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**2022 RECONNAISSANCE PROSPECTING REPORT:  
KOKOKO LAKE PROPERTY**

**CYNTHIA AND CHAMBERS TOWNSHIPS**

**SUDBURY MINING DIVISION**

**NORTHEASTERN ONTARIO, CANADA**



**JUNE 7<sup>TH</sup>, 2022**

**PREPARED BY: JOERG KLEINBOECK, P.GEO.**

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## **1.0 INTRODUCTION**

A reconnaissance prospecting program was completed on the Kokoko Lake Property on May 23<sup>rd</sup> and 24<sup>th</sup>, 2022. This consisted of one day trail clearing, and one day of prospecting. A total of 4 samples were collected from both felsic volcanics and banded iron formation. At the time of work report submission, the assay results were pending. Results will be included in an addendum to this report once they are made available.

## **2.0 PROPERTY DETAILS**

### **2.1 Location and Access**

The Property is located within the Sudbury Mining Division, Ontario, approximately 15 km west of the Town of Temagami, Ontario. The Property is located within Cynthia and Chambers Townships. National Topographic System (NTS) map sheets 41P/01A, 41P/01H, 31M/04D, and 31M/04E cover the area of the Property.

Access to the Property is obtained through several overgrown logging roads/trails that head west from the past producing Sherman Mine for a distance of 15 km. Alternatively, the Property can also be accessed in the summer months by boat from portaging from Lake Temagami into Kokoko Lake, or by float plane.

### **2.2 Topography and Vegetation**

The local terrain is variable from swamps to steep cliffs. Typical vegetation on the Property consists of a boreal forest with a mixture of coniferous and deciduous trees, including poplar, white birch, red pine, white pine, white spruce, black spruce, balsam, cedar, and alders. The elevation of the Property ranges from approximately 298 to 355 m ASL.



Figure 1: Location of the Kokoko Lake Property

### 2.3 Claims

As of May 10<sup>th</sup>, 2022, the Property is comprised of 27 unpatented mining claim cells, totalling approximately 432 ha. The author retains a 100% ownership in the subject claims listed in Table 1 and displayed in Figure 2. The Property is bounded by UTM NAD83 coordinates 17N 574490E to 576855E, and 5212610N to 5215370N.

