Ontario

We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l’accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d’aide à la communication, veuillez nous contacter.

BLACK MOUNTAIN GRAPHITE, SILICATE PROJECT

Field Trip 12 Oct. 13, 2021

&

Project Summary

Prospectors: M Martin, J Andreana

January 2022

BLACK MOUNTAIN GRAPHITE, SILICATE PROJECT
Field Trip 12 Oct. 13, 2021 & Project Summary

Table of Contents

BLACK MOUNTAIN GRAPHITE, SILICATE PROJECT

Field Trip 12 Oct. 13, 2021
&
Project Summary

Attachments **Page**

Maps

Figures below from OGS Report OFR 6356 Report of Activities published in 2019 by A. C. Tessier et al "Black Mountain Graphite Prospect, Matawatchan and Miller Townships", with claims as of late 2018:

Photos Sample 1 Black Mountain Oct. 13, 2021 jpg
Sample 2 Black Mountain Oct. 13, 2021 jpg
Sample 3 Black Mountain Oct. 13, 2021 jpg

BLACK MOUNTAIN GRAPHITE, SILICATE PROJECT Field Trip 12 Oct. 13,2021 & Project Summary

1. Summary

Oct. 13, 2021 Field Trip - was undertaken to prospect an area of the claims in the north - central section where there is a gneiss / marble rock unit contact and interpreted fault traces. Graphite occurrences were located in the gneissic rock. These are similar to observations made during prior prospecting 2016-2019.

Project Summary - OGS (2015) located the initial graphite occurrence in what is now the north end of the claims, at the base of Black Mountain. After prospecting many kms on crown land to the SW a graphite trend was identified during 2016-8. OGS Southern Tweed Office examined the site in 2018, confirming mineralization in the southern and central sections in an Open Field Report 6356. Hand samples obtained by the prospectors have been reviewed by OGS Southern and the OGS write-ups included in prospector reports, including Field Trip 12.

Since the project began in 2016 over thirty graphite occurrences have been located in or near a 7.5 km NE-SW striking near vertically dipping metasediment trend. Graphite occurrences are prominent in a rusty schist with bands of graphitic gneiss as well. Fourteen assays of surface outcrop over this area average 3.0 % graphite.

An Actlab analysis of a portion of the samples, after crushing to 1 mm, identified graphite flake size profile where most of the flake is classified as small (75 microns) to jumbo (300 microns). The host rock is 89% silicate and by-products are possible: quartz, plagioclase, feldspar.

The project is on strike with the historic high-grade Black Donald Mine 13 km to the NE. OGS identified graphite occurrences SW of historic Black Donald Mine in a trend leading to the graphite occurrence in the north end of the claims at the base of Black Mountain. This is where crown land began. Geophysical trends and geological rock units also link the historic mine with Black Mountain project.

The dimensions of the metasediment rock unit with graphite mineralization are beginning to emerge- 7.5 km length, up to 30 m width measured in south and central sections, 40 m measured depth on Black Mountain slope in the north and open on depth. If the assayed graphite of 3 % were present continuously throughout this rock unit volume it represents a large tonnage compared to other Ontario graphite mineral resources.

Further planned work by the prospectors includes land sampling, detailed infill ground prospecting and ground and drone-based geophysics.

The property was introduced at the OPA Conference in Thunder Bay in 2019 and in 2021 listed for option on the Ontario Prospectors Association Property Exchange website www.ontarioprospectors.com The intent is to attract capital to advance the mineral resource assessment and explore for high grade zones and higher grade with depth. Activities include geophysics (TDEM, IP), trenching, bulk sampling, drilling.

Enquiries are being received about the project from interested parties, some facilitated by the OGS Southern Office. Samples of graphite mineralization are being provided for marketing purposes.

BLACK MOUNTAIN GRAPHITE, SILICATE PROJECT
Field Trip 12 Oct. 13, 2021
&
Project Summary

2. Introduction

After a long lay off in field work due to pandemic induced travel restrictions imposed on the prospectors in southern Ontario, field trip #12 was undertaken Oct. 13, 2021. This report provides the details on Field Trip 12. Over the project life there have been 12 trips – 10 to the property site and 2 to the Algonquin of Ontario offices in Pembroke Ontario.

An overall project review is also provided incorporating the prospector work, OGS Mapping, an OGS Southern property examination with added perspectives from an OGS opinion on minimum mineral resource size limits, Actlab assays and graphite analysis, NRCAN on commodity prices, and a comparison of the Black Mountain Graphite Silicate Project to Ontario graphite properties.

3. Mining Lands - on which Field Trip 12 was performed

Township name	Matawatchan Township
Provincial Grid cell numbers	31F03H – specifically 31F03H171,31F03H191,31FO3H211
Claim numbers	234392, 289923, 507294

Ownership of Land - See Map A

- There are surface rights owned (SRO) land adjacent to crown land where the project claims are located. Ownership of land affecting access, prospecting and related topics are described for the entire 28 contiguous mining claim Black Mountain project.

- From the **south end of project all claims can be accessed** via township road Matawatchan Road receiving year-round maintenance, then Quackenbush Road to crown land, Ontario Hydro right of way access road, ATV trails, and finally bush hiking.

- **Quackenbush Road** is in North Frontenac Township running south from Matawatchan Road ending at the "Y" in the road by the south end of Quackenbush Lake where the snowmobile trail turns off toward west. This is at a place where claim 510358 begins but is overridden where the SRO applies. The road apparently has a gate on it just south of the snowmobile turnoff but this has not been observed in operation during our 6 years of our prospecting activity. The same road continues another 250 m bounded by SRO until crown land is reached. Then it continues southward as E100 & E102 Multi-Use Trail. At the SW corner of Trapper Lake access the eastward branch to continue on the contiguous claims. This part is also an Ontario Hydro right of way access road. And the road is active for recreational use. It is an uneven, rocky, dirt road and a 4x4 vehicle for access is recommended as maintenance in intermittent. Regular mining traffic would require approval, a road upgrade and a maintenance fee would likely apply. Right-of-way on this road, bounded by privately owned land, is permitted at this time for recreational use and our prospecting.

- An **Ontario Hydro power line** and right of way (≈75 m wide) cross the southern portion of the claims. A miner would need to work with Hydro One for safe mining activity near the right of way and a new safe roadway across the right of way connecting mining activity on either side.

- **Only Crown land is allowed for prospecting in southern Ontario**. Prospecting is not allowed on SRO land which overlaps part of half of the 28 contiguous claims (north to south): 215838, 118799,118800,234392, 289923, 507293, 507295, 507305, 507308, 507311, 507318, 507324, 507325, 510358.

- When **accessing from the north**, permission to park on SRO land and hike SRO trails to the crown land destination is required. All claims can be accessed from the south.

- A **water power lease agreement No79** permitting mineral activity applies to the farthest north-east component of the Black Mountain project in Lots 4,5,6,7 Concession 9 Matawatchan Township where the lease overlap claims 215838, 279290, 118799, 223258, 103528. Ontario Hydro entered a water lease with Ministry of Natural Resources adjacent to Centennial Lake. Per the agreement searched in land titles by M Martin and MNR correspondence with M Martin July 12, 2018 “This water power lease agreement does not hinder any mining claims in this area.”

- **Lot 37 Concession 5 Miller Township,** in Frontenac County is crown land per the online MNDMNRF Ontario Crown Land Use Policy Atlas (examined May 1, 2022). This is located in the central-south part of the claims. A nearby SRO landowner also stated this to be crown land in conversation with M Martin. The online MNDM MLAS Map shows it is as SRO, overlapping part of claims 507305, 507308, 507311. The Ministry of Consumer and Commercial Relations Property Index 1998 Map places Property Identification Number 0061 on this block. An online land registry search by M Martin for Lt 37 Conc 5 Miller Township, North Frontenac provided the result “No instrument within the selected criteria exists in the automated system”. Conclusion: the on-line MNDMNRF and MNDM MLAS maps contradict. Neither online system is exact. A land registry search to date suggests there is no private ownership, but it does not say unpatented or crown. There is a need to finalize this with land registry expertise.

4. Access- means of access to the land from the nearest population centre

Prospector M Martin lives in Kingston, Ontario (409269)
Prospector J Andreana lives in Oakville, Ontario (413446)

Access to the land - from location with accommodation, food, gas
Cloyne, Ontario on Hwy 41 is the nearest access to the land when accessing from south and east (Kingston) and south and west (Oakville) where prospectors live. Cloyne has overnight accommodation at Mazinaw Inn, recently renamed the Lakeside Inn. There is also food and gas.

Take Hwy 41 north from Cloyne and exit easterly on County Road 30 to Vennachar. At Vennachar take Matawatchan Rd north-easterly. To access the south end of Black Mountain Graphite, Silicate Claims, exit Matawatchan Rd and enter Quackenbush Road going south. Go in on the 4 x 4 road about 2 km to the claims and trails. Total distance about 55 km from Cloyne.

To access the north end of the Black Mountain Graphite, Silicate Claims continue on Matawatchan Rd. exit via Aird Lake Road to the east. Parking and trail forest access is at the end of Aird Lake Rd on private land. We prospectors always seek permission with the two different land-holdings owners each time there is access from this direction.

	Easting	**Northing**	**(UTM zone 18)**
Cloyne, Ontario	327110	4965300	Mazinaw Inn – accommodation, renamed Lakeside Inn. Food, gas in town.
Hwy 41 to County Rd 30	323330	4996325	turn east
Vennachar (village)	326525	4993625	turn north
South Entrance			
Entrance to Quackenbush Rd	334135	4997010	turn south
Claims at south end	334762	4995610	claim 510358
North Entrance			
Entrance to Aird Lake Rd	334755	4999480	turn east
Parking at end of Aird Lake Rd	337245	4999870	park - with permission
Access crown land claims at north end	338035	4999495	access claim 234392 crown land after hike on private trail – with permission. This is one of the 28 contiguous claims.

