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# Drift Lake Property

# Grass Roots

## 2019 Assessment Report

## Ground Magnetics & VLF

Thunder Bay Mining District, Ontario

Drift Lake Area (G-0713), Conacher (G-0646)

NTS 052B/09

Claims: 117387, 171703, 190485, 228394, 228395, 275615 ,336039

**White Metal Resources Corp.**
864 Squire St.
Thunder Bay, ON
P7B 4A8

November 20, 2019

Cathy Salo, B.Sc., Earth Science

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Figure 1: Ontario Location Map

## 1.0 INTRODUCTION

White Metals staked Drift Lake property in January of 2018 to follow-up on Untested E.M. conductor on OGS Geophysical, Geochemical Series, Map 81581. 5 days of ground

geophysics commenced on the Drift Lake property starting on February 6, 2019 which included VLF which was carried out by Bob Heilman and magnetics carried out by Cliff Hickman. The geophysics was done on the North east part of Drift lake on a picketed grid in two sections and comprising of 9 lines. Results of this survey shows a NE trending structure.

## 2.0 PROPERTY DESCRIPTION

The Property is located approximately 71.5 km west of Thunder Bay on TransCanada Highway 11 with turnoff north on Drift Lake Road located about 2.5 km before Shebandowan. The property is composed of 12 cells (single cell) making up 255 hectares. The yearly work required costs to keep the claims in good standing amounts to $4,800. (See Table 1 for claim details and figure 2 for claim map).

Table 1: Property Claims

| Tenure No. | Type | Date Issued | Anniversary | Holder |
|---|---|---|---|---|
| 117387 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 117388 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 127140 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 171703 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 171704 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 174452 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 190485 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 228394 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 228395 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 275615 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 287677 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |
| 336039 | Single Cell Mining | 20180128 | 20200109 | (100) WHITE METAL RESOURCES CORP. |

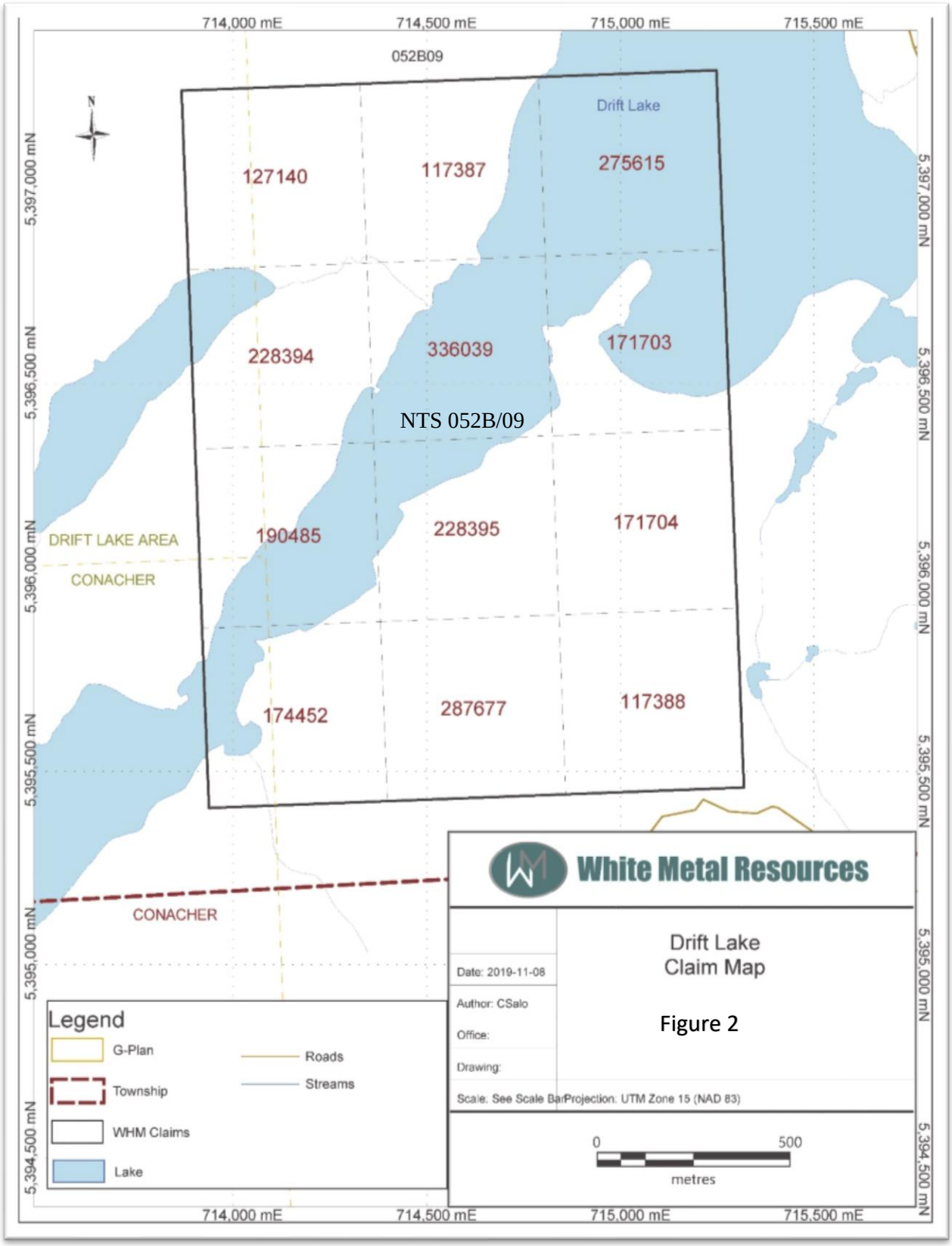


Figure 2: Claim Map

## 3.0 LOCATION, ACCESS AND TOPOGRAPHY

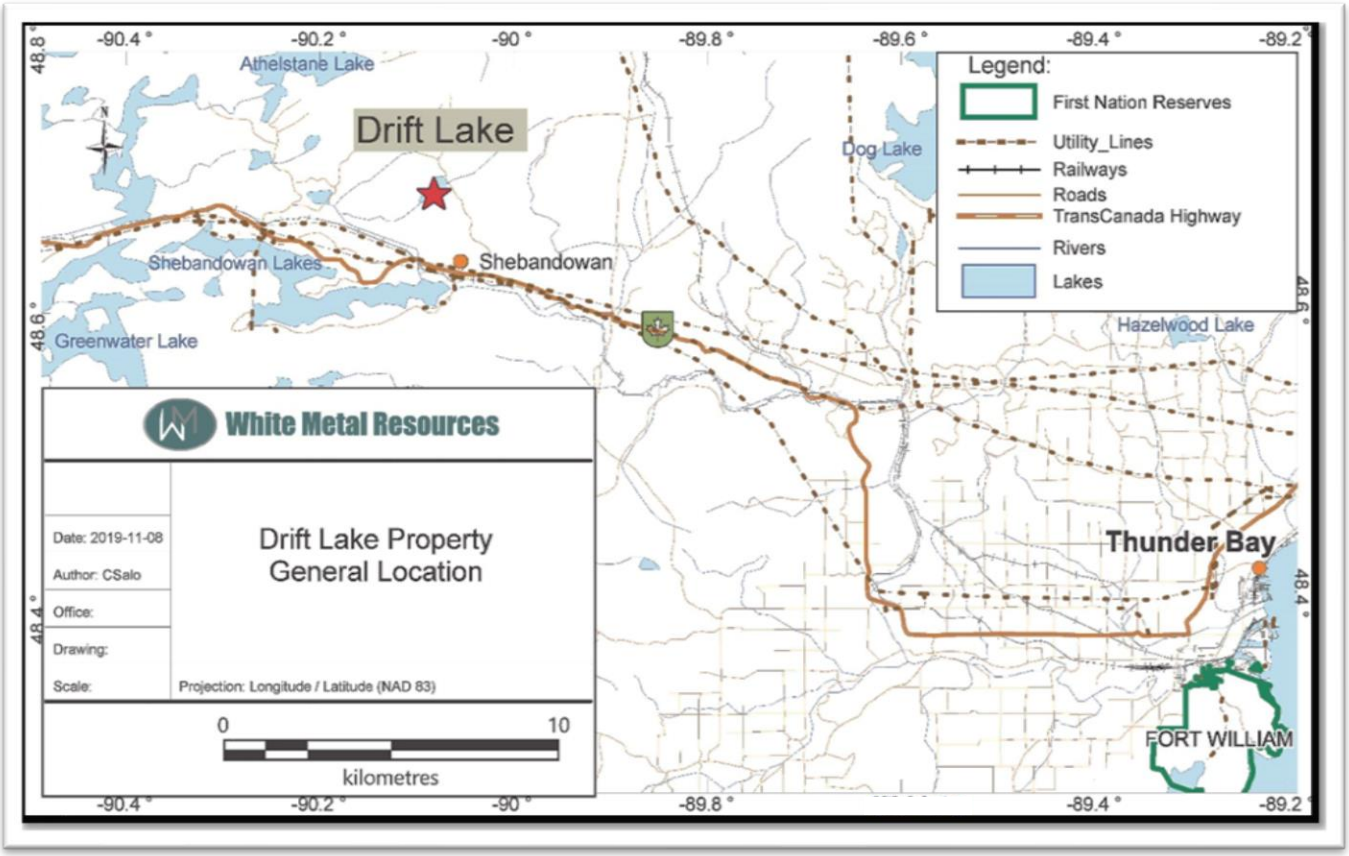


Figure 3: General Location

White Metal's Drift Lake property is situated within the Thunder Bay Mining District in northern Ontario, Canada. The claims are located about 66 kilometres from Thunder bay on Transcanaa Highway 11, then a north on Drift Lake Road for 3.3 km and turning west on a logging Road for about another 2.1 km kilometers (*see Figure 4*). The property is located north of Conacher Township and within NTS block 052B/09. The central point of the property is approximately 714,655 E and 5,396,553 N, (UTM Zone 15, NAD 83). The unincorporated community of Shebandowan is located approximately 7 kilometres from the southern part of the property. See figure 4.

