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Wallbridge Mining Company Limited



## **2017 ASSESMENT REPORT**

## - FIELD WORK -

## **Rudy's Lake Property**

Morgan Township

Ontario, Canada

August 2017

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## INTRODUCTION AND TERMS OF REFERENCE

## 1.1 **GENERAL**

The Rudy's Lake Property covers 144 ha of footwall in the North Range of the Sudbury Structure. It is located approximately 570 m north of the SIC contact, 300 m west of the Sandcherry Creek Fault and 8.5 km east of the Fecunis Lake Fault. Many highly lucrative contact and footwall deposits are located along the SIC contact southwest of the property (McCreedy East and West, Fraser, Craig, Strathcona, Levack, etc.).

This report has been prepared by Marshall Hall for Wallbridge Mining Company Limited and summarizes previous work and work completed in 2017 on mining claim 1225797.

## 1.2 SOURCES OF INFORMATION

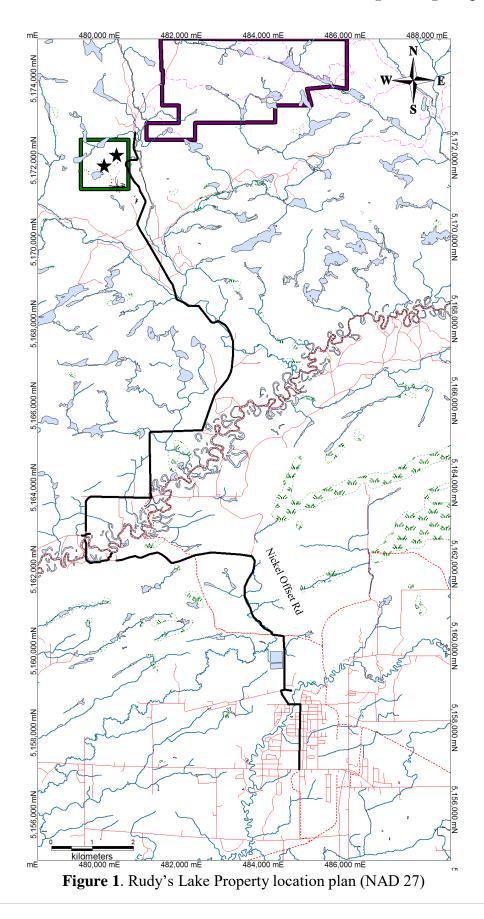
A complete list of the material reviewed is provided at the end of this report.

### 2 PROPERTY DESCRIPTION AND LOCATION

The Rudy's Lake Property is located in Morgan Township, approximately 30 km northwest of Sudbury and about 15 km north of Chelmsford up the Nickel Offset Road (NTS Area 41-I/11) (Figure 1). The property is composed of one unpatented claim totalling 9 units over 144 hectares of land (Figure 2 and Table 1). The lands included in this project are wholly owned and operated by Wallbridge. The claim is in good standing until January 27, 2018 (**Error! Reference source not found.**).

mining claims:					work (\$)	work (\$)
number	township	area (ha)	units	holder	required	reserve
1225797	Morgan	144	9		3,600	135

Table 1: Rudy's Lake Property Claim Status



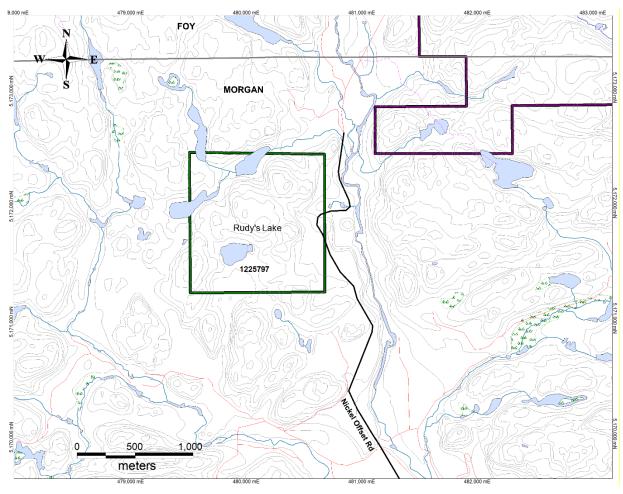


Figure 2. Rudy's Lake Property map (NAD 27)

## 3 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Provincial highways and a Canadian Pacific rail line access the town of Chelmsford 15 km south of the property. The property is accessible by taking the Nickel Offset road north from Chelmsford. The Nickel Offset road is paved near town, but the paving ends 2.9 km north of Chelmsford and from here in the road is rough and not easily passable other than with a four wheel drive vehicle. There are three fords on this road, the first and second fords cross Sandcherry Creek at 4.7 km and 5.6 km respectively. The third ford crosses Island Creek, a tributary to Sandcherry Creek, 6.9 km from the Nickel Offsets Road turn off in Chelmsford. The Nickel Offset road passes immediately east of the property and continues to the north. An ATV trail into Rudy's Lake

gives good access to the south eastern corner of the property from Nickel Offset road. Travel time from Wallbridge's offices in Lively, to the property is approximately 2 hours.