Map B-1 Land Access Hwy 41 to Matawatchan Rd
Map B-2 South Matawatchan Road to Quackenbush Rd to Claims
North Matawatchan Road to Aird Lake Rd, Park, Trail to Claims
(permission required to park, take trail on SRO)

5. **Samples - Summarize the number of samples collected, and the number of samples analyzed from Field Trip 12.**

Map C – 1 through Map C – 6 Route, Sample, Observation Locations

In chronological order, the samples collected by the prospectors and samples analysed are provided below.

MM= M Martin prospector comment. UTM zone 18
LM = Laura Mancini P. Geo. comment (OGS Southern Ontario Regional Geologist) January 2022.

Field Trip 12 Oct. 13, 2021 M Martin J Andreana

This is the 12th trip for the Black Mountain Graphite, Silica project. Two of these trips were to dialogue with the Algonquin of Ontario (AOO) in Pembroke and ten were to the project site.

The purpose of this specific trip was to prospect a gneiss/schist contact with marble and interpreted fault locations in the northern portion of the 28 contiguous claims; a target for a potentially higher concentration of graphite.

Sample 1 – BM12 338207 4999298 Claim 289923 zone 18 See Map

MM: outcrop, graphite, sampled in gully location, no Beep Mat score, no fizz so not calcareous, no magnetism, no on zinc test, no streak. Rusty brown, layered, fine grained. Small quartz crystals – sparkle. See picture - Sample 1 Black Mtn Oct 13 2021

LM: fine grained qtz -mica (musc/phlog?), 15 % mica, 1-3 % graphite, trace Fe oxide.

Sample 2 – BM12 338165 4999290 Claim 289923 zone 18 see Map

MM: outcrop, graphite. Went west to Beaver Dam, turned back to main stream. Could this gorge be an E-W fault trace? No Beep Mat score, no fizz, no magnetism, no on zinc test, no streak, small quartz crystals – sparkle, fine grained. See picture – Sample 2 Black Mtn Oct 13 2021.

LM: fine grained qtz – mica (musc/phlog?), 15 % mica, 1-3 % graphite, trace Fe oxide.

Sample 3 – BM12 338100 4998842 Claim 507294 zone 18 see Map

MM: outcrop, no graphite, marble? rock from east ridge, with black in it, no Beep Mat score, no fizz, no magnetism, no on zinc test, no streak, no fizz so not marble, quartz / whitish feldspar? See picture – Sample 3 Black Mtn Oct 13 2021.

LM: Qtz-feldspar gneiss or peg, phlog, trace mag. Possibly the magmatic felsic gneiss?

13 stops were made to inspect rocks on field trip, including the 3 described above where samples were taken. This is described next in the daily log.

6. **Daily Log- Provide a daily log describing in detail the nature and content of the work and the nature of rocks and mineralization observed during the performance of the work.**

Detailed field notes:

Purpose: explore marble/gneiss contact, interpreted fault traces.

Access: approached claims from north end, sought permission from landowners whose bush lots we park on, then cross. After receiving permissions and while preparing gear after parking we met 4 neighbours, including landowners walking or on ATV with who we discussed field trip.

Testing: (1) locations for conductor, magnetic readings with the Beep Mat, (2) samples/locations for calcareous content- with acid, (3) samples for magnetism with hand magnet, (4) samples for zinc test with solution, (5) sample streak with streak plate. Area was also tested for VLF EM 16 application.

See Maps C-1 through C-6 for route, locations.

MM= M Martin prospector comment. UTM zone 18
LM = Laura Mancini P. Geo. comment (OGS Southern Ontario Regional Geologist) January 2022.

Location #	Sample #	Easting	Northing	Observations
1	1	338207	4999298	MM: outcrop, graphite sampled in gully location, no Beep Mat score, no fizz so not calcareous, no magnetism, no on zinc test, no streak. Rusty brown, layered, fine grained. Small quartz crystals – sparkle. LM: fine grained qtz -mica (musc/phlog?), 15 % mica, 1-3 % graphite, trace Fe oxide.
2		338193	4999308	MM: graphite located in sandy brown schist
3	2	338165	4999290	MM: outcrop, graphite. Went west to Beaver Dam, turned back to main stream. Could this gorge be an E-W fault trace? No Beep Mat score, no fizz, no magnetism, no on zinc test, no streak, small quartz crystals – sparkle, fine grained. LM: fine grained qtz – mica (musc/phlog?), 15 % mica, 1-3 % graphite, trace Fe oxide.
4		338160	4999260	MM: in gully on overburden, no outcrop
5		338187	4999146	MM: outcrop, no graphite, marble, fizzed, east side of valley
6		338136	4999164	MM: outcrop, no graphite, gneiss, west side of valley

7		338149	4999055	MM: test VLF EM 16 instrument: ineffective as no null tone to east, no null tone on tilt
8		338121	4999037	MM: graphite observed in gneiss on west side of stream
9		338103	4998950	MM: at stream there were gneiss boulders with graphite, and also marble boulders
10	3	338100	4998842	MM: outcrop, no graphite, marble? rock from east ridge, with black in it, no Beep Mat score, no fizz, no magnetism, no on zinc test, no streak, no fizz so not marble, quartz / whitish feldspar? LM: Qtz-feldspar gneiss or peg, phlog, trace mag. Possibly the magmatic felsic gneiss?
11		338011	4998657	MM: just before lake, picture taken, overburden
12		337986	4998658	MM: loose rock at lake, steep slope; marble/gneiss contact
13		337935	4999285	MM: get back on trail, take trails to truck. End 5.30 pm

Summary of Field Trip 12- Graphite Focus

Three graphite occurrences were located in gneissic outcrop (locations 1,2,3), graphite was observed near the gneiss/marble contact (location 8) and also in a gneissic boulder (location 9). These are consistent with the overall findings at Black Mountain – graphite is present in rusty schist/ gneissic rock. This schist and gneiss are largely comprised of silicates. This unit generally presents as a magnetic anomaly on the 2014 aeromagnetic maps. It is believed this arises from pyrrhotite which is commonly associated with graphite.

As yet we did not locate a graphite high grade concentration along the rock unit contact or fault traces. These locations are under significant overburden and not detectable for observation or with the geophysical equipment – Beep Mat, VLF EM 16. The fault traces were interpreted by the OGS and can very well be present under the overburden in this valley.

7. **Regional Geology**

The following is sourced from OFR 6356 Report of Activities 2018 by A.C. Tessier et al published in 2019. This is the most recent expert description for the area. Direct quotes are in italics.

"The Black Mountain graphite prospect is located in the Centennial Lake area of the Black Donald domain in the northeastern part of the Central Metasedimentary Belt of the Grenville Province."

"The geology of the Centennial Lake area is subdivided into 3 lithostructural units: Western, Central, and Eastern Units. The Black Mountain property lies within the Eastern unit, which is represented by a major, northeasterly trending synform centred on Centennial Lake. The lithological succession, from bottom to top, consists of magmatic metapelitic rocks, amphibolites, calc-silicate schists and gneisses, and calcitic and dolomitic marbles. Dolomitic marbles in the Centennial Lake area are clean, white to grey, coarse grained and massive. They are in stratigraphic contact with siliclastic units that include rusty schists that host graphite- pyrrhotite mineralization (Duguet, Duparc and Mayer 2018: unit 9g).

The authors describe supportive geophysical and geological evidence that the Black Mountain property is on strike with the historic Black Donald Graphite Mine, 13 km to the north-east.

Black Mountain project maps and regional maps from OGS Report OFR 6356 Report of Activities published in 2019 by A. C. Tessier et al "Black Mountain Graphite Prospect, Matawatchan and Miller Townships", with claims as of late 2018, are attached:

Figure 10 Geological map of the Centennial Lake area, showing locations of the Black Mountain property, and graphite occurrences

Figure 11 Airborne magnetic survey map of the Centennial Lake area, showing locations of the Black Mountain property and graphite occurrences

Figure 12 Simplified geological map of the Centennial Lake- Black Donald Lake area, showing locations of the Black Mountain graphite prospect and the Black Donald mine

Figure 13 Airborne magnetic survey map of the Centennial Lake-Black Donald Lake area, showing locations of the Black Mountain graphite prospect and the Black Donald mine

8. Property Geology, Economic Geology

The following is sourced from OFR 6356 Report of Activities 2018 by A.C. Tessier et al published in 2019. This is the most recent expert description for the area. Subsequent field activity was curtailed due to the pandemic. The results of Field Trip 12 in this report do not alter the findings.

"The claims straddle a central unit of magmatic, felsic to intermediate gneiss that contains subunits of quartzite to quartzofeldspathic gneiss and rusty schist". "This unit coincides with a linear magnetic anomaly". "Flanking, and locally interlayered with, the siliceous gneisses and schists are bands of carbonate metasedimentary rocks, predominately calcitic marbles with narrow dolomitic lenses. Layering in the metasedimentary rocks, as observed in outcrops in the southern and central parts of the claim group, strikes 030°and dips vary from 70 ° west to 80° east."

A cross section in the southern section indicated gneiss in the footwall on the east side, a graphite zone, then gneiss in the hanging wall to the west. This graphite zone was visually estimated at 1 to 3 % graphite; one 0.3 m wide band was estimated at 10% graphite. On April 22, 2022 M. Martin observed a 25 m width for this graphite zone. OGS refers to this as the Trapper Lake zone.

