# Burchell Gold - Base Metal Project Review Shebandowan Gold Camp

# Burchell Lake Area Thunder Bay Mining Division NORTHWESTERN ONTARIO, CANADA NTS 52B/10SE

Prepared for BOLD VENTURES INC.

- by -

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#### **Project Highlights**

- Road-accessible property 105 km west of Thunder Bay, Northwestern
   Ontario and close to major transportation corridor (Highway 11) (Figure 1)
- Property located within the western portion of the Shebandowan Greenstone Belt in the Wawa-Abitibi Terrane (Stott 2011), well known for its mineral endowment (i.e., Hemlo, Kirkland Lake)
- Contiguous with Goldshore Resources Moss Lake Property, which hosts the Moss Lake Gold Deposit (NI 43-101 resource, Indicated 1.38 Moz @ 1.1 g/t Au, Inferred 1.75 Moz @ 1.1 g/t Au). This site is currently (Feb. 2022) undergoing a 100,000 m drilling program to upgrade resources
- Historical gold occurrences in the northwest portion of the Burchell Property are located within a 25 km long northeast-trending structure, known as the Moss Lake-Coldstream Deformation Zone (MLCDZ) (Osmani 2017). This structural zone also hosts the Moss Lake Gold Deposit (which lies within 3 km of the Burchell properties northwest claim boundary), past producing North Coldstream Mine and the OG Deposit.
- The Northwest Gold Occurrences on the Burchell Property are linked to 1988 drilling by Newmont Exploration: Drill Hole 88-07 returned 1.05 g/t Au over 3.36 m and Drill Hole 88-4 returned 0.8 g/t Au over 6.8 m (including 1.8 g/t Au over 1.65 m) (Osmani 2017)
- The Hermia Lake Cu-Au Prospect is a northeast-trending mineralized copper-rich zone that extends for 2.8 km east of Hermia Lake in the westcentral portion of the Burchell Property
- Diamond drilling by several companies from 1964 to 2008 within the mineralized copper trend at the Hermia Lake Prospect returned assay values ranging from 0.31% Cu to 1.1% Cu over 1.30 m to 6.7 m core

lengths. Drilling by Mengold Resources Inc. east of Hermia Lake in 2008 returned 7.19 g/t Au over 0.40 m in Hole BU08-7 (Osmani 2017)

 The eastern half and southwestern portions of the property are highly under-explored despite having a geological and structural setting similar to the western areas of the property. Numerous VTEM anomalies generated by Mengold Resources 2006 Geotech survey in these areas, remain untested.



# **Property Location and Access**

The Burchell Gold-Base Metal Project claims are located approximately 105 km west of the port city of Thunder Bay in the south-central portion of Northwestern Ontario (centered on UTM Zone 15, 677340E, 5380617N) (Figure 1). The claims are accessible via logging roads and secondary Highway 802 south from Trans-Canada Highway 11 travelling west from Thunder Bay. Additional infrastructure includes an east-west 230 KV transmission line along Highway 11.

Extensive support services including accommodations, supplies and explorationrelated businesses such as assay labs, heavy equipment rentals and operators, engineering and consulting companies, are provided by the City of Thunder Bay and the town of Atikokan west of the property.

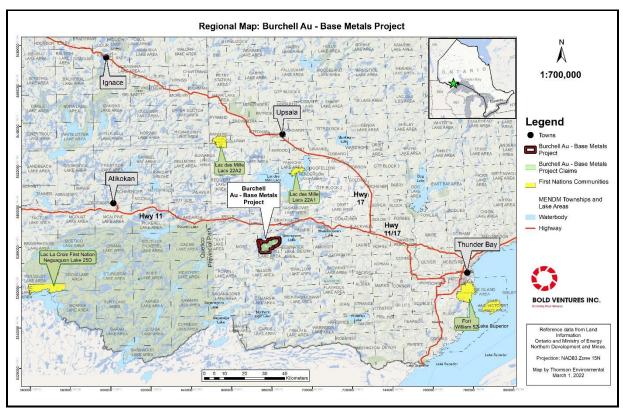


Figure 1. Regional Location Map, Burchell Gold - Base Metal Property.

The Burchell Property lies within the traditional territories of the Lac des Mille Lacs, Fort William and Lac La Croix First Nations.

