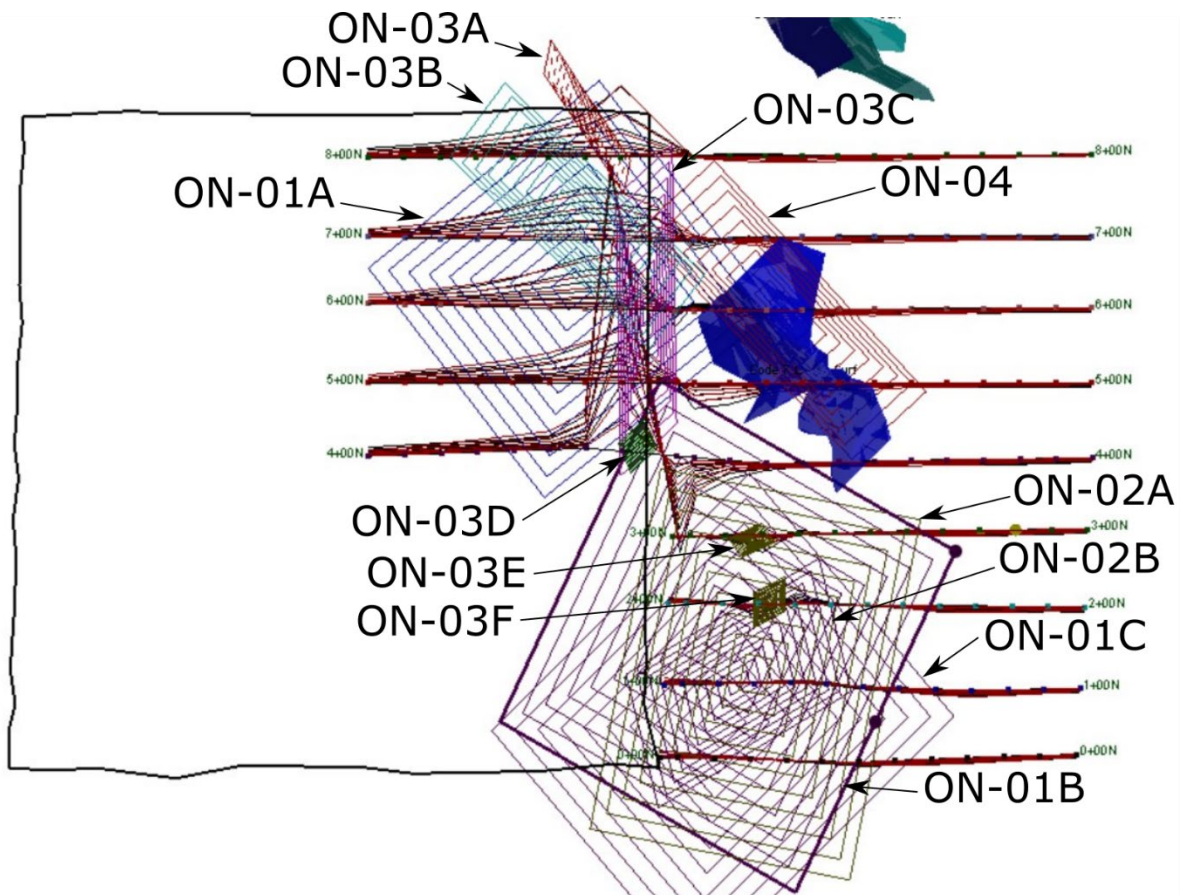


Figure 1 Plan view of conductor models interpreted from the Lynx FLTEM survey by Marc Auclair

Table 1 Notes on the EM responses of the conductor models shown in Figure 1 above

Plate	Colour	Conductance	Notes
ON-03A	Red	223	Contributes strongly to response on line 8+00N but doesn't influence adjacent line 7+00N
ON-03B	Light blue	55	Some contribution to 7+00N and minor on 6+00N – not an important element of the model
ON-01A	Dark blue	59	Main contributor to responses on 6+00N and 7+00N, and to long-wavelength component on 8+00N. Important element of model. <b>Target.</b>
ON-03C	Magenta	117	Strong contribution to 5+00N, 6+00N and to lesser extent 7+00N responses. <b>Target.</b>
ON-03D	Green	641	Minor, shallow conductor. Required to fit response on line 4+00N only.
ON-04	Red	9	Lynx mineralization. Minor contribution to response – too far from Tx loop. Needed to fit a peak in Y-component on line 6+00N
ON-02A	Olive	240	Strong contribution to responses on lines 3+00N, 2+00N, 1+00N and 0+00N. <b>Target.</b>
ON-02B	Purple	53	Some contribution to 1+00N and 2+00N
ON-03E	Olive	285	Minor, shallow conductor. Needed to fit spiky response on line 3+00N near Tx loop
ON-01C	Purple	58	Important contribution to 1+00N, 2+00N and lesser 3+00N responses. Almost co-planar with ON-01B so probably one of these conductors is redundant in the model. <b>Lower priority target</b>
ON-01B	Purple	54	As per ON-01C
ON-03F	Olive	286	Minor, shallow conductor

Of immediate concern is whether the targets defined above have been tested by historic drill holes. Unfortunately, the current state of the drill hole database makes this difficult to determine. The two northern conductors, ON-01A and ON-03C, may have been tested (Figure 2) by one or more of the historic holes S08-70, S08-71, S08-09, S08-10, S08-07, S08-08, H-77 or 75-05. Of these holes, only 75-05 has both azimuth and dip values in the Mapinfo table provided. This hole passes by the top edge of plate ON-03C. No anomalous elements are noted in the table; however, it would be worthwhile to locate some geological logs or at least a summary for this hole. No anomalous geochemistry was noted for any of the other holes mentioned above. It is worth noting that the conductor models ON-01A, ON-02A and ON-01C are all deeper than any of the historic holes for which survey information is available, so it is less likely that the holes mentioned above would have tested them.

Given the paucity of information concerning historic drilling, it is probably worthwhile to simply drill the conductors and obtain some geological information that is now sorely lacking.





Table 2 Proposed drill holes (permitted)

Hole ID	Target	Prospect	Collar E NAD83 UTM16N	Collar N NAD83 UTM16N	Dip	Azim.	TD (m)	Comment
NRX21-01	HLEM conductor 20030C	88A Zone	453115	5540680	60	70	200	Previously tested by H-71 at an acute angle to strike; 10% po; trace base metals; 8.7 ppm Au in H-70 nearby
NRX21-02	Heli EM conductor 20050C	Lynx depth extension	453150	5540380	75	50	300	Previously tested by H-77 drilled parallel to strike of Lynx Zone 1; massive po at ~40m depth
NRX21-03	Heli EM conductor 20060A	Lynx depth extension	453320	5540210	60	50	300	S08-66 drilled away from conductor; S06-12 drilled away from conductor
NRX21-04	Heli EM conductor 20070B	Lynx off set	453270	5540070	60	60	200	Untested conductor near carbonate exhalate bed

As currently designed, hole NRX21-01 would test the upper edge of conductor model ON-01A (Figure 3). It may also be possible to test conductor ON-03C with this hole by further extending it. But the azimuth is far from optimal and the hole is just as likely to miss the target, passing by the northern end of the target, so a different hole design for this target would be more appropriate. In order to improve the chances of intersecting ON-01A the total depth should be extended to 230 m.

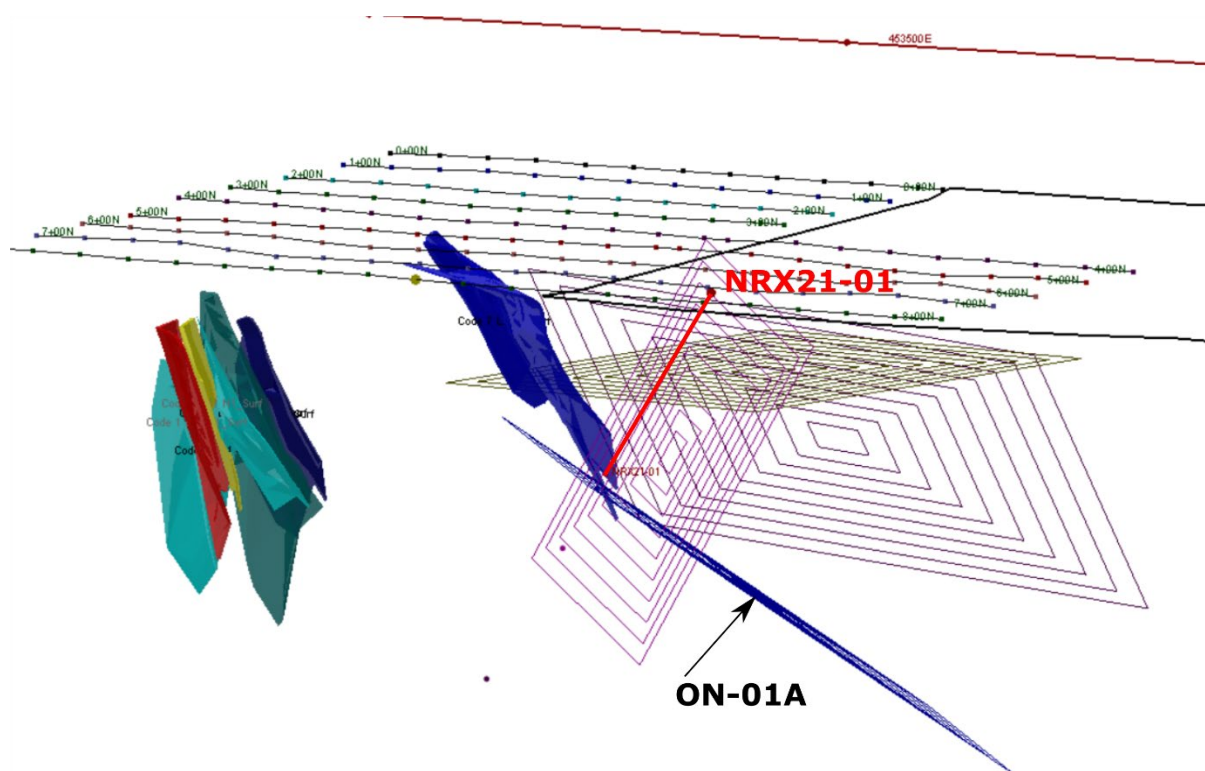


Figure 3 Proposed hole NRX21-01 would test the upper edge of conductor model ON-01A if extended by at least 15 m

Proposed hole NRX21-02 could test the southern edge of conductor model ON-01A (Figure 4) but would miss conductor model ON-03C. There is also a strong possibility that the hole would also miss ON-01A because the position of the conductor edge is only loosely constrained by the EM model. Therefore, it is recommended that the hole azimuth be changed from 050° to 040°, and that the dip be shallowed from 75° to 55° as illustrated by the blue proposed hole below. By doing so, the hole

would intersect conductor ON-03C (approx. 180 m down-hole) and ON-01A (approx. 300 m down-hole).