"In the central zone of the property, 2 areas were examined: east of Montserrat Lake (UTM 337400E, 4998000N) about 3 km northeast along strike from the Trapper Lake zone; and east of Aird Lake (UTM 338200E 4999340N), an additional 1.5 km along strike to the northeast. In both areas, the graphitic, rusty schist, quartz-feldspar-biotite gneiss and calcitic marble were observed. The graphite content of the schist is consistent, visually estimated at 3 to 5 % …"

"In 1 location east of Montserrat Lake (UTM 3374054E 4997992N), the graphitic zone is exposed on the east side of a ridge that drops about 20m to a swamp that trends parallel to the ridge. Graphitic schist was also observed to the west, indicating a potential width of 30 m of graphitic schist, overlain by quartz-biotite gneiss to the west. "

In the north end of the claim area the geology maps (P3708) show a rusty schist rock unit 9g (Duguet, Duparc, and Mayer, 2018) from the area east of Aird Lake to the very northern limit of the claims. The prospectors have located and assayed graphite occurrences in it and in nearby gneiss/schist. In one area, at the north east ridge of Black Mountain the prospectors located graphite over an elevation difference of 40 m and open in near vertical dipping rock units. This gives a sense of depth of the mineralization.

Physical dimensions for the rock area containing graphite mineralization are beginning to emerge: 7.5 km length, up to 30 m wide, 40 m depth and open. Fourteen surface assays average 3.0 % graphite.

At a density of 2.5 mt / cu m the tonnage of this rock unit is estimated at 22.5 million metric tonnes. If the 3.0 % found in the assays was found to be present throughout this tonnage at the same grade the in-situ graphite would be 675,000 mt. This is 135 times what OGS indicate for the minimum size of a graphite deposit (details in Attachment 1). And silicate (quartz, feldspar, plagioclase), a large part of the waste, could possibly be sold. If not return it to the extracted area.

This estimate of graphite tonnage assumes continuity of the 3.0 % grade throughout the estimated volume. Trenching and drilling will be needed to increase confidence in this prospect.

9. Conclusion

This property has the potential to be a large tonnage easy access medium grade graphite in southern Ontario with attractive graphite flake size and potential silicate by-products.

The assay grades at 3.0 % rank better than the published mineral resource averages for Bissett and Kearney.

Mineralization is in a metasediment slab turned on end and stretching 7.5 km, accessible by open pit. Pit walls need testing but are likely competent.

There may be upside to the project in several ways – parallel graphite widths in some areas, higher grade graphite zones and increasing grade with depth.

Mineral resource definition, trenching and drilling, is required to advance this project.

10. Next Steps, Recommendations

Further prospecting work can infill the geological and geophysical definition already apparent.

A proposed drone lidar and drone mag survey can improve the topographical and magnetic response information.

Optioning to a mining company with graphite property interest and capital to commit can lead to further exploration by way of time domain EM geophysics, induced polarization geophysics, trenching and drilling.

Trenching cost across several graphite mineralized zones would cost tens of thousands of dollars An example drilling program: over 7.5 km drill every 100 m, so 75 holes. If each were drilled 100 m the cost would be about $20,000 per hole (@ $200 / m all in). The full drill program would be about $1.5 million.

The property is advertised for option and will continued to be (see attached). Graphite procuring companies will continue to be approached. Samples for industrial minerals marketing will continue to be provided. Meanwhile prospecting work and geophysical work will continue.

Attachment 1 Mineral Resource Assessments by OGS as Guide to Prospecting

In the Ontario Geological Survey Open File Report 6141 "Procedural Guidelines for Provincially Significant Mineral Potential Mineral Resource Assessment" Wilson, A.C., Rowell, D.J., Seim, G.Wm. and Debicki, R.L. 2018 there are specific references for the mineral resource assessment of the target minerals – graphite and silica – which help to guide this prospecting effort.

Part A Graphite- Mineral Resource Assessment Considerations

Pg. 7 Industrial Mineral Deposit Models: IM8 Graphite in pelites; IM9 Graphite in carbonates

Pg. 66 IM8 Graphite in pelites – Associated with peliitic rocks in ductile shear zones. Located in the Central Gneiss Belt, Grenville Province. Local fold structures present. Regional geophysics (magnetics, if available, identifies fold structures).

IM9 Graphite in carbonates – Associated with organic carbonate rocks in the Central Metasedimentary Belt of the Grenville Province. Located in the Frontenac Terrane. Local fold structures present. Regional and local geophysics (EM, if available, helps define graphite zones).

Pg. 82 Grade or Mineral Content Requirements for Mineral **Occurrences –**

Graphite 0.50 % (arbitrarily ½ of the minimum acceptable grade)

Pg. 83 Grade or Mineral Content and Dimension Requirements for **Prospects** = Grade x True Width or requirement

Graphite 0.50 % x 5 m

Pg. 85 Grade and tonnage requirements for producing mines, past producing mines and **developed prospects with reserves –**

Graphite 5.00 % [A] Footnote A: minimum economic grade based on average prices during 1985-1994 period. Grades determined for the "normal" style of mineralization.

Graphite 100,000 tonnes [B]; or equiv. (min 1%)[1] Footnote B: significant, but not economic, minimum tonnage limits; determined on the basis of the normal style of mineralization and the typical mining method. Minimum tonnage limits are established to screen out the economically insignificant small-scale mines that produced in the distant past under special situations or during a phase of the exploration process. Footnote 1: Equivalent ranges of grade and/or tonnage values generally relate to lower grade, large tonnage deposit types generally amenable to large scale open-pit or underground mining techniques.

M Martin comment: OGS 100,000 mt @ 5 % graphite = 5,000 mt graphite in-situ. Using NRCAN's 2020 price of Cdn $ 2000 per mt for graphite produced in Canada the gross – before cost – in-situ value of the minimum size graphite deposit is Cdn $ 10 Million.

For a density of 2.5 mt / cu m a rock unit of 100,000 mt requires a mined volume of 40,000 cu m. Assuming a 30 m width and 40 m depth, a 33.3 m length would be enough. This is a small pit.

At a grade of 3 % like Black Mountain more volume is needed to be equivalent. The minimum length of the ore body would need to be larger …56 m long. (56 x 30 x 40 x 2.5 x .03 = 5,040 mt graphite in-situ), assuming continuity of mineralization.

Attachment 2 Black Mountain Graphite Illustration & Comparison to Graphite Occurrences in Ontario

Black Mountain Graphite Illustration

7500 m length (observed by prospectors then OGS), up to 30 m wide (OGS) – true widths as near vertical dip, over 40 m depth (measured by prospectors at north end on Black Mountain facing down slope point of original discovery by OGS). The volume of this rock unit would be about 7500 x 30 x 40 = 9 million m^3. At a specific gravity of 2.5 mt/m^3 this rock volume weighs 22.5 million tonnes.

Assays average 3.0 % graphite where sampled. If the rock unit were continuously mineralized at 3 % (length, width, depth) the in-situ graphite would be 675,000 mt graphite. This is 135 times the OGS minimum.

If 2/3 were mined – allowing for set backs, extraction of better zones - there would be 450,000 mt graphite, enabling a 22.5-year mine life at 20,000 mt per year. An open pit mine would extract a mineralized vertical slab 30 m wide, 40 m deep and 225 long each year. Hanging wall and footwall rock appear competent, though testing is required to confirm.

NOTE: a mineral resource assessment with trenching and drilling has not been undertaken.

Comparison to Graphite Occurrences in Ontario (Ontario Government 2016)

Black Mountain ranks among the larger mineral resource graphite opportunities in Ontario when ranked by in-situ graphite (million metric tonnes). It is much larger in size than the 8 smaller projects listed below.

Black Mountain 0.68 million mt graphite (40 m depth and open)

NOTE: a mineral resource assessment with trenching and drilling has not been undertaken.

Comparison:

3 largest Bissett Creek 1.61 Albany 1.41 Kearney 1.32

Black Mountain 0.68

8 smaller: Stewart Lake 0.15, Black Donald Graphite .09 produced, N. A. Timmins Graphite .08, Meadow Lake Zone .06, National Graphite .06, Beidelman - Lyall .04, Portland .02, Globe

Attachment 3 Graphite Silicate Co-Products, Graphite Flake Grain Size

1. Graphite Silicate Co-Products

Actlab Modal Mineralogy – composite of 7 samples in 2019 from Black Mountain gneiss, schist

Graphite	3.00 %
Silicates	89.26 (includes quartz 44.77, plagioclase 19.34, k-feldspar 7.17)
Oxides & Hydroxides	4.67
Sulphide & Sulphate	1.59
Others	1.48
Total	100.00

Comment by M Martin: NRCAN report graphite sales at $2000 per mt in 2020. Quartz (silica) sales in 2020 were $ 33.70 per mt. Quartz makes up about 44 % of the Black Mountain gneiss/schist sampled for graphite. Most of the rest could qualify as sand. NRCAN report sand & gravel sales at $10.14 per mt

.03 x 2000 = 60.00 per mt host rock as finished graphite
.4477 x 33.70 = 15.09 per mt host rock as quartz
.45 x 10.14 = 4.56 per mt host rock as sand

2. Graphite Flake Grain Size

M Martin interpretation from Actlab Grain Size

Sieve Size	**Microns**	**Category Name**	**% in Category as Measured by Maximum Diameter OR Equivalent Circle**	
NOTE: Crushed to < 1000 microns so any in-situ graphite > 1 mm does not appear here				
Under 48*	> 300	XL or JUMBO	40.96	7.13
80 to 48*	180-300	L or LARGE	21.04	8.87
100 to 80	150-180	MEDIUM	4.35	24.59
200 to 100	75- 150	SMALL	15.28	29.20
Over 200	< 75	FINE	18.37	30.21
		TOTAL	100.00	100.00

This is not an in-situ grain size. It is measured with a microscope, not through % passing sieves physically. It reflects sizing after crushing samples to 1 mm (1000 microns).

