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NTS 411/16

Assessment Work Report

**Magnetometer Survey** 

**Scholes Twp. Property** 

**Scholes Township** 

November 22, 2022

Author: David Laronde

# TABLE OF CONTENTS

1.0	Summary
2.0	Property Description
3.0	Regional and Local Geological Settings
4.0	Location and Access
5.0	Magnetometer Survey
	5.1 Instrumentation
	5.2 Survey Results and Interpretation
6.0	Conclusions and Recommendations

# LIST OF FIGURES

Figure 1	Location Map of Property	1:40,000
Figure 2	Claim and Grid Map	1:5,000

## LIST OF MAPS

Map No.1	Magnetometer contour map of total field
	1:5000

## 1.0 SUMMARY:

On October 25 and 26, 2022, a magnetometer survey was carried out on the Scholes Twp. Property on behalf of claimholder Trefstone Corp. 49 Caroline Court, Sudbury, Ontario P3A 4H2.

David Laronde, 73 Lakeshore Drive, P.O. Box 482, Temagami, Ontario POH 2HO performed the geophysical surveying and authored the report. A total of 2.5 km of grid line was established and surveyed. The grid lines were located with a modern Global Positioning System GPS unit Garmin Map 76 Csx capable of 5 meter accuracy. Stations were flagged at 25 meter intervals by the author David Laronde. Universal Transverse Mercator UTM coordinates were used as they relate to NAD 83 Zone 17. The MLAS claim cells where the work was done are: 239145, 120659, 279964, and 298637.

The Legacy claims involved at the work location are 4275002 and 4275003.

## 2.0 PROPERTY DESCRIPTION:

Historically, the property was owned by Eagle Rock Mines and explored for Algoma type, oxide facies, iron formation within Archean greenstone capped by 800-100 feet of Nipissing diabase.

Robust exploration from 1952-1961 using geophysics and drilling outlined a total of 330 million tonnes grading 26.9% sol. Fe (Burns 1966). There was a 1177 foot shaft sunk and 2,100 feet of lateral work, bulk sampling and metallurgical testing by North American Rare Metals Ltd., Rio Tinto Mining Co. and Eagle Rock Mines Ltd. Trefstone Corp. staked the property in 2005 and have been the only claimholder since. The whole property today consists of 19 contiguous MLAS mining claim cells situated in north central Scholes Twp. (Note: some cell numbers are listed more than once since they are a part of multiple legacy claims) (the 7 legacy claims are listed below).

Legacy Claim Id	Township	Tenure ID	Tenure Type	Anniversary Date	Work Required
3014444	SCHOLES	330545	Single Cell Mining Claim	2023-08-19	. 400
3014444	SCHOLES	326691	Boundary Cell Mining Claim	2023-08-19	200
3014444	SCHOLES	251254	Boundary Cell Mining Claim	2023-01-17	200
3014444	SCHOLES	183731	Boundary Cell Mining Claim	2023-08-19	200
3017117	SCHOLES	330545	Single Cell Mining Claim	2023-08-19	400
3017117	SCHOLES	195286	Single Cell Mining Claim	2023-08-19	400
3017117	SCHOLES	183731	Boundary Cell Mining Claim	2023-08-19	200
3017117	SCHOLES	131074	Boundary Cell Mining Claim	2023-08-19	200
3017138	SCHOLES	330545	Single Cell Mining Claim	2023-08-19	400
3017138	SCHOLES	326691	Boundary Cell Mining Claim	2023-08-19	200
3017138	SCHOLES	239145	Boundary Cell Mining Claim	2023-08-19	200
3017138	SCHOLES	223418	Single Cell Mining Claim	2023-08-19	400
4275001	SCHOLES	315634	Boundary Cell Mining Claim	2022-12-30	200
4275001	SCHOLES	308895	Boundary Cell Mining Claim	2022-12-30	200
4275001	SCHOLES	308894	Boundary Cell Mining Claim	2022-12-30	200
4275001	SCHOLES	296173	Boundary Cell Mining Claim	2022-12-30	200
4275001	SCHOLES	241542	Boundary Cell Mining Claim	2022-12-30	200
4275001	SCHOLES	120660	Boundary Cell Mining Claim	2022-12-30	200
4275002	SCHOLES	298637	Single Cell Mining Claim	2022-12-30	400
4275002	SCHOLES	279964	Single Cell Mining Claim	2022-12-30	400
4275002	SCHOLES	231952	Boundary Cell Mining Claim	2022-12-30	200
4275002	SCHOLES	120660	Boundary Cell Mining Claim	2022-12-30	200
4275002	SCHOLES	120659	Boundary Cell Mining Claim	2022-12-30	200
4275002	SCHOLES	106435	Single Cell Mining Claim	2022-12-30	400
4275003	SCHOLES	314841	Single Cell Mining Claim	2022-12-30	400
4275003	SCHOLES	289422	Single Cell Mining Claim	2022-12-30	400
4275003	SCHOLES	279964	Single Cell Mining Claim	2022-12-30	400
4275003	SCHOLES	246017	Single Cell Mining Claim	2022-12-30	400
4275003	SCHOLES	120659	Boundary Cell Mining Claim	2022-12-30	200
4275004	SCHOLES	318748	Single Cell Mining Claim	2022-12-30	400
4275004	SCHOLES	289422	Single Cell Mining Claim	2022-12-30	400
4275004	SCHOLES	246017	Single Cell Mining Claim	2022-12-30	400
4275004	SCHOLES	246016	Single Cell Mining Claim	2022-12-30	400

### 3.0 REGIONAL AND LOCAL GEOLOGICAL SETTINGS:

Regionally the iron formation on the property occurs in Archean volcanic rocks which are covered by Huronian Cobalt Group sediments and Whitewater Group Nipissing diabase up to 1000 feet thick.