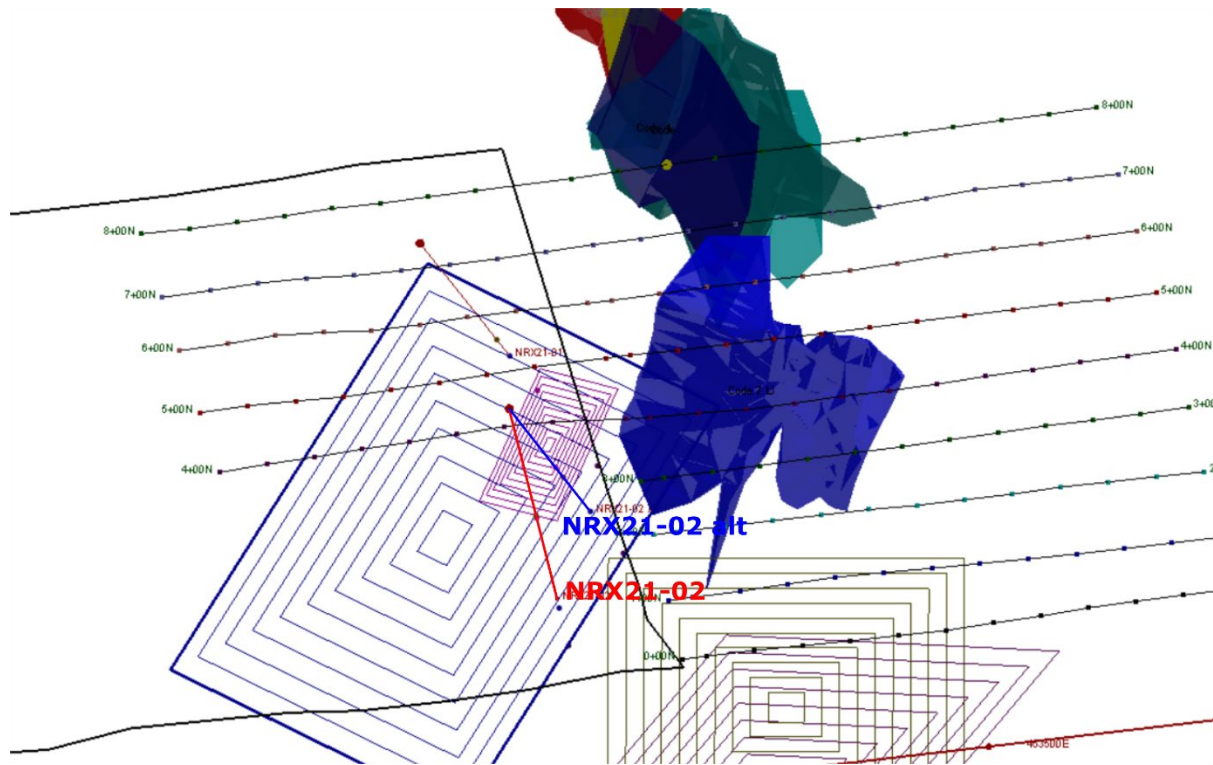


Figure 4 Proposed hole NRX21-02 (red) requires modification and an alternative design is shown here in blue

Proposed hole NRX21-03 has an azimuth that would likely result in the hole missing conductors ON-02A and ON-01C, passing to the north of them (Figure 5). However, the hole may still be worth drilling to test for down-plunge extensions to the mineralization in the resource solid.

Proposed hole NRX21-04 would probably intersect conductor ON-02A (the main contributor to the EM response in this area) if drilled to planned depth (Figure 6). The hole would also intersect the deeper conductor ON-01C if extended to at least 280 m. However, this conductor is much weaker and contributes less to the calculated response. Note that these conductor models are poorly constrained because the transmitter loop is not well coupled to these targets. If defining these targets more accurately was a priority, a new FLTEM survey would be recommended. However, it may be sufficient at this time to simply drill the holes to obtain some stratigraphic information and consider more geophysics in light of these results.

The proposed modified hole designs discussed above are summarized in Table 3 below.

Table 3 Proposed modified drill hole designs

Hole ID	Collar E NAD83 UTM16N	Collar N NAD83 UTM16N	Dip	Azim.	TD (m)
NRX21-01	453115	5540680	60	70	230
NRX21-02	453150	5540380	55	40	300
NRX21-03	453320	5540210	60	50	300
NRX21-04	453270	5540070	60	60	280

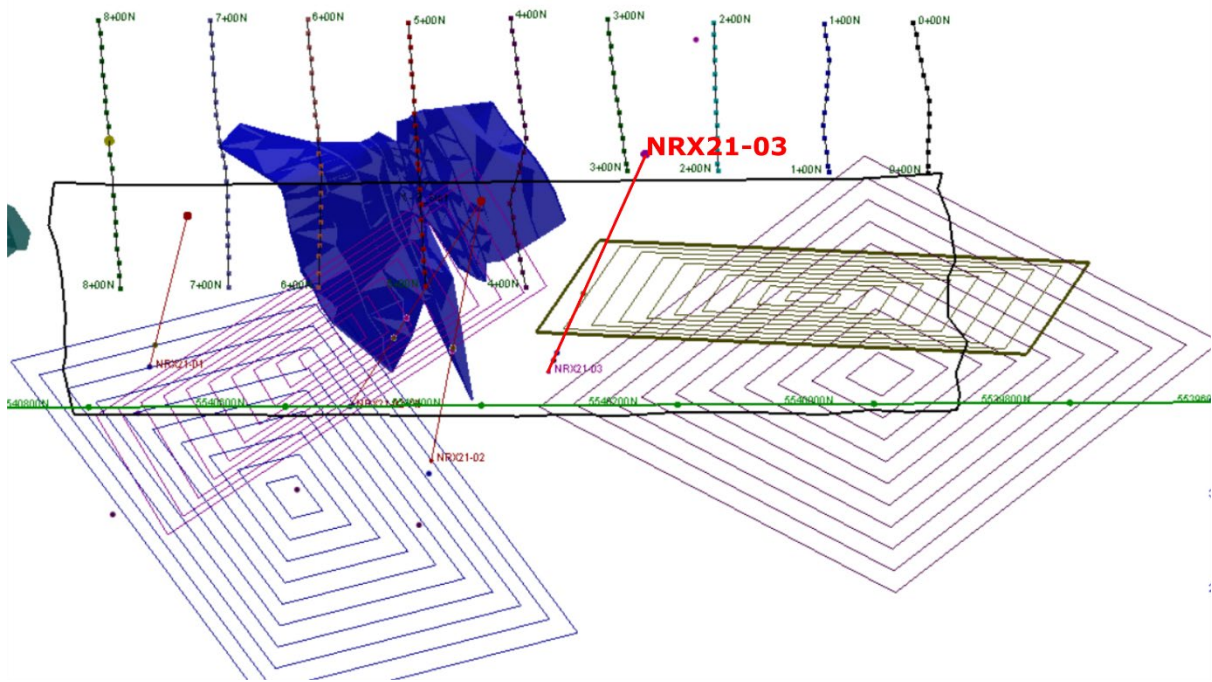


Figure 5 Proposed hole NRX21-03 would likely miss both conductors ON-02A and ON-01C. However, the main objective is to test for depth extensions of Lynx evident in the helicopter EM data, so the hole should not be modified.

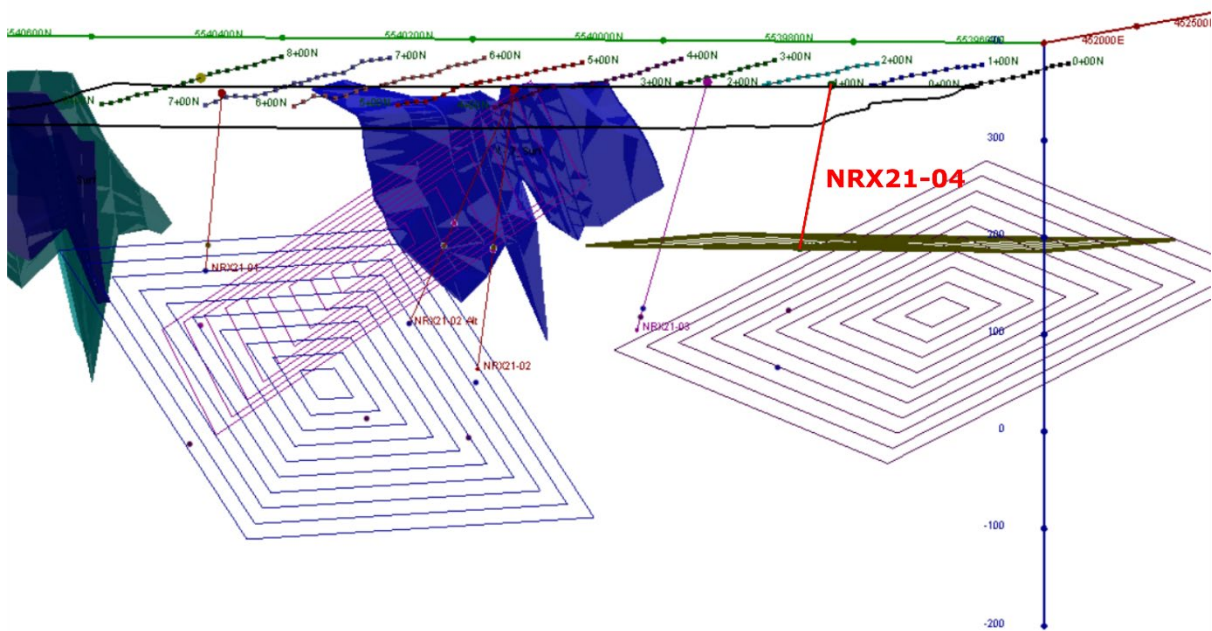


Figure 6 Proposed hole NRX21-04 would probably intersect conductor model ON-02A and would intersect ON-01C if extended to 280m EOH.

## Appendix G

### Ground Electromagnetic Survey by Abitibi Geophysics

GROUND ELECTROMAGNETIC SURVEY



# ARMIT-TDEM

CONFIGURATION  
FIXED CONVENTIONAL LOOP

LOGISTICS AND INTERPRETATION REPORT

PREPARED FOR



**NORONEX**  
— LIMITED —

## **ONAMAN PROJECT**

COUGHLAN LAKE AREA, ONTARIO, CANADA  
JULY 2021

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# 1. RESEARCH OBJECTIVES

The Onaman Project is in the 30 km-wide Beardmore Geraldton Belt on the southern boundary of the east-trending, isoclinally folded, early Precambrian metavolcanic-metasedimentary sequence of the Wabigoon Subprovince. The Beardmore-Geraldton Belt has a known span of 180 km from lake Nipigon to Longlac. The belt has been defined as a metavolcanic and metasedimentary terrane spearing the granite-greenstone Onaman-Tashota Belt to the north from the metasedimentary Quetico subprovince to the south. The regional geology is displayed in Figure 1. The Onaman Project lies in a unit of mafic metavolcanics underlain by felsic metavolcanics (see Figure 2). Iron formations are present on the surveyed area along a north-south axis. The bedding generally strikes north-south and dips west at steep angles.