# **Property Description and Exploration Activity**

The Burchell Property consists of 216 single Cell claims and 49 Boundary claims encompassing approximately 5,070 ha (12,528 acres) situated between Burchell and Greenwater Lakes in the western Shebandowan area (Figure 2). The western and northern boundaries of the property are contiguous with Goldshore Resources Inc.'s Moss Lake Property, which hosts the Moss Lake Gold Deposit. The deposit consists of a NI 43-101-compliant Indicated resource of 1.38 Moz @ 1.1 g/t Au and an Inferred resource of 1.75 Moz @ 1.1 g/t Au (Campbell et al. 2021). Current (February 2022) exploration work on the Moss Lake Property includes a major 100,000 m diamond drilling program to upgrade and increase resources related to the known deposit.

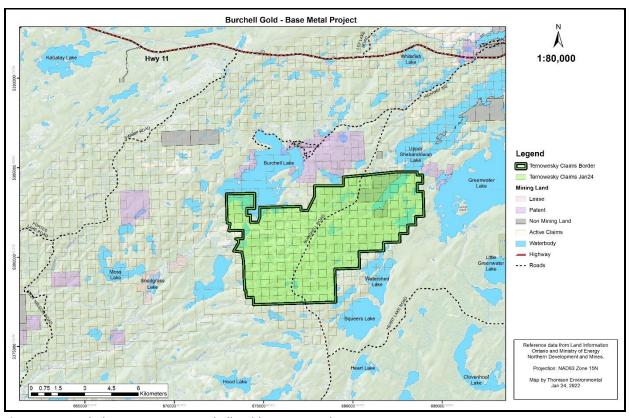
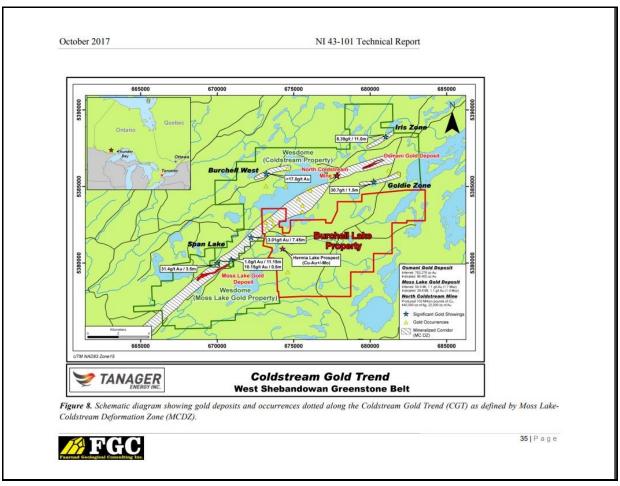


Figure 2. Detailed Location Map, Burchell Gold - Base Metal Property.

Other significant gold resources, located within 2 km of the northern boundary of the Burchell claims, include the past producing (1957 to 1967) North Coldstream Mine (2.47 Mt at 1.87% Cu, 0.28 g/t Au and 5.53 g/t Ag) and the OG

Deposit (formerly East Coldstream). The OG Deposit hosts a NI 43-101-compliant Indicated resource of 96,400 oz @ 0.85 g/t Au and an Inferred resource of 763, 276 oz @ 0.78 g/t Au (Campbell et al. 2021).



**Figure 3.** Tanager Energy Map Showing Northeast Mineralized Structural Corridor Trending across the Burchell Property (Osmani 2017).

A key component to deciphering the nature of the gold mineralization in this portion of the Shebandowan Greenstone Belt (SGB) was the detailed field work conducted by Osmani (1997, 2017) of the Ontario Geological Survey (OGS) during the 1990's and later, as a consultant for Tanager Energy Inc. on the Burchell Lake Property in 2017. The work identified a deformation zone or structural corridor that ties together much of the significant gold mineralization in this area of the SGB. Historical gold occurrences in the northwest portion of the Burchell Gold - Base Metal Property are located within a 25 km long northeast-trending structure, known as the Moss Lake-Coldstream Deformation

Zone (MLCDZ) (Osmani 2017). This structural zone also hosts the Moss Lake Deposit, past producing North Coldstream Mine and the OG Deposit (Figure 3). The presence of this major structure will assist in targeting exploration work on the Burchell Property.