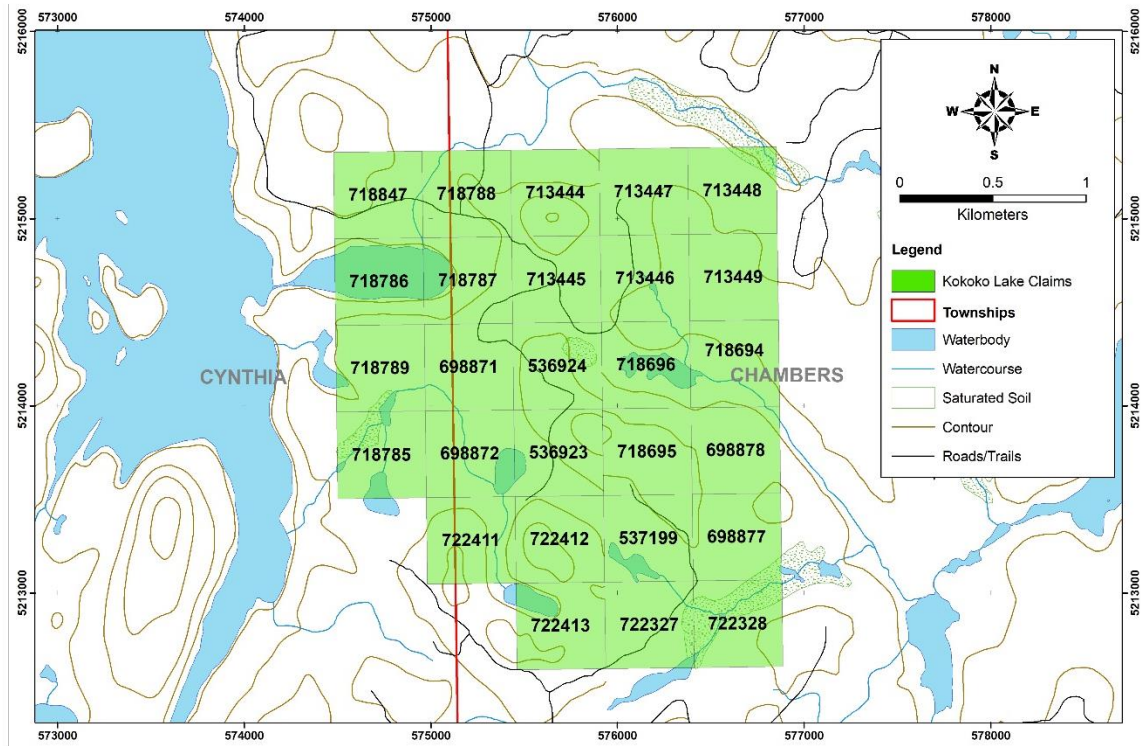


Figure 2: Tenure map for the Kokoko Lake Property

**Table 1: Claim Details**

Township / Area	Tenure ID	Anniversary Date	Work Required	Work Applied	Total Reserve
CHAMBERS	722413	2024-05-03	400	0	0
CHAMBERS	722412	2024-05-03	400	0	0
CHAMBERS	722328	2024-05-03	400	0	0
CHAMBERS	722327	2024-05-03	400	0	0
CHAMBERS	718696	2024-04-13	400	0	0
CHAMBERS	718695	2024-04-13	400	0	0
CHAMBERS	718694	2024-04-13	400	0	0
CHAMBERS	713449	2024-03-11	400	0	0
CHAMBERS	713448	2024-03-11	400	0	0
CHAMBERS	713447	2024-03-11	400	0	0
CHAMBERS	713446	2024-03-11	400	0	0
CHAMBERS	713445	2024-03-11	400	0	0
CHAMBERS	713444	2024-03-11	400	0	0
CHAMBERS	698878	2023-12-21	400	0	0
CHAMBERS	698877	2023-12-21	400	0	0
CHAMBERS	537199	2021-12-18	400	0	0
CHAMBERS	536924	2021-12-18	400	0	0
CHAMBERS	536923	2021-12-18	400	0	0
CHAMBERS,CYNTHIA	722411	2024-05-03	400	0	0
CHAMBERS,CYNTHIA	718788	2024-04-13	400	0	0
CHAMBERS,CYNTHIA	718787	2024-04-13	400	0	0
CHAMBERS,CYNTHIA	698872	2023-12-21	400	0	0
CHAMBERS,CYNTHIA	698871	2023-12-21	400	0	0
CYNTHIA	718847	2024-04-13	400	0	0
CYNTHIA	718789	2024-04-13	400	0	0
CYNTHIA	718786	2024-04-13	400	0	0
CYNTHIA	718785	2024-04-13	400	0	0

## **3.0 HISTORY**

### **3.1 Historical Mineral Exploration**

Assessment files covering the unpatented mining claims were sourced online through MNDMNRF's Assessment File Research Imaging (AFRI) database. From 1972 through to 1996, the area was removed from staking due the Temagami Land Caution. An extensive amount of past historical work has been completed on the Project, and only a summary of the most significant work has been provided below.

**1952-1955:** Dominion Gulf Co. completed trenching, stripping, geological mapping, and diamond drilling (2 drill holes totaling 1,275 ft) testing a northwest orientated iron formation.

**1971:** Copperfields Mining Ltd. completed line cutting and ground geophysics (VLF-EM, DIGHEM), along with 2 diamond drill holes totaling 614 ft. The drill holes intersected graphitic schists and narrow sulphidic horizons consisting of pyrrhotite and pyrite.

**1996-1998:** Falconbridge Ltd. completed line cutting, ground geophysics (HLEM, magnetometer), along with 10 diamond drill holes totaling 1805 m. The program was targeting VMS mineralization. Anomalous copper, zinc, and nickel values were returned from several drill holes.

**1998:** Ag Armino Mines Inc. completed ground geophysical surveys (HLEM, magnetometer).

**2008-2013:** Pantheon Ventures Ltd. completed line cutting, ground geophysical surveys (magnetometer, HLEM, VLF-EM, and IP).



## **4. GEOLOGICAL SETTING AND MINERALIZATION**

### **4.1 Regional Geology**

The Property is located within the southern part of the Cobalt Embayment which lies within the south margin of the Superior Structural Province of the Canadian Shield. The regional geology consists of early Precambrian metavolcanics and metasediments which correlate with the 2,737 Ma Chambers-Briggs Assemblage, part of the Temagami Greenstone Belt (Jackson & Fyon, 1991). These rocks are intruded by vertical Matachewan diabase dykes dated at 2,454 Ma, and younger olivine diabase dykes (Sudbury-type), dated at 1,238 Ma (Osmani, 1991).