This survey targets the Lynx South Cu-Ag-Au deposit of the Onaman Project. The mineralization present is known to be dipping at a 55° angle toward the south-west. Figure 4 displays this deposit as defined by drilling intersections. Figures 3, 5 & 6 display a wireframe of the mineralized zone and existing boreholes. The Onaman Project area is known to respond favorably to the electromagnetic method with previous HLEM, HeliGEOTEM II and ZTEM surveys performed in the past displaying anomalies in the vicinity of the deposits.

Abitibi Geophysics was mandated to perform a surface electromagnetic survey on the property with the use of a fixed, conventional time-domain electromagnetic (TDEM) loop aimed at coupling with down-dip and along strike extension of the known deposit. This purpose of this survey is to provide new exploratory drilling targets.



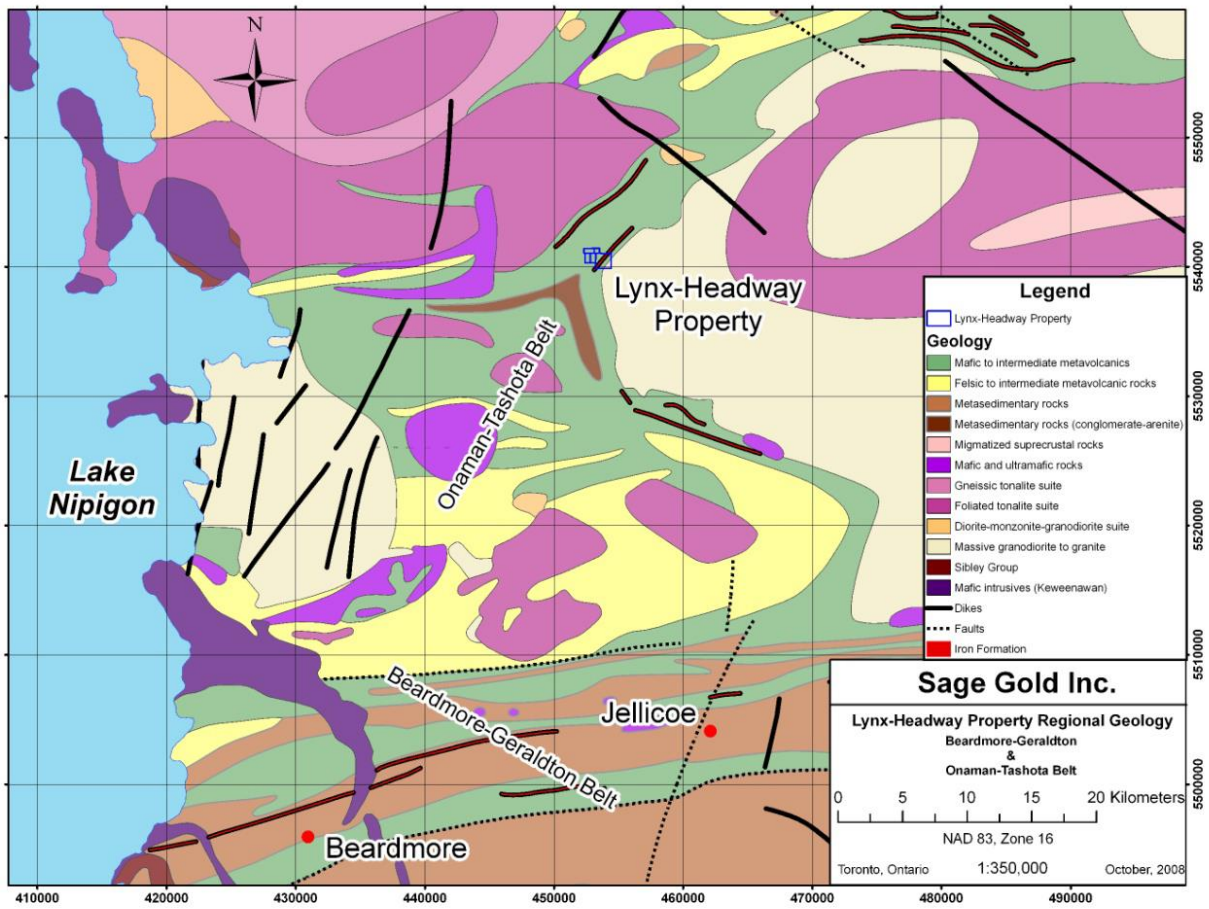


Figure 1. Regional Geology of the Onaman Project.

(Source: Sage Gold Inc., NI43-101 Technical Report, Lynx Cu / Ag / Au Deposit)

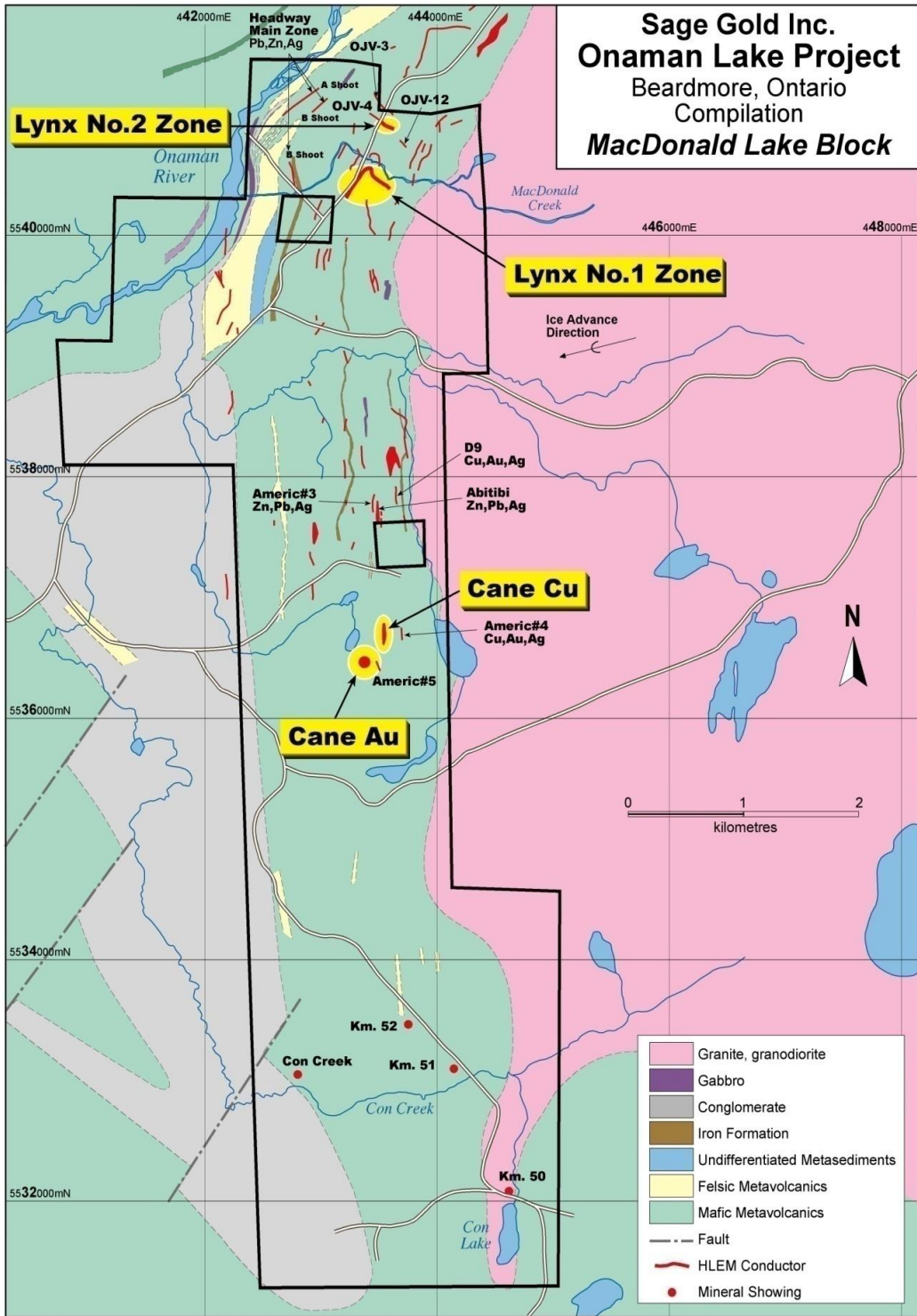


Figure 2. Geology of the Onaman Project Area.

(Source: Sage Gold Inc., NI43-101 Technical Report, Lynx Cu / Ag / Au Deposit)

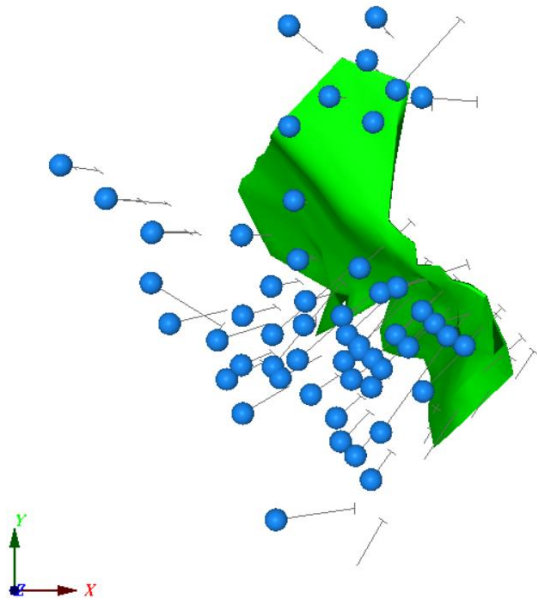


Figure 3. Lynx Deposit Wireframe viewed from Above.