In addition to the ongoing diamond drilling program at the Moss Lake Property by Goldshore Resources, other exploration companies are active in the immediate area to the east and north of the Burchell Property. This includes Kesselrun Resources Ltd. currently in the late stages of a 23,000 m diamond drilling program on the Huronian Gold Project, White Metal Resources Corp. work (diamond drilling, IP geophysical survey, prospecting and sampling) on the Tower Mountain Gold Property and recent work by the Tashota Resources group on their Echo Ridge (diamond drilling), Larose and Strike Copper properties.

### **Exploration History**

1948 – I. Wadson completed a small drilling campaign on the Burchell Lake Property east of Hermia Lake consisting of four drill holes (W-1 to W-4) totaling 109 m. This was the first recorded work on the property, however, no results were reported.

1956 to 1957 – Great Lakes Copper Mines Ltd. completed 1669 m of diamond drilling in 15 holes. Core sample assays ranged up to 1% Cu over 5.6 m (Hole M-7) in a siliceous cherty rhyolite breccia and as high as 5.08% Cu (Hole M-5) (Osmani 2017).

1957 – The Mining Corporation of Canada Ltd. completed an 8-hole, 624 m diamond drilling program on a property west of Hermia Lake. Sample analysis from Hole T2-8 returned 1.4% Cu over 0.67 m and 1.22% Cu over 0.30 m.

1962 – International Nickel Company of Canada Ltd. drilled 3 holes totaling

210 m on Upper Shebandowan Lake. The highest results obtained from core analysis yielded 0.08% Cu and 0.18% Ni.

1965 – Consolidated Mining and Smelting completed a large airborne Mag-EM geophysical survey over much of Moss Township and part of the Burchell Lake Area. Most of this work occurred southwest of the current property, but it extends onto it and is a good regional guide to structures that may continue from the old Huronian Mine (Ardeen) or Moss Lake Gold Property to the southwest (Osmani 2017).

1966 to 1967 – Cominco Ltd. conducted a drill program consisting of 3-holes, totaling 328 m, which targeted EM conductors located east of Fountain Lake. No assay results were reported.

1971 to 1972 – According to a Gulf Minerals assessment report (1982), Freeport Canadian Exploration Company drilled 2909 m in 16 holes on the Burchell property during this period. These holes appeared to have been drilled in the same area as the Gulf Minerals drill holes completed in 1982. Highlights of drill hole results from Freeport Sulphur's 1971 program include 0.36% Cu over 6.1 m and 0.28% Cu over 48.8 m (Solonyka 1982).

1976 – Belore Mines Ltd. drilled 3-holes, totaling 470 m east of Hermia Lake to follow-up on an IP survey completed by McIntyre Mines Ltd in 1975. One of the holes intersected 2 zones of wide low-grade visible copper mineralization, which returned 96 m of 0.232% Cu and 9.1 m of 0.292% Cu. Drill logs also indicated several zones of pyrite, chalcopyrite, molybdenite, hematite, and/or magnetite, which were not analyzed (Osmani 2017).

1980 to 1982 – Gulf Minerals Canada Ltd. completed a 42 km ground Mag-EM geophysical survey and drilled 6-holes, totaling 1837 m on a property southeast of Burchell Lake. Assay results include 0.29% Cu over 42.5 m and 1.09% Cu over 1.5 m.

1987 to 1988 – Newmont Exploration Canada Ltd. completed a 76.4 line-km VLF-EM geophysical survey followed by an 8-hole diamond drilling program totaling 1850 m. Diamond drilling was conducted in the northwest portion of the current day Burchell Property. Drill Hole 88-07 returned 1.05 g/t Au over 3.36 m and Drill Hole 88-4 returned 0.8 g/t Au over 6.8 m (including 1.8 g/t Au over 1.65 m) (Osmani 2017).

1992 – A. Wallace conducted mapping and sampling on the Burchell Lake Property, which produced numerous anomalous multi-element assays (Cu, Zn, Au, Ag). The most significant results obtained are from chip sampling across a vein structure and included 2.9 g/t Au over 0.30 m, 0.97 g/t Au over 0.91 m, 3.4 g/t Au over 0.30 m, 19.3 g/t Au over 0.61 m, and 42.2 g/t Au over 0.61m (Osmani 2017).

