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Report on Three-Dimensional Modelling at the Gowganda Project, Miller Lake O'Brien, Capitol and Bonsall mines, Haultain and Nicol Township, Ontario, Canada

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1. OVERVIEW

1.1 Project Name

This project is known as the **Gowganda Project.**

1.2 Summary

Battery Mineral Resources Ltd. (BMR) undertook three-dimensional (3D) modelling of the Gowganda project, Miller Lake O'Brien, Capitol and Bonsall mine prospects intermittently from October 10, 2018 to November 26, 2019 comprising a total of 67 man days spent by Canadian Exploration Services (CXS) geologists.

The objective of this 3D modelling was to gain a better understanding of the spatial correlation of these mines and the mineralized structures they were mining to help define future drill targets.

Underground workings were modelled using Autodesk Civil 3D, and 3D geological modelling was done using Leapfrog Geo (Leapfrog). A total of three underground mines were modelled, the Miller Lake O'Brien, Capitol and Bonsall, as well as six main lithological volumes which include the late gabbro dikes, ore veins, Nipissing Diabase sill, Huronian Sediments, Matachewan Gabbro dikes and Keewatin meta-volcanics.

Modelling of underground workings has shown mineralization to be dominantly in parallel vein sets that are east-west and north-south trending, dipping near vertical and are forming almost entirely within the upper-half of the Nipissing Diabase sill.

Although this area has been extensively explored for silver in the past, there is still a large opportunity here for cobalt rich vein systems that were not favourable to previous silver-oriented exploration and mining. 3D modelling has given new insight into data that was previously only available to view in two-dimensions. In addition, with aerial geophysics and a recent 3D IP survey around the Capitol and Miller Lake O'Brien mine, several new prospective structures and settings have been identified including vein offsets within the Miller Lake O'Brien mine, veins along the lower contact of the Nipissing sill, parallel IP anomalies to previously mined veins and mineralization along the Huronian-Keewatin unconformity.

All coordinates presented in this report are in UTM NAD83 Z17N.

2. LOCATION DETAILS

2.1 PROPERTY & LOCATION

The Battery Mineral Resources' (BMR) Gowganda project is comprised of 1455 mining cell claims and 4 mining leases, totaling 31641.59 hectares, in Morel, Shillington, Rankin, Raymond, Knight, Van Hise, Haultain, Chown, Lawson, Nicol, Leith, Milner and Corkill townships (Figures 3 & 4) near the village of Gowganda in the District of Timiskaming. The general location of the Miller Lake O'Brien, Capitol and Bonsall mine property is shown in Figure 1.

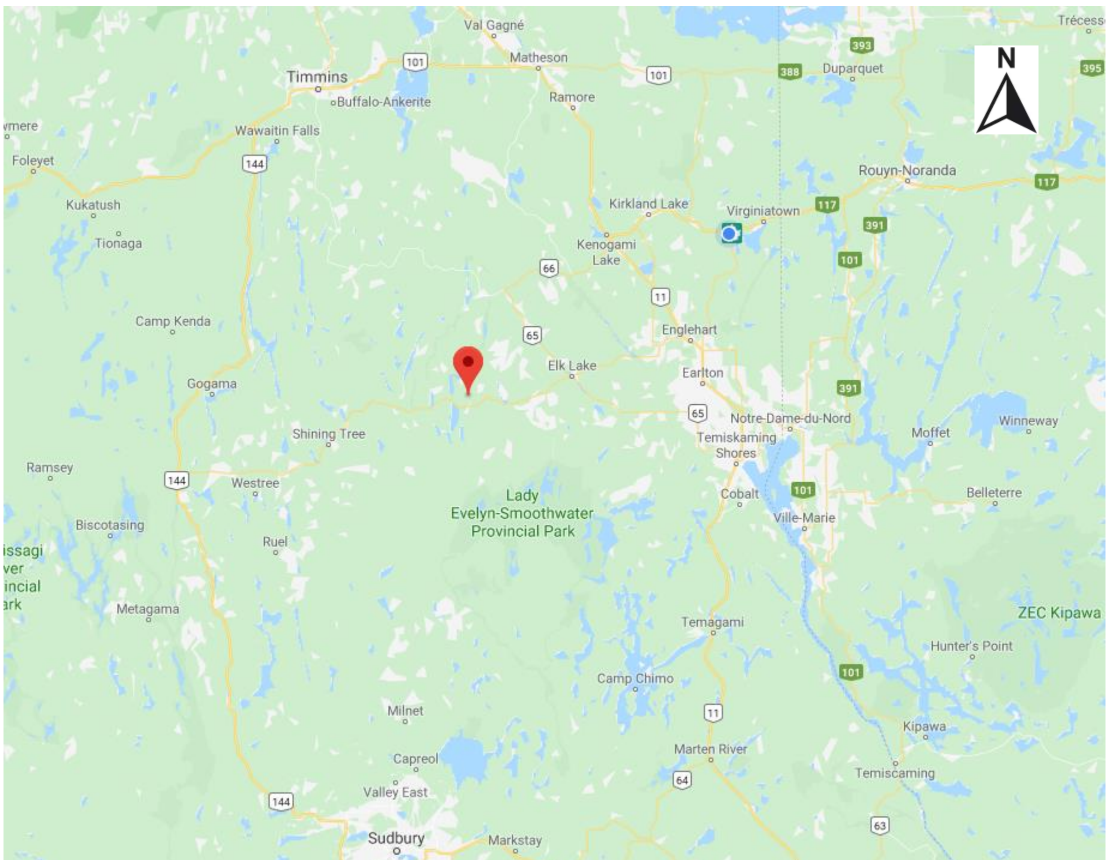


Figure 1: Location of the Gowganda Project, Miller Lake O'Brien, Capitol and Bonsall prospects.

2.2 ACCESS

Access to the property can be made by taking HWY 560 west from Elk Lake, Ontario for 37.7 km to Everett Lake road. Everett Lake road can be taken for 4.2 km north-north-east to the historic O'Brien camp.

2.3 MINING CLAIMS AND LEASES

The Battery Mineral Resources' (BMR) Gowganda project is comprised of 1455 mining cell claims and 4 mining leases, totaling 31641.59 hectares, in Morel, Shillington, Rankin, Raymond, Knight, Van Hise, Haultain, Chown, Lawson, Nicol, Leith, Milner and Corkill townships (Figures 2 & 3). The BMR property consist of wholly owned staked units, leased claims, and under option from several individuals and companies.

The area of modelling includes legacy claim numbered L4208019 which transitioned into boundary cells 272344, 152343, 101306, 123830 (Table 1), and mining leases LEA-109391, LEA-109392, LEA-109393, LEA-109394 (Table 2) located in the south boundary region of Haultain Township and northern border region of Nicol Township, within the Larder Lake Mining Division.

Legacy Claim Number	Claim Number	Provincial Grid Cell ID	Ownership of Land	Township
L4208019	272344	41P10J363	Battery Mineral Resources Limited	Haultain
L4208019	152343	41P10J364	Battery Mineral Resources Limited	Haultain
L4208019	101306	41P10J383	Battery Mineral Resources Limited	Haultain-Nicol
L4208019	123830	41P10J384	Battery Mineral Resources Limited	Haultain-Nicol

Table 1. Mining Claims Information

Mining Rights Number	Lease Expiry Date	Ownership of Land	Township
LEA-109391	2033-12-31	Battery Mineral Resources Limited	Haultain-Nicol
LEA-109392	2033-12-31	Battery Mineral Resources Limited	Nicol
LEA-109393	2033-12-31	Battery Mineral Resources Limited	Nicol
LEA-109394	2033-12-31	Battery Mineral Resources Limited	Haultain-Nicol

