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# - ASSESSMENT REPORT -

## 2016 Surface Mapping Report

on the

**Ermatinger Property** 

Ermatinger, Hart, Vernon, and Venturi Townships

Sudbury, Ontario

August, 2017

Wallbridge Mining Company Limited

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### **1- Property Description and Location**

The Ermatinger Property covers portions of Ermatinger, Hart, Vernon, and Venturi Townships and is composed of two separate claim groups, however they are still contiguous via the Trill West property. The Ermatinger property contains 21 claims – 1246168, 3004868, 4206116, 4245183, 4255355, 4255356, 4255357, 4255358, 4255359, 4255388, 4255389, 4255391, 4255392, 4262273, 4262275, 4262276, 4262277, 4262278, 4262284, 4262287, and 4278153 totaling 295 units or 4,720 ha (Figure 2).

The Ermatinger property is located ~50 km west to northwest of downtown Sudbury, Ontario and the northern portion of the Property is 10 km south-southwest of the town of Cartier on the North Range of the Sudbury Igneous Complex ("SIC") (Figure 1). Table 1 summarizes the Ermatinger claims status. The lands included in Ermatinger are part of the Lonmin Plc North Range Joint Venture (NRJV) agreement.

#### Assessment Report, Ermatinger Property Mapping 2016

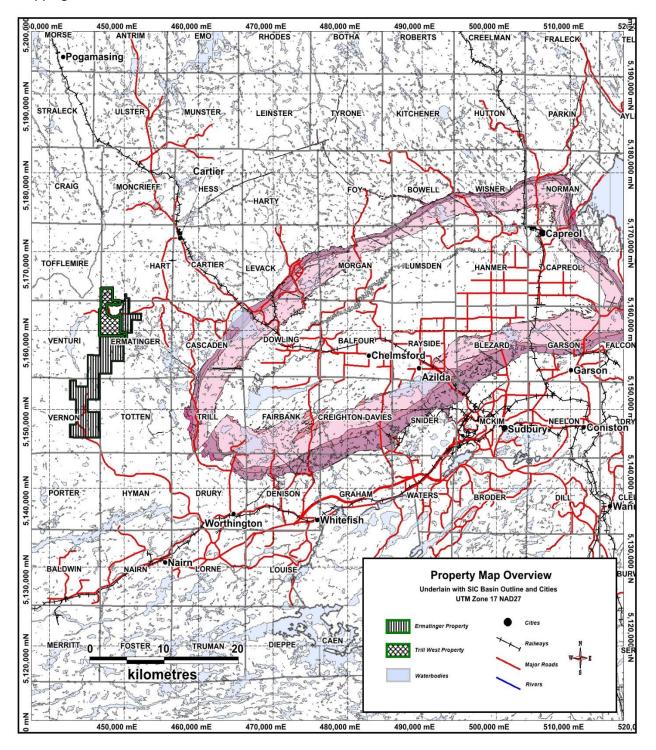
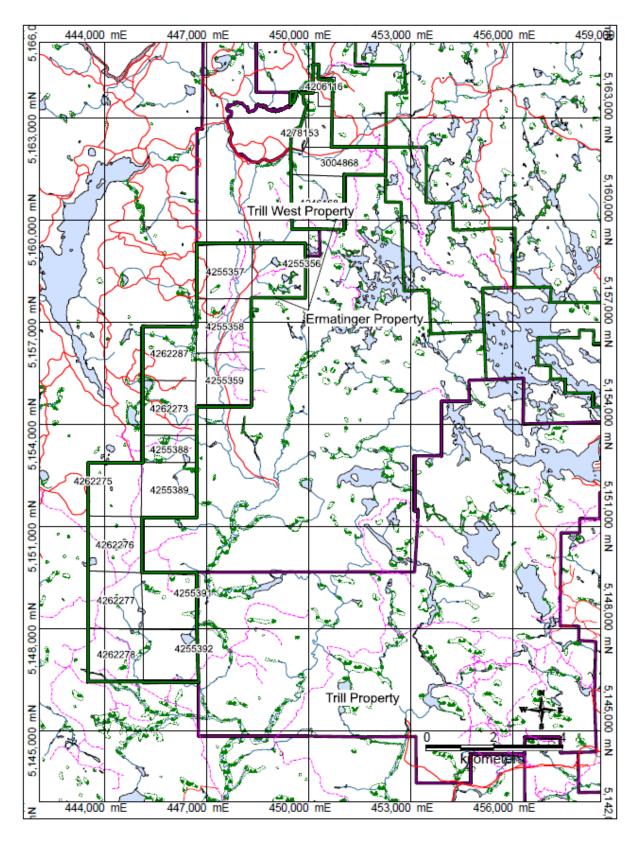


Figure 1: Regional Overview Location Map.