### **4.2 Property Geology**

The Property is predominantly comprised of west-northwest trending mafic to felsic volcanics. The felsic volcanics have been overlain by a thick sequence of oxide-facies iron formation. The metavolcanics were then intruded by gabbro, diorite, and felsic porphyries, followed by the emplacement of granitic batholiths (Spawning Lake Stock). The Archean metavolcanic rocks are unconformably overlain west and north of the Property by Huronian sediments of the Gowganda Formation. A northwest orientated Sudbury-type diabase dyke intrudes the metavolcanics and felsic porphyries, and is the youngest rock type on the Property. An ultramafic (to Mafic) intrusive is emplaced between the contact between felsic metavolcanics and iron formation.

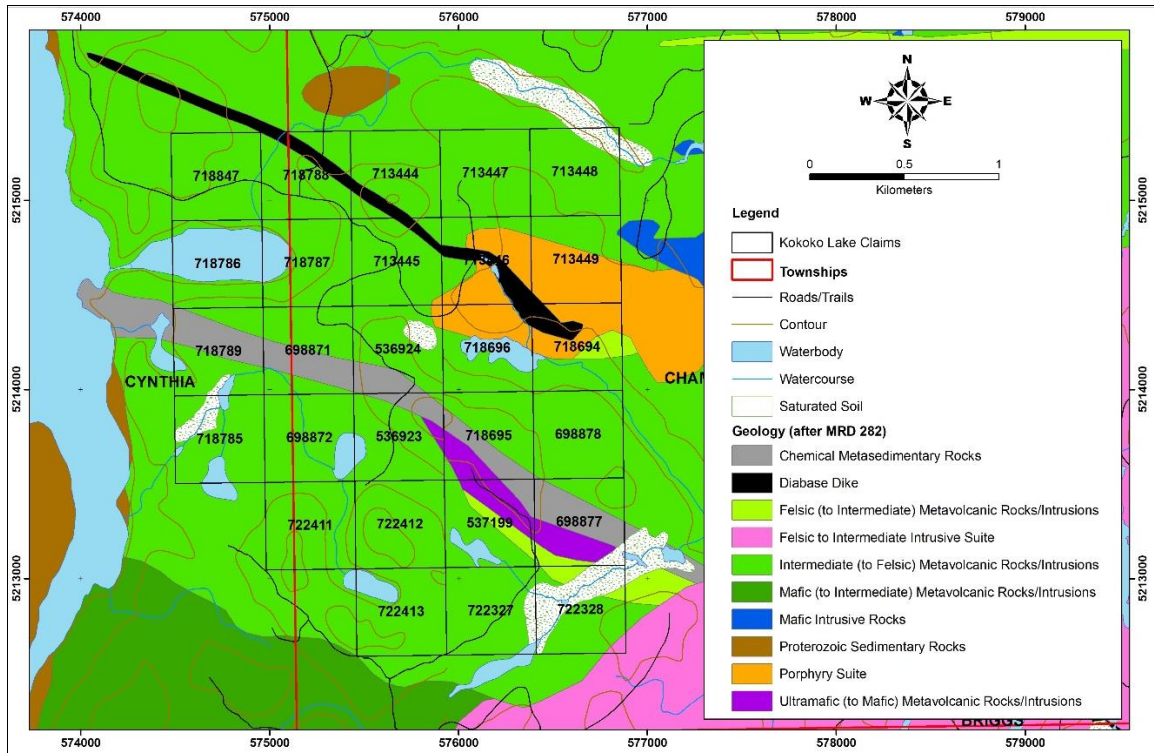


Figure 3: Property Geology (after MRD 282).

## 5.0 DESCRIPTION OF WORK

### 5.1 Methods

From May 24<sup>th</sup> to 25<sup>th</sup>, 2022, a limited two-day prospecting program was completed on the Property. This included a full day to open up the access, and a full day of prospecting on mining claims 537199 and 698877. The program focused in the area south of the mapped iron formation to locate ultramafic intrusive rocks as shown in MRD 282 (figure 3). MRD 282 differs from earlier maps (P2323) by the addition of this unit. In 1996, Falconbridge Ltd. completed drill hole CHA-03 that intersected highly anomalous Cu (up to 1.44%) and Ni (up to 0.25%) over a partially sampled length of 47.20 m. The drill log describes the interval as being predominantly felsic volcanics and lesser amounts of iron formation, and includes a heavily mineralized zone over a core length of 11.50 m. However, the analytical results seem to be more representative of a mineralized mafic to ultramafic intrusive unit(s). If the drill log is correct, then another alternative is that possibly the drill hole is proximal to such an intrusive unit and the elevated Cu and Ni values may be caused by remobilization of the sulphides proximal to the geological contact as the drill log does describe sulphide mineralization occurring as stringer-type to fracture controlled.