2004 to 2010 – Mengold Resources Inc. conducted several prospecting and sampling programs over the Burchell Property and completed basal till and soil geochemical surveys. Two diamond drilling programs were also conducted in 2006 (5-holes totaling 669 m) and in 2008 (20-holes totaling 3199 m). Intersections of low-grade copper mineralization were returned in Holes BU08-12 and BUO8-15 in the area immediately east of Hermia Lake. Most of the significant gold values are associated with intermediate to felsic fine grained tuffaceous rocks with associated pyrite mineralization. The highest gold value was obtained from Hole BU08-7 at 7.19 g/t Au over 0.40 m in this same area.

2017 – Tanager Energy Inc. released a NI 43-101 Technical Report covering the Burchell Lake Property.

2019 – Paleo Resources Inc. contracted Prospectair Geosurveys to complete a High-Resolution Heliborne Magnetic Survey over the entire Burchell Gold - Base Metal Property.

## **Regional Geology**

The Burchell Gold - Base Metal Project is located within the western portion of the Shebandowan Greenstone Belt, which is part of the Wawa-Abitibi Terrane (WAT) of the Superior Province in Ontario (Figure 4). The WAT extends westsouthwest for approximately 850 km from the Kapuskasing Structural Zone in northeastern Ontario to the Minnesota River Valley area in North Dakota (Osmani 2017). Rocks within these terranes share similar lithological, geochemical and age characteristics, and structural and metamorphic histories (Stott et al. 2010).

The WAT is a typical Archean greenstone-granite terrane consisting of primitive ultramafic to felsic volcanic rocks and associated metasedimentary rocks, intruded, and enclosed by granitoid rocks of similar age. It is bounded to the north and west by the Quetico metasedimentary basin or subprovince (Magnus 2019, Stott 2011). The WAT contains a series of greenstone belts of similar age (ca. 2.95 to 2.68 Ga) hosting gold, nickel, and zinc deposits. In Northwestern Ontario, these deposits include the Hemlo Gold Mine at Marathon and past producers; the Geco VMS (Cu-Zn) Mine at Manitouwadge, the Shebandowan NI-Cu Mine and the Winston-Pick Lake VMS Zn-Cu Mine north of Schreiber.

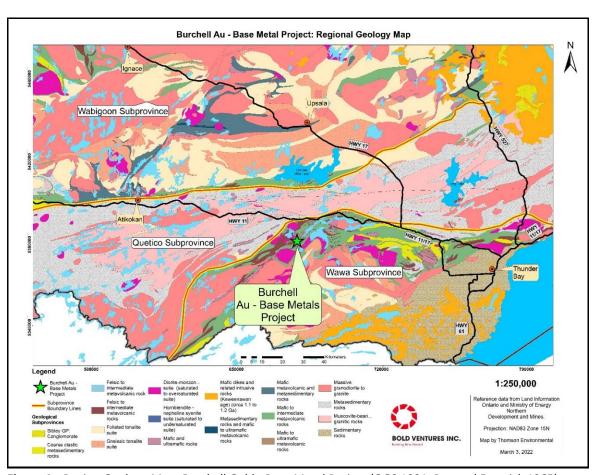


Figure 4. Region Geology Map, Burchell Gold - Base Metal Project (OGS 1991, Pye and Fenwick 1965)

#### **Local Geology and Mineralization**

The western portion of the SGB is host to numerous base and precious metal deposits and occurrences and is characterized by the presence of older (2720 to 2715 Ma, Osmani 1997), tholeiitic to calc-alkalic mafic and felsic to intermediate metavolcanic rocks and their associated intrusive equivalents. Clastic and chemical (chert and chert-magnetite banded iron formation) metasedimentary rocks, although rare on the Burchell Property, occur in relative abundance within the extreme western part of the SGB near the Quetico Subprovince boundary. Komatiitic mafic and ultramafic metavolcanics and associated intrusive rocks are rare, but widely distributed in the Greenwater Lake area, located approximately 10 km east of the Burchell Property. The past producing Shebandowan Ni-Cu-PGE Mine (1971 to 1998 - intermittent with a total production of 9.3 Mt @ 1.75% Ni, 0.88% Cu and 1.83 g/t PGE's), is hosted within komatiitic rocks and located approximately 20 km east-northeast of the Property along the south shore of Shebandowan Lake (Campbell et al. 2021). An intensely silicified and deformed gabbroic sill-like body hosting Cu-Au-Ag mineralization at the past producing North Coldstream Mine is located approximately 1.5 km north of the Burchell Property boundary. The setting of the deposit at the North Coldstream Mine is similar to the Cu-Au Prospect located east of Hermia Lake on the Burchell Property (Osmani 2017).