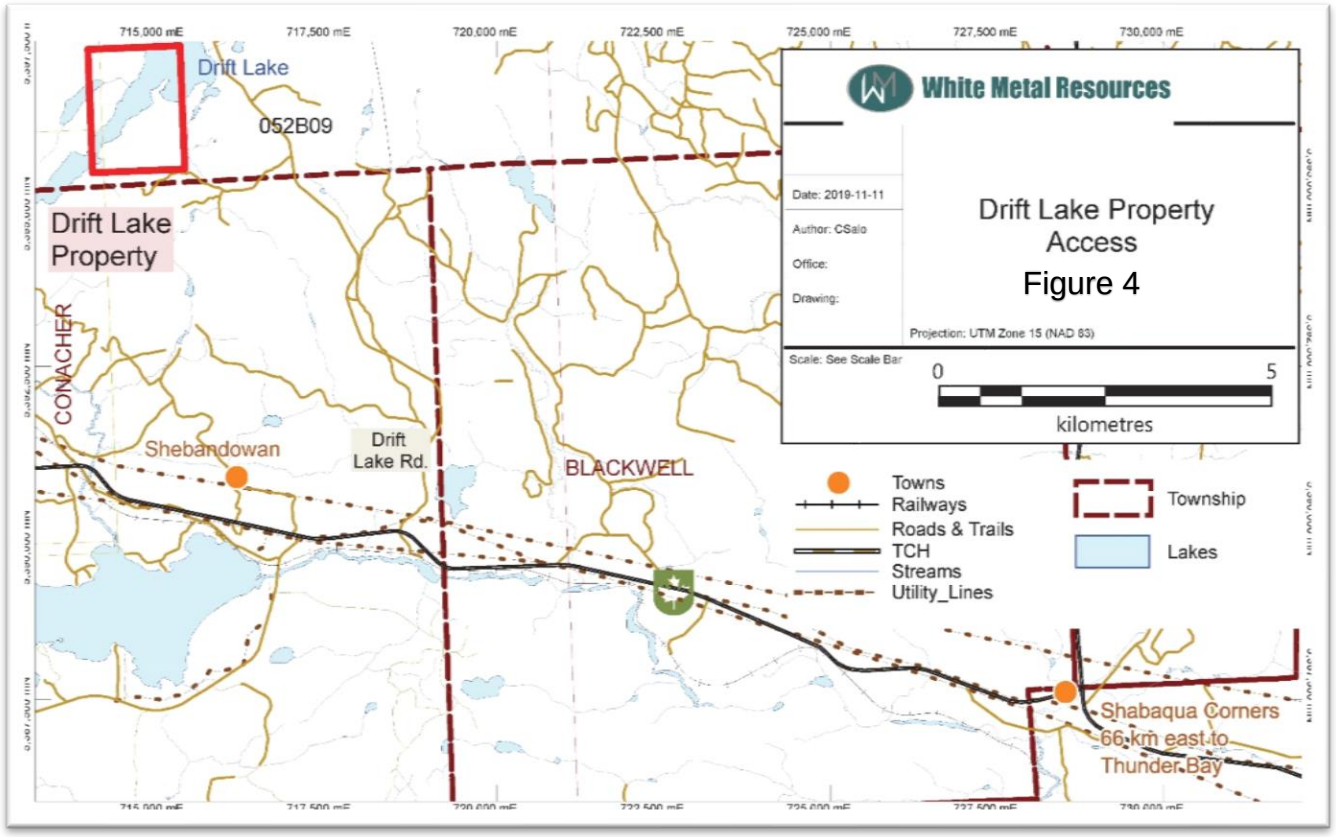


Figure 4: Property Access Map

The property is mainly covered in trees (mostly spruce, with some poplar and alders) with minimal swamps and Drift Lake comprises of about 35% of the property. There are logging roads the SE corner of the property. The area is generally rolling hills. See Figure 5.

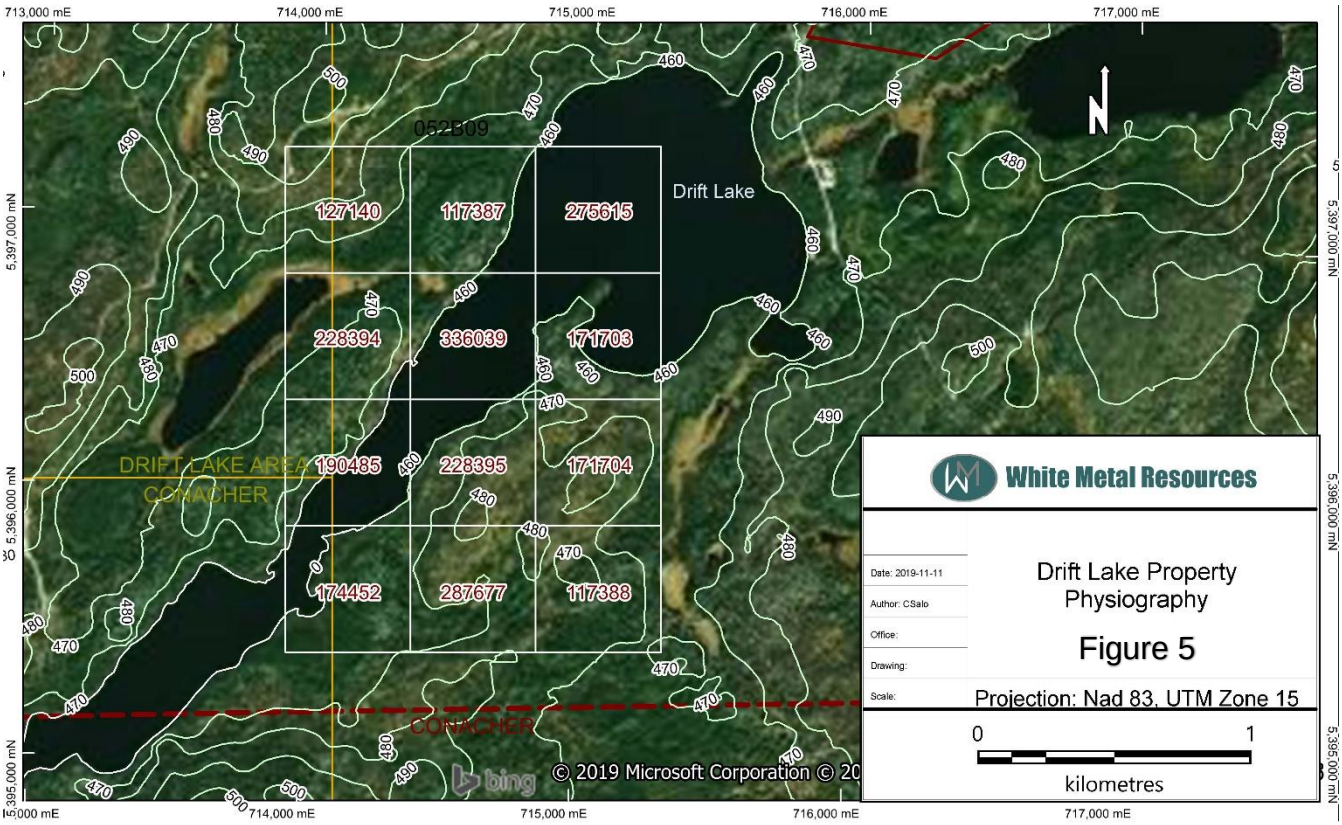


Figure 5: Property Physiography

## 4.0 PREVIOUS EXPLORATION

No Previous assessment work filed on this location.

## 5.0 REGIONAL GEOLOGY

The Drift Lake property is part of the Quetico Belt which extends approximately 970 km across Ontario and parts of Minnesota. The dominant rocks within the belt are schists and gneisses produced by intense metamorphism of greywackes and minor amounts of other sedimentary rocks aged from 2,690 to 2,680 million years. The metamorphism is relatively low-grade on the margins and high-grade in the center. The low-grade components of the greywackes were derived primarily from volcanic rocks; the high-grade rocks are coarser-grained and contain minerals that reflect higher temperatures. The granitic intrusions within the high-grade metasediments were produced by subduction of the ocean crust and partial melting of metasedimentary rocks. Immediately south of Voyageurs National Park and extending to the Vermilion fault is a broad transition zone that contains migmatite

The Quetico gneiss belt represents an accretionary wedge that formed in a trench during the collision of several island arcs (greenstone belts). Boundaries between the gneiss belt and the

flanking greenstone belts to the north and south are major fault zones, the Vermilion and Rainy Lake – Seine River fault zones. **(**LaBerge, Gene L.,1994).