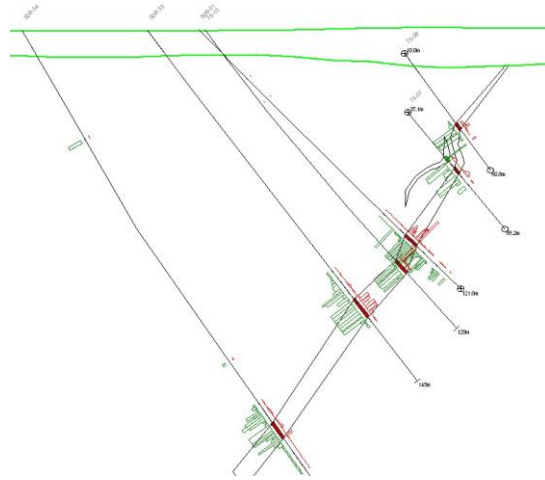


Figure 4. Digitized Cross-Section of the Lynx Deposit.

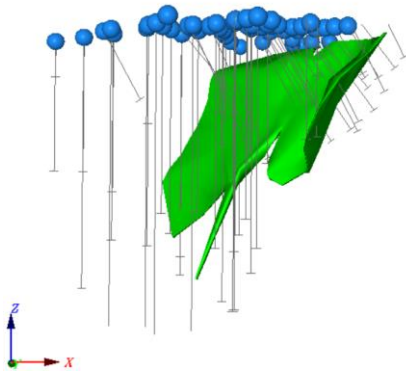


Figure 5. Lynx Deposit Wireframe Viewed from the South.

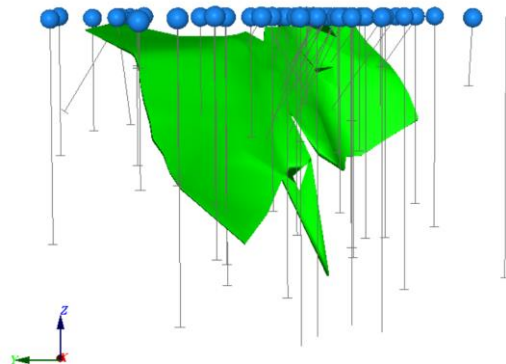


Figure 6. Lynx Deposit Wireframe Viewed from the West.

(Source: Noronex Limited)

## 2. IMPLEMENTED SOLUTION

The time-domain electromagnetic survey, as performed by Abitibi Geophysics, consists of measuring the electromagnetic field induced in the subsurface after the application of a primary magnetic field. This type of measurement of the electromagnetic properties of the subsurface utilizes a large and targeted magnetic field to electrically activate rocks in the ground remotely. To create the desired primary magnetic field, a loop of wire is installed at the surface, in which an electrical current is transmitted in square-waved, bipolar pulses. Properly positioned, this magnetic field will successfully couple with conductive bodies in the subsurface. The time-varying primary field will induce eddy currents which will generate their own magnetic field in return. The magnetic field generated by the eddy currents is referred to as the secondary magnetic field, as it is induced during the turn-off time of the primary field and measured during the off time.

Figure 7 below displays this circuit for the out-of-loop surface measurement of the secondary field generated by a vertical conductor as it is electrically induced by a single TDEM loop.

The TDEM method is and has been particularly useful in the mineral exploration industry to detect economic metallic sulphides in Ni-Cu-PGE, VMS and uranium deposits. One must also consider that this method will also detect sterile sulphides, graphitic sediments, and saline fluids.

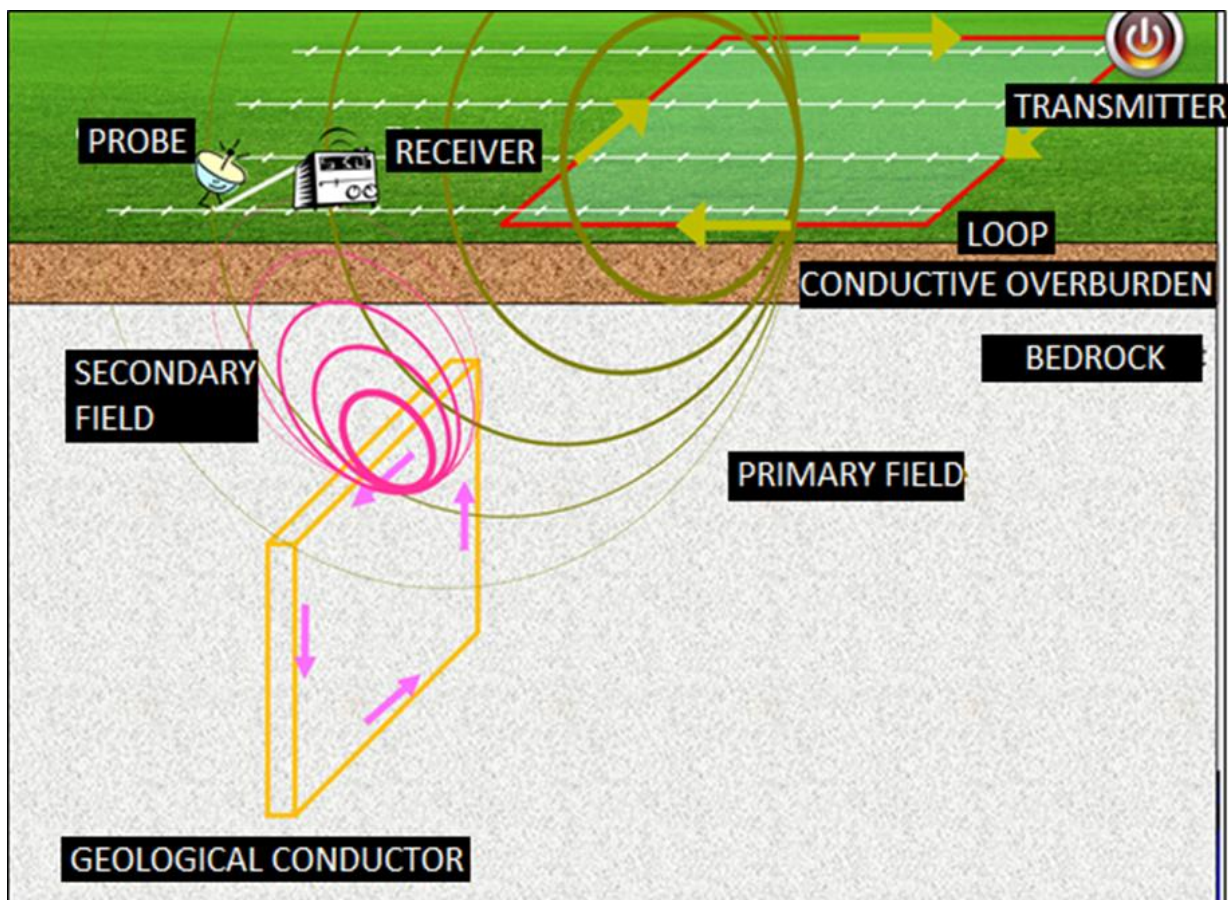


Figure 7. Working Principles of a TDEM Survey.

### 3. RESULTS AND RECOMMENDATIONS

The Armit-TDEM survey identified a total of 4 surface EM axis which were modelled using 12 conductive plates (see Table 2). The projection of each of these anomalies at the surface is provided in Table 3. Below, a description of the identified trends is provided. A 1500 metre drilling campaign is recommended and described in Table 1.

Figure 8 displays the 12 modeled plates used to fit the data along with the recommended boreholes. Figure 9 illustrates a comparison of the measured and modelled responses for the X and Y components of the B-Field on channels 10 to 20.

The identified conductors were modelled in 3D using the Maxwell plate modelling software, which utilizes all data points and all measured components to model the position, orientation, size, and conductivity of a detected conductor, providing an approximation of the targets as planar features. This conductive plate modelling technique remains the most precise inversion method for TDEM surveys and has been particularly successful when applied to relatively thin conductive lenses and VMS deposits. The details of the modelled plates are presented in Table 2. The modelled targets are delivered in 3D DXF files, which can easily be imported in most 2D and 3D mapping software.

The *Geophysical Interpretation Map* (10.0) shows the projection of the apex of the Maxwell plates at the surface since it is where most of the current is flowing. A free version of the *Geoscience Analyst* 3D software is provided with the digital deliverables included in this report as visualizing the 3D model in 2D figures may be difficult.

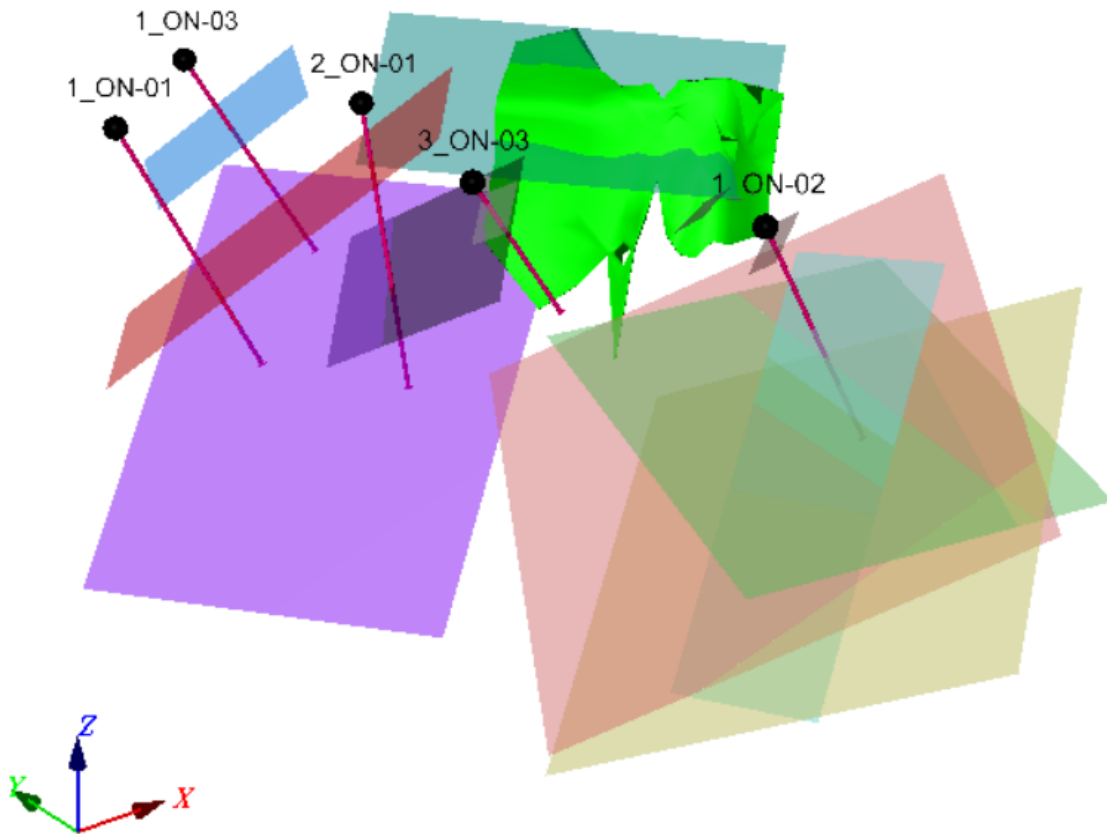


Figure 8. Model Plates and Recommended Drill Holes Viewed from Above-South-West.