#### Table 1: Ermatinger Property Claim Status

	Ermatinger					
		_	area			
	number	township	(ha)	units	required	reserve
1	1246168	Ermatinger	256	16	6,400	0
2	3004868	Ermatinger	224	14	5,600	0
3	4206116	Hart	64	4	1,600	0
4	4245183	Ermatinger	112	7	2,800	0
5	4255356	Ermatinger	256	16	6,400	0
6	4255357	Ermatinger	256	16	6,400	0
7	4255358	Ermatinger	256	16	6,400	0
8	4255359	Ermatinger	256	16	6,400	0
9	4255388	Vernon	128	8	3,200	0
10	4255389	Vernon	256	16	6,400	0
11	4255391	Vernon	256	16	6,400	0
12	4255392	Vernon	256	16	6,400	0
13	4262273	Venturi	256	16	6,400	0
14	4262275	Vernon	256	16	6,400	0
15	4262276	Vernon	256	16	6,400	0
16	4262277	Vernon 256 16 6,400		6,400	0	
17	4262278	Vernon 256 16 6,400		6,400	0	
18	4262287	Venturi	256	16	6,400	0
19	4278153	Venturi	32	2	800	0
			41	.44ha		

### 2 - Accessibility and Physiography

The Ermatinger Property is approximately 70 kilometers from downtown City Greater Sudbury. The property is accessible by a combination of primary and secondary paved roads, gravel-topped roads, logging roads, ATV trails, and lastly on foot. From Sudbury, take Highway 17 West and turn north onto Highway 144. Follow Highway 144 for about 50 km, passing through the towns of Chelmsford and Dowling. Turn left onto Old Cartier Road at the Windy Lake Motel keep right and continue west to the Fox Lake Road turn off (Figure 1).

The area has a temperate climate with average temperatures ranging from 25°C in summer to -18°C in winter. The average annual precipitation is 634 mm of rain and 268 cm of snow.

The topography and relief in the map area are characteristic of shield areas underlain largely by granitic rocks. The elevation ranges from 310 m to 450 m above sea level with numerous lineament controlled valleys. The altitudes of three major lakes in the area are between 330 m and 360 m above sea level. In northern Hart Township, Nipissing Diabase and Lorrain Formation form northeast trending ridges ranging in elevation from 300 m to 450 m. Drainage in the area is prominently lineament controlled. Most of the

streams trend southerly, except in northern Hart Township where they drain west or southwest into the Spanish River. Exposure in the mapped areas is generally good in areas under lain by granitic rocks. Huronian sediments, at many places, are covered with glacial deposits.

### **3 - Regional Geologic Setting**

The properties are located on the western edge of the North Range of the Sudbury Structure, ranging from a proximal 10 kilometers the SIC contact all the way up to 17 kilometers distally. The area is dominated by strongly deformed, amphibolite facies, neo- to meso-archean (2.5 to 3.4 Ga) massive foliated granodiorite to granite, with local Paleoproterozoic Matachewan diabase dyke segments (2473 +16/-9 Ma and 2446 ±3 Ma; Heaman, 1997) cutting the granites.

Sudbury Breccia, a pseudotachylite created from the shock wave associated with the 1850 Ma Sudbury Event, occurs as irregular veins and belts in the footwall rocks of the SIC.