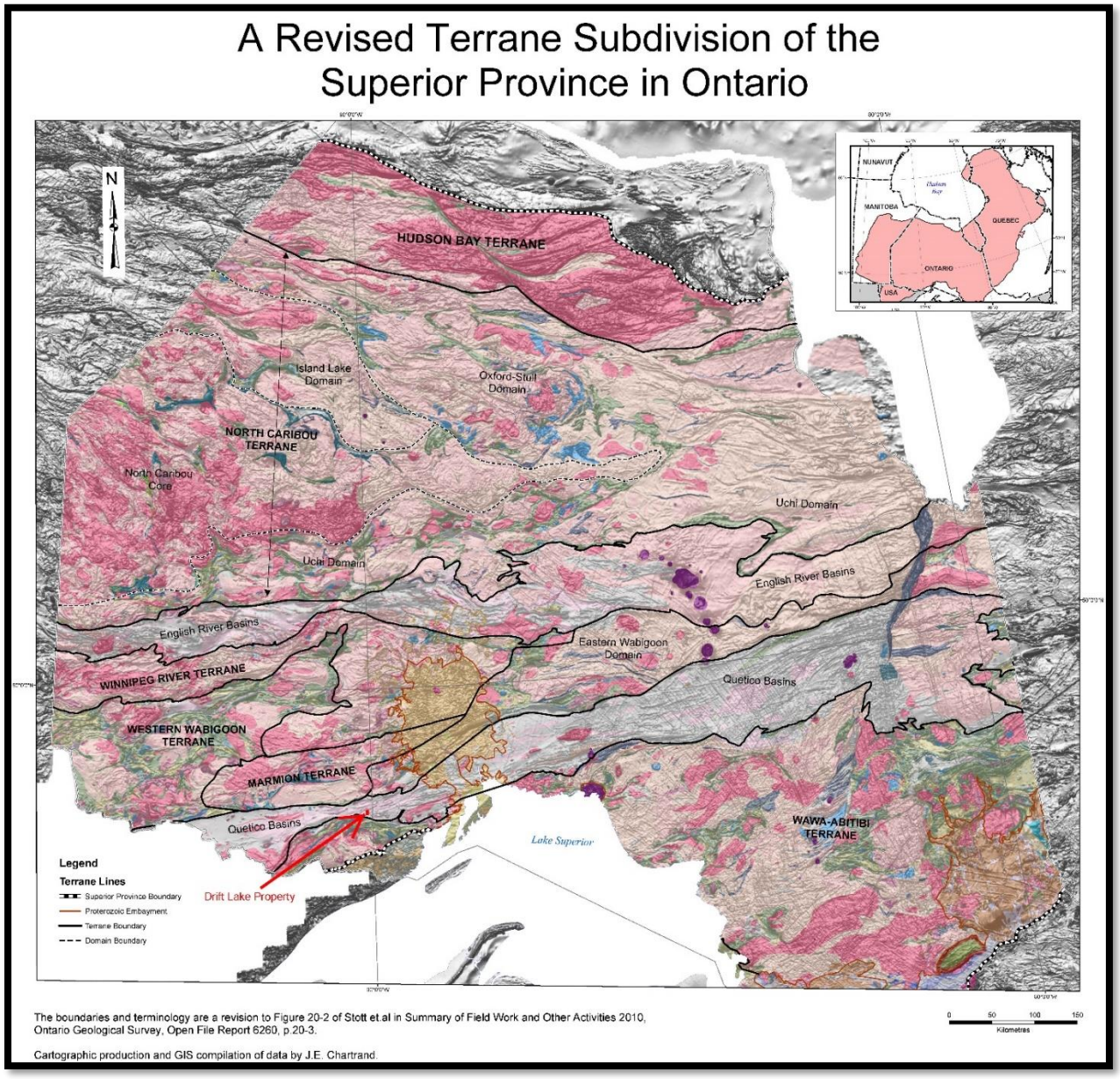


Figure 6: Terrance Subdivision of Superior Province in Ontario

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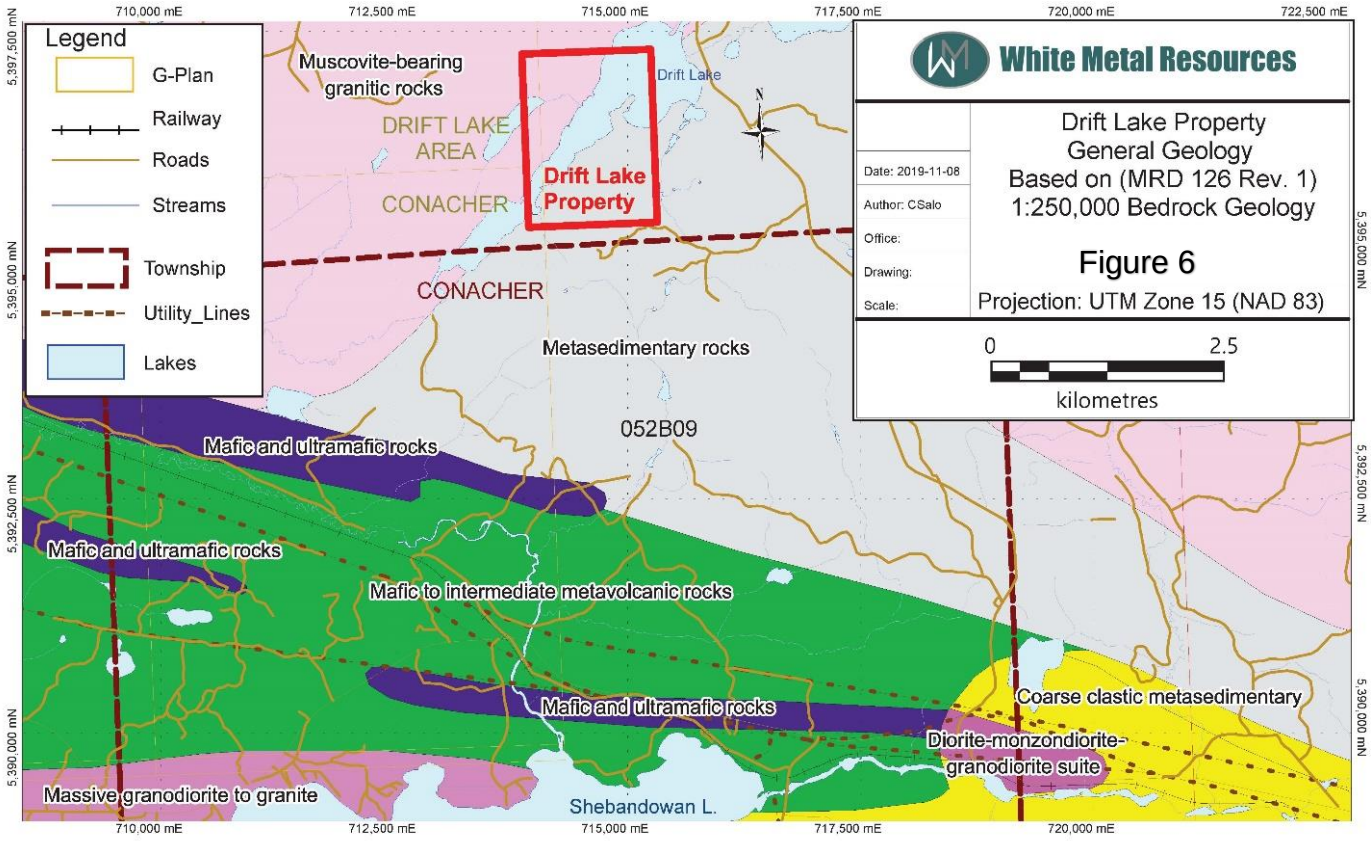


Figure 7: Regional Geology

## 6.0 PROPERTY GEOLOGY

Property was visited during the winter therefore no rock outcrops were observed but based on Map 2267, “Lower Shebandowan Lake outcrops located were mapped as mainly quartz-biotite-feldspar schist north of Drift Lake and mapped as Migmatite south of the lake.

## 7.0 GROUND MAGNETIC AND VLF SURVEY

Ground Magnetic survey was performed covering Drift Lake with a picketed grid totalling 5.5 km and oriented north south. The line spacing was 100m and readings were taken every 12.5m. This was completed over 2 sections with 6 lines in the western section and then 400m to the east the second section has 3 north south lines. This started on February 6, 2018 and took 5 days to complete by Cliff Hickman.

Bob Heilman collected the VLF data during the same period and on the same picketed grid. Readings where then with a 25m coil and 50m coil at 25m spacings. See Map 1 for results.

Below is a description of the equipment used for all the surveys along with specifications.

A Gem Systems GSM-19 over Hauser magnetometer serial no. 7052358 was one of the instruments used for the ground surveys. These units have an accuracy of +/- 1/100th of a gamma. In this phase of work 2.4 km was surveyed taking 194 readings at 12.5 metre intervals. A GSM-19 base station was used to monitor and correct for the diurnal variation during the survey. This instrument reads to 1/10th of a gamma resolution. The base station cycled at 15-second intervals. All survey Results have been gridded using MapInfo by Paul Nielsen and presented in plan form by Cathy Salo at 1:5,000 scale in Nad 83, UTM Zone 15 (Map 1). See appendix C for raw data.

The Crone Radem VLF-EM which was manufactured by Crone Geophysics Ltd. of Mississauga, Ontario was used for the VLF-EM survey. Cutler Maine, transmitting at 24.0 kHz and at an approximate azimuth of 246" from the survey area, was used as the transmitting station. The Crone Radem VLF-EM receiver measures both the total field strength and the dip angle. The VLF-EM uses a frequency range li-cm about 15 lo 3X kllz. whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its I-relatively high frequency. the VLF-EM can detect zones of relatively lower conductivity. This results in it being a useful tool for geologic mapping in areas of overburden but it also often results in detection of weak anomalies that are difficult to explain. However, the VLF-EM can also detect sulfide bodies that have too low a conductivity for other EM methods to pick up. A total of 5.5 kilometres were completed on the grid. Lines were orientated north South with readings being taken every 25 metres and 12.5m. All survey Results have been gridded using MapInfo by Cathy Salo and presented in plan form at 1:5,000 scale in Nad 83, UTM Zone 15 (Map 1). See appendix B for raw data.

## 8.0 RECOMMENDATIONS AND CONCLUSIONS

The VLF cross overs should be followed up by a lake sediment program to determine if any anomalous values of Gold or base metals present. A NE trend has been detected in the southern part of the lake covering a total distance of neary 1.5 km and open in the west and east due to limits of ground Geophysics. A minor magnetic high as also been recorded and in some areas associated with the VLF cross overs.

In the area of the E.M. conductor from OGS Geophysical, Geochemical Series, Map 81581 (See Map 1 for location) there is both a VLF cross over and minor magnetic high. This area should be followed up with a Max Min to confirm and if results are favorable and diamond drill hole should be drilled.

## 9.0 REFERENCES

**LaBerge, Gene L** (1994). *Geology of the Lake Superior Region*. Geoscience Press, Inc.

***Stott, G.M.*** (1973): Ontario Geological Survey Map M 2267, Lower Shebandowan Lake, Thunder Bay District.

**W.0. MACKASEY, C.E. BLACKBUR N AND N. F. TROWELL** (1974); A Regional Approach to The Wabigoon-Quetico Belsts and Its Bearing on Exploration In Northwestern Ontario, Miscellaneous Paper 58

1991, OGS, Total Intensity Magnetic Survey Airborne, Electromagnetic Survey, Shebandowan Area, Map 81581, Scale 1:20,000

## 10.0 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 practised my profession in Ontario since 1989 and have been employed directing by Ontario mining exploration companies for the last 17 years as the sole proprietary of Salo Geoscience Services.