BLACK MOUNTAIN GRAPHITE CLAIMS, SE ONTARIO - FOR OPTION

Graphite is on Ontario's Proposed Critical Minerals List *March 10, 2021 ENDM*

Option: A working interest in Black Mountain Graphite Claims is offered in exchange for optionee contribution of expertise and work to advance this property through exploration and potentially development. A brief review of the project is provided here. More information and samples are available. Property inspection can be arranged.

Contact: J. Martin P.Eng. email: *mjamesmartin@bell.net* (Ontario Prospector MLAS: M MARTIN)

Location: SE Ontario - Matawatchan Twp., Renfrew County and Miller Twp., Frontenac County.
Road access to contiguous claims at 335110 Easting, 4995540 Northing (NAD 83 zone 18).

Mineralization: 28 contiguous mining claims cover a total of 9 km strike length of favourable, graphite-bearing units. Graphitic schist with flake graphite content of 2 to 3.5% has been identified over a strike of about 7.5 km on the claim group. Preliminary prospecting indicates width of zones is up to 30 m (OGS Mancini 2020).

On strike surface flake graphite occurrences differ up to 75 m in elevation. This is measured as the elevation difference from the OGS 2015 occurrence (275-280 m) at the base of Black Mountain to an elevation high (350-355 m) 3.6 km SW at a location in the central zone where graphite was assayed at 3.47%. Assays average 3.0% graphite (Fig. 1) for 14 surface bedrock samples taken over the extent of the NE - striking steeply dipping rock units.

Canada's largest past-producing graphite mine, the Black Donald Mine, is located 13 km along strike to the northeast from the Black Mountain property, where the deposit is associated with rusty-pyrite-pyrrhotite-graphite-bearing schists and calc-silicates near the contact with carbonate metasedimentary rocks, similar to the graphite mineralization on the Black Mountain property (OGS Tessier, 2019)(Pg.3).

Geological Setting: Canadian Shield, Grenville Province, Central Metasedimentary Belt, Bancroft Terrane, south west portion of Black Donald Domain, south eastern flank of Centennial Lake synform. This flank strikes NE and is steeply dipping. The synform plunges and widens to north east, while to the south west it pinches, approaching a fold hinge. The synform rises in the SW and meets the Grimsthorpe Domain (OGS Duquet 2018).

Local Geology: per OGS Map P3437 Precambrian Geology Denbigh 2001 (Lumbers & Vertolli) host rocks:

- Legend **13b**: late intrusive rocks (1280-1270 Ma) - gneissic trondhjemite and minor granodiorite with laminated structure and metamorphic fabric.
- Legend **5:** siliceous clastic metasedimentary rocks – calcareous and micaceous shaly metasedimentary
- Legend **RS:** rusty-weathering, graphitic, pyrite -and pyrrhotite- bearing schist.

The foregoing rock units are associated with a 2VD aeromagnetic anomaly. They are generally higher in elevation than adjacent parallel calcitic marble units:

- Legend **8b:** calcitic marble (medium to high metamorphic grade)- medium to coarse grained, gneissic siliceous calcitic marble containing 20 to 60 % siliceous impurities.

Activity: Work carried out 2016-9 includes grass roots prospecting with beep mat and, for the **Pg. 2 of 4**
the northern portion of the claims, resistivity surveys and a ground mag survey by a Queen's University geophysics professor/grad student team. Thirty-two (32) graphite occurrences were identified and 14 assayed. A graphite analysis was undertaken on a composite of 7 of the assay samples from the central zone of the claims. This included modal mineralogy, graphite grain size analysis, graphite association and liberation, and grain images. OGS resources include aeromagnetic and geological bedrock surveys and reports, sampling reviews, geological and geophysical guidance, assay support, a property visit, and writeups in OGS annual reports. Communication regularly takes place with the Algonquin First Nation and nearby surface rights owners. Prospecting and ground geophysics is being continued, with focus.

Access: The claims are easy to access and close to power supply and major transportation routes: Hwy. 41, 17 TransCanada, 401. Distance to: Ottawa 150 km, Toronto 328 km, Montreal 345 km.
To drive there: from Napanee on Hwy 401 go north 113 km on Hwy 41. Or, from Pembroke on TransCanada Hwy 17 go south 100 km on Hwy 41. At Vennachar Junction drive 5 km east on paved Buckshot Lake Rd (Road 30) to Vennachar. Proceed north-east 15 km on paved Matawatchan Rd to Quackenbush Rd (pg.3). With appropriate transportation, e.g.:4x4 with good road clearance, turn south and go about 1 km on unpaved 4x4 Quackenbush Rd to the start of the Black Mountain Graphite claim group, situated on crown land starting at 335110 easting, 4995540 northing NAD 83 UTM zone 18.

Fig. 1 Graphite Assays from Surface Bedrock listed north to south

		NAD 83 UTM zone 18		
Claim Zone	**Graphite Grade**	**Northing**	**Easting**	**Elevation metres**
north	2.77 %	5000863	338691	315
central	3.32 %	4999470	338166	315-320
	3.37 %	4999456	338107	315
	3.16 %	4999338	338200	285-290
	2.86 %	4999337	338192	"
	1.67 %	4998112	337471	335-340
	3.27 %	4997992	337405	340-345
	3.47 %	4997913	337410	350-355
				Average Grade for 14 samples: 3.0 %
south	2.24 %	4995235	336472	340-345
	3.39 %	4995234	336475	"
	2.81 %	4995194	336349	345-350
	3.72 %	4995188	336345	"
	3.00 %	4995178	336337	"
	2.98 %	4995103	336291	345

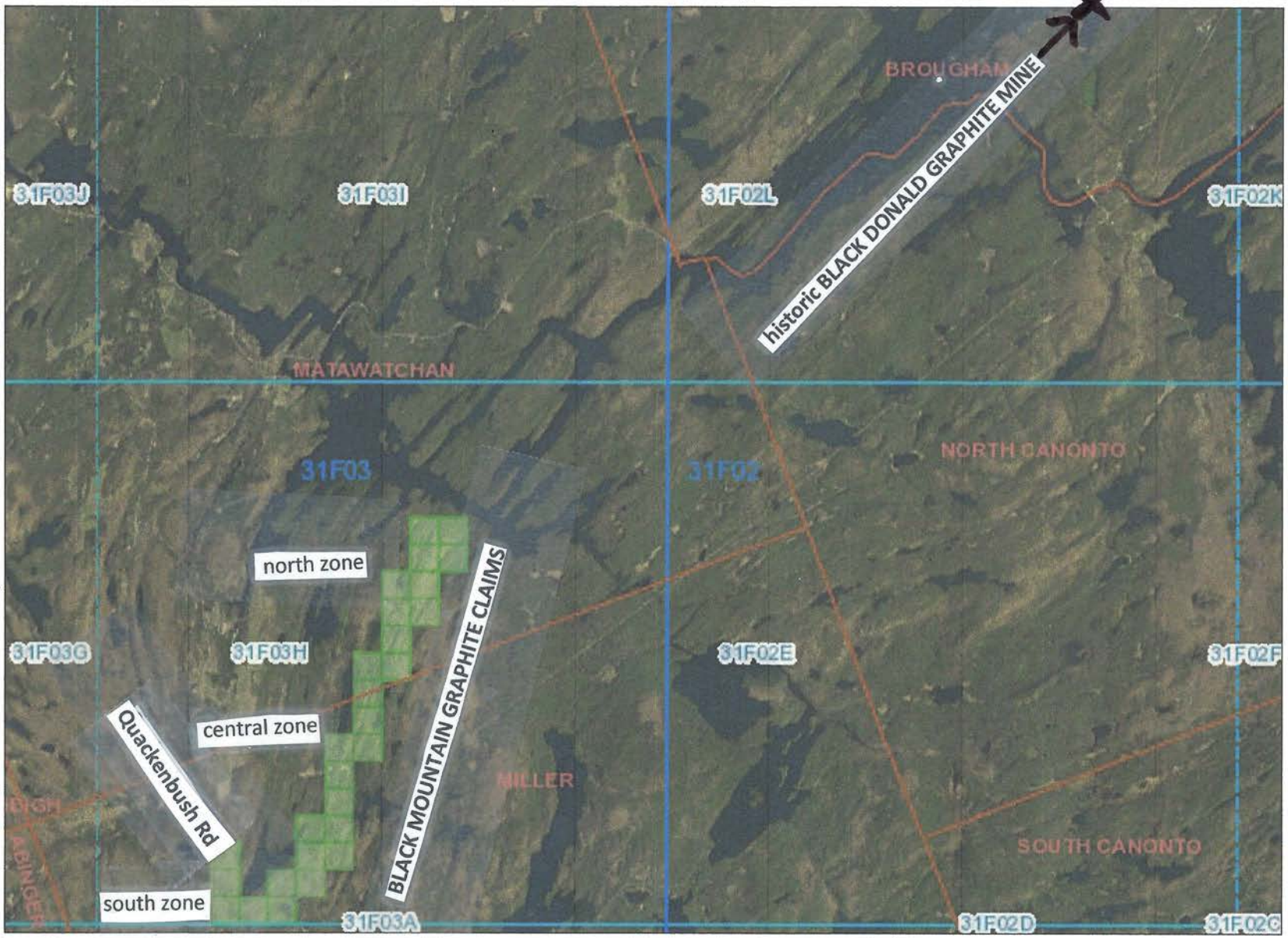
Pg. 3: Black Mountain Graphite Claims, proximity to historic Black Donald Mine, scale 1: 144 448
Pg. 4: Black Mountain Graphite Claims, scale 1: 72 224