The property is typified by rolling hills with interceding low to swampy areas. The local drainage flows east and south into the Sandcherry Creek.

Bedrock is generally weakly exposed on the property. Wallbridge estimates that the property area is comprised of approximately 10-15% outcrop, 45% water, and 40% swamp and glacial moraine. The land area is generally covered with 1 to 3 m of glacial till with scattered large granitic glacial float up to 4m in size. The outcrops are commonly rounded, smooth knobs with maximum dimensions of 120 by 10 meters.

Vegetation consists of spruce, white pine, red pine, jack pine, poplar, and maple, with alder, cedar and white ash more commonly occurring in the low wet areas. Marshy areas are found along the northern half of the baseline.

## 4 HISTORY

### 4.1 WORK HISTORY PRIOR TO WALLBRIDGE

In 1953, prospector T. Mungovan carried out ground magnetic surveys. The survey was initiated in order to map magnetic anomalies that were thought to reflect concentrations of nickeliferous pyrrhotite. Ground prospecting followed up the anomalies. No significant mineralization was discovered to be associated with any of the mapped magnetic anomalies.

Between 1968 and 1972, Falconbridge Limited drilled seven holes totalling 2,659 feet, in the S<sup>1</sup>/<sub>4</sub> of the N<sup>1</sup>/<sub>2</sub>, lot 10 and the NW<sup>1</sup>/<sub>4</sub> of the N<sup>1</sup>/<sub>2</sub>, lot 11, concession 5, located ~1 km west of the property (**Error! Reference source not found.**). These holes intersect several varieties of felsic and mafic Archean gneisses and pyroxene bearing dykes. Minor sulphide mineralization was recorded in the drill logs without any information on assaying which might have been carried out.

In 1970, Inco drilled twelve holes totalling 11,498 feet, in lot 8 of concession 4, in lots 7, 8 and 9 of concession 5, and in lots 5 and 6 of concession 6, located within and to the north-east of the property (**Error! Reference source not found.**). These holes intersected granite gneisses, SIC norite, and footwall breccia with some sulphide mineralization. No assay data are filed.

In 1980, Falconbridge Limited carried out an airborne magnetic and electromagnetic surveys in lots 11 and 12, concessions 5and 6, located to the north-west from the property. The purpose of the survey was to prospect for massive base metal mineral deposits. Based on these surveys three conductive zones were recommended for the follow-up ground geophysical work.

In 1987, Noramco Explorations Inc. contracted helicopter borne airborne geophysical surveys in Levack and Morgan townships, the eastern extent of the survey encompassed the Rudy's Lake property area. Total field magnetic and VLF electromagnetic surveys were completed. A logistics report and maps were provided for the property. The survey results were used primarily to help map the lithology and structure of the area surveyed. In 1988, Noramco Explorations Inc. prepared a geological report where they recommend continuing geological and geophysical surveys of several linear anomalies striking 070°. The importance of this structural direction (070°) stressed in the relationship with high-grade Cu zone veins in the footwall at Strathcona Mine.

In 1988 and 1989 Crimsonstar Resource Ltd./Noramco Exploration Ltd. drilled two holes totalling 363.4 m, in lots 8 and 10 of concession 6, north of the property.

## 4.2 WALLBRIDGE WORK HISTORY

Work performed by Wallbridge Mining is summarized in Table 2 and described below.

In 1999, Wallbridge contracted Geoterrex-Dighem Limited (now Fugro Airborne Surveys) for an airborne electromagnetic (EM) survey. A high-resolution time domain EM survey (GEOTEM III) was performed, with accompanying high-resolution magnetic data. This survey covered the entire property with lines spaced every 200 metres and a flight line azimuth of 330°. The survey was

designed to detect conductive bodies to depths of 300 metres however, no significant EM anomalies were identified in the claim block.