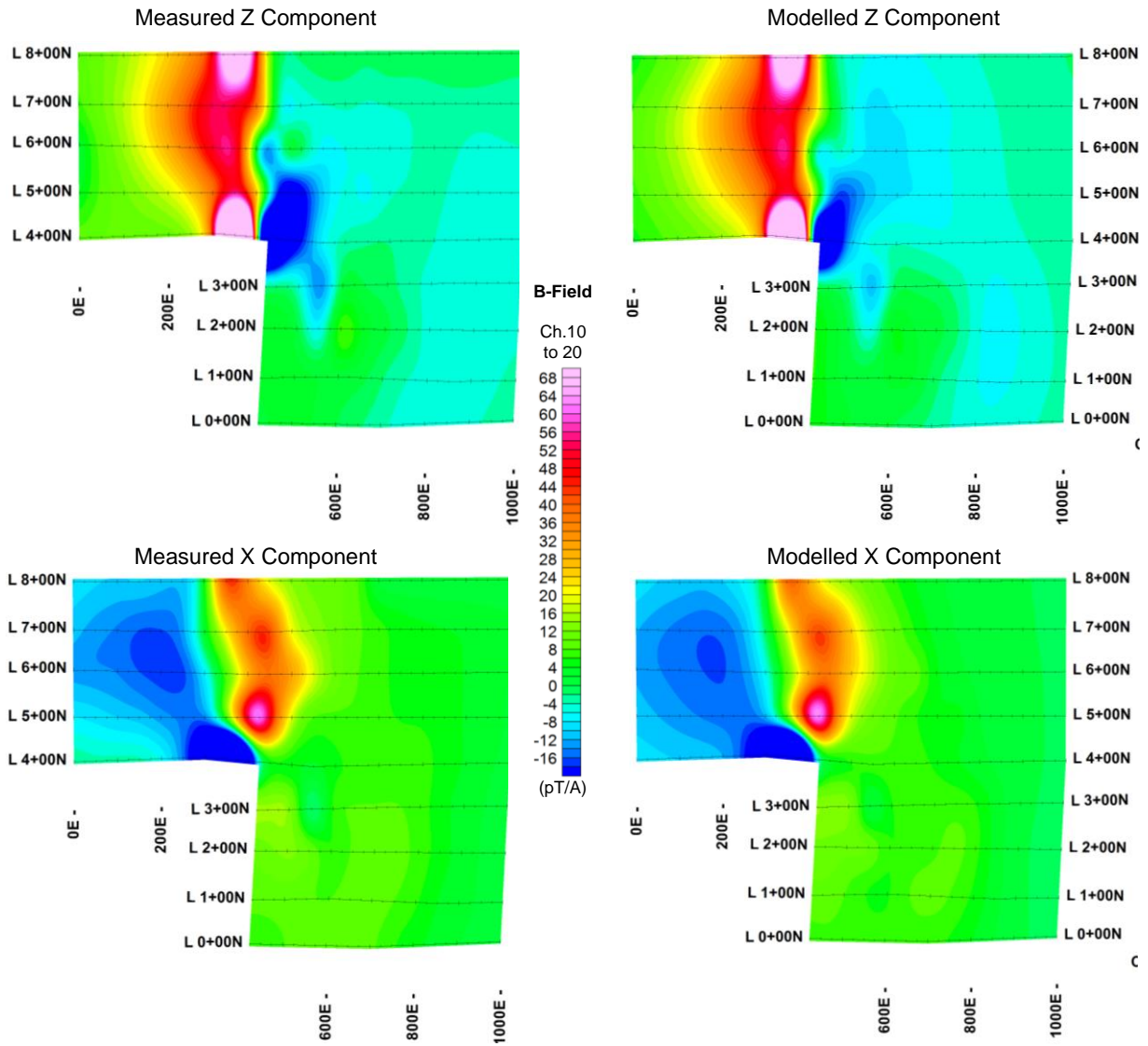


Figure 9. Measured and Modelled X & Z Components of the B-Field from Channel 10 to 20.

### □ ON-01 Trend

The ON-01 trend modelling using the ON-01A, ON-01B and ON-01C plates is a long-wavelength anomaly detected across every survey line. This response indicates the surveyed grid area is underlain by a moderate to weak, large scale conductor. The waveform suggests a shallow dip towards the west. The trend is deep seated and reaches towards, seemingly pinching, into known Lynx South Zone, suggesting that the observed trend may be a feeder structure to the Lynx Deposit.

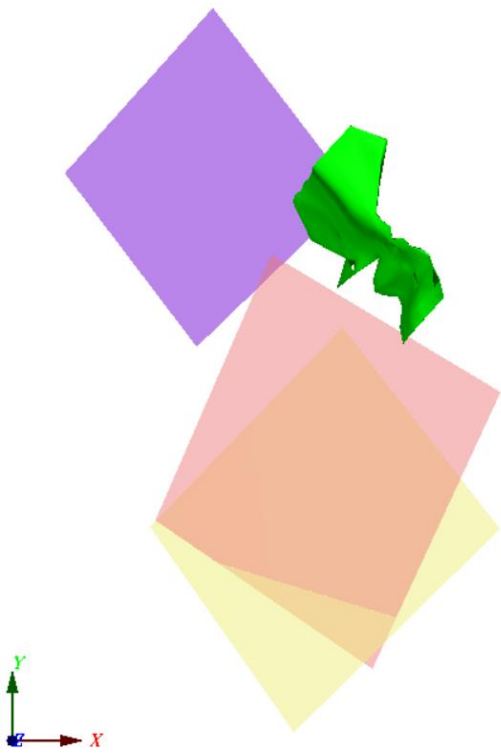


Figure 10. ON-01 Trend from Above.

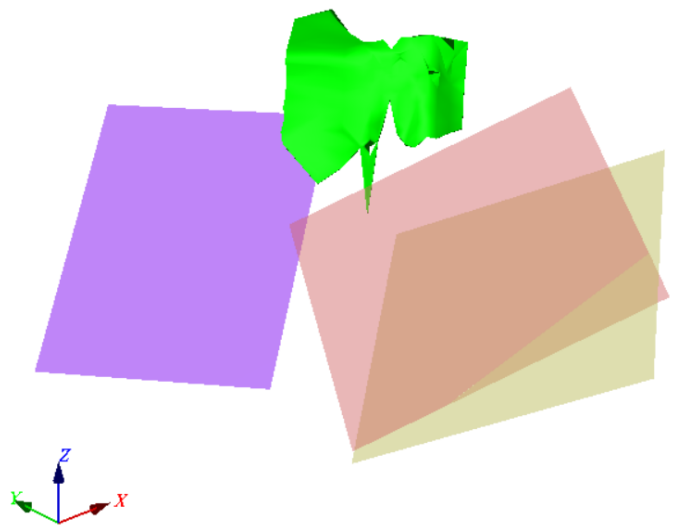


Figure 11. ON-01 Trend from Above-South-West.

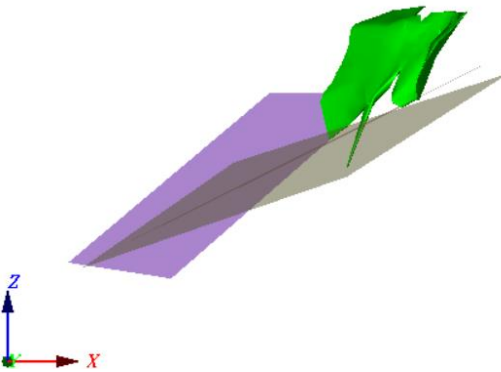


Figure 12. ON-01 Trend from the South.

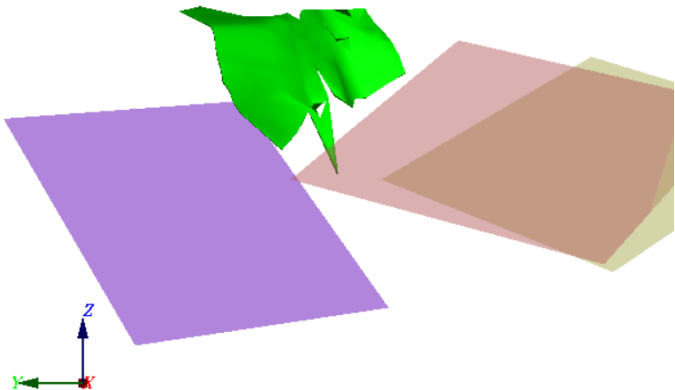


Figure 13. ON-01 Trend from the West.

### □ ON-02 Trend

The ON-02A and ON-02B model plates define moderate to strongly conductive lenses detected in the southern end of the survey area along strike with the ON-01 trend. These are possibly offshoots from the ON-01 feeder or stratigraphic repetition of the same conductive unit. The depth and dip are not very well constrained, but the response is indicative of 150+ metres deep, large, and shallowly dipping lenses.

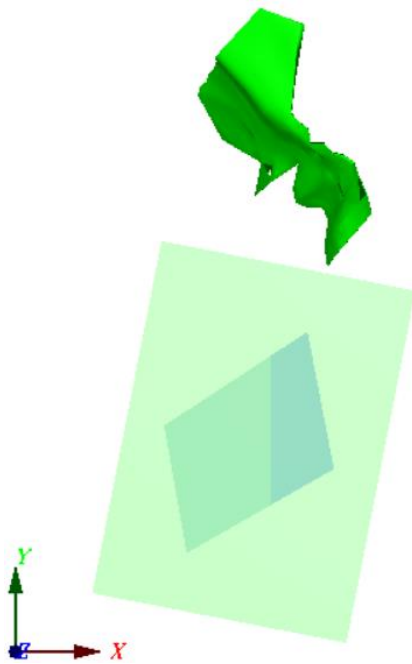


Figure 14. ON-02 Trend from Above.

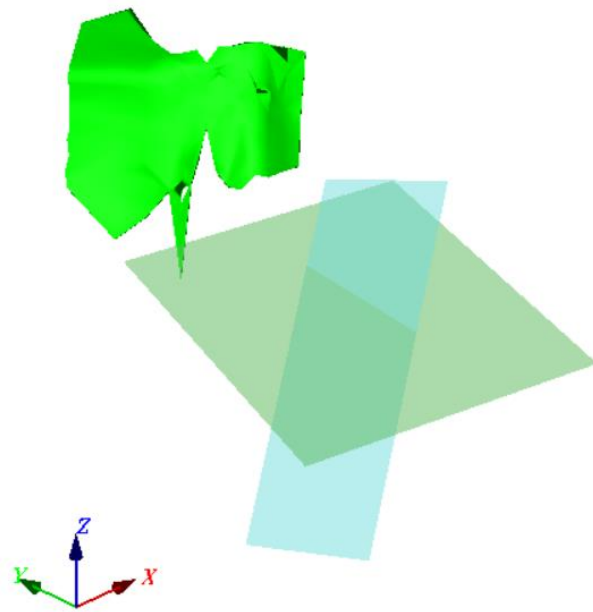


Figure 15. ON-02 Trend from Above-South-West.