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mountain Graphite Claims

Notes:
Scale 1: 144448 MLAS Map
historic Black Donald Graphite Mine



Legend

- **Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
- **Mining Claim**
  - Mining Claim
  - Boundary Claim
- **Alienation**
  - Withdrawal
  - Notice
- **ENDM Administrative Boundaries**
  - ENDM Townships and Areas
  - Geographic Lot Fabirc
  - UTM Grid 1K
  - UTM Grid 10K
  - Mining Division
  - Mineral Exploration and Development Region
  - CLUPA Protected Area - Far North
  - Resident Geologist District
  - Federal Land Other
  - Native Reserves
  - AMIS Sites
  - AMIS Features
  - Drill Hole
  - Mineral Occurrences
- **MLAS Mining History**
  - Withdrawal - History
  - Notice - History
  - Mining Claim - History
  - Mining Land Tenure - History
  - Legacy Claim
- **Provincial Grid**
  - Provincial Grid 250K
  - Provincial Grid 50K
  - Provincial Grid Group
- **Land Tenure**
  - Surface Rights
  - Mining Rights
  - Mining and Surface Rights
  - Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 5.17 km

N

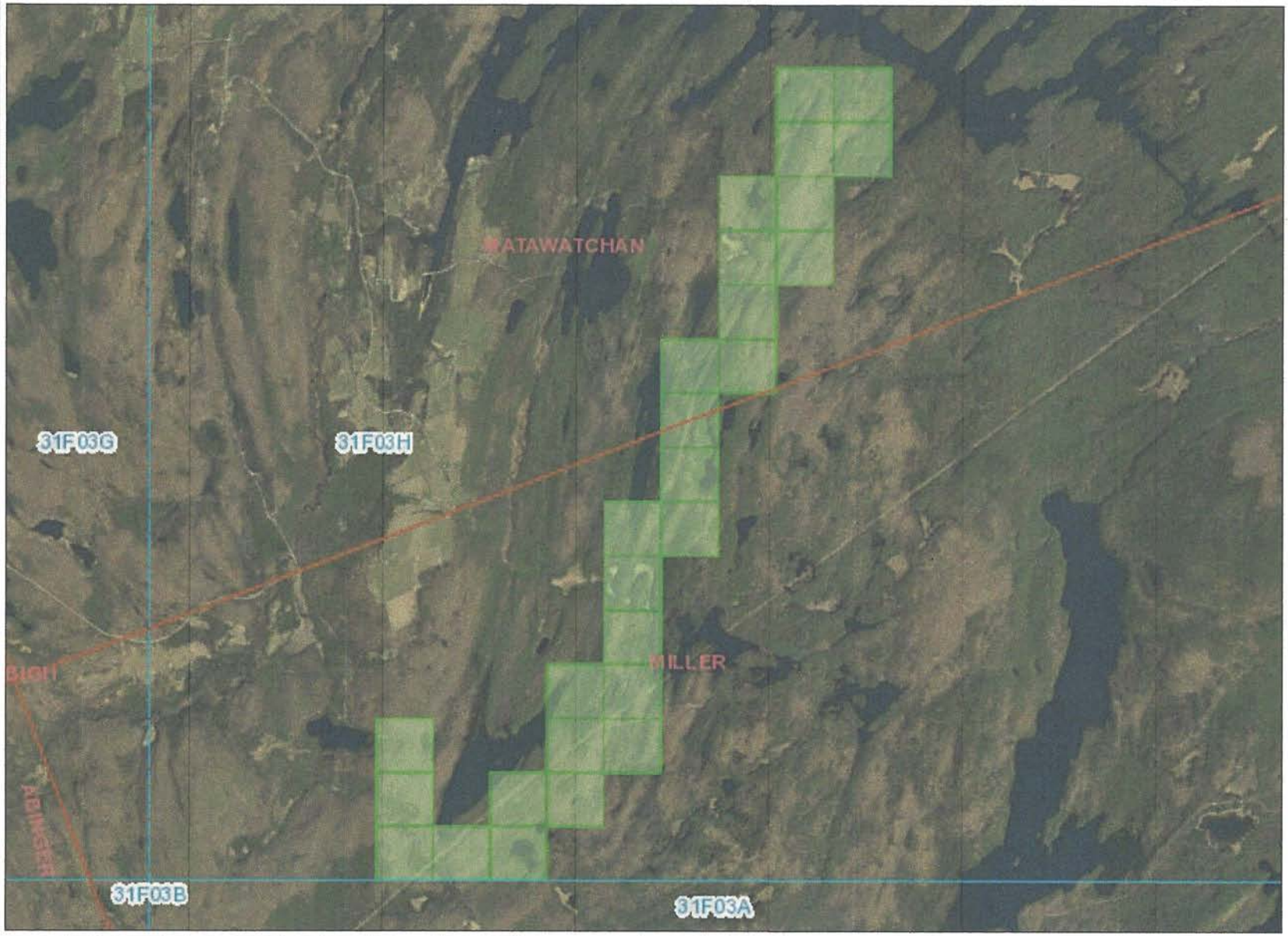
Projection: Web Mercator

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mountain Graphite Claims

Notes:
Scale 1: 72224 MLAS Map



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 2.59 km

N

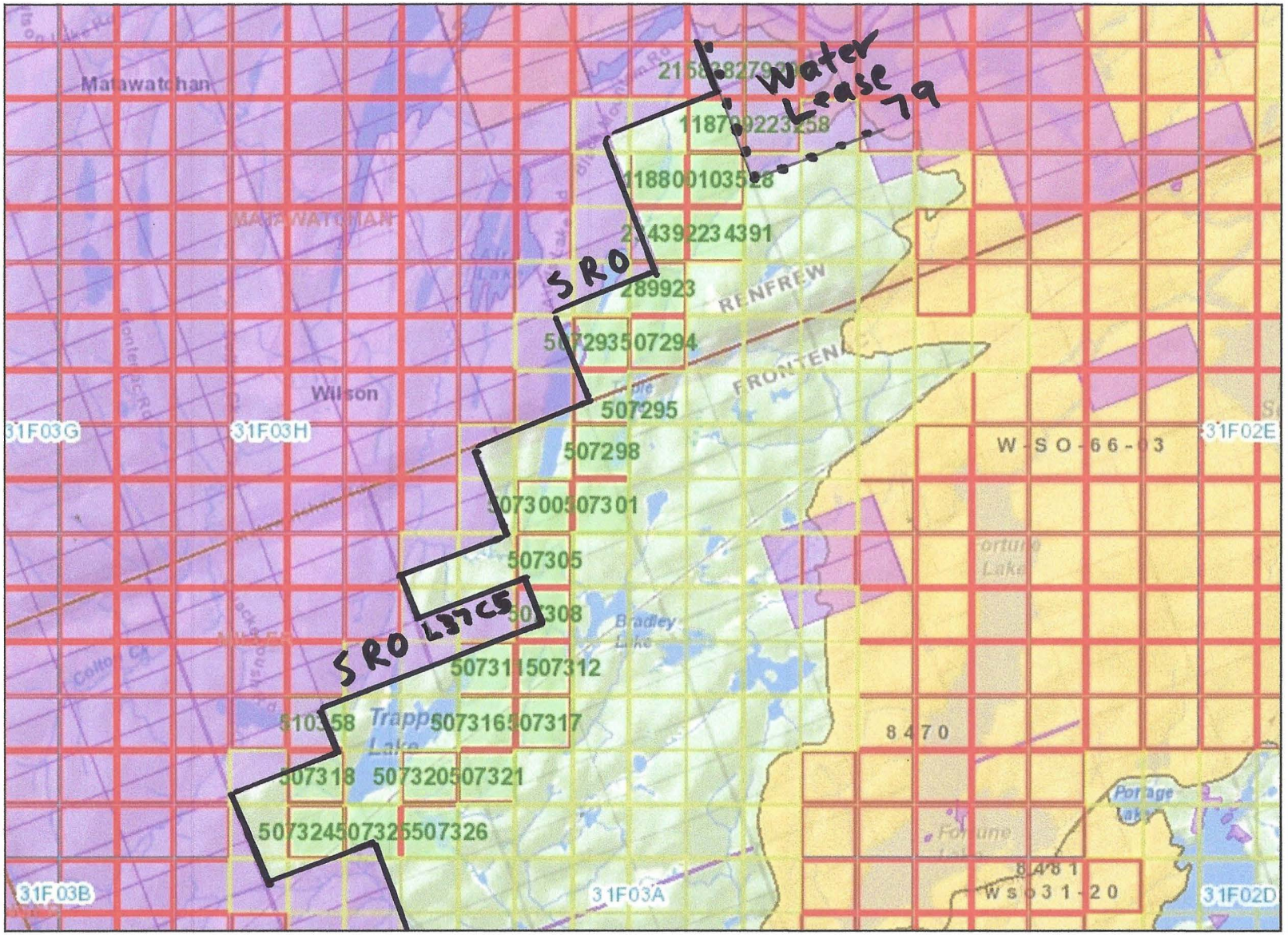
Projection: Web Mercator

Ontario

Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)
MLAS Map Viewer

Map A Land Ownership

Notes:
BLACK MOUNTAIN GRAPHITE-SILICA PROJECT
Scale 1: 72224



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

NDM Administrative Boundaries
- NDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Northern Development and Mines (NDM) for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Northern Development and Mines (NDM) web site.