Locally the geological setting is characterised by northeast trending iron formation buried at 1000 foot depths by vertical to steeply dipping Nipissing diabase. Local fracturing and shearing is pervasive in low topography areas.

3.1 Mineral Deposit/Model Type: Gold associated with highly prospective iron formation similar to Golden Rose Mine 7 km to the west.

3.2 Reason for Exploration Work: The objective of the work was to map prospective, subtle, magnetic trends and magnetic characteristics of the underlying geology to help identify geological mapping and prospecting targets for structurally controlled gold mineralization.

#### 4.0 LOCATION AND ACCESS:

The property is within the Sudbury Mining Division with topographic reference NTS:41 I/16. The topography on this section of property is very rugged with a few unscalable cliffs and steep-sided forested hills typical of the underlying Nipissing diabase terrain. It is well drained and rugged however several old logging roads that are now hunters and anglers trails provide good access to most places on the claims.

As the crow flies the property is located 75 km northeast of the city of Sudbury and is accessed by truck or SUV in a roundabout way. First take Hwy 805 northward from the hamlet of River Valley for a distance of 37 km to a bridge and a fork in the road. Take the right fork on a well maintained road and travel along Manito and Emerald Lakes.

From Emerald Lake continue northeast some 6 km to a right fork near Rachel Lake. From here the road is very rough and an ATV is recommended to continue eastward another 7 km to the work area. The road entrance is marked with a Gull Lake Road sign. The road enters the property from the west then continues across the property exiting at the south-eastern boundary.

### 5.0 MAGNETOMETER SURVEY:

**5.1 Instrumentation**: Gem Systems GSM-19 overhauser magnetometers serial no. 58479 and 7052358 were used as field unit and base station for the survey. These units have an accuracy of +/- 1/100th of a gamma. 2.5 km was surveyed taking 208 readings at 12.5 meter intervals. The base station set up near the property cycled at 15 second intervals then the data was used to correct for diurnal drift during the survey.

**5.2 Survey Results and Interpretation:** The results are presented in contour format on plans at 1:5000 scale.

The magnetic survey has outlined a prominent highly magnetic linear feature open in both east and west directions. The flanks of the linear high were surveyed for potential cross-cutting controlling structure as it relates to gold exploration and met with limited success.

Intense magnetic fields of 8,000 nT characterise the axis of an ENE trending linear feature 100 meters wide. Proximal magnetic values moving away from the feature gradually decrease with distance until background readings in the order of 56,200 are noted.

There is a wrinkle in the uniform magnetic pattern on L 550 and 6650 E that breaks up an otherwise uniform magnetic response.

These magnetic values are consistent with local banded iron formation within a diabase intrusive.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS:

The intense magnetic responses encountered are a signature trait of the underlying banded iron formation that is overlain by 800-1100 feet of Nipissing diabase. For the most part the proximal influence of a highly magnetic iron formation and an overlying diabase intrusive seem to mask out any anticipated subtle low magnetic responses from fault structure. There is however a north south low trend noted from 550 E, 5201500 N to 650 E 520150 N. This "wrinkle" in the data may indicate prospective structure for gold mineralization that warrants a closer look with geological mapping and prospecting. There is good outcrop exposure is this area of the property.

Any further geophysical surveying to identify controlling structure should be electrical since the iron formation and diabase intensity is influencing magnetic responses for a few hundred meters beyond its physical boundaries to the north and south. Test lines are warranted and recommended.

An induced polarization survey can benefit an exploration program in two ways. It will map the resistivity of any structure and scan for disseminated sulphide mineralization. The latter is known for its association with gold. The close proximity to the historic Golden Rose Mine 7 km to the west at Emerald Lake warrants it.

A second option for an electrical survey is a few test lines with a low cost VLF-EM survey.

In the future, a first derivative gradient magnetic calculation and associated geological mapping would benefit the search for subtle linear magnetic lows that may represent structure.

### **References**

Geological Map #2361 OGS 1975 Geological Compilation Series 1in to 4 miles Sudbury-Cobalt Sheet 1:250,000

Geological Map #2385 OGS 1973 Afton and Scholes Townships

Deposit MDI 41i16NE00036 - Ministry of Northern Development and Mines

Mineral Resources Circular No. 11-1968 Roman Shklanka pp 275,276

## **CERTIFICATE OF AUTHOR**

I, David Laronde of the town of Temagami, Ontario hereby certify:

- That I am a geology technologist and have been working in mineral exploration for the past 42 years.
- That I am a graduate of Cambrian College in Sudbury with a diploma in Geology Engineering Technology 1979.
- 3. That my knowledge of the property described herein was acquired by field work and documentation.

Dated at Temagami this 22nd day of November 2022.

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David Laronde