Cathy Salo
Salo Geoscience Services
Date: November 20, 201

## Appendix A – List of Personnel

| Employee/Contractor | Activities |
|---|---|
| Michael Stares | Compilation maps preparation for survey |
| Hickman Prospecting Services (Cliff Hickman) | Picket grid, and ground magnetics |
| Paul Nielsen<br>(Paul Nielsen P.Geo Consulting) | Geophysics data |
| Bob Heilman | Picket Grid, VLF ground geophysics |
| Cathy Salo (Salo Geoscience) | GIS Compilation & Report |
| | |

Appendix B

Raw VLF Data

Appendix B

| UTME | UTMN | LINE | STATION | READING |
|---|---|---|---|---|
| 714161 | 5396126 | 9900 | 9675 | -28 |
| 714161 | 5396102 | 9900 | 9650 | -28 |
| 714160 | 5396077 | 9900 | 9625 | -26 |
| 714160 | 5396052 | 9900 | 9600 | -20 |
| 714160 | 5396027 | 9900 | 9575 | -10 |
| 714160 | 5396002 | 9900 | 9550 | -8 |
| 714160 | 5395977 | 9900 | 9525 | -4 |
| 714160 | 5395952 | 9900 | 9500 | 0 |
| 714159 | 5395927 | 9900 | 9475 | 0 |
| 714159 | 5395902 | 9900 | 9450 | 6 |
| 714159 | 5395877 | 9900 | 9425 | 6 |
| 714261 | 5396275 | 10000 | 9825 | -20 |
| 714261 | 5396250 | 10000 | 9800 | -26 |
| 714261 | 5396225 | 10000 | 9775 | -24 |
| 714261 | 5396200 | 10000 | 9750 | -24 |
| 714261 | 5396176 | 10000 | 9725 | -24 |
| 714260 | 5396151 | 10000 | 9700 | -20 |
| 714260 | 5396126 | 10000 | 9675 | -20 |
| 714260 | 5396101 | 10000 | 9650 | -14 |
| 714260 | 5396076 | 10000 | 9625 | -10 |
| 714260 | 5396051 | 10000 | 9600 | -6 |
| 714260 | 5396026 | 10000 | 9575 | -6 |
| 714259 | 5396001 | 10000 | 9550 | 10 |
| 714259 | 5395976 | 10000 | 9525 | 10 |
| 714259 | 5395952 | 10000 | 9500 | 10 |
| 714259 | 5395927 | 10000 | 9475 | -4 |
| 714362 | 5396499 | 10100 | 10050 | -6 |
| 714362 | 5396474 | 10100 | 10025 | -6 |
| 714362 | 5396449 | 10100 | 10000 | -6 |
| 714362 | 5396424 | 10100 | 9975 | -6 |
| 714362 | 5396399 | 10100 | 9950 | -10 |
| 714361 | 5396374 | 10100 | 9925 | -10 |
| 714361 | 5396349 | 10100 | 9900 | -12 |
| 714361 | 5396324 | 10100 | 9875 | -16 |
| 714361 | 5396299 | 10100 | 9850 | -16 |
| 714361 | 5396275 | 10100 | 9825 | -10 |
| 714361 | 5396250 | 10100 | 9800 | -10 |
| 714360 | 5396225 | 10100 | 9775 | -10 |
| 714360 | 5396200 | 10100 | 9750 | -10 |
| 714360 | 5396175 | 10100 | 9725 | -10 |
| 714360 | 5396150 | 10100 | 9700 | -4 |
| 714360 | 5396125 | 10100 | 9675 | -2 |
| 714360 | 5396100 | 10100 | 9650 | -4 |
| 714360 | 5396075 | 10100 | 9625 | -4 |
| 714359 | 5396050 | 10100 | 9600 | -4 |
| 714359 | 5396026 | 10100 | 9575 | -4 |
| 714359 | 5396001 | 10100 | 9550 | -6 |
| 714463 | 5396647 | 10200 | 10200 | 2 |
| 714463 | 5396622 | 10200 | 10175 | 0 |
| 714462 | 5396598 | 10200 | 10150 | 0 |

Appendix B

| UTME | UTMN | LINE | STATION | READING |
|---|---|---|---|---|
| 714462 | 5396573 | 10200 | 10125 | 2 |
| 714462 | 5396548 | 10200 | 10100 | 4 |
| 714462 | 5396523 | 10200 | 10075 | 4 |
| 714462 | 5396498 | 10200 | 10050 | 4 |
| 714462 | 5396473 | 10200 | 10025 | 6 |
| 714462 | 5396448 | 10200 | 10000 | 6 |
| 714461 | 5396423 | 10200 | 9975 | 4 |
| 714461 | 5396398 | 10200 | 9950 | 8 |
| 714461 | 5396373 | 10200 | 9925 | 8 |
| 714461 | 5396349 | 10200 | 9900 | 8 |
| 714461 | 5396324 | 10200 | 9875 | 10 |
| 714461 | 5396299 | 10200 | 9850 | 14 |
| 714460 | 5396274 | 10200 | 9825 | 14 |
| 714460 | 5396249 | 10200 | 9800 | 14 |
| 714460 | 5396224 | 10200 | 9775 | 14 |
| 714460 | 5396199 | 10200 | 9750 | 20 |
| 714563 | 5396771 | 10300 | 10325 | -14 |
| 714563 | 5396746 | 10300 | 10300 | -16 |
| 714563 | 5396721 | 10300 | 10275 | -16 |
| 714563 | 5396697 | 10300 | 10250 | -12 |
| 714563 | 5396672 | 10300 | 10225 | -12 |
| 714562 | 5396647 | 10300 | 10200 | -14 |
| 714562 | 5396622 | 10300 | 10175 | -14 |
| 714562 | 5396597 | 10300 | 10150 | -10 |
| 714562 | 5396572 | 10300 | 10125 | -8 |
| 714562 | 5396547 | 10300 | 10100 | -6 |
| 714562 | 5396522 | 10300 | 10075 | -4 |
| 714561 | 5396497 | 10300 | 10050 | -6 |
| 714561 | 5396472 | 10300 | 10025 | -6 |
| 714561 | 5396448 | 10300 | 10000 | -6 |
| 714561 | 5396423 | 10300 | 9975 | -6 |
| 714561 | 5396398 | 10300 | 9950 | -6 |
| 714561 | 5396373 | 10300 | 9925 | 16 |
| 714560 | 5396348 | 10300 | 9900 | 16 |
| 714560 | 5396323 | 10300 | 9875 | 16 |
| 714560 | 5396298 | 10300 | 9850 | 16 |
| 714560 | 5396273 | 10300 | 9825 | 20 |
| 714664 | 5396895 | 10400 | 10450 | -20 |
| 714663 | 5396870 | 10400 | 10425 | -20 |
| 714663 | 5396845 | 10400 | 10400 | -20 |
| 714663 | 5396820 | 10400 | 10375 | -18 |
| 714663 | 5396795 | 10400 | 10350 | -16 |
| 714663 | 5396771 | 10400 | 10325 | -14 |
| 714663 | 5396746 | 10400 | 10300 | -16 |
| 714662 | 5396721 | 10400 | 10275 | -14 |
| 714662 | 5396696 | 10400 | 10250 | -14 |
| 714662 | 5396671 | 10400 | 10225 | -10 |
| 714662 | 5396646 | 10400 | 10200 | -10 |
| 714662 | 5396621 | 10400 | 10175 | -10 |
| 714662 | 5396596 | 10400 | 10150 | -10 |

Appendix B

| UTME | UTMN | LINE | STATION | READING |
|---|---|---|---|---|
| 714662 | 5396571 | 10400 | 10125 | -12 |
| 714661 | 5396546 | 10400 | 10100 | -10 |
| 714661 | 5396522 | 10400 | 10075 | -10 |
| 714661 | 5396497 | 10400 | 10050 | -8 |
| 714661 | 5396472 | 10400 | 10025 | -8 |
| 714661 | 5396447 | 10400 | 10000 | -4 |
| 714661 | 5396422 | 10400 | 9975 | 12 |
| 714660 | 5396397 | 10400 | 9950 | 20 |
| 714660 | 5396372 | 10400 | 9925 | -22 |
| 714660 | 5396347 | 10400 | 9900 | -24 |