### 4 - Property Geology

The regional bedrock geology compilation put out by the Geological Survey of Canada (Open File 4570) indicates that the claims are dominantly underlain by the neo- to meso-archean (2.5 to 3.4 Ga) massive foliated granodiorite to granite (Ames et al., 2005). Several larger bodies of (2219 Ma) Nipissing diabase sills as well as Paleoproterozoic sediments underlay the surface EM grid (Ames et al., 2005). Based on Wallbridge's mapping of claims 4255391 and 4255392 (**Error! Reference source not found.**) the local eology of that area is dominated by neo- to meso-archean (2.5 to 3.4 Ga) massive foliated granodiorite to granite with lesser amounts of diabase (Nipissing and Matachewan) and Sudbury breccia throughout the entire claims.

Pleistocene glaciation removed soil from local topographic highs and filled topographic lows with unconsolidated glacio-fluvial sediments.

### **5 - Lithology Descriptions**

#### Granodiorite to Granite

Early Felsic plutonic Archean rocks of the Levack Gneiss Complex are the most abundant lithology outcropping in the area. These metamorphic rocks contain locally strong foliation with variable orientations.

#### Matachewan Diabase

Mafic dikes, found on both claims, exhibit fine- to coarse-grained plagioclase phenocrysts, indicative to the Matachewan Diabase dike swarm. These rocks are typically weakly magnetic, fine-grained, and contain trace disseminated pyrite. Inferred strike of dikes, based on local contact relationships, is roughly NE-SW.

#### Nipissing Diabase

Mafic dikes, found on both claims, exhibit fine- to coarse-grained habit with fine plagioclase. These rocks are typically weakly magnetic, fine-grained, and contain trace disseminated pyrite. The dikes trend in various directions and are most likely feeder systems for the larger gabbroic bodies in the area.

#### Sudbury Breccia

Sudbury Breccia is present locally in claim 4255392 forming an N-S trending zone where breccia appears along a Matachewan Diabase/granite contact.

The breccia contains clasts of the host rocks, usually granite and diabase which are centimeter- to metersized. The clasts are supported in a fine-grained green matrix with concoidal fracturing habit. The matrix is quite glassy and homogeneous suggesting it has experienced very little heat-induced alteration after its formation. Locally the breccia matrix contains trace disseminated pyrite.

### **6 - Mineralization**

No new mineralization was encountered during mapping.

### 7 - Structures

The main structures on the properties are NNW-SSE and WSW-ENE major regional features. N-S trending cliff faces in the area are likely the result of normal faulting. Locally, geological contacts between mafic intrusions and the gneisses are present and typically trend NW-SE but also NE-SW.

### 8. Previous Work by Wallbridge Mining

2001: AMT surveys on 22 stations
2002: 80 line km of ground Mag, <1km of IP and 9 AMT stations</li>
2008: AeroTEM survey targeting the Ministic offset dyke
2010: Mapping, prospecting and trenching along offset dyke trends
2011: Drilled three holes targeting the Hess offset dyke, trenched 8 sites, 1,640 km VTEM, with recon mapping along the Hess offset dyke trend
2012: Trenching, mapping, and prospecting
2013: Mapping and prospecting B-field responses from previous geophysics
2014: 15 line km of UTEM
2015: Property covered by LiDAR, mapping and prospecting

### 9 - Mapping Program

The aim of the 2016 mapping program on the southern claim block the Ermatinger property was to prospect and investigate lineaments derived from the newly acquired LiDAR data that have the potential to host the western extension of the Trill quartz diorite (QD) offset dyke known as far as west as Wallbridge's Trill property. The geological mapping was carried out by two to three-person field crews comprising geologists Marshall Hall and Shannon Baird with assistants Mike Goble and James Johnson. Spending a total of fifteen (15) days equaling thirty-four (34) man-days mapping and prospecting in July and August 2016. Outcrop maps are found in **Error! Reference source not found.**3-5.

A total of 4 samples were submitted for 33 element analysis and 3 of these were sent for whole rock analysis. These are summarized in table 2 below.