0 2.59 km

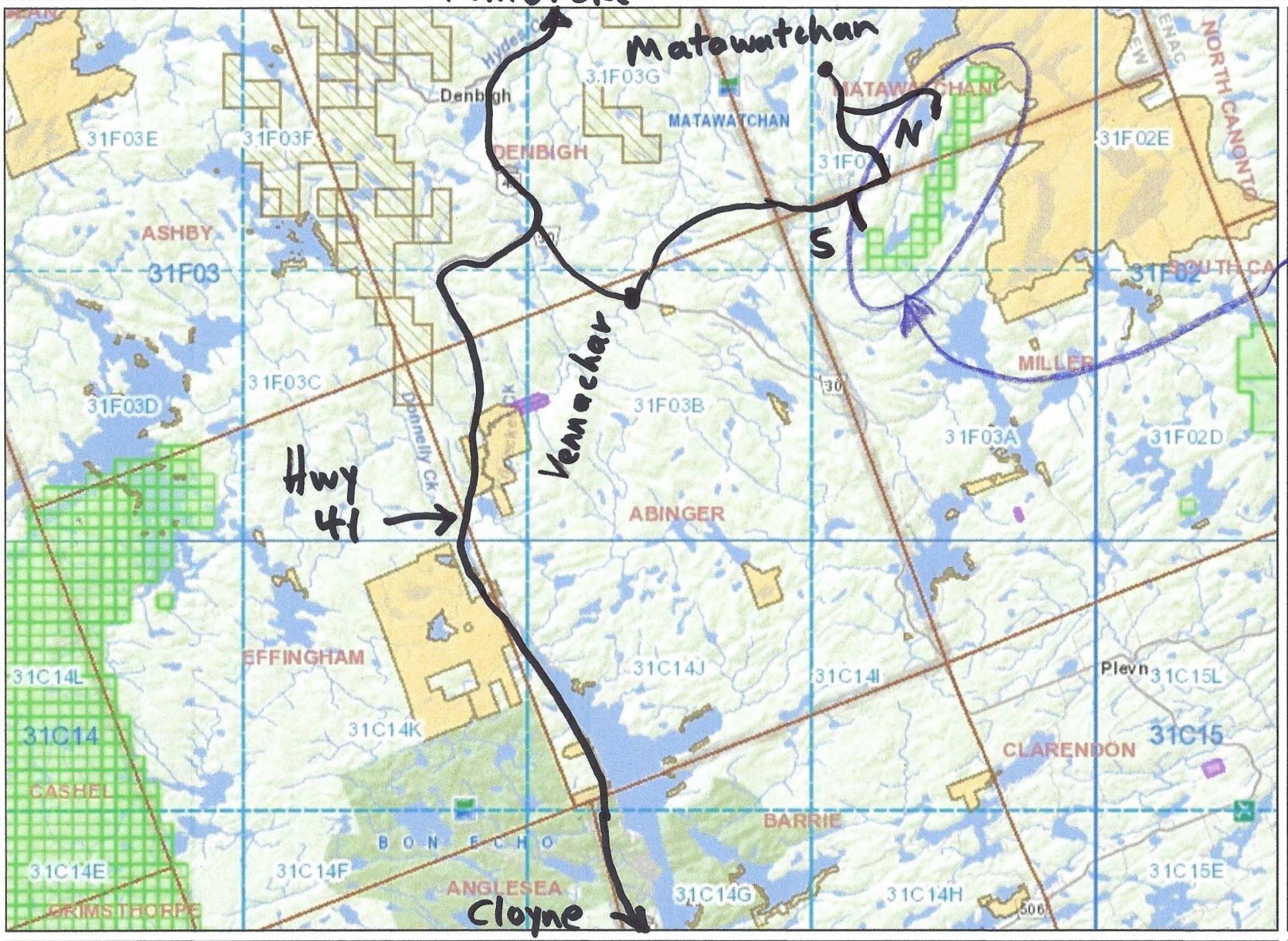
Projection: Web Mercator

Ontario

Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)
MLAS Map Viewer

Map B-1 Land Access Hwy 41 to Matawatchan

Notes:
BLACK MOUNTAIN GRAPHITE-SILICA PROJECT
Scale 1: 288895



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

NDM Administrative Boundaries
- NDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

0 10.37 km

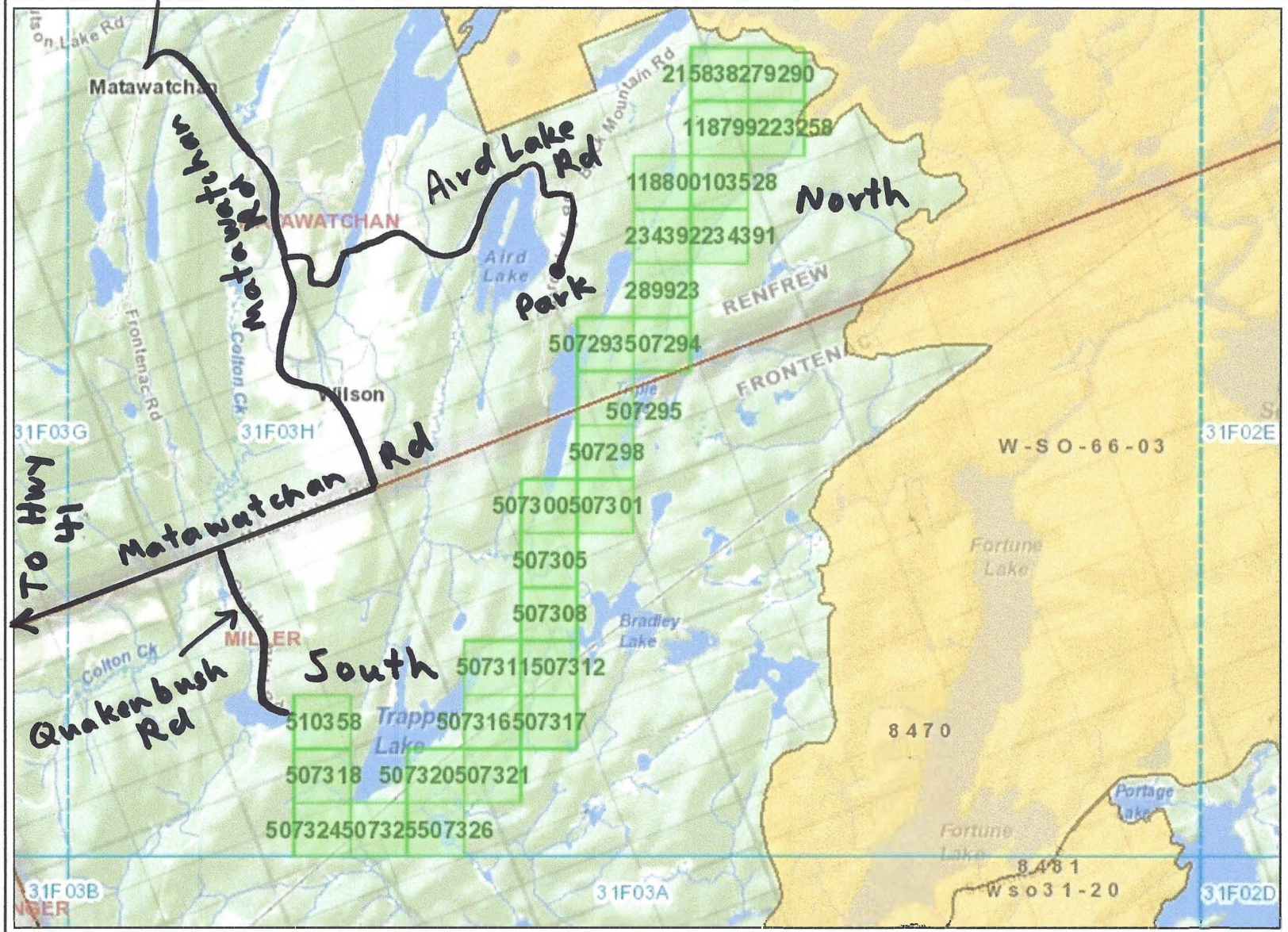
Projection: Web Mercator

Ontario

Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)
MLAS Map Viewer

Map B-2 Land Access South, North

Notes:
BLACK MOUNTAIN GRAPHITE-SILICA PROJECT
Scale 1: 72224



Legend

- **Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
- **Mining Claim**
  - Mining Claim
  - Boundary Claim
- **Alienation**
  - Withdrawal
  - Notice
- **NDM Administrative Boundaries**
  - NDM Townships and Areas
  - Geographic Lot Fabirc
  - UTM Grid 1K
  - UTM Grid 10K
  - Mining Division
  - Mineral Exploration and Development Region
  - CLUPA Protected Area - Far North
  - Resident Geologist District
  - Federal Land Other
  - Native Reserves
  - AMIS Sites
  - AMIS Features
  - Drill Hole
  - Mineral Occurrences
- **MLAS Mining History**
  - Withdrawal - History
  - Notice - History
  - Mining Claim - History
  - Mining Land Tenure - History
  - Legacy Claim
- **Provincial Grid**
  - Provincial Grid 250K
  - Provincial Grid 50K
  - Provincial Grid Group
- **Land Tenure**
  - Surface Rights
  - Mining Rights
  - Mining and Surface Rights
  - Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Northern Development and Mines (NDM) for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Northern Development and Mines (NDM) web site.