Appendix C

Raw Magnetic Data

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 9900 | 9675 | 56440.77 | 56434.13 |
| 9900 | 9662.5 | 56282.45 | 56276.03 |
| 9900 | 9650 | 56254.6 | 56248.31 |
| 9900 | 9637.5 | 56278.17 | 56271.2 |
| 9900 | 9625 | 56302.54 | 56296.44 |
| 9900 | 9612.5 | 56316.95 | 56310.39 |
| 9900 | 9600 | 56323.6 | 56316.93 |
| 9900 | 9587.5 | 56341 | 56334.82 |
| 9900 | 9575 | 56327.98 | 56321.79 |
| 9900 | 9562.5 | 56358.21 | 56351.89 |
| 9900 | 9550 | 56359.31 | 56353.06 |
| 9900 | 9537.5 | 56353.69 | 56347.2 |
| 9900 | 9525 | 56345.48 | 56338.87 |
| 9900 | 9512.5 | 56331.41 | 56324.99 |
| 9900 | 9500 | 56318.67 | 56312.42 |
| 9900 | 9487.5 | 56299.25 | 56292.68 |
| 9900 | 9475 | 56284.32 | 56277.39 |
| 9900 | 9462.5 | 56288.05 | 56281.37 |
| 9900 | 9450 | 56295.11 | 56288.7 |
| 9900 | 9437.5 | 56298.92 | 56292.51 |
| 9900 | 9425 | 56313.67 | 56307.11 |
| 9900 | 9412.5 | 56292.88 | 56286.04 |
| 10000 | 9462.5 | 56229.68 | 56223.33 |
| 10000 | 9475 | 56282.07 | 56275.71 |
| 10000 | 9487.5 | 56263.43 | 56257.45 |
| 10000 | 9500 | 56267.1 | 56261.1 |
| 10000 | 9512.5 | 56291.77 | 56285.6 |
| 10000 | 9525 | 56308.64 | 56302.35 |
| 10000 | 9537.5 | 56312.88 | 56306.57 |
| 10000 | 9550 | 56311.2 | 56305.04 |
| 10000 | 9562.5 | 56311.39 | 56305.38 |
| 10000 | 9575 | 56317.38 | 56311.31 |
| 10000 | 9587.5 | 56332.13 | 56325.86 |
| 10000 | 9600 | 56342.86 | 56336.52 |
| 10000 | 9612.5 | 56350.66 | 56344.3 |
| 10000 | 9625 | 56365.95 | 56359.88 |
| 10000 | 9637.5 | 56386.19 | 56379.98 |
| 10000 | 9650 | 56401.63 | 56395.39 |
| 10000 | 9662.5 | 56413.06 | 56406.67 |
| 10000 | 9675 | 56409.09 | 56402.61 |
| 10000 | 9687.5 | 56393.88 | 56387.57 |
| 10000 | 9700 | 56383.2 | 56376.95 |
| 10000 | 9712.5 | 56366.74 | 56360.43 |
| 10000 | 9725 | 56351.51 | 56345.26 |
| 10000 | 9737.5 | 56336.25 | 56329.96 |
| 10000 | 9750 | 56320.97 | 56314.65 |
| 10000 | 9762.5 | 56299.3 | 56293.08 |
| 10000 | 9775 | 56278.57 | 56272.41 |
| 10000 | 9787.5 | 56271.6 | 56265.36 |
| 10000 | 9800 | 56289.23 | 56282.96 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10000 | 9812.5 | 56224.7 | 56218.44 |
| 10000 | 9825 | 56169.99 | 56163.68 |
| 10100 | 10050 | 56457.99 | 56451.99 |
| 10100 | 10037.5 | 56227.79 | 56221.86 |
| 10100 | 10050 | 56454.48 | 56448.56 |
| 10100 | 10037.5 | 56233.88 | 56228.01 |
| 10100 | 10025 | 56338.05 | 56331.87 |
| 10100 | 10012.5 | 56358.02 | 56352.08 |
| 10100 | 10000 | 56364.88 | 56359.04 |
| 10100 | 9987.5 | 56344.12 | 56338.16 |
| 10100 | 9975 | 56318.07 | 56312.28 |
| 10100 | 9962.5 | 56290.48 | 56284.78 |
| 10100 | 9950 | 56271.91 | 56265.95 |
| 10100 | 9937.5 | 56254.22 | 56248.32 |
| 10100 | 9925 | 56245.05 | 56239.32 |
| 10100 | 9912.5 | 56243.14 | 56237.49 |
| 10100 | 9900 | 56248.62 | 56242.98 |
| 10100 | 9887.5 | 56259.34 | 56253.42 |
| 10100 | 9875 | 56261.42 | 56255.4 |
| 10100 | 9862.5 | 56265.89 | 56259.6 |
| 10100 | 9850 | 56272.07 | 56265.67 |
| 10100 | 9837.5 | 56283.19 | 56276.83 |
| 10100 | 9825 | 56297.79 | 56291.22 |
| 10100 | 9812.5 | 56320.78 | 56314.2 |
| 10100 | 9800 | 56337.13 | 56330.42 |
| 10100 | 9787.5 | 56354.59 | 56348.03 |
| 10100 | 9775 | 56362.53 | 56356.02 |
| 10100 | 9762.5 | 56362.91 | 56356.51 |
| 10100 | 9750 | 56359.4 | 56353.03 |
| 10100 | 9737.5 | 56355.25 | 56348.89 |
| 10100 | 9725 | 56351.78 | 56345.37 |
| 10100 | 9712.5 | 56347.51 | 56340.98 |
| 10100 | 9700 | 56346.22 | 56339.73 |
| 10100 | 9687.5 | 56350.24 | 56343.65 |
| 10100 | 9675 | 56358.3 | 56351.79 |
| 10100 | 9662.5 | 56357.12 | 56350.44 |
| 10100 | 9650 | 56368.02 | 56361.24 |
| 10100 | 9637.5 | 56404.31 | 56397.73 |
| 10100 | 9625 | 56395.13 | 56388.46 |
| 10100 | 9612.5 | 56404.26 | 56397.72 |
| 10100 | 9600 | 56365.29 | 56358.47 |
| 10100 | 9587.5 | 56351.1 | 56344.33 |
| 10100 | 9575 | 56350.73 | 56343.89 |
| 10100 | 9562.5 | 56306.31 | 56299.25 |
| 10100 | 9550 | 56507.19 | 56500 |
| 10100 | 9537.5 | 56382.72 | 56375.51 |
| 10200 | 9750 | 56436 | 56427.74 |
| 10200 | 9762.5 | 56415.72 | 56407.48 |
| 10200 | 9775 | 56412.7 | 56404.7 |
| 10200 | 9787.5 | 56403.43 | 56395.19 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10200 | 9800 | 56391.54 | 56383.32 |
| 10200 | 9812.5 | 56377.91 | 56369.77 |
| 10200 | 9825 | 56363.69 | 56355.65 |
| 10200 | 9837.5 | 56350.61 | 56342.61 |
| 10200 | 9850 | 56332.19 | 56324.2 |
| 10200 | 9862.5 | 56316.7 | 56308.69 |
| 10200 | 9875 | 56289.57 | 56281.61 |
| 10200 | 9887.5 | 56291.67 | 56283.86 |
| 10200 | 9900 | 56281.09 | 56273.01 |
| 10200 | 9912.5 | 56277.18 | 56269.02 |
| 10200 | 9925 | 56277.26 | 56269.18 |
| 10200 | 9937.5 | 56280.04 | 56271.68 |
| 10200 | 9950 | 56282.92 | 56274.32 |
| 10200 | 9962.5 | 56286.79 | 56278.07 |
| 10200 | 9975 | 56295.1 | 56286.27 |
| 10200 | 9987.5 | 56305.72 | 56296.91 |
| 10200 | 10000 | 56320.03 | 56311.15 |
| 10200 | 10012.5 | 56332.93 | 56324.04 |
| 10200 | 10025 | 56339.63 | 56330.67 |
| 10200 | 10037.5 | 56340.79 | 56331.82 |
| 10200 | 10050 | 56338.47 | 56329.62 |
| 10200 | 10062.5 | 56339.48 | 56330.51 |
| 10200 | 10075 | 56339.62 | 56330.89 |
| 10200 | 10087.5 | 56331.78 | 56322.97 |
| 10200 | 10100 | 56323.58 | 56314.63 |
| 10200 | 10112.5 | 56326.8 | 56317.62 |
| 10200 | 10125 | 56334.92 | 56325.58 |
| 10200 | 10137.5 | 56340.58 | 56331.1 |
| 10200 | 10150 | 56335.72 | 56326.29 |
| 10200 | 10162.5 | 56323.93 | 56314.15 |
| 10200 | 10175 | 56350.86 | 56341.13 |
| 10200 | 10187.5 | 56437.66 | 56428.11 |
| 10200 | 10200 | 56332.36 | 56322.79 |
| 10200 | 10212.5 | 55713.16 | 55703.44 |
| 10300 | 10325 | 56349.7 | 56343.73 |
| 10300 | 10312.5 | 56324.19 | 56318.24 |
| 10300 | 10300 | 56290.21 | 56284.3 |
| 10300 | 10287.5 | 56223.93 | 56218.17 |
| 10300 | 10275 | 56314.3 | 56308.69 |
| 10300 | 10262.5 | 56319.06 | 56313.27 |
| 10300 | 10250 | 56312.46 | 56306.69 |
| 10300 | 10237.5 | 56325.02 | 56319.28 |
| 10300 | 10225 | 56298.77 | 56292.91 |
| 10300 | 10212.5 | 56331.95 | 56326.12 |
| 10300 | 10200 | 56327.78 | 56322.34 |
| 10300 | 10187.5 | 56330.59 | 56325.18 |
| 10300 | 10175 | 56333.71 | 56328.27 |
| 10300 | 10162.5 | 56334.87 | 56329.5 |
| 10300 | 10150 | 56329.87 | 56324.24 |
| 10300 | 10137.5 | 56316.07 | 56310.41 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10300 | 10125 | 56303.67 | 56297.85 |
| 10300 | 10112.5 | 56291.06 | 56285.37 |
| 10300 | 10100 | 56283.26 | 56277.69 |
| 10300 | 10087.5 | 56281.76 | 56276.5 |
| 10300 | 10075 | 56286.73 | 56281.6 |
| 10300 | 10062.5 | 56293.46 | 56288.53 |
| 10300 | 10050 | 56302.45 | 56297.46 |
| 10300 | 10037.5 | 56313.11 | 56308.09 |
| 10300 | 10025 | 56316.68 | 56311.55 |
| 10300 | 10012.5 | 56315.14 | 56309.93 |
| 10300 | 10000 | 56315.12 | 56309.91 |
| 10300 | 9987.5 | 56328.92 | 56323.74 |
| 10300 | 9975 | 56327.69 | 56322.57 |
| 10300 | 9962.5 | 56331.99 | 56326.96 |
| 10300 | 9950 | 56340.7 | 56335.59 |
| 10300 | 9937.5 | 56358.61 | 56353.5 |
| 10300 | 9925 | 56369.11 | 56363.99 |
| 10300 | 9912.5 | 56381.91 | 56376.72 |
| 10300 | 9900 | 56394.28 | 56389.13 |
| 10300 | 9887.5 | 56401.31 | 56396.13 |
| 10300 | 9875 | 56403.27 | 56398.03 |
| 10300 | 9862.5 | 56423 | 56417.88 |
| 10300 | 9850 | 56441.13 | 56436.28 |
| 10300 | 9837.5 | 56428.31 | 56423.62 |
| 10300 | 9825 | 56432.4 | 56427.88 |
| 10300 | 9812.5 | 56419.83 | 56415.24 |
| 10400 | 9875 | 56335.37 | 56330.59 |
| 10400 | 9887.5 | 56381.92 | 56377.35 |
| 10400 | 9900 | 56363.31 | 56358.68 |
| 10400 | 9912.5 | 56351.16 | 56346.58 |
| 10400 | 9925 | 56331.8 | 56327.27 |
| 10400 | 9937.5 | 56322.19 | 56317.86 |
| 10400 | 9950 | 56318.5 | 56314.05 |
| 10400 | 9962.5 | 56322.39 | 56317.95 |
| 10400 | 9975 | 56329.01 | 56324.4 |
| 10400 | 9987.5 | 56339.45 | 56334.86 |
| 10400 | 10000 | 56359.81 | 56355.06 |
| 10400 | 10012.5 | 56367.09 | 56362.56 |
| 10400 | 10025 | 56370.75 | 56365.83 |
| 10400 | 10037.5 | 56349.25 | 56344.4 |
| 10400 | 10050 | 56324.23 | 56319.26 |
| 10400 | 10062.5 | 56301.66 | 56297.12 |
| 10400 | 10075 | 56283.74 | 56279.46 |
| 10400 | 10087.5 | 56276.67 | 56272.29 |
| 10400 | 10100 | 56268.22 | 56263.63 |
| 10400 | 10112.5 | 56260.65 | 56256.02 |
| 10400 | 10125 | 56254.31 | 56249.65 |
| 10400 | 10137.5 | 56246.01 | 56241.43 |
| 10400 | 10150 | 56241.75 | 56237.14 |
| 10400 | 10162.5 | 56243.02 | 56238.44 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10400 | 10175 | 56251.66 | 56246.89 |
| 10400 | 10187.5 | 56266.41 | 56261.47 |
| 10400 | 10200 | 56276.4 | 56271.39 |
| 10400 | 10212.5 | 56283.43 | 56278.51 |
| 10400 | 10225 | 56283.1 | 56278.27 |
| 10400 | 10237.5 | 56279.69 | 56274.89 |
| 10400 | 10250 | 56278.86 | 56273.89 |
| 10400 | 10262.5 | 56282.76 | 56277.74 |
| 10400 | 10275 | 56288.87 | 56283.8 |
| 10400 | 10287.5 | 56295.56 | 56290.45 |
| 10400 | 10300 | 56300.72 | 56295.35 |
| 10400 | 10312.5 | 56076.7 | 56071.93 |
| 10400 | 10325 | 56298.67 | 56293.69 |
| 10400 | 10337.5 | 56298.48 | 56293.31 |
| 10400 | 10350 | 56305.37 | 56300.02 |
| 10400 | 10362.5 | 56307.1 | 56301.89 |
| 10400 | 10375 | 56313.08 | 56307.24 |
| 10400 | 10387.5 | 56310.88 | 56305.21 |
| 10400 | 10400 | 56309.36 | 56304.04 |
| 10400 | 10412.5 | 56303.45 | 56297.92 |
| 10400 | 10425 | 56307.02 | 56301.69 |
| 10400 | 10437.5 | 56306.21 | 56300.85 |
| 10400 | 10450 | 56278.38 | 56273.17 |
| 10400 | 10462.5 | 56246.64 | 56241.35 |
| 10800 | 10375 | 56432.22 | 56425.78 |
| 10800 | 10387.5 | 56479.04 | 56472.86 |