Historical exploration work has identified 2 key areas of significant mineralization on the Burchell Property:

- 1. Northwest Gold Occurrences
- 2. Hermia Lake Cu-Au Prospect

These 2 areas are located along the western portion of the Burchell Property where much of the past exploration work has been focused. It is evident from a review of the historical data over the past 70 years that the central and eastern regions of the property have been under-explored. This is despite the fact that these under-explored areas are underlain by similar bedrock geology and structural features that trend across the property from southwest to northeast.

Evidence of this observation is taken from detailed mapping conducted by the Ontario Geological Survey (Osmani 1997, Map 2622) in 1992.

#### **Northwest Gold Occurrences**

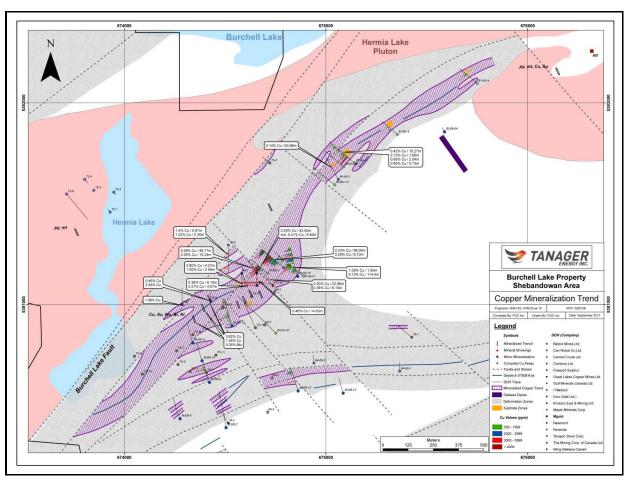
The known gold occurrences located in the northwest portion of the Burchell claim group are linked to a diamond drilling program conducted by Newmont Exploration of Canada Limited from 1987 to 1988. Seven of the nine holes (totaling 1850 m) completed indicates strongly anomalous gold mineralization in a series of narrow zones (1.0 – 4.0 g/t Au over 0.1 to 0.7 m). Favorable gold intersections reported in the drill logs range from 1.05 g/t Au over 3.36 m (Drill hole 88-07) to 0.8 g/t Au over 6.8 m (including 1.8 g/t Au over 1.65 m) (Drill hole 88-04). Descriptions of the host rock include sericite-pyrite felsic crystal tuff and sheared sericitic and pyritic rhyodacite. Gold mineralization occurs in shears and is associated with fine-grained disseminated pyrite along schistosity planes. No follow-up exploration work was completed by Newmont.

As previously discussed, the Northwest Gold occurrences lie within the MLCDZ, a 25 km long northeast trending deformation zone that hosts much of Goldshore Resources known gold mineralization across their property, including the Moss Lake Gold Deposit. It is significant to note that information released by Wesdome Gold Mines Ltd. (previous owners of the Moss Lake Property) in 2017 (press releases), indicates that diamond drilling and associated IP anomalies track along the northeast trend to within 2 km of the Burchell properties northwest claim boundary. If the historically defined gold zones in the Span Lake area are considered, the known gold trend can be extended northeastwards to within 500 m of the Burchell Property claims and the Newmont gold occurrences (Osmani 2017).

#### **Hermia Lake Cu-Au Prospect**

Exposed trenches and historic diamond drilling (1964, 1981) work at the Hermia Lake Prospect, indicate the area is underlain by intensely deformed, sheared, brecciated and altered mafic to felsic volcanic rocks. The strong deformation

affecting these rocks is related a major northeast-southwest-trending structure that can be traced from historical drill logs and exploration trenches in conjunction with geophysical data (Osmani and Zulinski 2014). This northeast copper-gold trend extends for approximately 2.8 km from south of Hermia Lake to a point southeast of Burchell Lake (Figure 5). The altered and deformed metavolcanic rocks have been intruded by dikes and sills of both mafic (gabbro to diorite) and felsic (quartz-feldspar and feldspar porphyries) composition.