No gabbroic or ultramafic outcrops or boulders were located in the field. Outcrops mainly consisted of either felsic volcanics, magnetite-bearing metasediments, or banded iron formation. Extensive sand and gravel deposits are present in the area where the target rocks project to surface.

A total of 4 grab samples were collected from bedrock. Table 2 provides the sample descriptions, and Figure 4 shows the GPS-tracks. Figures 5, 6, 7, 8 display the photographs of the samples with a recorded UTM coordinate, and Figure 9 provides the sample locations with respect to the claim tenure. The casing for drill hole CHA-03 was also located at 576310E/5212945N (Figure 10).

At the time of work report submission, the assay results were pending. Results will be included in an addendum to this report once they are made available.

**Table 2: Sample Descriptions**

Sample	Easting (NAD83)	Northing (NAD83)	Rock Type	Comments
662817	576404	5213055	Felsic volcanic (fragmental)	Outcrop is 5m x 5m in size. White to pink weathered surface, greyish green fresh surface, mottled (fragments?) appearance. Moderately silicified. Trace disseminated and fracture-controlled pyrite. Mag sus=0.376
662818	576412	5213057	Felsic volcanic (fragmental)	Outcrop is 2m x 2m in size, as previous, with significant number of rusty fractures containing up to 2% pyrite. Fractures occasional infilled with 2-5mm quartz-carb veins. Mag sus=0.387
662819	576510	5213273	Iron formation/chert	Outcrop is 1m x 1m in size. Oxide-facies iron formation consisting of alternating magnetic, chert, and chlorite beds ranging from <1mm to 1cm in thickness. Moderately magnetic (contains 5-10% magnetite. Trace disseminated pyrite. Mag sus=36.1
662820	576555	5213167	Metasediment	Outcrop is irregular, 4m x 4m in size. Dark green very fine-grained metasediment. Generally massive, however very weak bedding can be seen in outcrop @ 108/-85. Weakly magnetic – magnetite bearing (overlies iron formation). Trace disseminated py. Weak pervasive chlorite throughout. Mag sus=2.84