| 10800 | 10400 | 56439.57 | 56433.09 |
| 10800 | 10412.5 | 56405.32 | 56399.12 |
| 10800 | 10425 | 56373.39 | 56367.12 |
| 10800 | 10437.5 | 56341.54 | 56335.13 |
| 10800 | 10450 | 56333.4 | 56327.25 |
| 10800 | 10462.5 | 56327.22 | 56320.98 |
| 10800 | 10475 | 56321.49 | 56315.19 |
| 10800 | 10487.5 | 56319.83 | 56313.38 |
| 10800 | 10500 | 56324.04 | 56318.14 |
| 10800 | 10512.5 | 56331.7 | 56325.59 |
| 10800 | 10525 | 56334.5 | 56328.59 |
| 10800 | 10537.5 | 56339.65 | 56333.29 |
| 10800 | 10550 | 56341.92 | 56335.44 |
| 10800 | 10562.5 | 56341.19 | 56334.61 |
| 10800 | 10575 | 56339.35 | 56332.69 |
| 10800 | 10587.5 | 56335.38 | 56329.34 |
| 10800 | 10600 | 56323.23 | 56316.89 |
| 10800 | 10612.5 | 56312.47 | 56305.81 |
| 10800 | 10625 | 56302.79 | 56296.14 |
| 10800 | 10637.5 | 56294.89 | 56287.92 |
| 10800 | 10650 | 56287.66 | 56280.75 |
| 10800 | 10662.5 | 56283.65 | 56276.78 |
| 10800 | 10675 | 56282.76 | 56276.16 |
| 10800 | 10687.5 | 56284.6 | 56277.88 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10800 | 10700 | 56282.33 | 56275.86 |
| 10800 | 10712.5 | 56274.35 | 56267.97 |
| 10800 | 10725 | 56268.56 | 56262.19 |
| 10800 | 10737.5 | 56266.54 | 56260 |
| 10800 | 10750 | 56266.57 | 56259.93 |
| 10800 | 10762.5 | 56269.81 | 56263.44 |
| 10800 | 10775 | 56275.48 | 56268.79 |
| 10800 | 10787.5 | 56280.53 | 56274.17 |
| 10800 | 10800 | 56285.14 | 56278.74 |
| 10800 | 10812.5 | 56285.52 | 56278.96 |
| 10800 | 10825 | 56288.29 | 56281.84 |
| 10800 | 10837.5 | 56293.04 | 56286.54 |
| 10800 | 10850 | 56298.71 | 56292.41 |
| 10800 | 10862.5 | 56300.84 | 56294.63 |
| 10800 | 10875 | 56296.44 | 56290.29 |
| 10800 | 10887.5 | 56288.91 | 56282.5 |
| 10800 | 10900 | 56280.98 | 56274.3 |
| 10800 | 10912.5 | 56275.39 | 56269.04 |
| 10800 | 10925 | 56275.63 | 56268.81 |
| 10800 | 10937.5 | 56278.75 | 56272.35 |
| 10800 | 10950 | 56281.49 | 56274.9 |
| 10800 | 10962.5 | 56274.49 | 56267.57 |
| 10800 | 10975 | 56263.99 | 56257.34 |
| 10800 | 10987.5 | 56243.59 | 56236.71 |
| 10800 | 11000 | 56234.73 | 56227.86 |
| 10800 | 11012.5 | 56240.77 | 56234.07 |
| 10800 | 11025 | 56239.59 | 56232.82 |
| 10800 | 11037.5 | 56235.8 | 56229.2 |
| 10800 | 11050 | 56237.93 | 56231.22 |
| 10800 | 11062.5 | 56250.52 | 56244.07 |
| 10800 | 11075 | 56266.06 | 56259.78 |
| 10800 | 11087.5 | 56205.71 | 56199.36 |
| 10800 | 11100 | 56032.84 | 56026.46 |
| 10900 | 11150 | 55967.88 | 55961.53 |
| 10900 | 11137.5 | 56135.23 | 56128.91 |
| 10900 | 11125 | 56256.05 | 56250.04 |
| 10900 | 11112.5 | 56283.67 | 56277.66 |
| 10900 | 11100 | 56265.39 | 56259.19 |
| 10900 | 11087.5 | 56270.63 | 56264.4 |
| 10900 | 11075 | 56287.92 | 56281.89 |
| 10900 | 11062.5 | 56282.4 | 56276.48 |
| 10900 | 11050 | 56279.45 | 56273.42 |
| 10900 | 11037.5 | 56283.96 | 56277.76 |
| 10900 | 11025 | 56283.31 | 56276.9 |
| 10900 | 11012.5 | 56278.39 | 56272.05 |
| 10900 | 11000 | 56270.53 | 56264.05 |
| 10900 | 10987.5 | 56261.49 | 56254.66 |
| 10900 | 10975 | 56257.67 | 56250.99 |
| 10900 | 10962.5 | 56255.09 | 56248.46 |
| 10900 | 10950 | 56257.69 | 56251.16 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10900 | 10937.5 | 56266.65 | 56260.05 |
| 10900 | 10925 | 56271.73 | 56265.13 |
| 10900 | 10912.5 | 56274.81 | 56267.76 |
| 10900 | 10900 | 56273.45 | 56266.39 |
| 10900 | 10887.5 | 56270.42 | 56263.43 |
| 10900 | 10875 | 56260.81 | 56254.08 |
| 10900 | 10862.5 | 56260.95 | 56254.2 |
| 10900 | 10850 | 56262.86 | 56256.09 |
| 10900 | 10837.5 | 56264.56 | 56257.93 |
| 10900 | 10825 | 56263.29 | 56256.64 |
| 10900 | 10812.5 | 56259.94 | 56253.13 |
| 10900 | 10800 | 56258.12 | 56251.22 |
| 10900 | 10787.5 | 56256.87 | 56249.77 |
| 10900 | 10775 | 56258.95 | 56251.33 |
| 10900 | 10762.5 | 56261.52 | 56253.71 |
| 10900 | 10750 | 56262.56 | 56254.77 |
| 10900 | 10737.5 | 55491.55 | 55483.73 |
| 10900 | 10725 | 56263.88 | 56256.25 |
| 10900 | 10712.5 | 56267.35 | 56259.04 |
| 10900 | 10700 | 56274.08 | 56265.81 |
| 10900 | 10687.5 | 56290.37 | 56282.16 |
| 10900 | 10675 | 56302.47 | 56294.3 |
| 10900 | 10662.5 | 56314.43 | 56306.45 |
| 10900 | 10650 | 56321.65 | 56313.67 |
| 10900 | 10637.5 | 56330.6 | 56322.56 |
| 10900 | 10625 | 56337.62 | 56329.55 |
| 10900 | 10612.5 | 56346.8 | 56338.79 |
| 10900 | 10600 | 56357.33 | 56349.49 |
| 10900 | 10587.5 | 56366.15 | 56358.22 |
| 10900 | 10575 | 56371.93 | 56364.07 |
| 10900 | 10562.5 | 56376.41 | 56368.44 |
| 10900 | 10550 | 56381.19 | 56373.08 |
| 10900 | 10537.5 | 56387.76 | 56379.55 |
| 10900 | 10525 | 56395.25 | 56386.96 |
| 10900 | 10512.5 | 56407.07 | 56398.73 |
| 10900 | 10500 | 56414.05 | 56405.67 |
| 10900 | 10487.5 | 56416.7 | 56408.57 |
| 10900 | 10475 | 56405.14 | 56396.98 |
| 10900 | 10462.5 | 56399.25 | 56390.97 |
| 10900 | 10450 | 56386.7 | 56378.48 |
| 10900 | 10437.5 | 56377.72 | 56369.55 |
| 10900 | 10425 | 56366.32 | 56358.11 |
| 10900 | 10412.5 | 56337.99 | 56329.89 |
| 10900 | 10400 | 56325.4 | 56317.46 |
| 10900 | 10387.5 | 56316.69 | 56308.56 |
| 10900 | 10375 | 56305.47 | 56297.51 |
| 10900 | 10362.5 | 56294.78 | 56286.52 |
| 10900 | 10350 | 56281.34 | 56273.06 |
| 10900 | 10337.5 | 56270.58 | 56262.36 |
| 10900 | 10325 | 56274.21 | 56265.66 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 10900 | 10312.5 | 56276.98 | 56268.09 |
| 10900 | 10300 | 56269.15 | 56260.11 |
| 10900 | 10287.5 | 56263.28 | 56254.41 |
| 10900 | 10275 | 56260.23 | 56251.1 |
| 10900 | 10262.5 | 56266.27 | 56257.08 |
| 10900 | 10250 | 56273.76 | 56264.54 |
| 10900 | 10237.5 | 56284.73 | 56275.79 |
| 10900 | 10225 | 56291.98 | 56282.45 |
| 10900 | 10212.5 | 56288.31 | 56278.59 |
| 10900 | 10200 | 56277.68 | 56267.46 |
| 10900 | 10187.5 | 56269.02 | 56258.95 |
| 10900 | 10175 | 56267.4 | 56257.3 |
| 10900 | 10162.5 | 56266.18 | 56255.93 |
| 10900 | 10150 | 56265.83 | 56255.71 |
| 10900 | 10137.5 | 56265.8 | 56255.71 |
| 10900 | 10125 | 56265.21 | 56254.96 |
| 10900 | 10112.5 | 56265 | 56254.74 |
| 10900 | 10100 | 56268.81 | 56258.47 |
| 10900 | 10087.5 | 56274.42 | 56264.23 |
| 10900 | 10075 | 56259.11 | 56248.73 |
| 10900 | 10062.5 | 56251.53 | 56241.2 |
| 10900 | 10050 | 56248.59 | 56238.32 |
| 10900 | 10037.5 | 56211.1 | 56200.89 |
| 11000 | 10037.5 | 56279.84 | 56268.83 |
| 11000 | 10050 | 56262.12 | 56251.26 |
| 11000 | 10062.5 | 56296.72 | 56285.58 |
| 11000 | 10075 | 56319.32 | 56308.34 |
| 11000 | 10087.5 | 56288.4 | 56277.39 |
| 11000 | 10100 | 56290.64 | 56279.76 |
| 11000 | 10112.5 | 56286.7 | 56276.2 |
| 11000 | 10125 | 56272.56 | 56262.45 |
| 11000 | 10137.5 | 56269.87 | 56259.85 |
| 11000 | 10150 | 56256.53 | 56246.19 |
| 11000 | 10162.5 | 56259.82 | 56249.25 |
| 11000 | 10175 | 56262.11 | 56251.26 |
| 11000 | 10187.5 | 56275.25 | 56264.29 |
| 11000 | 10200 | 56281.3 | 56269.97 |
| 11000 | 10212.5 | 56284.86 | 56273.5 |
| 11000 | 10225 | 56281.74 | 56269.94 |
| 11000 | 10237.5 | 56283.34 | 56271.68 |
| 11000 | 10250 | 56289.57 | 56277.88 |
| 11000 | 10262.5 | 56293.13 | 56281.68 |
| 11000 | 10275 | 56297.03 | 56285.42 |
| 11000 | 10287.5 | 56300.27 | 56288.74 |
| 11000 | 10300 | 56302.28 | 56290.61 |
| 11000 | 10312.5 | 56304.32 | 56292.55 |
| 11000 | 10325 | 56306.1 | 56294.18 |
| 11000 | 10337.5 | 56310.35 | 56298.54 |
| 11000 | 10350 | 56316.3 | 56304.54 |
| 11000 | 10362.5 | 56326.24 | 56314.64 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 11000 | 10375 | 56333.92 | 56322.34 |
| 11000 | 10387.5 | 56358.49 | 56346.99 |
| 11000 | 10400 | 56372.36 | 56360.85 |
| 11000 | 10412.5 | 56389.44 | 56377.83 |
| 11000 | 10425 | 56398.46 | 56386.89 |
| 11000 | 10437.5 | 56406.61 | 56394.93 |
| 11000 | 10450 | 56410.43 | 56398.88 |
| 11000 | 10462.5 | 56412.83 | 56401.09 |
| 11000 | 10475 | 56417.8 | 56406.09 |
| 11000 | 10487.5 | 56420.34 | 56408.48 |
| 11000 | 10500 | 56421.74 | 56409.79 |
| 11000 | 10512.5 | 56399.55 | 56387.45 |
| 11000 | 10525 | 56426.11 | 56413.76 |
| 11000 | 10537.5 | 56427.19 | 56414.82 |
| 11000 | 10550 | 56429.15 | 56416.75 |
| 11000 | 10562.5 | 56428.78 | 56416.52 |
| 11000 | 10575 | 56416.78 | 56404.56 |
| 11000 | 10587.5 | 56407.66 | 56395.46 |
| 11000 | 10600 | 56420.67 | 56408.74 |
| 11000 | 10612.5 | 56405.45 | 56393.56 |
| 11000 | 10625 | 56382.92 | 56371.16 |
| 11000 | 10637.5 | 56364.81 | 56353 |
| 11000 | 10650 | 56349.24 | 56337.26 |
| 11000 | 10662.5 | 56339.77 | 56327.83 |
| 11000 | 10675 | 56334.04 | 56322.06 |
| 11000 | 10687.5 | 56328.56 | 56316.67 |
| 11000 | 10700 | 56322.03 | 56310.09 |
| 11000 | 10712.5 | 56312.76 | 56300.81 |
| 11000 | 10725 | 56312.8 | 56300.75 |
| 11000 | 10737.5 | 56311.14 | 56298.83 |
| 11000 | 10750 | 56272.51 | 56259.89 |
| 11000 | 10762.5 | 56309.95 | 56296.96 |
| 11000 | 10775 | 56302.67 | 56289.41 |
| 11000 | 10787.5 | 56295.96 | 56282.51 |
| 11000 | 10800 | 56292.72 | 56279.17 |
| 11000 | 10812.5 | 56275.25 | 56261.21 |
| 11000 | 10825 | 56293.78 | 56279.99 |
| 11000 | 10837.5 | 56293.72 | 56279.95 |
| 11000 | 10850 | 56288.21 | 56274.94 |
| 11000 | 10862.5 | 56284.35 | 56271.51 |
| 11000 | 10875 | 56281.85 | 56268.95 |
| 11000 | 10887.5 | 56275.31 | 56262.84 |
| 11000 | 10900 | 56271.34 | 56258.67 |
| 11000 | 10912.5 | 56263.19 | 56250.71 |
| 11000 | 10925 | 56252.69 | 56239.81 |
| 11000 | 10937.5 | 56249.31 | 56236.65 |
| 11000 | 10950 | 56249 | 56236.08 |
| 11000 | 10962.5 | 56026.24 | 56013.39 |
| 11000 | 10975 | 56250.96 | 56238.59 |
| 11000 | 10987.5 | 56261.62 | 56247.93 |