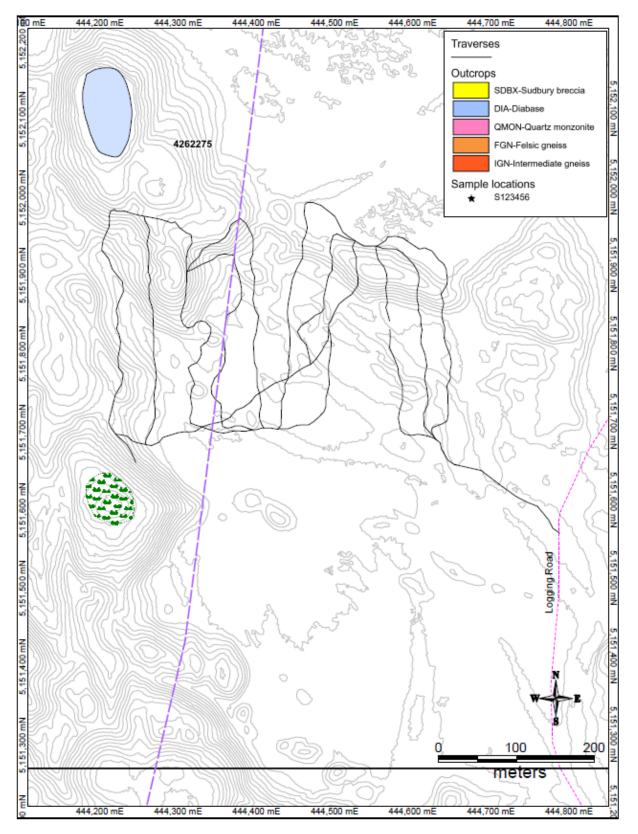


Figure 3: Nad 27 1:4000, Mapping on claim 4262275. No outcrops discovered

### Assessment Report, Ermatinger Property Mapping 2016

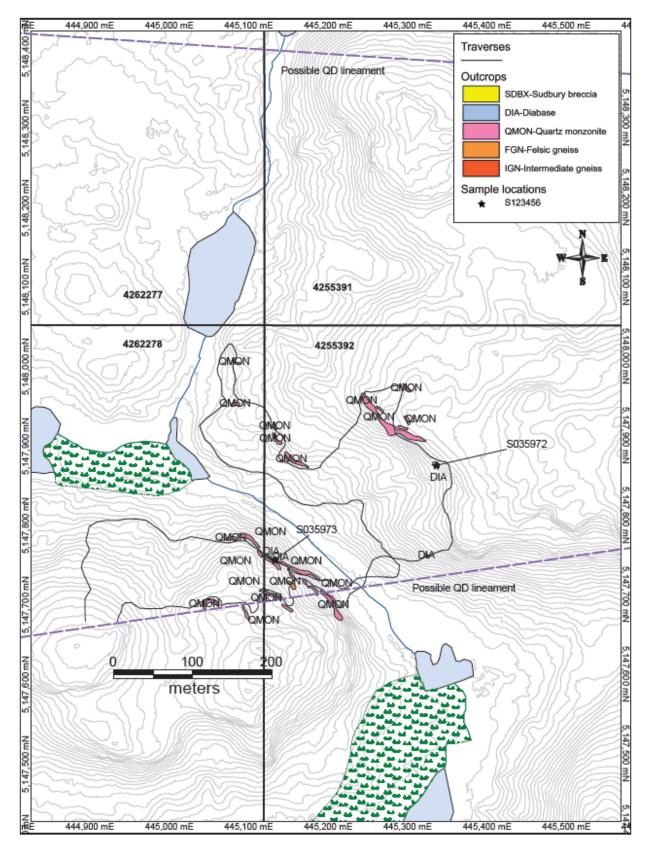


Figure 4: Nad 27 1:4000 Eastern mapping on claims 4262277, 4262278, 4255391 and 4255392