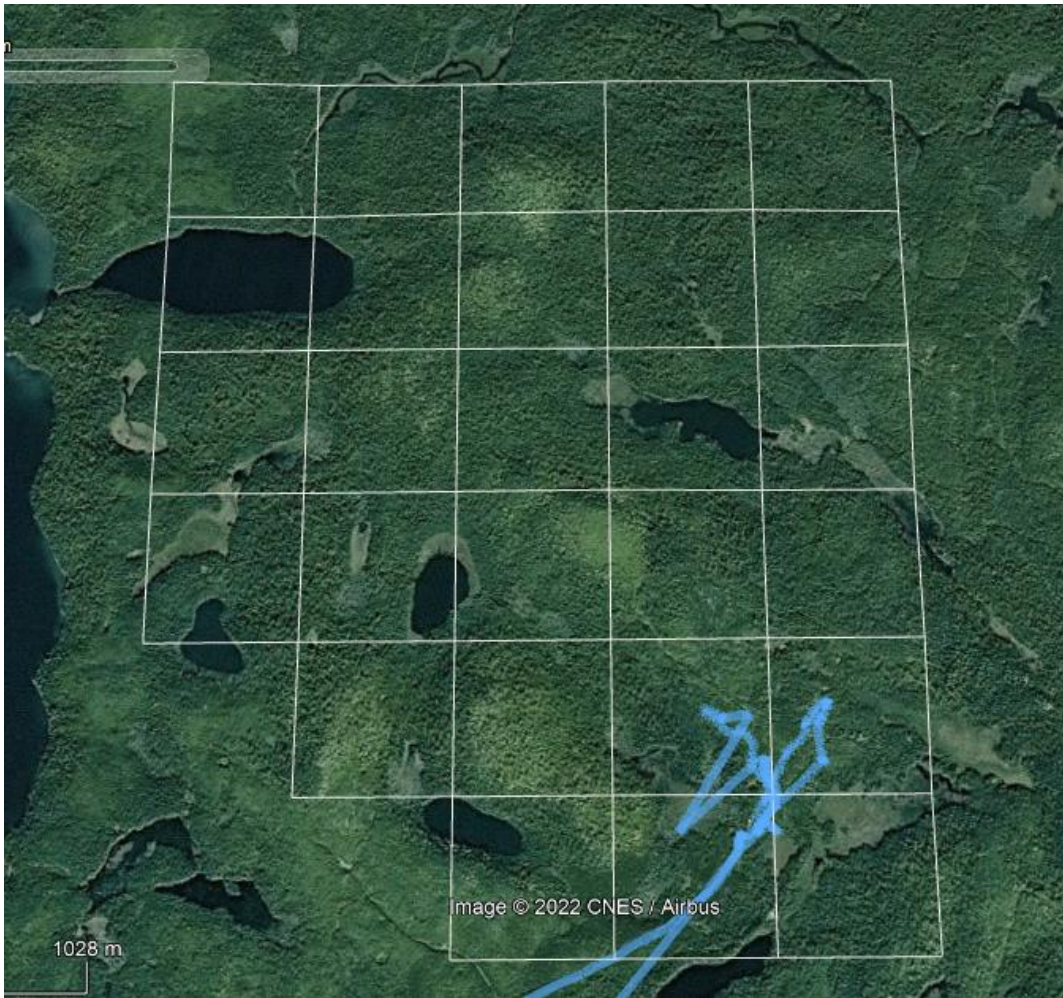


Figure 4: GPS Tracks from the 2022 Prospecting Program.



Figure 5: Sample 662817 (576404E/5213055N).



Figure 6: Sample 662818 (576412E/5213057N).

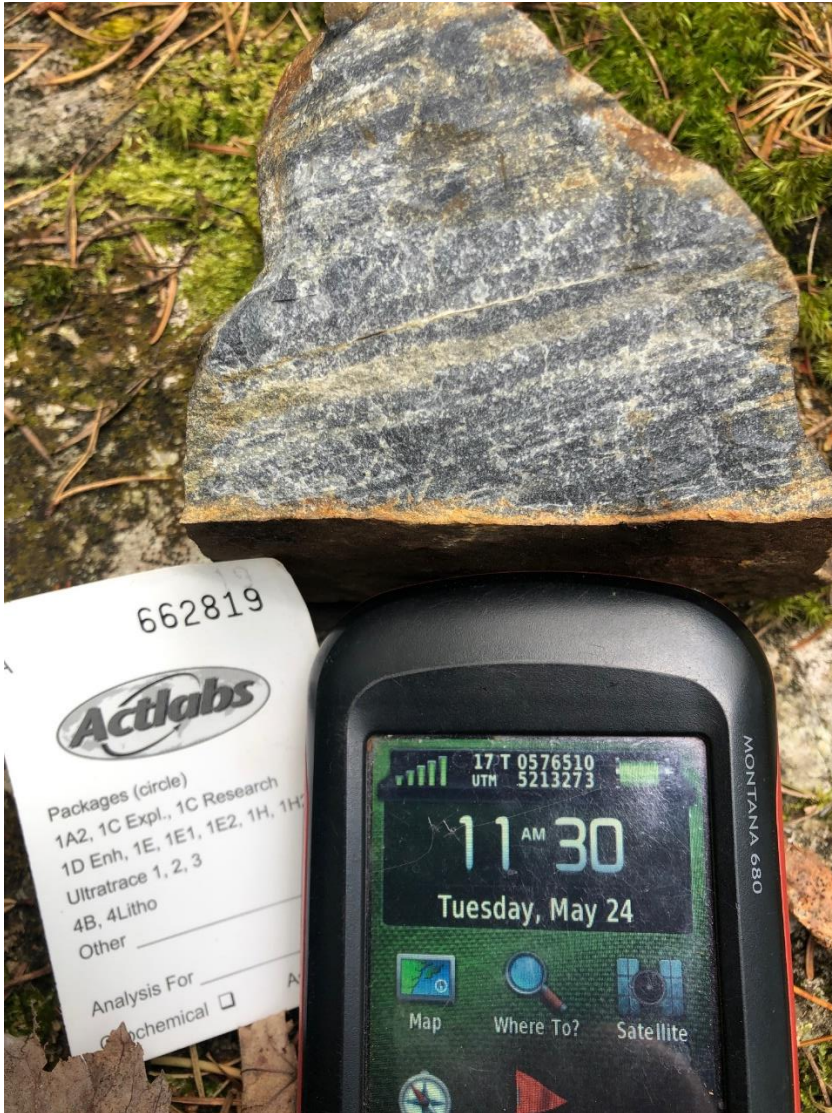


Figure 7: Sample 662819 (576510E/5213273N).