Table 2, Mining Lease Information

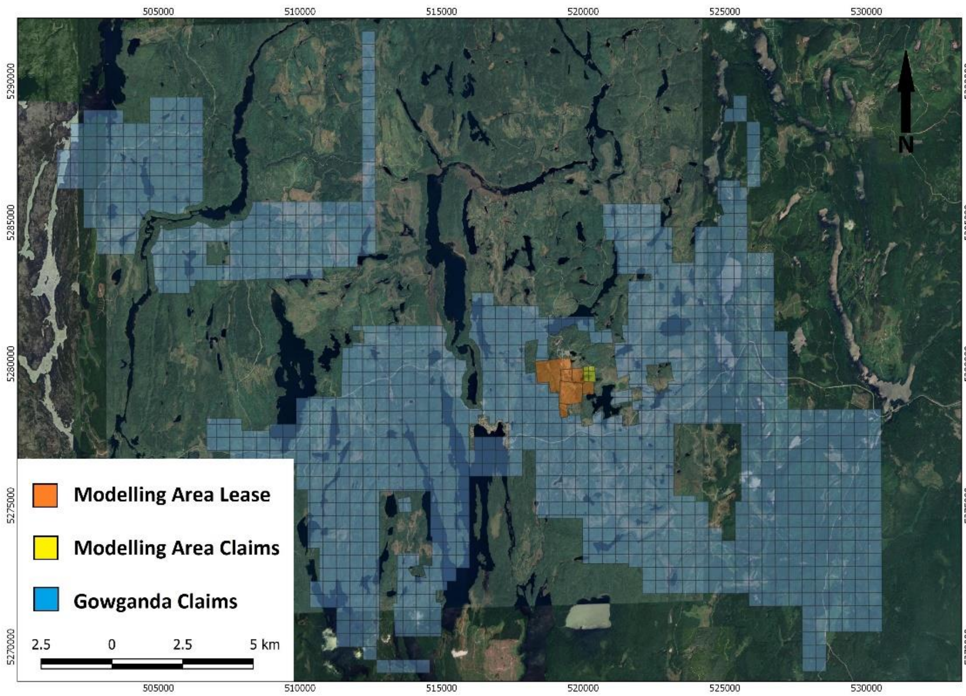


Figure 2. BMR's broader Gowganda project (blue) and modelling area (orange and yellow) overlain on a satellite image.

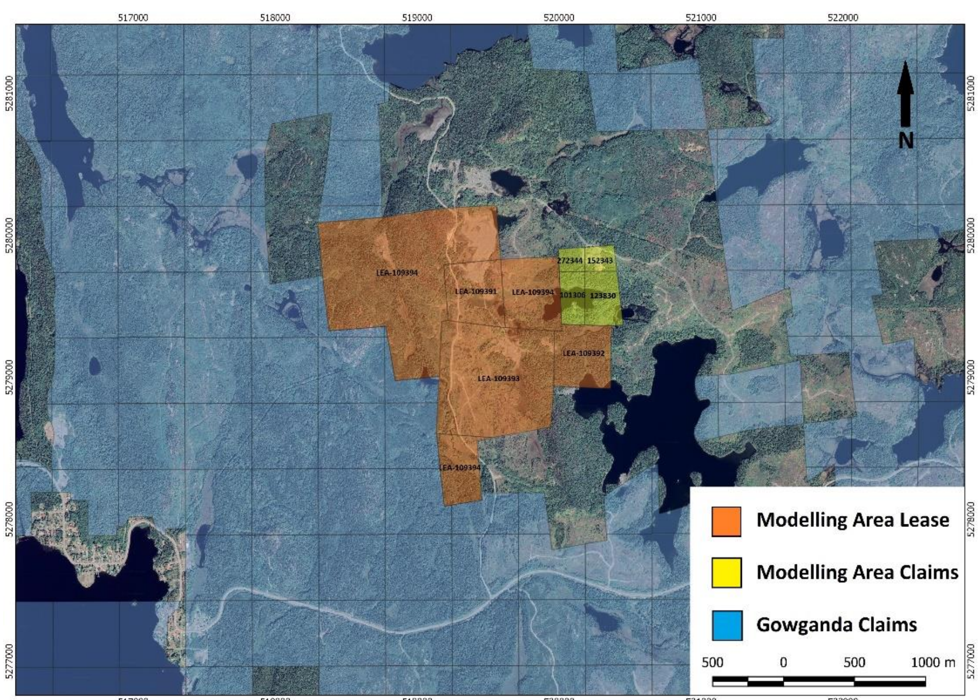


Figure 3 Gowganda project area (blue) modelling area (orange and yellow), overlain on a satellite image.

2.4 PROPERTY & EXPLORATION HISTORY

There have been many historical mining and exploration projects carried out over the years within the survey area. The following list describes details of the previous geoscience work, which was collected by the Mines and Minerals division, the Kirkland Lake Resident Geologist office, and provided by OGSEarth (MNDM & OGSEarth 2018).

PROPERTY AND EXPLORATION HISTORY

Capitol- Property History and Development

In 1929 Castle-Trethewey Mines Ltd was formed through the amalgamation of Capitol Silver Mines and Trethewey Silver Cobalt Mines, both of whom had begun major production in the area in 1920. (McIlwaine, 1978). The bulk of the production came from the Castle No. 3 Mine. Production ceased in 1931. Castle-Trethewey Mines recommenced operations in 1948 in the old Capitol Shaft area where production began again in 1949.

The Capitol Shaft property along with all other Gowganda Area properties held by Castle-Trethewey Mines were acquired by McIntyre Porcupine Mines in 1959. McIntyre Porcupine Mines continued production until 1964.

In 1967 all the Gowganda properties held by McIntyre Porcupine Mines were leased to United Siscoe Mines (Siscoe Metals). The Capitol Shaft was re-examined and operational until 1972 when Siscoe Metals relinquished them back to McIntyre Porcupine Mines.

In 1976, Milner Consolidated Silver Mines Ltd. acquired all the Gowganda properties from McIntyre.

Capitol- Exploration History

1908: Capitol Silver Mines/Trethewey Silver Cobalt Mines

Acquired the Capitol property among other neighbouring properties in the Gowganda camp. Initial surface work was completed (stripping/trenching) and a 44-foot shaft was sunk into a north-south trending vein carrying iron-cobalt-nickel arsenides with minor silver. (File 41P10NE0016).

1920-1931: Capitol Silver Mines/Trethewey Silver Cobalt Mines (Castle-Trethewey)

Major production was conducted across all Gowganda properties with 6,461,021 ounces silver and 299,847 ounces cobalt produced. The majority coming from the

Castle No. 3 Shaft. (File 41P10NE0016).

1925: Capitol Silver Mines/Trethewey Silver Cobalt Mines (Castle-Trethewey)

Sunk a second shaft, 60 ft east of the initial shaft which reached a final depth of 819 ft. This second shaft would be referred to as the 'Capitol Shaft'. (File 41P10NE0016).

1951-66 and 1969-1971: Castle-Trethewey Mines Ltd./McIntyre Porcupine Mines/Siscoe Metals

During these times and under several companies the Capitol Mine was actively mining and produced 11,437,181 ounces silver and 209,474 ounces cobalt. (File 41P10NE0016).

1976: Milner Consolidated Silver Mines Ltd. (File 41P10NE0016)
Compilation and Interpretation – Haultain and Nicol Township

Kenneth H. Darke Consultants Limited compiled, interpreted, and concluded that vein systems and areas of potential economic interest within the properties were not sufficiently evaluated. Drilling and detailed geological evaluation was recommended to assess the potential of this area.

1987: Canadian Lencourt Mines Ltd. (File 41P10NE0023)
Geochemical Sampling – Haultain and Nicol Township

Canadian Lencourt Mines Ltd and Sandy K. Mines conducted geochemical sampling on mine tailings on the Siscoe Metals property. It was concluded that the silver tailings at Sandy K are amenable to treatment. Recoveries were estimated to yield significant profit over a 7-year span.

2007: Amador Gold Corp. (File 20000002177)
Magnetometer Survey – Haultain Township

Larder Geophysics Ltd. performed magnetometer survey over 3.3875 line-km of the Capitol Mine Grid. Three significantly high magnetic intensities were observed. A northwest trending magnetic high was interpreted as a geological boundary, whereas the sources of a southwest linear trend and a high anomaly observed in the lake region could not be configured.