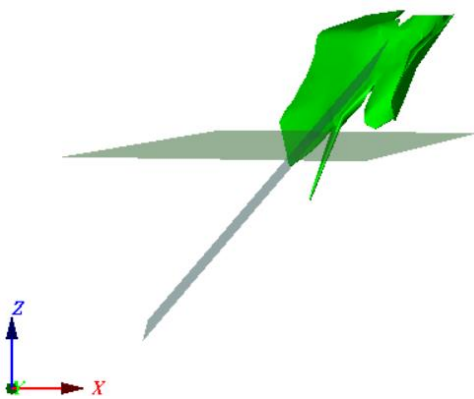


Figure 16. ON-02 Trend from the South.

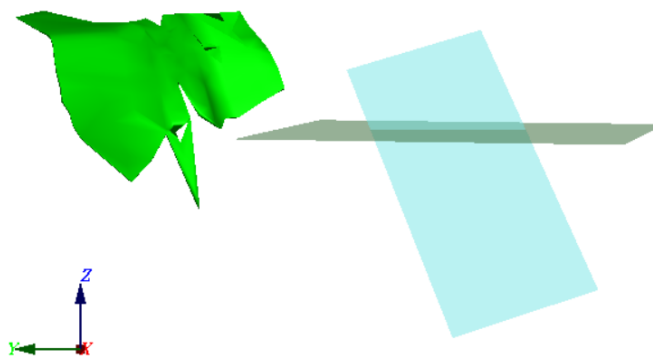


Figure 17. ON-02 Trend from the West.



### □ ON-03 Trend

The ON-03 trend modelled using the ON-03A to ON-03F plates consist of a series of conductors that cross the surveyed grid along an azimuth of  $345^\circ$ . On the northern half of the grid (lines 5+00 to 8+00N) the response is indicative of a cluster of moderately sized lenses dipping to the west and plunging to the north-west. The ON-03D to ON-03F plates are small, near-surface anomalies which likely extend to the surface. These should be prospected prior to drilling of the ON-03 trend targets to assess the source of the anomaly. This trend is either associated with an iron formation which overlies the Lynx Deposit or a stratigraphic repetition of the same unit. The existing drill cores should be consulted to better understand the source of these anomalies. It should be noted that the ON-03 trend, as modelled, is very well coupled with the loop and displays a considerably stronger response than the other trends.

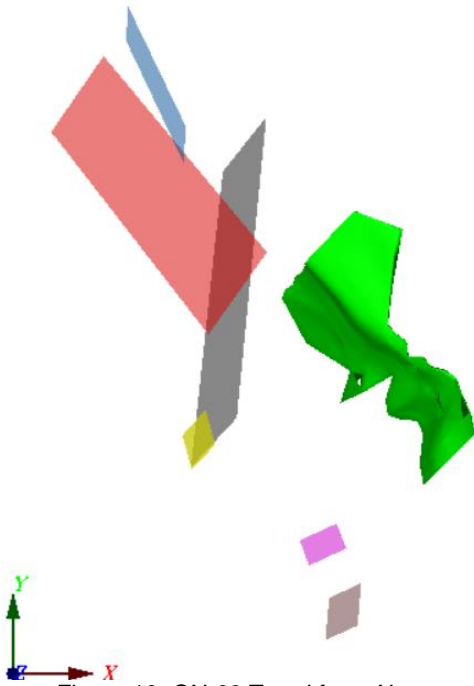


Figure 18. ON-03 Trend from Above.

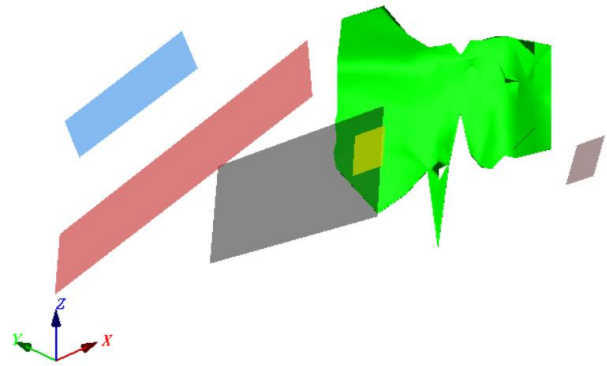


Figure 19. ON-03 Trend from Above-South-West.

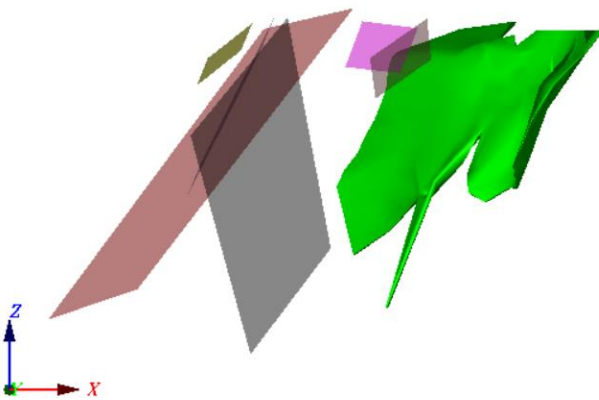


Figure 20. ON-03 Trend from the South.

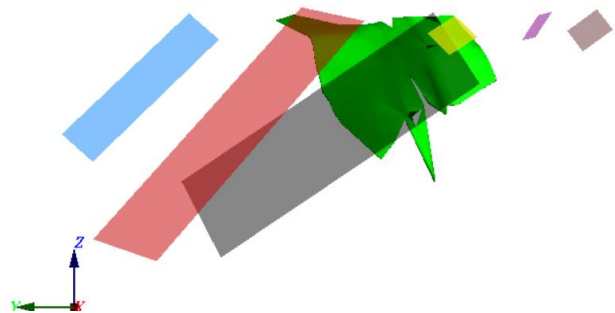


Figure 21. ON-03 Trend from the West.

❑ **ON-04 Trend**

This target is poorly defined because (1) its response is masked by the stronger surrounding anomalies, (2) little to no coupling occurred, or (3) the mineralized lens does not react favorably to the electromagnetic method. Figure 24 shows the primary field vectors generated by the transmitter loop used for this survey and the Lynx Deposit's wireframe. Although the down-dip and near-surface portions are well coupled (i.e., the primary field is perpendicular), for most of the deposit, the primary field is parallel, thus it is poorly coupled. It should also be noted that if (1) the upper and lower portions of the deposit coupled with the primary field and (2) the deposit were conductive and continuous, the coupling in those two portions would be in opposite directions. To some extent, the eddy currents inside such conductors would cancel each other.

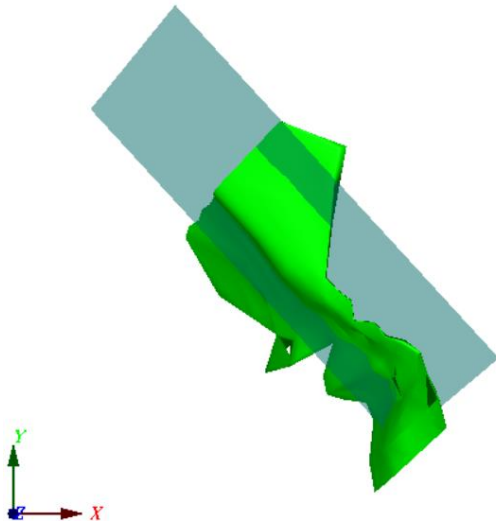


Figure 22. ON-04 Trend from Above.

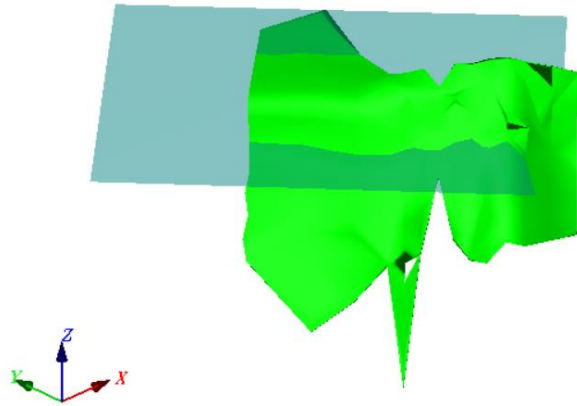


Figure 23. ON-04 Trend from Above-South-West.

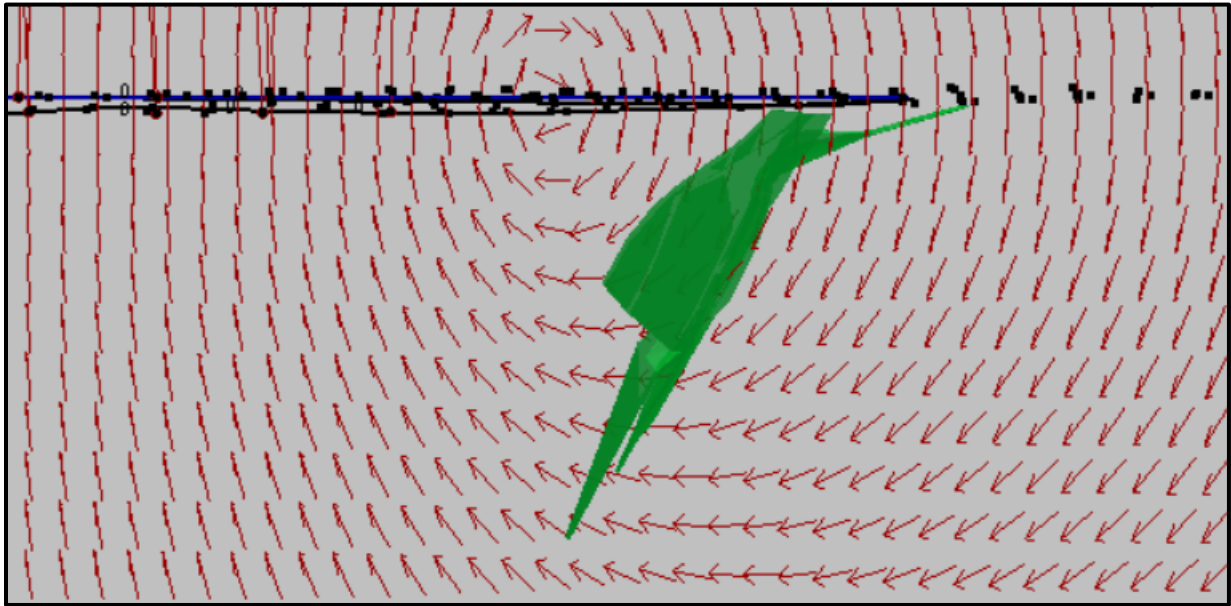


Figure 24. Primary Field Vectors and the Lynx Deposit Wireframe Viewed from the South-West.