Figure 8: Sample 662820 (576555E/5213167N).

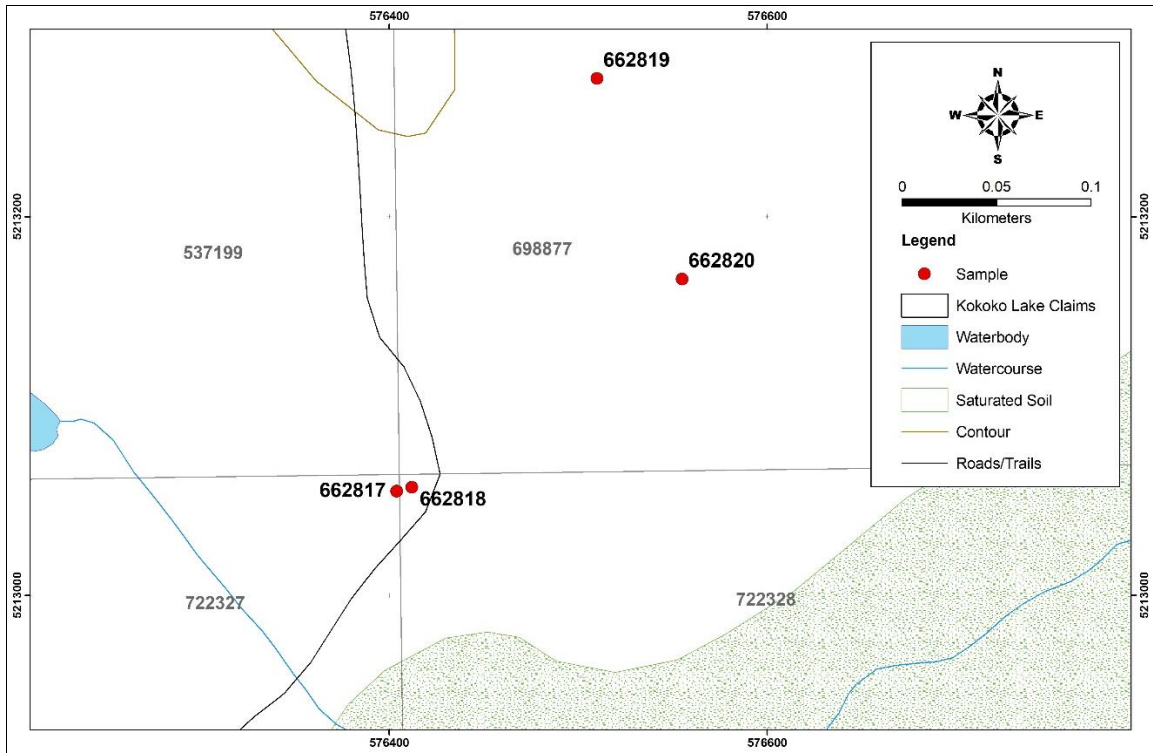


Figure 10: Casing for historical drill hole CHA-03 (576310E/5212945N).

**Figure 1**



Figure 10: Casing for historical drill hole CHA-03 (576310E/5212945N).

## **6.0 CONCLUSIONS & RECOMMENDATIONS**

Based on the results from the 2022 reconnaissance prospecting program, the following is recommended:

- 1) Further prospecting is warranted to locate the surface expression of the mineralization intersected in historical drill hole CHA-03. Till and b-horizon soil sampling should be considered to complement the prospecting work.
- 2) If positive results are obtained from the geochemical and prospecting work, mechanized stripping is recommended as the next step.

## 8.0 REFERENCES

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## **Appendix I**

### **Statement of Qualifications**

## Statement of Qualifications

I, Joerg Martin Kleinboeck of 147 Lakeside Drive, North Bay, Ontario, do hereby certify that:

I am a graduate of Laurentian University, Sudbury, Ontario with a B.Sc. Geology, 2000, and have been practising my profession as a geologist since.

I am a member with the Association of Professional Geoscientists of Ontario (#1411).

I have an active prospector's license for the province of Ontario (#1002600).



Joerg Martin Kleinboeck  
June 7<sup>th</sup>, 2022  
North Bay, Ontario