2008: Amador Gold Corp. (File 20000002746)
Very Low Frequency EM Survey – Haultain Township

Larder Geophysics Ltd. conducted a VLF EM survey over 3.4875 line-km of the Capitol Mine Grid. High magnetic intensities were mainly observed in the vicinity of an old mine. An intense north-northwest trending anomaly and a strong axis was observed, but their sources were undetermined.

2009: Amador Gold Corp. (File 20000003861)
HLEM Survey – Haultain Township

Larder Geophysics Ltd. conducted a HLEM survey over 3.4875 line-km of the Capitol Mine Grid. Conductive HLEM axes were observed in the survey area. Northern portion of these contributions were likely due to cultural features.

2013-2015: Castle Silver Mines Inc (File 20000014046)
Geological Mapping, Geochemical Sampling, Stripping, Channel Sampling, Rehabilitation – Haultain and Nicol Township

Douglas Robinson of Doug Robinson Consulting conducted geological data compilation, geochemical analyses, stripping, channel sampling and grid rehabilitation on the Castle Silver Property. Additional line cutting, geophysical surveys and geological surveys were recommended for the survey area.

2016: Battery Mineral Resources Limited (File 20000015781)
Airborne Magnetometer and Airborne Radiometric Surveys – Donovan, Barber, Browning, Charters, Corkill, Donovan, Dufferin, Ermatinger, Hart, Haultain, James, Leckie, Leonard, Moncrieff, Nicol, North Williams, Ray, Speight, Unwin, Van Nostrand, Willet Townships

Precision GeoSurveys conducted airborne magnetometer and radiometric surveys over 12,024 line-km of land for the Cobalt Project. Geophysical maps were generated with data obtained, but no solid interpretation was made. Additional geophysical surveying was recommended for accurate interpretation.

2018: Battery Mineral Resources (file??)
Q2592 – Gowganda Project – Capitol Grid; 3-D Distributed Induced Polarization Survey (Ploeger, CJ, Postman, M)

Canadian Exploration Services conducted a 3D distributed IP survey. This survey highlighted several E-W oriented low-res anomalies between the Capitol shaft and the Miller Lake O'Brien mine as well as two high chargeability anomlies, one predicted to be the Kilpatrick vein system, the other larger anomaly is likely caused by cultural features.

<u>Miller Lake O'Brien and Bonsall- Property History and Development</u>

Initial work on the property commenced in 1908 upon the discovery and evaluation of a silver-cobalt vein. In 1909 the discovery claims were bought from Bonsall Mines Ltd. by Miller Lake Mining Company, and finally taken over my M.J. O'Brien in 1910 forming Miller Lake O'Brien Co. (McIlwaine, 1978).

The Millerett and Miller Lake O'Brien mine continued operations through to 1939.

Leasing options were then carried out from 1940 to 1944. In 1945 the Miller Lake O'Brien mine was acquired by Siscoe Metals of Ontario. Siscoe maintained production through to 1972. (McIlwaine, 1978) and produced a total of 43,181,431 oz of silver from Miller Lake O'Brien mine and 141,856 oz of silver from Bonsall (Joyce, 2011). Siscoe sold the property to Sandy K mines in 1981.

Sandy K Mines held the property from 1981 to 2006, during this time active mining was not under way. Several exploration projects focused around the Bonsall and the tailings were the main focus (Kilborn Limited, 1987).

In 2006 Temex Resources Corp. acquired the Sandy K Mines property with a main focus on re-processing the tailings and a minor focus on exploration around the Bonsall Mine.

Miller Lake O'Brien and Bonsall- Exploration History

1908: Bonsall Mines Ltd. (McIlwaine, 1978)

Native silver and smaltite found on surface between claims R.S.C. 90 and 91.

1909-1944: Miller Lake O'Brien Co. (McIlwaine, 1978)

Undertook extensive underground exploration activities including drifting and drilling, in which numerous vein systems were found, starting with the No. 2 vein between claims RSC90 and 91, then moving SE discovering the Flynn system and many more. This pushed production of the mine down to the 525-foot level.

1945-1972: Siscoe Metal of Ontario. (McIlwaine, 1978)

Siscoe metals continued underground development and exploration up until 1972, mining to a vertical depth of 1475ft. From 1951 to 1968 Siscoe mined and milled on average one million ounces of silver annually.

1987-1989: Sandy K Mines

Conducted underground and surface exploration drilling and underground drifiting around the Upper Bonsall workings. This included 8511 meters of drilling and 525 meters of lateral underground development. Exploration discovered eight new silver veins trending E-W and N-S, with an estimated 1 million ounces of contained silver (WGM, 1994). Temex adds a disclaimer this is pre N.I. 43-101 standards (Campbell, 2006).
.

2006-2012: Temex Resources Corp.

Continued exploration around Bonsall mine including 19 drill holes in 2006 targeting veins found by Sandy K Mines, followed by 10 drill holes in 2011, 6 of which had downhole IP conducted on them.

2.5 Regional & Local Geology

The Gowganda project area lies along the northern margin of the Huronian basin and is underlain by Archean rocks of the Superior province (Joyce, 2011).

The project is hosted in early Proterozoic rocks of the Huronian Supergroup deposited between 2500 to 2200 Ma that rest unconformably over Archean metagranite, metavolcanics and metasedimentary rocks of the Abitibi Terrane that were deposited at 2720 Ma (Joyce, 2011; Hanych, 1999). The rocks comprising the Huronian Supergroup in the project area are part of the Upper Huronian Group and consist primarily of the Gowganda and Lorrain formations of the Cobalt Group, that form the uppermost part of the of the Huronian Supergroup (Joyce, 2011).

The Gowganda Formation is the basal unit of the Cobalt Group and is composed of laminated siltstones and argillites, sandstones, and a conglomeratic unit characterized by polylithic drop stones (Lindsey, 1969; Siemiatwoska, 1977). The Lorrain Formation consists of pebbly sandstones, conglomerates, and is capped by quartzite (Siemiatwoska, 1977). Both formations display flame structures, graded bedding and rippled tops indicating they were deposited in fluvial (shallow water) settings (Lindsey, 1969).

Both the underlying Archean rocks and Huronian sediments were intruded by mafic dike-sill complexes of the Nipissing Diabase between 2220 to 2217 million years ago (Corfu and Andrews (1986). The Nipissing Diabase comprises multiple compositional phases, but occurs mainly as an olivine tholeiite with a relatively uniform thickness of 980-1100 ft (Jambor 1971; Joyce 2011; Siddom and James, 1999). The Nipissing sills in the Huronian basin form domes and basins that likely influenced metal bearing fluid flow. At Gowganda, the the Nipissing forms a basin that reaches a maximum vertical depth of ~400m and is overlain by Archean volcanic rocks and Huronian sediments.

2.6 Mineral Deposit Types

Models of primary cobalt deposits, apart from those in the Central African Copperbelt, are not well defined in the existing literature (e.g., Hitzman et al., 2016). Kerrich et al. (1986), Andrews et al. (1986a), and Andrews et al. (1986b) undertook detailed geological and geochemical studies of the Ag-Co veins of the historic Cobalt and Gowganda camps and concluded that saline to hypersaline basin brines transported metals to deposition sites, and that these metals were sourced from Huronian Basin aquifers. Proterozoic Ag-Co veins and Archean mineralized zones at Gowganda are hosted in the Huronian Basin and are thought to be closely linked to Archean massive sulfide deposits, it is possible that cobalt minerals at the O'Brien camp target also formed from saline basin brine circulation into structural traps.

2.7 TARGET OF INTEREST

The objective of the modellng on the Gowganda project, Miller Lake O'Brien Mine, Capitol Mine and Bonsall Mine prospects was to: integrate the workings of the individual mines into a single comprehensive model to define vertical and lateral extents of silver and cobalt mineralized veins through the entire camp; model the geology and structure in 3-D to determine the geometry of the lithologies and the relationship of cobalt- silver mineralized veins to structure and lithology; to aid in the interpretation of the 3D Distributed IP survey conducted in the Capitol shaft area by CXS in 2018; and, aid in defining potential mine hazards ie. stopes or workings that project as being near surface.