**Table 1. Drilling Targets Recommended on the Onaman Project**

Planned Borehole	Targeted Model Plates	Collar UTM Coordinates			Dip (°)	Az. (°)	Length (m)
		Easting (m)	Northing (m)	Elevation (m)			
1_ON-02	ON-01B ON-01C ON-02A ON-02B ON-03F	453375	5540125	311	-68	90	300
1_ON-01	ON-01A ON-03B	452975	5540700	303	-68	90	350
1_ON-03	ON-01A ON-03A	453100	5540800	304	-65	90	300
2_ON-01	ON-01A ON-03B ON-03C	453200	5540600	304	-86	90	350
3_ON-03	ON-03C ON-03D	453200	5540375	308	-63	90	200

*\*Planned holes do not account for deviation.* Geologists planning these holes must adjust the parameters to account for expected deviation. The objective should be to maintain as close as possible the same pierce point where the planned hole intersects the target model plate. The modeled plates have been delivered as 3D DXF files in the deliverables

We also recommend drilling 75 to 100 m past the expected target, which will be favorable if further borehole EM surveying is completed.

**Table 2. Modelled Plates**

Plate	Easting (m)	Northing (m)	Elevation (m)	Depth (m)	Dip (°)	Strike (°)	Plunge (°)	Length (m)	Z Extension (m)	Conductance (s)
	(Center of its apex)									
<b>Ground TDEM</b>										
ON-01A	453279	5540701	147	-160	35	236	4	400	500	59
ON-01B	453539	5539973	197	-117	26	272	-26	531	514	54
ON-01C	453470	5539803	169	-143	26	291	-27	514	477	58
ON-02A	453194	5540073	144	-166	0	157	56	508	366	240
ON-02B	453372	5539934	114	-197	51	270	-69	451	197	53
ON-03A	453196	5540726	293	-12	66	260	-44	61	263	223
ON-03B	453265	5540540	310	3	41	297	-13	130	500	55
ON-03C	453261	5540578	183	-124	64	288	38	465	149	117
ON-03D	453228	5540372	295	-14	48	280	43	52	59	641
ON-03E	453345	5540213	292	-18	52	341	-81	51	51	285
ON-03F	453393	5540114	299	-12	53	304	-42	59	60	286
ON-04	453463	5540589	318	10	39	228	0	433	179	9

**Table 3. TDEM Anomalies on the Onaman Project**

Anomaly	Grid Coordinates		UTM Coordinates		Modelled Plate
	Line	Station	Easting (m)	Northing (m)	
ON-01	6+00N	4+50E	453288	5540541	ON-01A
	7+00N	4+00E	453238	5540638	
	8+00N	3+50E	453188	5540754	
	0+00N	6+50E	453467	5539918	ON-01B
	1+00N	7+00E	453522	5540022	
	2+00N	7+50E	453578	5540134	
	0+00N	7+00E	453517	5539917	ON-01C
	1+00N	7+50E	453572	5540020	
ON-02	0+00N	7+00E	453517	5539917	ON-02A
	1+00N	7+00E	453522	5540022	
	2+00N	7+00E	453528	5540134	
	3+00N	7+00E	453533	5540235	
	1+00N	6+50E	453472	5540025	ON-02B
	2+00N	6+00E	453428	5540135	
ON-03	8+00N	3+50E	453188	5540754	ON-03A
	6+00N	4+25E	453263	5540541	ON-03B
	4+00N	4+25E	453264	5540340	ON-03C
	4+00N	3+50E	453189	5540347	ON-03D
	3+00N	5+50E	453383	5540232	ON-03E
	2+00N	5+50E	453378	5540136	ON-03F
ON-04	5+00N	7+50E	453589	5540442	ON-04
	6+00N	6+50E	453488	5540543	
	7+00N	5+50E	453388	5540642	
	8+00N	4+50E	453288	5540754	



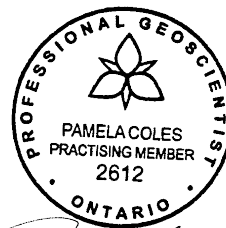
The author is confident that the Onaman Project offers potential for discovering new mineralized zones and that the prospecting targets and drill holes recommended for the investigation of the anomalous sources identified by the present survey will be positive.

However, our knowledge of the property's geology is not as thorough as the geologists of Noronex Limited. Our interpretation and recommendations are mainly based on the observed geophysical responses.

To maximize the outcome of the present results, Noronex Limited, should, ensure all available geoscience information are compiled, assessed and, if necessary, redefine the priority and nature of the recommendations proposed in this report.

Respectfully submitted,  
Abitibi Geophysics Inc

Marc Auclair G.I.T.,  
Geophysicist-in-Training  
PGO #10 885



Pam Coles, P.Geo.,  
Chief Geophysicist  
PGO #2612

MA/sl

## APPENDIX A: PROJECT OVERVIEW

- ❑ **PROJECT ID** **Onaman**  
(Our reference **21NT024-ED**)
  
- ❑ **CLIENT** **Noronex Limited**  
Suite 1, 295 Rokeby Road  
Subiaco, WA 6008 Australia  
Tel: +61 (8) 6555 2950
  
- ❑ **CLIENT REPRESENTATIVE** Dennis Arne, PhD, PGeo, RPGeo,  
Director  
dennis.arne@telemarkgeosciences.com
  
- ❑ **MINING TENURE** The surveyed grid covers 8 mineral claims which are wholly owned by Noronex Limited.
  
- ❑ **LOCATION** **Coughlan Lake Area, Ontario, Canada**  
NAD83 / UTM zone 16N: 453 090 mE, 5 540 360 mN  
NTS sheet: **42AL04**
  
- ❑ **NEAREST SETTLEMENT** **Jellicoe** is located 40 km south of the survey area.



Figure 25. General Location of the Onaman Project.



- ❑ *ACCESS* Access to the Property is gained via gravel roads which run off highway 11. The road which runs the length of the Property, from the south-west corner to the north-eastern extremity, is referred to as the Tashota Mine Road, as it was originally constructed to serve the former Tashota-Nipigon gold-copper mine which lies 6 km east of the north end of the Property.
- ❑ *ARTIFICIAL STRUCTURES* Numerous drill casings are present on the project area. The effect which these may have had on the EM data is negligible.
- ❑ *GEOMORPHOLOGY* The Property lies within the central plateau section of the Boreal Forest Region. On the uplands common tree species are pine, spruce, birch and aspen. The topography is gentle and very few outcrops are present. A small creek crosses the surveyed grid.
- ❑ *HEALTH AND SAFETY* As part of the Abitibi Geophysics Inc. HS & E program, crew members received first aid training and were provided with safety equipment and specialized training for the geophysical techniques utilized on this project. In addition, the crew was provided with a satellite telephone for emergency communication.
- No incidents were reported during the project.
- ❑ *ÉCOLOGO* Abitibi Geophysics adheres to the Ecologo Certification for the mining exploration industry. This certification promotes the widespread application of environmental, social, and economic practices of the highest standards. Abitibi Geophysics conforms with the standardized requirements of this certification and those of the government ministries related to these practices. The conditions for the execution of exploration work set by the governing bodies and any agreement between the claim owners and concerned Aboriginal communities are followed rigorously.
- ❑ *SURVEY COVERAGE* The ground TDEM survey covered a total of 7.4 km over 9 lines ranging from 600 to 1000 metres in length.
- The surveyed grid is illustrated in Figure 26.
- ❑ *COORDINATE SYSTEM* Local reference: NAD83  
Projection: Universal Transverse Mercator (UTM)  
Zone: 16N

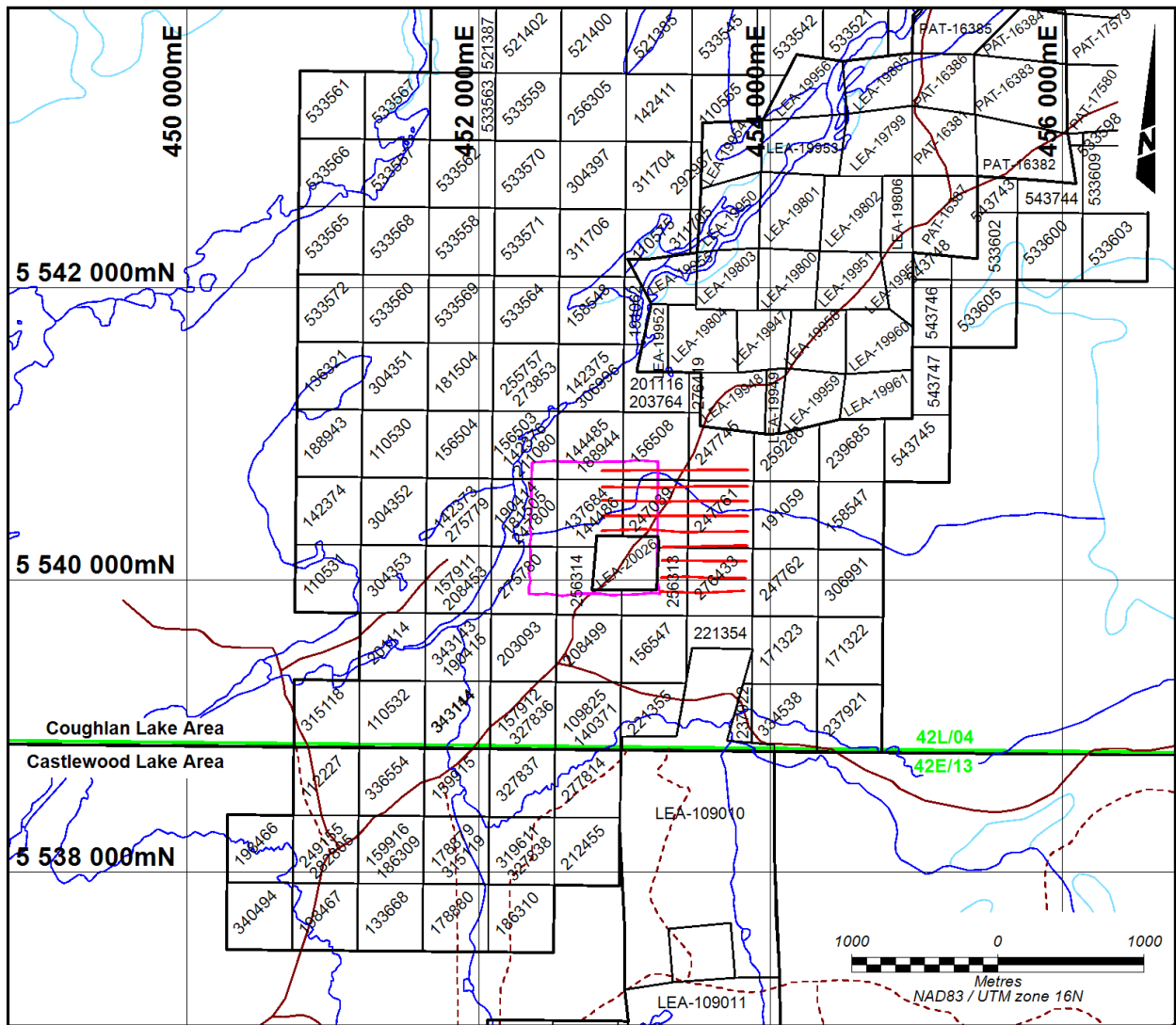


Figure 26. Mining Titles, Survey Coverage, and Traces of the Transmitting Loop over the Onaman Project.