Appendix C

| Line | Station | MagF | Mag Corrected |
|---|---|---|---|
| 11000 | 11000 | 56265.81 | 56251.89 |
| 11000 | 11012.5 | 56268.54 | 56254.14 |
| 11000 | 11025 | 56256.35 | 56241.71 |
| 11000 | 11037.5 | 56286.19 | 56271.19 |
| 11000 | 11050 | 56298.1 | 56282.84 |
| 11000 | 11062.5 | 56304.11 | 56288.87 |
| 11000 | 11075 | 56296.92 | 56281.78 |
| 11000 | 11087.5 | 56312.75 | 56297.69 |
| 11000 | 11100 | 56302.87 | 56288 |
| 11000 | 11112.5 | 56268.04 | 56253.24 |
| 11000 | 11125 | 56252.31 | 56238.17 |
| 11000 | 11137.5 | 56241.57 | 56227.75 |
| 11000 | 11150 | 56261.31 | 56247.7 |
| 11000 | 11162.5 | 56253.23 | 56239.97 |
| 11000 | 11175 | 56220.94 | 56207.84 |
| 11000 | 11187.5 | 56989.56 | 56977.22 |
| 11000 | 11200 | 56387.8 | 56374.28 |
| 11000 | 11212.5 | 56281.93 | 56268.19 |

Appendix D

Map

5,398,000 mN
5,397,500 mN
5,397,000 mN
5,396,500 mN
5,396,000 mN
5,395,500 mN
713,000 mE
713,500 mE
714,000 mE
714,500 mE
715,000 mE
715,500 mE
716,000 mE
716,500 mE

N

127140
117387
275615
Drift Lake
336039
228394
171703
190485
171704
228395
174452
287677
117388

APPROXIMATE LOCATION OF E.M. conductor

Legend:

Geophysics
- VLF Cross Overs
- VLF

General
- Streams
- Roads
- Lakes
- WHM Claims
- Township
- Operational Alienations

Magnetics
56,400
56,300
56,300
56,200
56,200
nT

White Metal Resources

| | |
|---|---|
| Date: 2019-11-08 | Drift Lake Property<br>Ground Magnetics & VLF<br>Map 1 |
| Author: CSalo | |
| Office: | |
| Drawing: | |
| Scale: 1:5000 | Projection: UTM Zone 15 (NAD 83) |