MODELLING

2.8 PROCESSING

Three-dimensional (3D) modelling of the O'Brien property at Gowganda was undertaken intermittently from November 2018 to January 2020, comprising a total of 67 days of work and report writing. Underground workings were modelled using Autodesk Civil 3D, and 3D geological modelling was done using Leapfrog Geo (Leapfrog). A total of three underground mines were modelled, the Miller Lake O'Brien, Capitol and Bonsall, as well as six main lithological volumes which include the late gabbro dykes, ore veins, Nipissing Diabase sill, Huronian sediments, Matachewan gabbro dykes and Keewatin meta-volcanics. A 3-D distributed IP survey was also digitally modelled and integrated into the mine model.

Many of the underground workings had previously been digitized to shape files by Tahoe resources. Shape files were then georeferenced in Autodesk on XYZ planes using a NAD83 UTM Zone 17N datum and by using GPS coordinates of Capitol shaft, Siscoe #6 shaft, Miller Lake O'Brien Main shaft and Bonsall adit as control points. Shape files were then cross referenced with original surveying plan maps to ensure accuracy. 2D polyline traces were then extruded to 3D meshes in DXF (11/12[AC1009]) format. 3D meshes were then imported to Leapfrog Geo for geological modeling.

Plan view maps of individual mine levels containing lithological and structural data were then geo-referenced within Leapfrog. It is important to note that many of the plan view maps transferred from Tahoe were strictly copies of engineering and surveying plans with little to no geological data. As none of the original linen or mylar geology or mining plans could be located, it was much more difficult to confine and correlate lithological contacts and structures from level to level.

Lithological contacts and faults were modelled by tracing contacts on 2D plan view maps and by using data from 15 BMR drill holes and 156 Historic drill holes. Occasionally, elementary geological units, contacts and structures had been traced on to some of the available plans and incorporated into the model. Historic drill holes are primarily Sandy K and Temex exploration holes, drilled mid to late 1980's and mid 2000's and early 2010's respectively; these holes are located entirely within the Bonsall mine area.

Ore veins were modelled using Hester's (2005) plan view of ore zones mined within the O'Brien camp, individual drifts within these ore zones were then correlated and connected to produce a 3D volume. More data on mining activity and lithology would be needed to better constrain these ore zones.

2.9 INTERPRETATION

The O'Brien camp in Gowganda is composed of 4 major past producers, 3 of which, Miller Lake O'Brien, Capitol, and Bonsall lie on BMR ground, and the 4th, Castle Trethewey, to the north. The largest mine on the property is the Miller Lake O'Brien, seen below in blue (Figure 4). This mine has twenty documented levels which start at 90 feet (27m) and extend down to a maximum depth of 1475 feet (450m) from which 43,181,431 oz of silver and 787,350 lbs of cobalt (Joyce, 2011) were produced. The second largest mine on the property is Capitol, seen below in red. This mine has 9 documented levels starting at 800 feet (244m) extending down to 1425 feet (434m) and produced 10,837,181 oz of silver and 209,662 lbs of cobalt (Joyce, 2011). Lastly the Bonsall, seen below in green, is divided into two separate mines, the Upper Bonsall and Lower Bonsall which mined the upper and lower contacts of the Nipissing sill respectively. Between both mines there are 10 documented levels starting at 60 feet (18m) at the Upper Bonsall extending down to 500 feet (152m) at the Lower Bonsall. Combined the upper and lower Bonsall produced 141,856 oz of silver (Joyce, 2011).

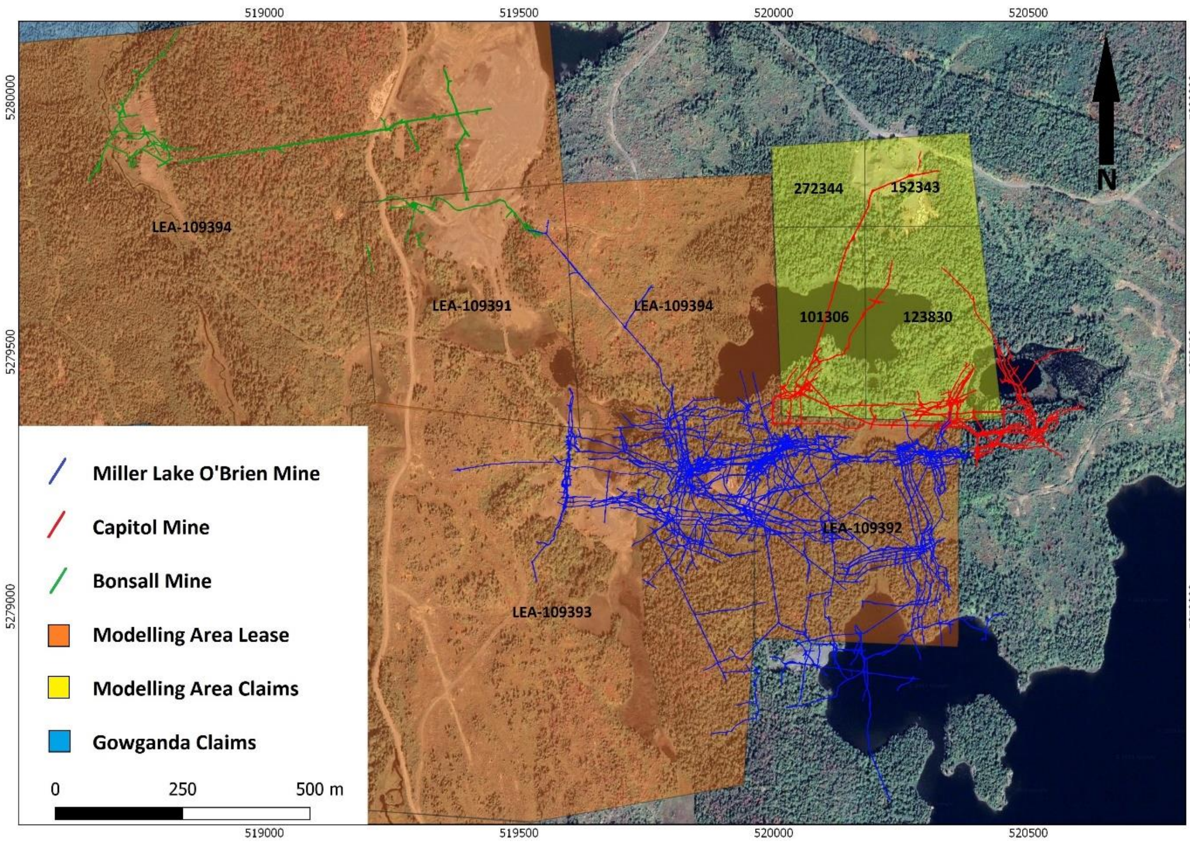
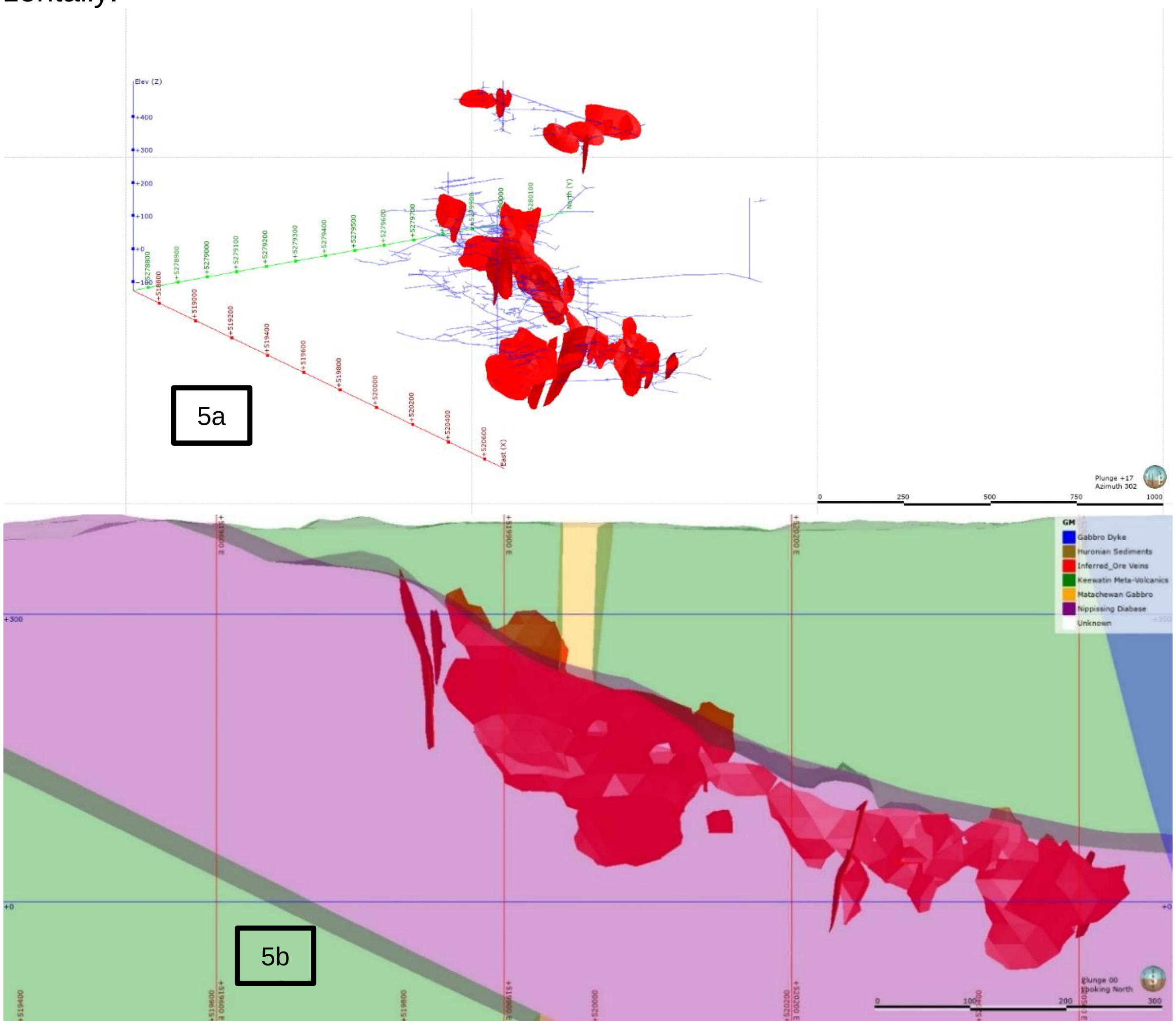