0 2.59 km

Projection: Web Mercator

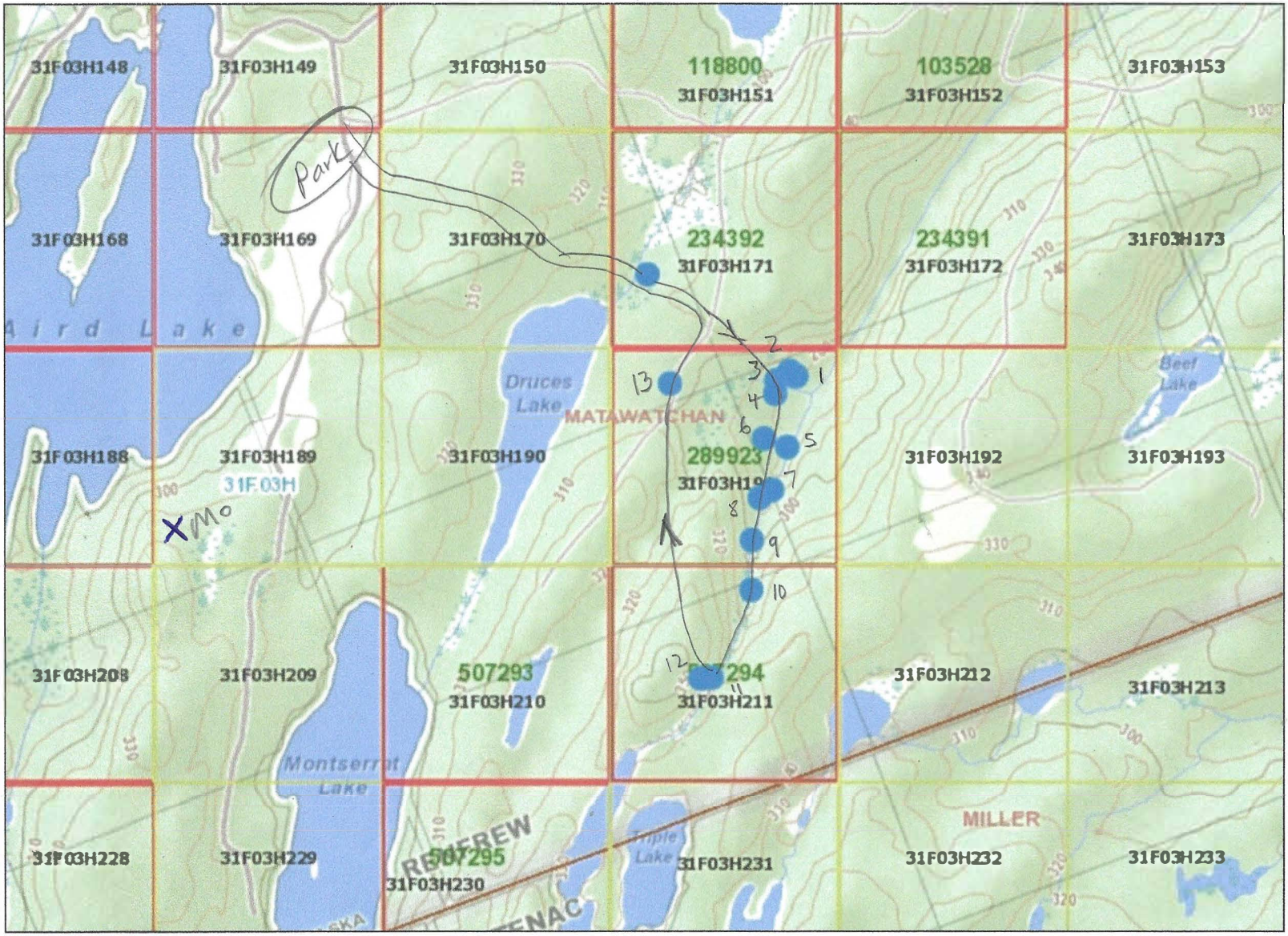
"black mtn ft 12 maps" Field Trip #12 Map C-1 Route

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1: 18056

Notes: Observation Locations



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabric
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 0.65 km

Projection: Web Mercator

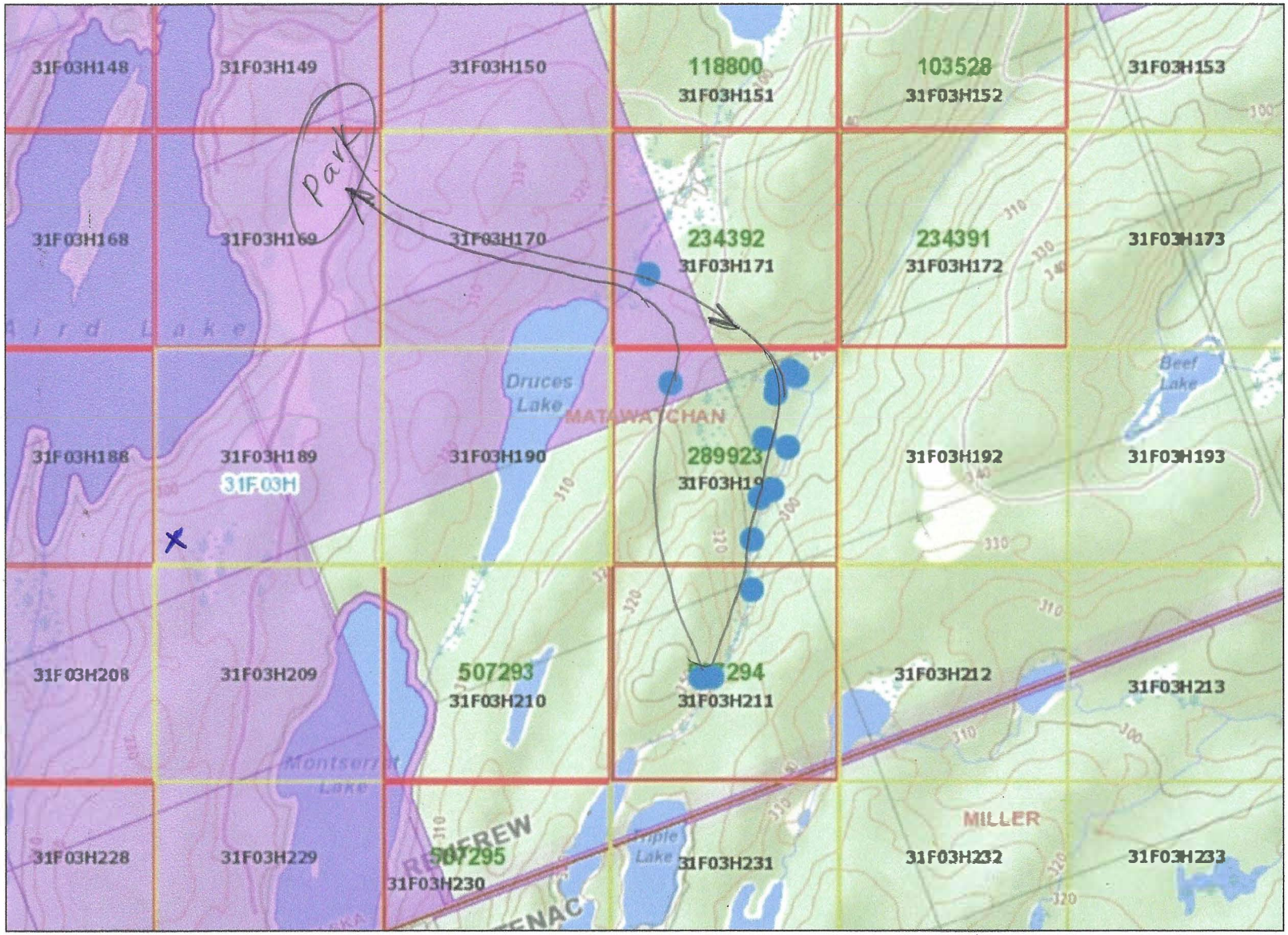
Map C-2 Route - SRO

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1:
18056

Notes: with permission (2)



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabric
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 0.65 km

Projection: Web Mercator

C-3 Route - north

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1: 9028

Notes: 3

Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabric
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