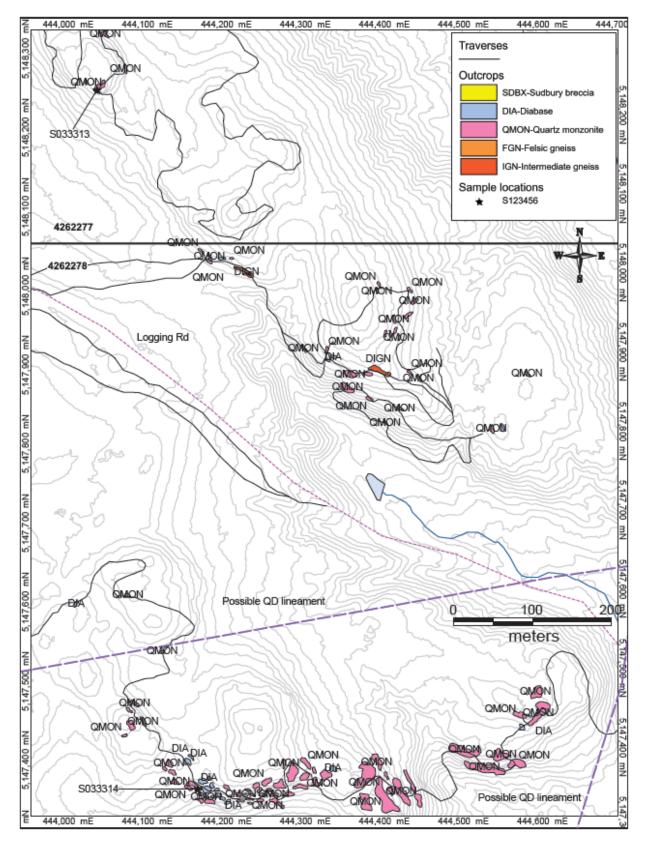


Figure 5: Nad 27 1:4000 Western mapping on claims 4262277 and 4262278

SampleID	E_NAD27	N_NAD27	E_NAD83	N_NAD83	RockType	FieldDesc
						Nearly aphanitic, weakly magnetic in spots, greyish
						blue colouration with a weak weathering rind, and
S035972	445330.3	5147869	445340	5148092	DIA	concoidal fractures
						Aphanitic, dark bluey/green/grey, highly magnetic
						diabase with up to 2% py along fracture filling
S035973	445127.4	5147750	445137.1	5147973	DIA	epidote veins. Heavy weathering (likely ODIA)
S033313	444029.3	5148240	444039	5148463	DIA	Diabase or QD?
						Highly magnetic, coarse grained, nearly cm acicular
						amphiboles with occassional 5cm long needles of
S033314	444156.6	5147355	444166.3	5147578	DIA	plag/amp(?).

Table 2 Surface sample summary

### **10 – Results and Recommendations**

The mapping program revealed no new outcrops of offset dykes. It did reveal a series of new diabase dykes of which there was no major mineralization. A handful of Sudbury breccia outcrops were discovered but are distal to the SIC and not likely to host Sudbury related mineralization.

I recommend that mapping be continued in the area to locate the extension of the Trill offset. Particular emphasis should be placed on locating the intersection between the Trill and Hess offsets as these junctions have been known to host mineralization elsewhere in the basin (e.i., Foy). Performing ground geophysics should then be carried out to identify buried conductors not exposed at surface.

### **11 - References**

- Ames, D.E., Buckle, J., Davidson, A., and Card, K., 2005, Sudbury bedrock compilation: Geological Survey of Canada, Open File No. 4570, geology, color map, and digital tables, scale 1:50,000.
- Heaman, L.M., 1997, Global mafic magmatism at 2.45 Ga: remnants of an ancient large igneous province?: Geology, v. 25, p. 299–302.
- Krogh, T.E., Davis, D.W., and Corfu, F., 1984, Precise U-Pb zircon and baddeleyite ages for the Sudbury Area: Ontario Geological Survey Special Volume 1, p. 431–446.

### **12 - Qualifications**

I, Marshall Hall, do hereby certify that:

- 1. I reside at 552 Phillip St, Lively, Ontario, P3Y 1N1.
- 2. I graduated from Laurentian University (Sudbury, Ontario) in 2014 with a B.Sc.H. and am finishing my M.Sc. at Laurentian University.
- 3. I am currently employed as a Project Geologist with Wallbridge Mining Company Limited.
- 4. I am geoscientist in training (G.I.T.) with the APGO, No. 10468
- 5. I am a licensed Ontario prospector, No. 1013626.
- 6. This technical report has been prepared by myself and other members of Wallbridge staff.

As an employee, and an insider, of Wallbridge Mining Company, I do not qualify as an independent Qualified Person.

Marshall Hall

Mo Hall

Wallbridge Mining Company Ltd. 129 Fielding Rd. Lively, ON, P3Y 1L7