Figure 4. Plan view showing Capitol mine, Miller Lake O'Brien mine and Bonsall mine over BMR leases and claims.

The predominant vein orientations are EW and NS. This is apparent in the trend of underground workings and is also highlighted in several documents by Brian Hester. Hester (1988) reports that veins range in dip from 70° to vertical, and 'swing' from one direction to another, while branching and crossing each other at high angles. This results in a complicated vein pattern (Figure 5a). These veins form almost entirely within the Nipissing Diabase sill along the upper contact with Archean metavolcanic rocks (Figure 5b), the exception to this being the Lower Bonsall which mined out veins at the lower contact of the Nipissing sill (Figures 7, 8 & 9). Hester (1988) notes veins in the Miller Lake area can extend up to 150m vertically and 1.2km horizontally.



<u>Figure 5(a & b). The above figures demonstrate the trend of the ore veins (these are zones that have been previously mined). These veins are predominantly trending E-W and N-S and are forming at shallower depths towards the west, following the shallowly east-dipping Nipissing Diabase-Archean contact.</u>

Lastly, the only structures and (or) lithologies that post date, and potentially effect mineralization are the E-W trending Gabbro dikes followed by gently east-dipping shears. Modelling of the Gabbro dike shows it cuts off one of the main ore bearing structures within the Miller Lake O'Brien mine which is corroborated by the aeromagnetic and IP data (Figure 6). Two east-dipping faults transect both the Miller Lake O'Brien and Capital mine, and sinistrally offset mineralization up to 30 m.

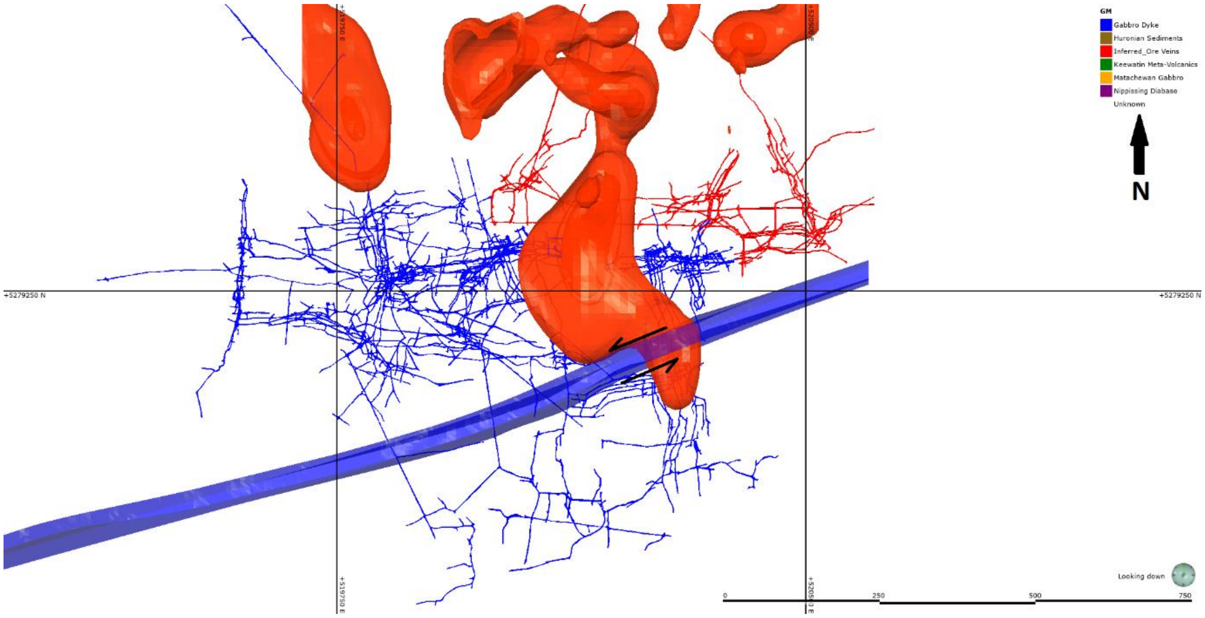


Figure 6. Plan view showing late gabbro dike sinistrally offsetting an IP anomaly.

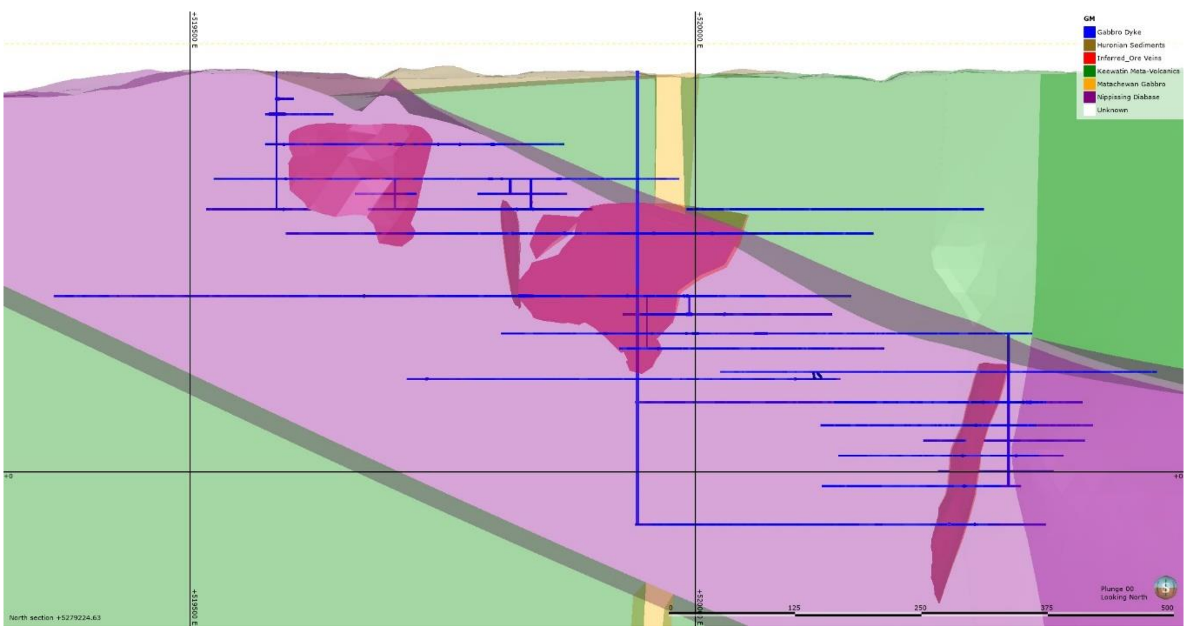


Figure 7. Cross-section of Miller Lake O'Brien mine looking north.