0 200
metres
Scale 1:5,000

Name: Michael Stares **Project: Drift Lake**

| Year | Mon. | Day | Portion of day | Name | Activity Summary | Vehicles/boats/ ski-doo | equip./Rentals |
|---|---|---|---|---|---|---|---|
| 2018 | Jan | 10 | | Michaeal Stares | Compilation maps for upcoming Geophysics | | |
| 2018 | Jan | 25 | | Michaeal Stares | Compilation maps for upcoming Geophysics | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Name: Bob Heilman **Project: Drift Lake**

| Year | Mon. | Day | Portion of day | Name | Activity Summary | Vehicles/boats/ ski-doo | equip./Rentals |
|---|---|---|---|---|---|---|---|
| 2018 | Feb | 6 | | Bob Heilman | Picketed grid and ground Magnetics | | |
| 2018 | Feb | 7 | | Bob Heilman | Picketed grid and ground Magnetics | | |
| 2018 | Feb | 8 | | Bob Heilman | Picketed grid and ground Magnetics | | |
| 2018 | Feb | 15 | | Bob Heilman | Picketed grid and ground Magnetics | | |
| 2018 | Feb | 16 | | Bob Heilman | Remove Grid and download data | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Name: Cliff Hickman **Project: Drift Lake**

| Year | Mon. | Day | Portion of day | Name | Activity Summary | Vehicles/boats/ ski-doo | equip./Rentals |
|---|---|---|---|---|---|---|---|
| 2018 | Feb | 6 | | Cliff Hickman | Picketed grid and ground magnetics | truck/Ski - doo | |
| 2018 | Feb | 7 | | Cliff Hickman | Picketed grid and ground magnetics | truck/Ski - doo | |
| 2018 | Feb | 8 | | Cliff Hickman | Picketed grid and ground magnetics | truck/Ski - doo | |
| 2018 | Feb | 15 | | Cliff Hickman | Picketed grid and ground magnetics | truck/Ski - doo | |
| 2018 | Feb | 16 | | Cliff Hickman | Remove Grid and download data | truck/Ski - doo | |
| | | | | | | | |
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# Overhauser Magnetometers

**Magnetometer (GSM-19) - Walking Magnetometer (GSM-19W)**
**Gradiometer (GSM-19G) - Walking Gradiometer (GSM-19GW)**

## Since 1980

**Leading the World of Magnetics**

**GEM Systems is the global leader in the manufacture and sale of high precision magnetometers.**

GEM Systems is the only commercial manufacturer of Overhauser magnetometers, that are accepted and used at Magnetic Observatories over the world.

**Our Potassium Magnetometers are the most precise magnetometers in the world.**

Our Proton sensors are considered the most practical and robust magnetometers for general field use.

**Proven reliability based on R+D since 1980.**

We deliver fully integrated systems with GPS and additional survey capability with VLF-EM for convenience and high productivity.

**Today we are creating the absolute best in airborne sensors and are leading the way with smaller and lighter sensors for practical UAV applications.**

GEM Systems large potassium sensors offer the highest sensitivity (20-50 fT) for use in natural hazard research and global ionospheric studies.

**Our Leadership and Success in the World of Magnetics is your key to success in applications from Archeology, Volcanology and UXO detection to Exploration and Magnetic Observations Globally.**


**GEM Systems Overhauser Magnetometer system. It can be configured with additional survey sensors for simultaneous gradiometer readings as well as VLF. System configurations can also include walking mode and GPS.**

## The Overhauser

GEM Systems GSM-19 Overhauser total field magnetometer and the GSM-19G Gradiometer provide improved data quality and greater absolute accuracy than Proton magnetometers, while providing a robust and comparable system to costlier Cs magnetometers for ground applications.

**Technically Superior**
The GSM-19 Overhauser instrument is the total field magnetometer / gradiometer of choice in today's earth science environment. GEM Overhauser technology provides a unique blend of physics, chemistry and engineering. Sophisticated system design and solid experience in the field of magnetics help to clearly differentiate it from other quantum magnetometers.

The GSM-19 is a standard in many fields, including:

- **Mineral exploration**
- **Environmental and engineering**
- **Pipeline mapping**
- **Airborne basestation**
- **Unexploded Ordnance Detection**
- **Archaeology**
- **Magnetic observatory measurements**
- **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.

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**. RF frequencies are well out of the bandwidth of the precession signal and they do not impair the sensitivity i.e. polarization and signal measurement can occur simultaneously - which enables **faster, sequential measurements** and increased cycling rates (i.e. sampling speeds). Measurements can therefore be near continuous.

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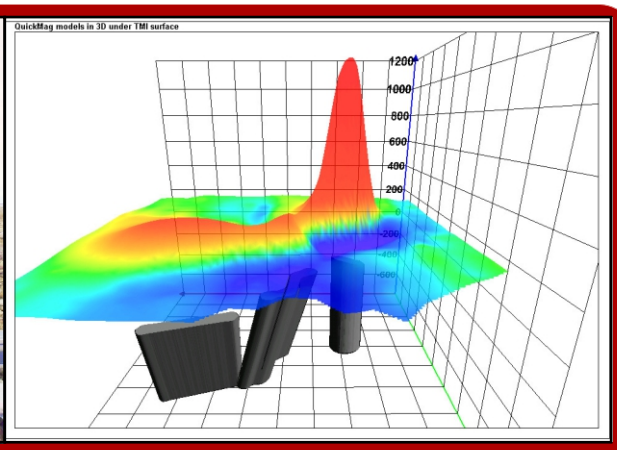
Our World is **Magnetics.**

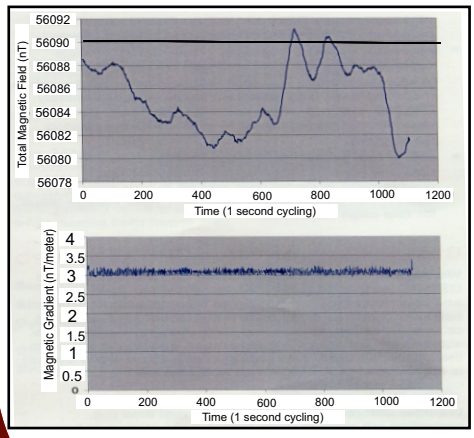



**Single sensor and gradiometer modes provide flexibility and fast sampling and are used for detecting changes in the magnetic field. Applications include; alteration mapping, structural geology, archeology and UXO applications.**

## GEM Systems Sensor Technology

GEM Systems sensors represent a **proprietary innovation** that combines advances in electronics design and quantum magnetometer chemistry. Each sensor head houses a **proprietary** hydrogen-rich liquid solvent which is combined with free electrons (free radicals) in the GEM labratory to increase the signal intensity under RF polarization.

**GEM Systems GSM-19**
Small and light weight. Rugged plastic housing protects the internal components during operation and transport.




**Sample data**
Gradiometer data shows very low noise level (<0.2nT. peak to peak)

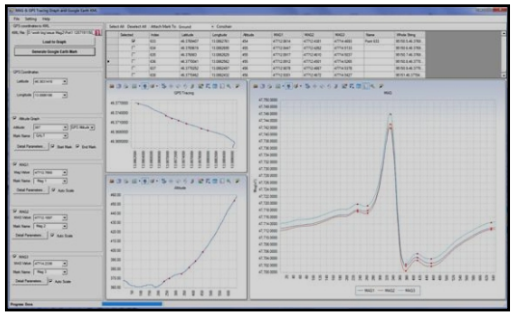
## GPS and Navigation

Along with basic GPS tracking, GEM provides a Navigation feature with real-time coordinate transformation to UTM and local grid. A survey "lane" guidance system with cross track display coupled with automatic end-of-line flag and guidance to the next line allows the operator to navigate seamlessly while carrying out the magnetic survey. Operators can define a complete survey on PC and download points to the magnetometer via RS-232 before leaving for the field.

## GEMLink+

### Software for Processing Magnetic Data

**GEMLink+** processing software is provided with every GEM magnetometer system. GEMLink+ provides all of the data visualization needed by the geoscientist to quickly assess the data quality in the field. The software provides diurnal correction, profile plotting, line path maps and some basic mapping and modeling functions. Files can be imported/exported to Google (.kmz) format and coordinate transformations can be made.



**GEMLink+** Data QAQC software with multi window data processing and plotting.

## Specifications

### Performance

| | |
|---|---|
| Sensitivity: Standard GSM 19 | 0.022 nT @ 1 Hz |
| GSM 19PRO | 0.015 nT @ 1 Hz |
| Resolution: | 0.01 nT |
| Absolute Accuracy: | 0.1 nT |
| Dynamic Range: | 20,000 to 120,000 nT |
| Gradient Tolerance: | up to 10,000 nT/m |
| Samples at: | 60+, 5, 3, 2, 1, 0.5, 0.2 sec |
| Operating Temperature: | -40°C to +50°C |

### Operating Modes

**Manual:** Coordinates, time, date and reading stored automatically at upto 0.2 sec.
**Base Station:** Time, date and reading stored at 1 to 60 second intervals.
**Remote Control:** Optional remote control using RS-232 interface.
**Input / Output:** Input/Output: RS-232 using 6-pin weatherproof connector with USB adapter.

### Memory - (# of Readings in millions)

Mobile: 1.4M, Base Station: 5.3M,
Gradiometer: 1.2M, Walking Mag: 2.6M

### Dimensions

| | |
|---|---|
| Console: | 223mm x 69mm x 240 mm (8.7x2.7x9.5in) |
| Sensor: | 175mm x 75mm diameter cylinder (6.8in long by 3 in diameter) |

### Weights

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

### Standard Components

GSM-19 console, GEMLink software, battery, harness, charger, sensor with cable, RS-232 cable and USB adapter, staff, instruction manual, and shipping case.

### Options

Gradient Magnetometer, Walking Mode, Multi sensor

### Available GPS

**GPS Time Only (Option A)**
**Standard GPS (Option B):**
• 0.7m SBAS (WAAS, EGNOS, MSAS)
• < 1.5m non-SBAS
**Enhanced GPS (Option C):**
• 0.6m SBAS (WAAS, EGNOS, MSAS), GLONASS, BeiDou, Galileo
• Consult GEM for availability
**High resolution GPS (Option D):**
• 0.6m SBAS (WAAS, EGNOS, MSAS), GLONASS, BeiDou, Galileo
• 40 cm or 4cm accuracy with NovaTel Correct (TerraStar Subscription required)
• Consult GEM for availability

**VLF Option :** Frequency Range: 15 to 30.0 kHz with up to 3 stations. Parameters: Vertical in-phase and out-of-phase components as % of total field.

**The GSM 19,19G,19W and 19GW systems come complete with an industry leading three year warranty**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ADVANCED MAGNETOMETERS

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