## APPENDIX B: TECHNICAL SPECIFICATIONS

- |   |  |   |   |         |    |         |     |          |                   |
|---|--|---|---|---------|----|---------|-----|----------|-------------------|
| <input type="checkbox"/> <i>SURVEY TYPE</i>   | <p><b>TDEM</b> (Time Domain Electromagnetic)<br/>         Configuration: <b>Fixed conventional loop (<i>in-loop</i>)</b><br/>         Nominal station spacing: <b>50 m with 25 m infills</b></p>   |   |   |         |    |         |     |          |                   |
| <input type="checkbox"/> <i>MEASUREMENTS</i>  | <p>Surface: Vertical component Z, and horizontal components (X and Y) of the <b>B-field</b> and its partial derivative <math>\partial\mathbf{B}/\partial t</math>.</p>   |   |   |         |    |         |     |          |                   |
| <input type="checkbox"/> <i>PERSONNEL</i>   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                 Eric Vallerand<br/>                 Simon Michetti<br/>                 David Pelletier<br/>                 Carole Picard, Tech.<br/>                 Jonathan Collin, P.Eng.<br/>                 Marc Auclair, G.I.T.<br/>                 Pam Coles, P.Geo.             </td> <td style="width: 50%; vertical-align: top;">                 Crew chief<br/>                 Assistant<br/>                 Assistant<br/>                 Mapping technician<br/>                 QC and processing<br/>                 Interpretation and report<br/>                 Project supervisor and final verification of product conformity             </td> </tr> </table> | Eric Vallerand<br>Simon Michetti<br>David Pelletier<br>Carole Picard, Tech.<br>Jonathan Collin, P.Eng.<br>Marc Auclair, G.I.T.<br>Pam Coles, P.Geo. | Crew chief<br>Assistant<br>Assistant<br>Mapping technician<br>QC and processing<br>Interpretation and report<br>Project supervisor and final verification of product conformity |         |    |         |     |          |                   |
| Eric Vallerand<br>Simon Michetti<br>David Pelletier<br>Carole Picard, Tech.<br>Jonathan Collin, P.Eng.<br>Marc Auclair, G.I.T.<br>Pam Coles, P.Geo. | Crew chief<br>Assistant<br>Assistant<br>Mapping technician<br>QC and processing<br>Interpretation and report<br>Project supervisor and final verification of product conformity  |   |   |         |    |         |     |          |                   |
| <input type="checkbox"/> <i>DATA ACQUISITION</i>  | <p>June 19<sup>th</sup> to 21<sup>st</sup>, 2021</p>   |   |   |         |    |         |     |          |                   |
| <input type="checkbox"/> <i>LOOP SPECIFICATIONS</i>   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Dimensions</td> <td style="width: 50%;">900 x 900 metres</td> </tr> <tr> <td>Azimuth</td> <td>0°</td> </tr> <tr> <td>Current</td> <td>23A</td> </tr> <tr> <td>T/O time</td> <td>520 &amp; 540 <math>\mu</math>s</td> </tr> </table> <p>see Figure 26 and <i>Geophysical Interpretation Map</i> (10.0)</p>  | Dimensions  | 900 x 900 metres  | Azimuth | 0° | Current | 23A | T/O time | 520 & 540 $\mu$ s |
| Dimensions  | 900 x 900 metres   |   |   |         |    |         |     |          |                   |
| Azimuth   | 0°   |   |   |         |    |         |     |          |                   |
| Current   | 23A  |   |   |         |    |         |     |          |                   |
| T/O time  | 520 & 540 $\mu$ s  |   |   |         |    |         |     |          |                   |

□ TRANSMITTERS (TX)



Figure 27. Terrascope Transmitter PRO5U.

**PRO5U** by Terrascope, s/n **5NF & 12NF**

Generator: Voltmaster 13000 long run  
 Maximal output: 18 kW or 25 A or 600 V  
 Signal transmitted: Bipolar wave, 50% duty cycle  
 Pulse linearity: 97%  
 Base frequency: 15 Hz ( $T/4 = 16.66$  ms)

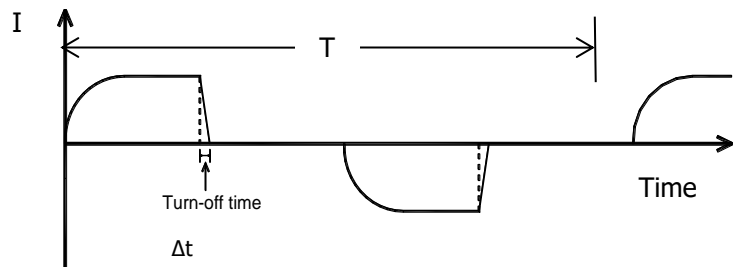


Figure 28. Current (I) Waveform Transmitted in the Loop.

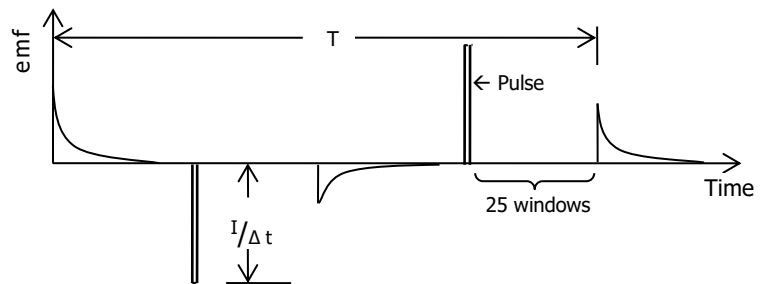


Figure 29. Electromotive Force Waveform generated in the Ground.

□ *RECEIVERS (RX)*

**SMARTem24** by EMIT, s/n **1186 & 1222**

Synchronization to Tx: **GPS** clock  
 Number of stacks: 4 repeats of 256 stacks.  
 Integration start time: 90  $\mu$ s  
 Integration windows: 25, geometrically spaced  
 Programmed delay: 0  $\mu$ s  
 Powerline filter: 60 Hz

**Table 4. Time Gate Locations (SMARTem24)**

Window #	15 Hz	
	Delay (ms)	Width (ms)
1	0.104	0.033
2	0.125	0.033
3	0.152	0.033
4	0.184	0.033
5	0.241	0.067
6	0.291	0.067
7	0.370	0.100
8	0.448	0.100
9	0.560	0.133
10	0.696	0.167
11	0.878	0.233
12	1.078	0.267
13	1.340	0.335
14	1.664	0.416
15	2.066	0.517
16	2.565	0.641
17	3.184	0.796
18	3.953	0.988
19	4.908	1.227
20	6.093	1.523
21	7.564	1.891
22	9.391	2.348
23	11.658	2.915

□ *SENSORS*

**ARMIT Mk2.5, s/n 8 & 20**

Simultaneously measures the Z, X and Y components of the **B-field** and its partial derivative  $\partial\mathbf{B}/\partial t$ .



Figure 30. ARMIT Mk2.5 Probe in the Field.

□ *POLARITY CONVENTION*

Z: Vertical, positive is upwards.

X: Horizontal, in the direction of the survey lines. Positive is towards the north for N-S oriented lines, and towards the east for E-W oriented lines.

Y: Horizontal, perpendicular to survey lines. For N-S lines, positive is toward the west. For E-W lines, positive is towards the north.

□ *SOFTWARES*

**SMARTem24** by EMIT: Rx data transfer to PC via USB port.

**Maxwell**® by EMIT: QC, data processing, modelling, presentation, and interpretation of the results.

**Montaj** by Seequent: Contour maps and interpretation.

## APPENDIX C: DATA PROCESSING AND DELIVERABLES

**QUALITY CONTROL**  
(RECORDS AVAILABLE UPON  
REQUEST)

**Before the survey:**

- ✓ Transmitter & motor generator were checked for maximum output using calibrated loads.

**Daily and prior to data acquisition:**

- ✓ The battery voltage of each receiver was checked.
- ✓ The polarity of the primary field was verified on each receiver.
- ✓ Receivers were calibrated and accurately synchronized to the transmitter prior to and during data acquisition.

**At the Base of Operations:**

- ✓ Field data were inspected and validated.
- ✓ The polarity of the primary field components was checked and corrected, as necessary.

**Survey noise evaluation:**

- ✓ No problematic geomagnetic activity was observed throughout the survey.
- ✓ No abnormal instrumental noise was detected during the survey.
- ✓ Multiple camp and mining installations, as well as borehole casings are present on portions of the survey area. Their effect was mitigated.

**PROFILE PLATES OF THE  
SECONDARY MAGNETIC  
FIELD**

Each profile is presented in a distinct plate including each component (X, Y and Z) of the **B-field** and  $\partial\mathbf{B}/\partial t$ .

**PRODUCED MAPS**

The maps are provided with this report. Our Quality Control Protocol requires that the final version of these maps be verified by at least two qualified persons.

**Table 5. Maps Produced**

<b>Map Number</b>	<b>Description</b>	<b>Scale</b>
	<b>ARMIT-TDEM Survey</b>	
Stacked Profiles	B-field EM Response Profiles / Components Z, X & Y	1:5000
Stacked Profiles	$\partial B/\partial t$ EM Response Profiles / Components Z, X & Y ( <b>PDF format only</b> )	1:5000
6.4	Z component Contours (B-field) / Channels 10 to 20 (pT/A)	1:5000
6.5	X component Contours (B-field) / Channels 10 to 20 (pT/A)	1:5000
10.0	Geophysical Interpretation & Transmitting Loop Outline	1:5000



# **APPENDIX A**

## **ARMIT- TDEM SURVEY B-FIELD EM RESPONSE PROFILES**

**B<sub>z</sub>**  
**B<sub>x</sub>**  
**B<sub>y</sub>**