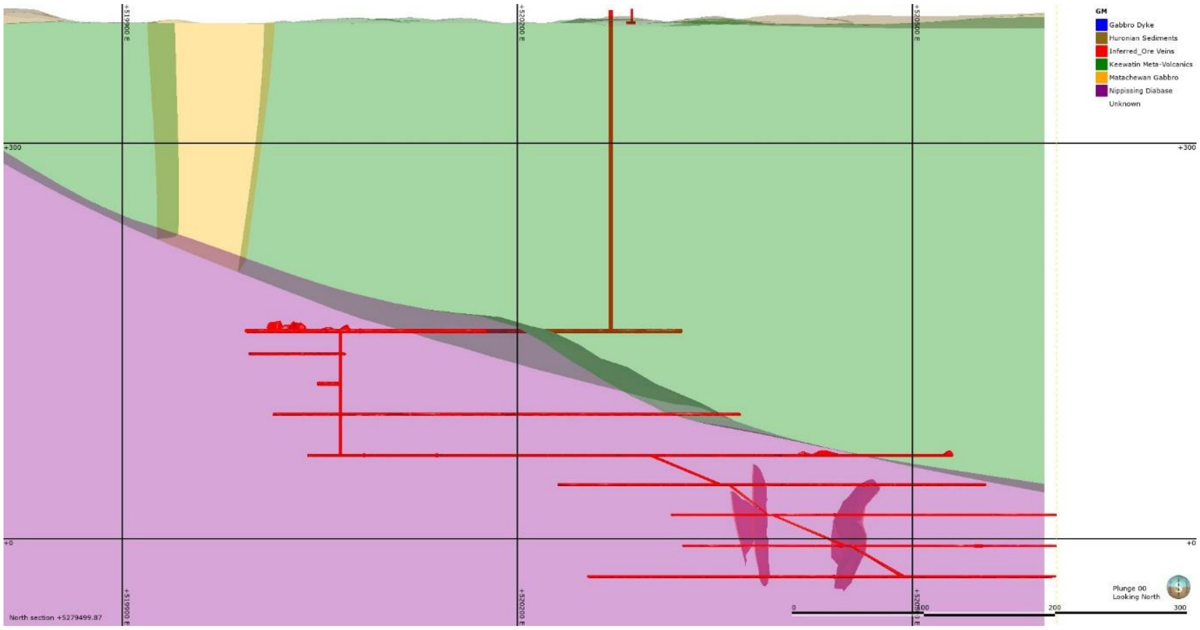


Figure 8. Cross section of Capitol mine looking north.

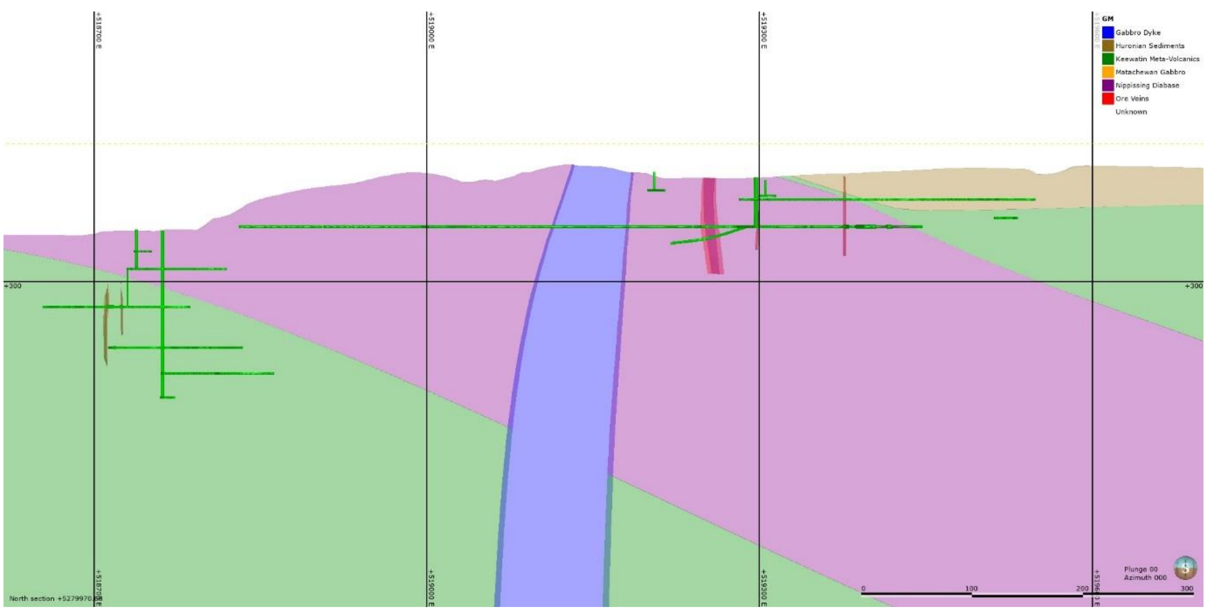


Figure 9. Cross section of Bonsall mine looking north.

2.10 RECOMMENDATIONS

1 The first recommended target are veins originally located by Sandy K Mines at the Upper Bonsall Mine. These veins are very close to surface and have previously been intercepted via underground drilling and drifting. Core samples were not assayed for cobalt. Modelling has indicated that these veins follow the patterns of the east- west vein sets mined at Milller Lake O’Brien and Capitol. Follow up drilling is recommended on the “Cobalt Vein” and several of the other vein systems around the Upper Bonsall mine to test for cobalt mineralization along these east- west vein sets. Similarly, drilling around and within, the previously mined areas of the Miller Lake O’Brien area to test for parallel structures that are cobalt- rich extensions of the silver veins, may be warranted.

2 Geological modelling at the Miller Lake O’Brien Mine property has shown that a late gabbro dike (Figures 6 & 10) cuts the Nipissing Diabase and the silver veins, offsetting the veins and the IP anomaly to the west. This suggests that the gabbro infilled an existing structure which was probably the original source of the offset. The offset extensions of veins lost at the dike contact present new targets on the south side of the dike.

3 Modelling of the Bonsall Mine (Figure 9) has revealed an interesting feature. Of all the Gowganda past producers, it is the only property on which mining activities occurred in the footwall portion of the Nipissing diabase sill and in the underlying volcanics. The geological parameters of this unique style of mineralization can be studied and evaluated; the model can then be used to develop targets in this newly identified setting.

4 When combining the 3-D IP and mine modelling, a linear IP resistivity anomaly was observed to parallel two modelled gabbro dikes (Figure 10). This may reflect another feature (dike/ fault) that offsets mineralization, again, presenting additional exploration targets.