Mapping, sampling, and an audio-frequency magnetotelluric (AMT) survey were conducted on the property during the 2000 field season. A total of 6.622 line kilometres were cut for the AMT survey; 5 lines oriented north-south, and an east-west baseline. Geosystems SRL of Milan, Italy, conducted the AMT survey in October 2000, and submitted a final report in September 2001. No significant anomalies were identified from the AMT survey.

In June 2002, Geoserve Canada Ltd. was contracted for line cutting and a ground magnetic survey. An east-west oriented grid was cut into the property totalling 15.85 line kilometres, with a northsouth baseline cut along the east side of the property.

In July 2002, Lamontagne Geophysics Inc. completed a UTEM 3 electromagnetic survey with a total of 6.275 km of in-loop data collected.

In September 2002, Quantec Geoscience Inc. completed a 12.3 kilometre gradient array time domain induced polarization (IP) survey over and around the property. Numerous anomalous zones were identified by the contractor.

A more detailed mapping and sampling program was carried out in 2002, and ground-truthing of the IP anomalies occurred after the mapping program. Previous work by the Company is outlined in Table 2.

Work carried out in 2005 was restricted to prospecting of a northeast trending structure in the northern part of the property and a re-examination of the Bait Occurrence.

Mapping and prospecting in 2009 focused on finding more Quartz Diorite (QD) outcrops within the southern part of the property.

In 2010, Attila Péntek (Project Geologist) and Györgyi Tuba (Field Geologist) filled in gaps of mapping in the southern portion of claim 1225797 at 1:2,000. Stripping of moss was performed on many earlier mapped outcrops to find additional exposures of Sudbury Breccia and Quartz Diorite. They also spent six days high pressure washing on three selected outcrops where QD was found in earlier years. The outcrops were cleared of shallow overburden and moss cover. Washing the outcrops resulted in a better understanding of the occurrence and emplacement mechanism of QD on the property.

In July 2013, Wallbridge contracted Geotech Ltd. to fly a VTEM survey over the Rudy's Lake property. Three very weakly anomalous zones were detected.

July of 2014 underwent a short mapping and beepmatting program to follow up the 2013 VTEM conductors. No explanation for the anomalies was reported.

November of 2016 a mapping program was carried out in an attempt to explain the VTEM anomalies. No explanation was reported.

Year	Geologist	Mapping	Samples	Thin Sections	Geophysics
1999	n.a.	none	0	0	GEOTEM
2000	Christina Wood	1:5000	88	88	AMT
2002	Paul Geddes	1:2500	29	30	IP, UTEM
2005	Joerg Kleinboeck	none	2	0	none
2009	Attila Péntek	1:2000	0	0	none
2010	Attila Péntek	1:2000	8	0	none
2013	Attila Péntek	None	0	0	VTEM
2014	Nicholas Wray	1:2000	4	0	Beepmatting
2016	Marshall Hall	1:2000	0	0	none

Table 2: Previous work by Wallbridge Previous work by Wallbridge

## **5 GEOLOGICAL SETTING**

## 5.1 **REGIONAL GEOLOGIC SETTING**

The Rudy's Lake property is located on the North Range of the Sudbury Structure, 570 m north of the SIC contact. The area is dominated by strongly deformed, amphibolite facies, tonalite- to granodiorite-gneiss of the NeoArchean Levack Gneissic Complex (LGC; ~2700-2640 Ma), with local Paleoproterozoic Matachewan diabase dyke segments (2473 +16/-9 Ma and 2446  $\pm$ 3 Ma; Heaman, 1997), and Mesoproterozoic olivine diabase of the Sudbury Dyke Swarm (1238  $\pm$  4 Ma; Krogh et al., 1987; 1235 +7/-3 Ma; Dudás et al., 1994) cutting the gneisses.

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. Footwall Breccia (or Late Granite Breccia), an impact breccia, occurs irregularly about the SIC contact. Footwall rocks proximal to the SIC have undergone contact metamorphism, apparent as intense recrystallization and partial melt features, due to the heat from the overlying melt sheet (the SIC).

The proximity of the property to the contact of the SIC in a structurally complex area suggests the possibility of more proximal footwall type deposits similar to McCreedy East. The northern end of the property also holds potential to host mineralization analogous to the Strathcona Deep Copper deposit.

The property is located 300 m west of the Sandcherry Creek Fault, a major north-south trending fault structure that sinistrally offsets the SIC and footwall rocks (Figure 3). Movement on the Sandcherry Creek Fault, like the Fecunis Lake Fault, occurred post-crystallization of the SIC. Immediately south of the property, a series of splays off the Sandcherry Creek Fault further displace the SIC and surrounding rocks; these faults are interpreted to be have been active while the SIC was still warm, however they may be more hypothetical than real (E. Pattison, personal communication).