**Figure 5.** Tanager Energy Map Showing the Hermia Lake Cu-Au Mineralized Trend on the Burchell Property (Osmani 2017)

Copper is the dominant mineralization at the Hermia Lake Prospect with lesser amounts of Au, Ag, Mo, Zn and Ni. Silicification is strongly developed in the intermediate to felsic metavolcanic rocks, chlorite and magnetite alteration dominates in the mafic schists and carbonate alteration is prominent in the sheared porphyritic rocks. Sulphide mineralization reported in the Hermia Lake trenches ranged up to 3% pyrite and 3% chalcopyrite occurring as

disseminations, stringers and elongated blebs in the sheared host rock. Sampling of the trenches by Osmani (1993) in areas of silicification with the highest sulphide content, returned values up to 1.05% Cu, 0.05% Mo and 0.2 g/t Au). Diamond drilling by Great Lakes Copper Mines Ltd. (Giblin 1964) returned results ranging from 0.31% Cu to 1.1% Cu over 1.30 m to 6.7 m core lengths (Hole M-9) in brecciated and hematized felsic metavolcanic rocks. Values as high as 5.08% Cu were obtained in Hole M-5 (no core length reported). Drilling carried out by Gulf Minerals Canada Ltd. from 1980-1981 reported assay values up to 1.1% Cu, 0.07% Mo, 0.6 oz Ag/ton and 0.08 oz Au/ton (Osmani 2017). All drilling discussed here was completed within the mineralized copper trend at the Hermia Lake Prospect.

#### **Economic Potential and Recommendations**

The initial exploration work on the Burchell Gold - Base Metal Property should be focused on the two areas of greatest economic potential. These two areas, the Hermia Copper-Gold Prospect and the Northwest Gold Occurrences Area (and the under-explored extensions along trend), provide the highest potential for economic concentrations of copper and gold within the claim group.

The Northwest Gold Occurrences area, which lie within the 25 km long northeast-trending Moss Lake-Coldstream Deformation Zone, should be considered a priority target. Goldshore Resources ongoing 100,000 m drilling program, centered on the Moss Lake Gold Deposit, is located within 3 km of the Burchell Property northwest claim boundary and lies along this well-defined structural zone (Figure 3). A compilation of available data will support the initial exploration program. Detailed prospecting, sampling and geological mapping should be followed by stripping and channel sampling in favorable areas. Results from this work in conjunction with the anomalies developed by the 2019 Paleo Resources High Resolution Magnetic Survey and the historical electromagnetic surveys, should be utilized to generate diamond drilling targets. Historical drilling in this area averaged approximately 230 m in depth.

A similar exploration strategy should be used for the Hermia Cu-Au Prospect in the west-central portion of the Burchell Property. This high priority area, which hosts numerous copper showings, is part of a 2.8 km long northeast-trending mineralized copper zone within the claims (Figure 5). Historical drill holes in his area averaged 100 to 150 m, with one hole to a maximum depth of 360 m. A review of the historical electromagnetic surveys (VTEM), in conjunction with the geological data base, may identify drill ready targets in the next phase of exploration work.

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#### **Statement of Qualifications**

#### **AUTHOR'S CERTIFICATE**

I, Gerald Dewar White, do hereby certify as follows:

- 1. I am an independent consulting geologist, and I reside and carry-on business at 28 Hill Street South, Thunder Bay, Ontario, P7B 3T5 under Superior Rift Geoconsulting Inc.;
- 2. That I have the degree of Bachelor of Science in Geology, 1979, from the University of Manitoba;
- 3. That I am a member in good standing of the Association of Professional Geoscientists of Ontario (Member No. 0184, effective June 22, 2002)
- That I have been practicing my profession in Canada continuously since 1979;
- 5. That I am the author of a report entitled "Burchell Gold-Base Metal Project Review, Shebandowan Gold Camp, Burchell Lake Area, Thunder Bay Mining Division, Northwestern Ontario, Canada" prepared for Bold Ventures Inc., with an effective date of March 2, 2022, and that I am responsible for all sections of the Report;
- 6. That, as at the effective date of the Report, to the best of my knowledge, information and belief, the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Dated at Thunder Bay, Ontario

This 2nd day of March 2022

Gerald White, BSc., P.Geo.