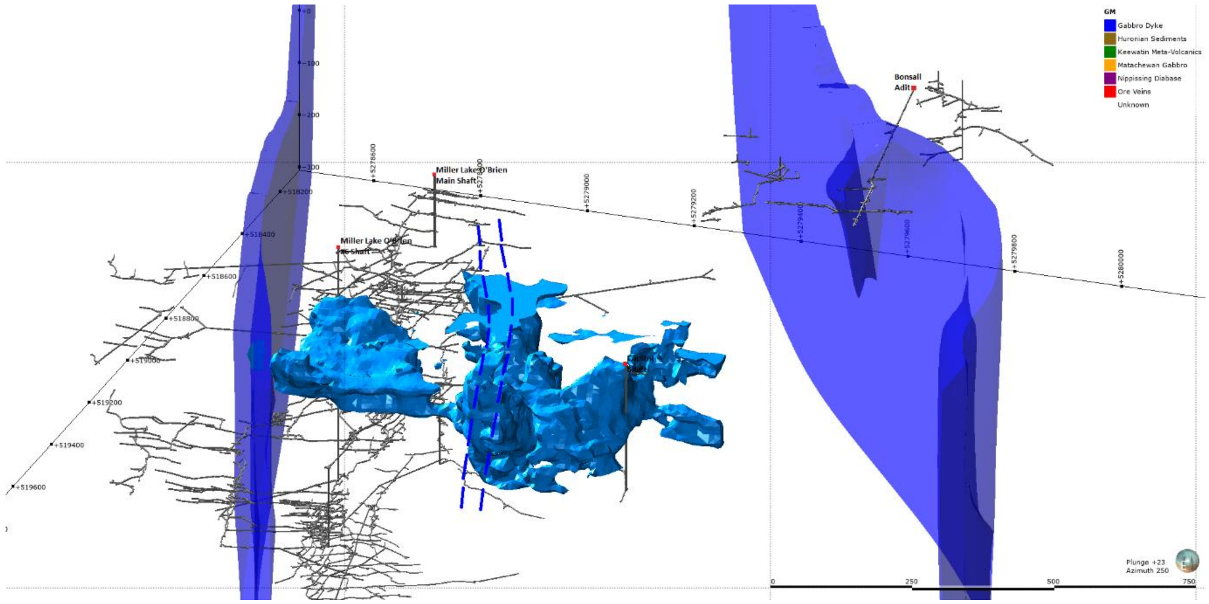


Figure 10. 3-D IP Resistivity Anomaly Exhibits a linear feature (blue dashed outline) parallel to the gabbro dikes (solid blue).

5 The Huronian –Archean unconformity represents a potential target for grass roots exploration. Potter (2009) suggests that unconformities could work as a structural trap for polymetallic rich fluids being transported by large scale faults. The Huronian sediments appear as thin skins overlying the basement volcanics in the modelling (Figures 7, 8 & 9). If an explanation for the occurrence of mineralized veins in the Archean volcanics at the Bonsall can be determined to represent pathways for mineralizing fluids, they could potentially be trapped under the sediment caps. Thus, the unconformity, or the fluid conduits themselves, could become potential targets.

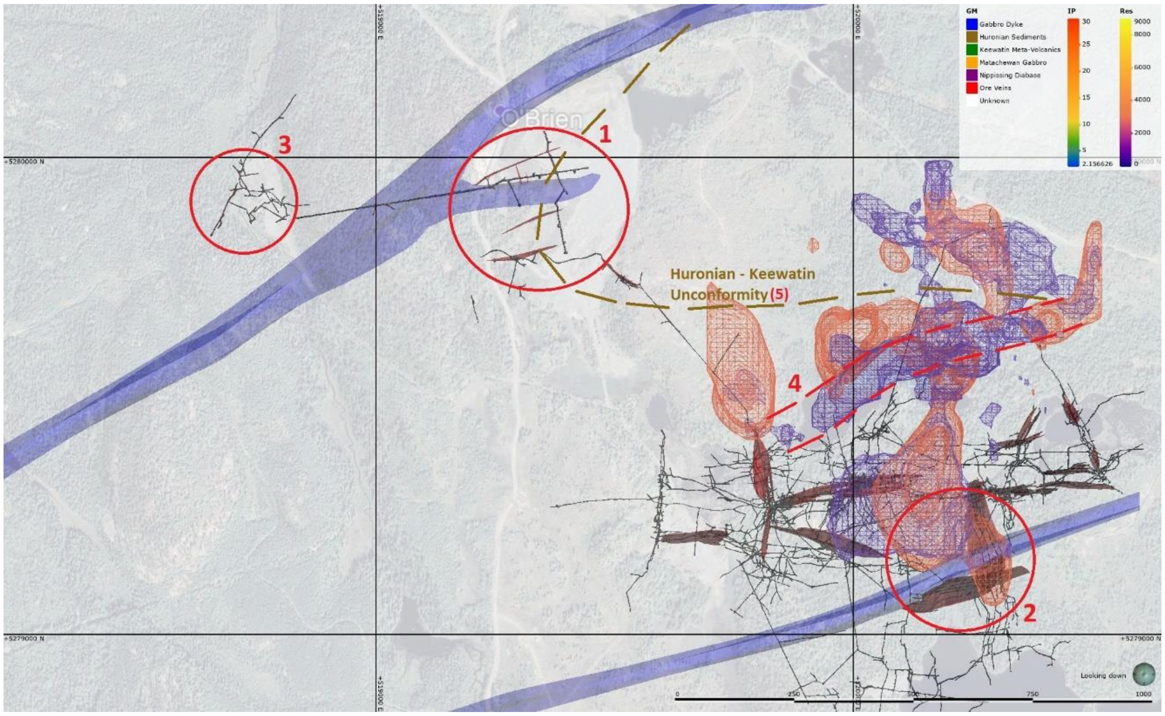


Figure 11. Showing targets 1 through 5.

A drill program, aggregating 2835m in 16 holes is recommended to test the targets identified by the modelling of the data available for the major Gowganda mines (Figure 11). The targets and proposed holes are detailed in Table 3 at an estimated cost of $520,000. This includes cost per meter of drilling, day rate of Geologists, and an estimated assaying cost taken from average assays per meter from previous BMR drill programs.

Area of Interest	Total Number of Drill Holes	Total Drill Metres	Estimated Samples	Geologist Man Days (With 3 Geologist)	Total Cost of Drilling
1 and 3	8	825	400	24	$150,000
2 and 4	4	1650	825	51	$300,000
5	4	360	180	12	$70,000

Table 3. Estimated costs of exploration.

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7 QUALIFICATIONS

CERTIFICATE OF QUALIFICATION AND CONSENT

I, Frank Rainer Ploeger of the town of Virginiatown, Province of Ontario, do hereby certify:

1) That I am a Consulting Geologist and reside at 21 Waite Avenue, Virginiatown, Ontario, P0K 1X0.

2) That I graduated from Queen's University at Kingston, Ontario with a Bachelor of Applied Science degree in 1973; and, that I completed 2 years of an MSc program at McMaster University in Hamilton, Ontario (1980- 1982).

3) That I am a **member in good standing of the Association of Geoscientists of Ontario (#479), the Association of Professional Engineers and Geoscientists of Saskatchewan (#10852, non- practicing), the Geological Association of Canada, the Prospectors and Developers Association, and the Northern Prospectors Association**. I have received a temporary permit (#2153) to practice in Quebec from the Ordre des geologues du Quebec pending acceptance by the Office quebequois de la langue francaise (OQLF).

4) That I have practiced my profession as a mineral exploration and mine geologist for a period of about 45 years.

5) This document is based on information various public documents and my personal observations during several visits to the property.

Although the information supplied to me is believed to be accurate and all reasonable care has been taken in the completion of this report, I hereby disclaim any and all liability arising out of its use and circulation. While I stand behind my interpretations, I cannot guarantee the accuracy of the source information and the use of this report or any part thereof shall be at the user's sole risk.

6) I have no interest, either directly or indirectly, in the subject property or client company.

7) *My written permission is required for the release of any summary or excerpt.*

____

Frank R. Ploeger — Virginiatown, Ontario,

CERTIFICATE OF QUALIFICATION AND CONSENT

I, Peter James Doyle of the city of Richmond Hill, Province of Ontario, do hereby certify:

1) That I am an Exploration Geologist and reside at 79 Naughton Drive, Richmond Hill Ontario, L4C8B2.

2) That I graduated from Laurentian University at Sudbury, Ontario with an Honours Bachelor of Science degree in 1980.