The property is situated in the Pumphouse Creek Deformation Zone (PCDZ), which occurs in the Levack Gneiss and Cartier Granite a few kilometres north of the SIC contact, trends east-northeast, and is abruptly terminated at a perpendicular intersection with the Sandcherry Creek Fault (Figure 4). Card (1994) described the zone as a topographic lineament along Pumphouse and Windy creeks, with brecciation, shearing and quartz veining near the Levack Gneiss-Cartier batholith contact, offset of lithological units, and changes in foliation trends in the gneisses.

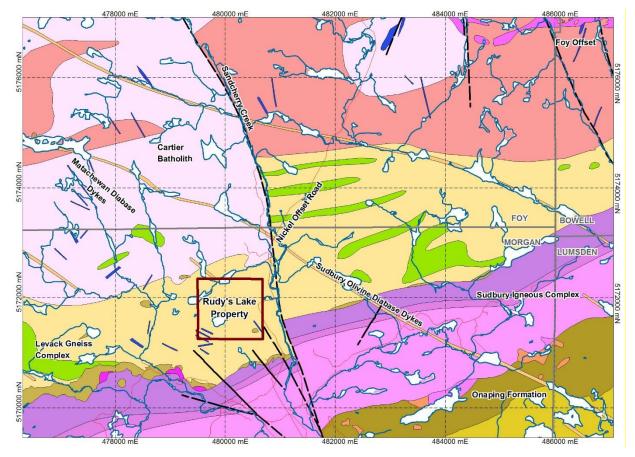
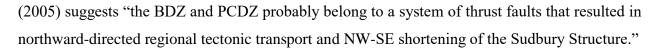


Figure 3. Regional geology map (from GSC Open File 4570).

The Pumphouse Creek and Benny deformation zones have been described as similar to the South Range deformation zone (Card, 1994), possibly implying a genetic association (**Figure 4**). Card



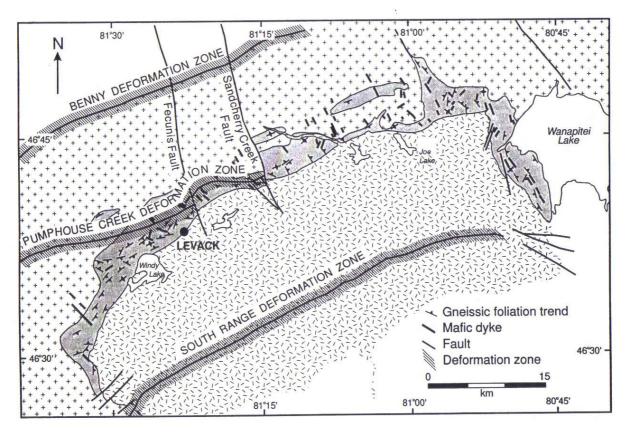


Figure 4. Deformation zones in the Sudbury area (from Card, 1994).

## 5.2 **PROPERTY GEOLOGY**

The regional bedrock geology compilation put out by the Geological Survey of Canada (Open File 4570) indicates that the Rudy's Lake Property is underlain by tonalite- to granodiorite- gneiss of the Levack Gneiss Complex (Ames et al., 2005). Mapping by Company geologists shows greater subdivision of the gneisses, with granite gneiss and diorite gneiss predominate in the northern half of the property, and partial melt diorite dominating the southern half. Locally quartz monzonite, diabase, amphibolite, Sudbury Breccia and QD (quartz diorite) have been reported as well.

The large percentage of partial melt diorite makes the southern part of the property the most interesting geologically, and the most prospective in terms of mineralization. The gneisses are

migmatitic with leucosomes of trondjhemitic material banded sub-parallel to the SIC contact. Sudbury Breccia locally comprises 100% of exposures in the southern half of the property.

Christina Wood described small (<1m wide) irregular bodies of "basic norite Sublayer" in partially melted granitic rocks in the southeast quadrant of the property, trending sub-parallel to the SIC contact around L1400N. Petrographic review of the thin sections (W-00-289, W-00-290, and W-00-362) reveals that the samples are actually QD. They are generally composed of extensively sausseritized plagioclase, quartz-feldspar granophyric intergrowths, stellate amphibole partially to completely altered to chlorite, and elongate apatite crystals.

Regional reconnaissance along the Sandcherry Creek fault led to the discovery of another QD occurrence, 60 m east of the property, striking east-west. This occurrence, partially covered by overburden, was estimated to be approximately 25m wide. No sulphide mineralization was found at surface. This occurrence is located about 400 metres north of the outcrops along L1400N, on what appears to be the limit of the partially melted rocks.

### 6 MINERALIZATION

Isolated pods (boudinaged horizons less than 1m in thickness) of well foliated pyroxenite occur locally as foliation-bound units within the intermediate gneisses. These pods and rafts locally contain up to 2% disseminated pyrite/pyrrhotite and are retrograded to greenschist facies assemblages.

At the 'Bait' occurrence, anomalous values up to 0.18% Cu+Ni (combined) occur as fine-grained disseminations associated with pyrrhotite in retrograded pyroxenite rafts and diorite gneisses. The gossanous area is approximately 10x10m, locally containing up to 3% pyrite and pyrrhotite. Elevated Ag values (0.58g/mt) may be indicative of a hydrothermal component to the occurrence although do not dictate such a mode of emplacement.

## 7 EXPLORATION PROGRAM

## 7.1 **INTRODUCTION**

Prospecting was carried out as follow up to the previously unexplained VTEM anomalies. Focus was put on peeling moss to expand outcrops and identify hidden mineralization. Along with the use of a bar finder to identify any magnetic mineralization (ie pyrrhotite).

## 7.2 WORK CARRIED OUT

## 7.2.1 PROSPECTING AND SAMPLING

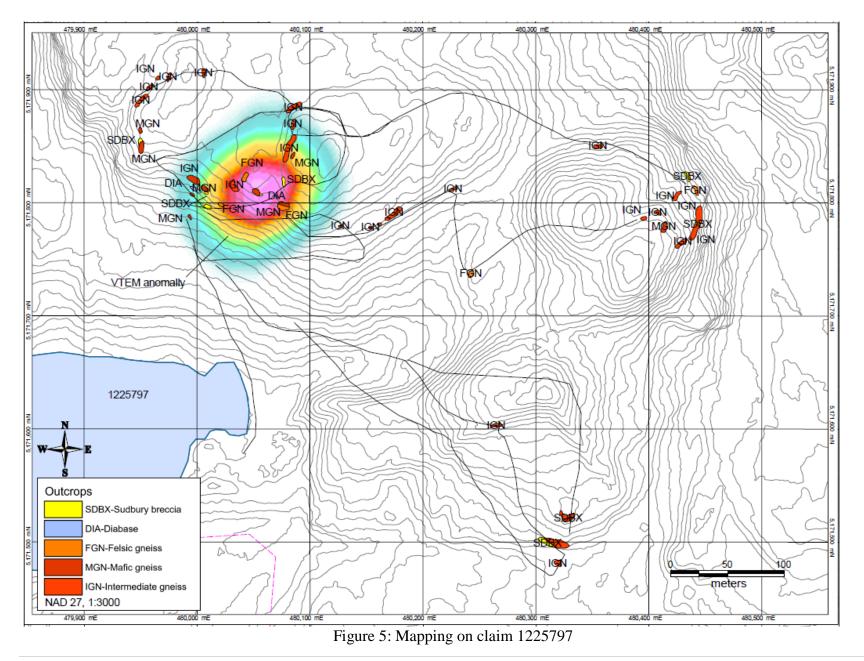
From August 8<sup>th</sup> to August 10<sup>th</sup> geologist Marshall Hall and assistant James Johnson performed 6 person days of prospecting over the property. They accessed the property through the use of a pickup truck, trailer, and two quads. Maps were produced at a scale of 1:2000 with the use of Garmin E-trex GPS, and compasses for navigation. They prospected around known VTEM anomalies with focus on known outcrops where they peeled moss on outcrop edges and broke rock to identify any mineralization in the area. At all locations the bar finder was used to help identify any possible magnetic mineralization.

## 7.3 **RESULTS**

Mapping and prospecting around one of the VTEM anomalies revealed no substantial mineralization. However, mapping did extend the amount of known recrystallized (or hot SDBX) further into the property. Associated with this was minor blebs of chalcopyrite infilling footwall granophyre like alteration pods.

### 8 **RECOMMENDATIONS**

To date no economically significant concentrations of mineralization have been observed on the property. The presence of a Quartz Diorite Offset dyke within a recrystallized Sudbury Breccia zone in the proximal footwall of the SIC is similar to footwall mineralized environments elsewhere around the Sudbury Basin. For that reason the property warrants further exploration work. This may include more detailed mapping and beepmatting of the known QD and Sudbury breccia outcrops or large loop ground EM survey and drilling.



## 9 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

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