3) That I am a **Fellow in good standing of the Australian Institute of Mining & Metallurgy (AUSIMM # 208850) as well as a member in good standing of Geological Association of Canada (GAC F0146); Canadian Institute of Mining & Metallurgy (CIMM # 91602); Prospectors & Developers Association of Canada (PDAC # 707); Society for Geology Applied to Mineral Deposits (SGA# 1333-08) and Society of Economic Geologists (SEG # 216720).**

4) That I have practiced my profession in various roles as a Mineral Exploration Geologist, Exploration Manager and Vice President of Exploration for a period of about 39 years principally within Canada & Australia as well as globally in United States of America, Mexico, Indonesia, China, Mongolia, Brazil, Argentina and Guyana.

5) This document is based on information various public documents and my personal observations during visits to the property during the exploration program.
Although the information supplied to me is believed to be accurate and all reasonable care has been taken in the completion of this report, I hereby disclaim any and all liability arising out of its use and circulation. While I stand behind my interpretations, I cannot guarantee the accuracy of the source information and the use of this report or any part thereof shall be at the user's sole risk.

6) I am currently employed full time as Exploration Manager – Canada for Battery Mineral Resources Limited and was directly involved in the planning and execution of the exploration program documented in this report.

7) *My written permission is required for the release of any summary or excerpt.*

____
Peter J. Doyle   Richmond Hill, Ontario,

8 INSTRUMENT SPECIFICATIONS

Leapfrog Geo

Software description and specifications can be found at https://www.leapfrog3d.com/products/leapfrog-geo

DOMAIN MODELLING
With Leapfrog Geo, you can rapidly build complex geological models from drillhole data, structural data, points, polylines and meshes in the project.

- Define a surface chronology to determine the cutting relationship
- Model planar and volumetric surfaces, veins and stratigraphic sequences
- Model complex vein systems that fold, curve and bifurcate from one another
- Apply structural data to influence and guide the overall geometry of surfaces
- Define faults and the relationships between them with the fault system
- Assign categories to blocks based on any of your models

NUMERIC MODELLING
Leapfrog Geo's powerful interpolation engine lets you easily build interpolants from drillholes and point data.

- Quickly visualise isosurfaces for rapid insight
- Incorporate complex anisotropies
- Create indicator models to guide further work
- Build multi-domained interpolants
- Export interpolant volumes, isosurfaces and composites

VISUALISATION
Intuitive visualisation tools aid in analysing your data and looking for correlations and patterns. See a model from any angle, find trends and detect errors.

- Visualise data in Leapfrog Geo's 3D scene
- Select, view and rearrange drillholes in Leapfrog Geo's drillhole correlation tool
- Analyse data using statistical tools such as scatter plots, Q-Q plots, box plots and histograms
- Visualise structural data in the 2D or 3D stereonet tool, or the 3D scene
- Build a scene using multiple models to visualise relationships
- Change how objects are displayed to analyse and emphasise important information
- Cut slices and change object transparency to see inside the mode

BLOCK MODELS
Easily build block models and keep them up-to-date.

- Create block models in Leapfrog Geo's 3D scene
- Import block models in Isatis and UBC formats
- Assign properties to blocks from geological and numeric models
- Create sub-blocked models and define triggering surfaces
- Export models in common industry formats

INTEROPERABILITY

Leapfrog Geo is committed to not being the roadblock in your modelling workflows. Leapfrog Geo imports and exports points, polylines, meshes and block models in multiple industry-standard formats and can readily fit into established processes.
Leapfrog partners with other leading companies to ensure we are providing the best end-to-end solution.

SHARING
Leapfrog Geo users can share their work with anyone in the organisation using cross sections, renders, scenes and movies. Staff outside the modelling team can see the model in 3D with scenes and movies or in 2D with sections and renders.

- Set up and save 3D scenes that illustrate important aspects of the model
- Annotate scenes to add further information
- Render images for use in reports
- Export a series of scenes as a scene file that can be displayed in the Leapfrog Viewer and Leapfrog Aspect
- Use scenes to create and export a movie
- Easily define cross sections, serial sections and fence sections in the 3D scene
- Display multiple models on sections
- Organise, annotate and export cross sections using the powerful section editor

System Requirements

Take a look at our minimum and recommended requirements for running Leapfrog and Central Browser.

	Minimum	**Recommended**
Operating system [1, 2, 3]	Microsoft Windows 7 (64-bit) Microsoft Windows 8 (64-bit) Microsoft Windows 8.1 (64-bit) Microsoft Windows 10 (64-bit)	Microsoft Windows 10 (64-bit)
Processor	Intel Core i3, i5 or i7 CPU (2nd Generation) or later Intel Xeon	Intel Core i7-6800k Intel Core i7-6900k Intel Core i7-7700 Intel Xeon E5-2630 v3

System memory	4 GB	32 GB RAM or more
Storage	Hard Disk Drive (HDD) 250 GB capacity 25 GB free space	Solid-State Drive (SSD) 1 TB or larger capacity 100 GB free space
Display	1280 x 720 Single display	1920 x 1080 or higher Multiple displays
Graphics [4,5]	**Nvidia - Desktop** GeForce 700 series GeForce 900 series GeForce 1000 series Quadro 600 series and above Quadro K series Quadro P series	GeForce GTX 950 GeForce GTX 1050 / 1050 Ti
	Nvidia - Mobile GeForce 700M series GeForce 800M series GeForce 900M series GeForce 1000 series Quadro M series Quadro P Mobile series	GeForce GTX 950M GeForce GTX 1050
	AMD - Desktop Radeon HD 8000 series Radeon R5 series Radeon R7 series Radeon R9 series Radeon RX series Firepro V series	Radeon RX 460 Radeon RX 570

Firepro W series

AMD - Mobile
Radeon HD 8000 series
Radeon R5 series
Radeon R7 series
Radeon R9 series
Radeon RX series

Firepro M series

Radeon R9 M375
Radeon RX 460

Intel Integrated Graphics
HD Graphics 2000 (Generation 2 or later)
HD Graphics 510 (Generation 6 or later)

Autodesk Civil 3D

Civil 3D® civil engineering design software enhances collaboration and workflow efficiencies from design to production.

Relative elevation feature lines
Obtain feature lines from a surface or relative to a surface, so feature lines update with changes to the surface.

Dynamic offset profiles
Create dynamic offset profiles using a default cross slope. Modify them by editing the profile properties.

Connected alignments
Create a new dynamically linked alignment and profile that transitions between 2 intersecting alignments and their profiles.

Pipe sizing and analysis
Resize pipes and reset inverts, and compute the energy and hydraulic grade lines according to HEC-22 2009 standards.

Plan and profile sheet generation
Create plan/plan and profile/profile sheets by including multiple plan or profile views on a single sheet.

More features
Civil design

Corridor design
Tools for corridor modeling.

Extract corridor feature line workflow
Easily extract multiple feature lines.

Advanced roundabout design
Bring new roundabout designs into Civil 3D.

Rail track layout
Streamline the layout of rail tracks.

Point clouds
Use and display point cloud data.

Surface creation from point cloud data
Create TIN surfaces from point cloud data.

Surface modeling
Use tools to create dynamic surfaces.

Grading
Terrain models for grading.

Parcel design
Automated parcel design tools.

Gravity pipe networks
Tools for sanitary and storm drainage systems.

Geotechnical modeling
Tools to help you better plan, visualize, and model geotechnical data.

Drafting and documentation
Property set definition
Create and use data for any drawing object.

Property data to corridor solids
Automate data and information changes.

Construction documentation
Generate annotated production plans.

Visualization and analysis
Geospatial analysis
Advanced mapping and analysis functionality.

Storm and Sanitary Analysis software
Dynamic models enable stormwater management.

Analyze gravity networks
Measure pipes and inverts to HEC-22 2009 standards.

Model analysis

Dynamic QTO and earthwork calculations.

Visual analysis
Better understand civil designs with visualization.

Collaboration
Corridor data shortcut (DREF)
Create and share data shortcuts for corridors.

Cache DREF surface
Cache terrain surfaces to share Civil 3D drawings more broadly.

Streamlined reference creation
Add DREFs via simple drag-and-drop operations.

Civil 3D with Navisworks
Gain better predictability.

Civil 3D with Revit
Enhance structural and civil design collaboration.

3ds Max interoperability
Create professional-quality visualizations.

IFC import and export
Import and export AutoCAD solids to IFC files.