0 0.32 km

Projection: Web Mercator

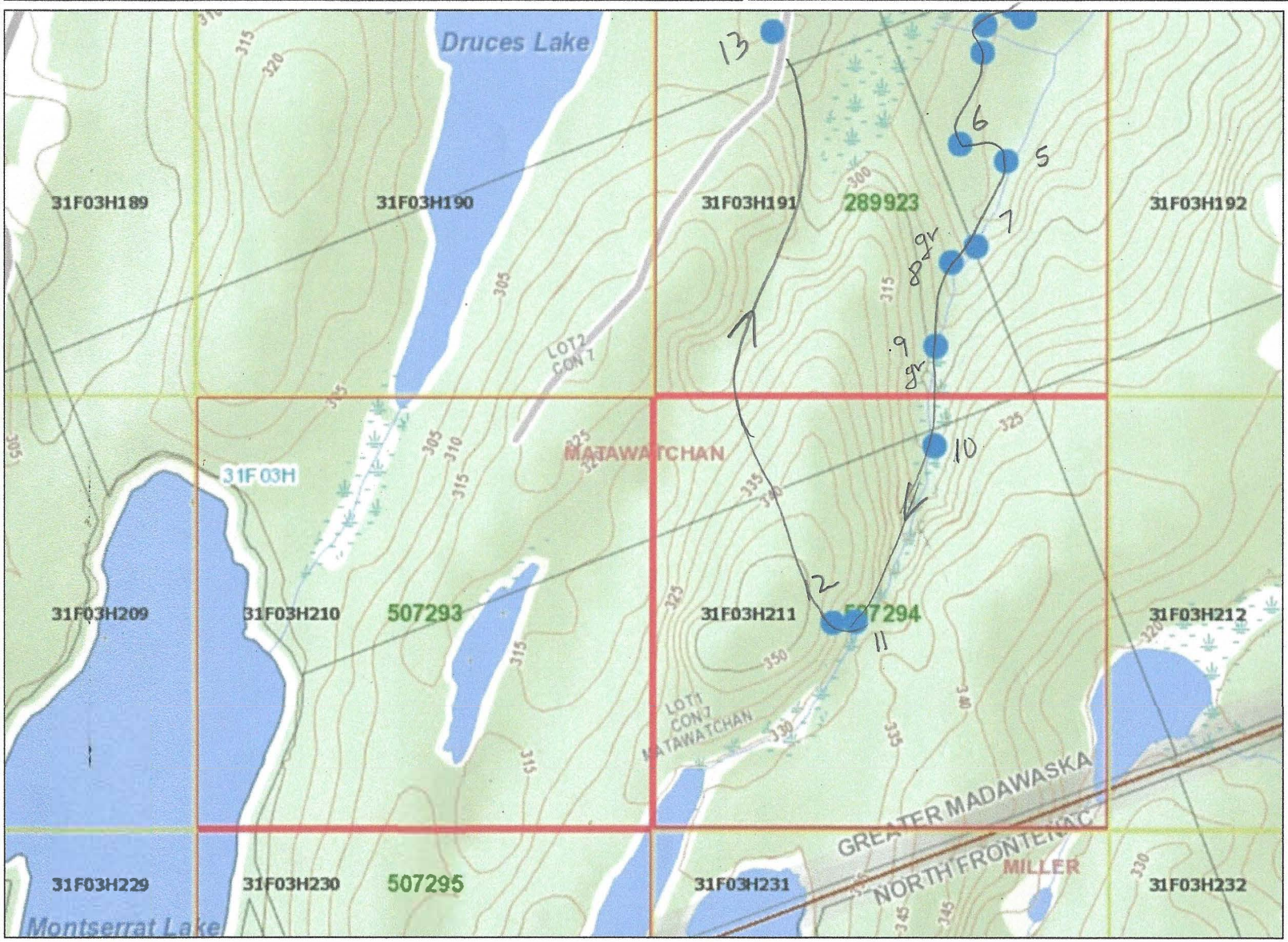
C-4 Route-south

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1: 9028

Notes: (4)



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 0.32 km

Projection: Web Mercator

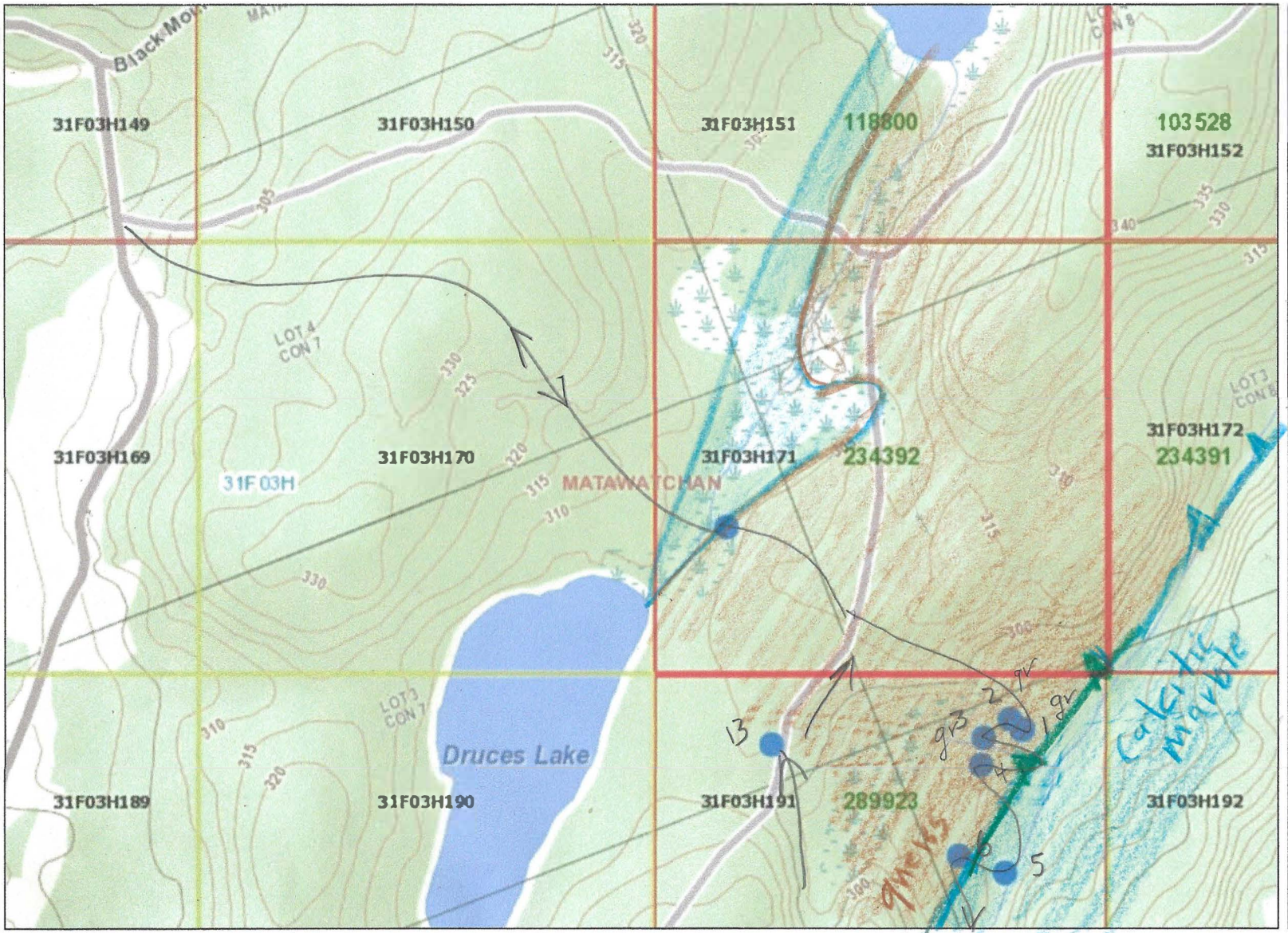
C-5 Route - north

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1: 9028

Notes: Geology Overlay (5)



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from varioussources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.

0 0.32 km

Projection: Web Mercator

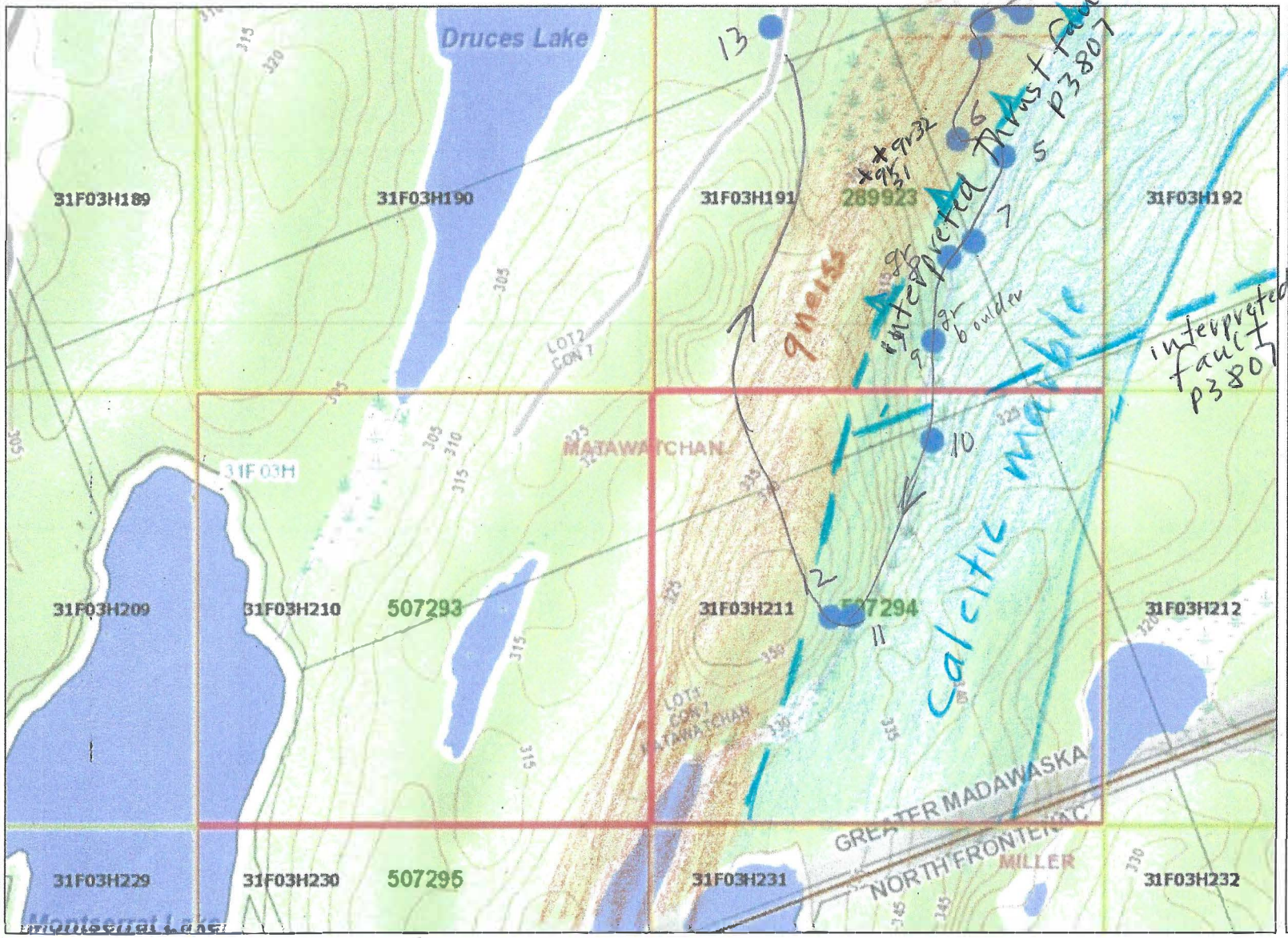
C-6 Route - south

Ontario

MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

Black Mtn Oct. 13, 2021 1:
9028 ~~Assay~~

Notes: Geology Overlay (6)



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

ENDM Administrative Boundaries
- ENDM Townships and Areas
- Geographic Lot Fabric
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

0 0.32 km

Projection: Web Mercator

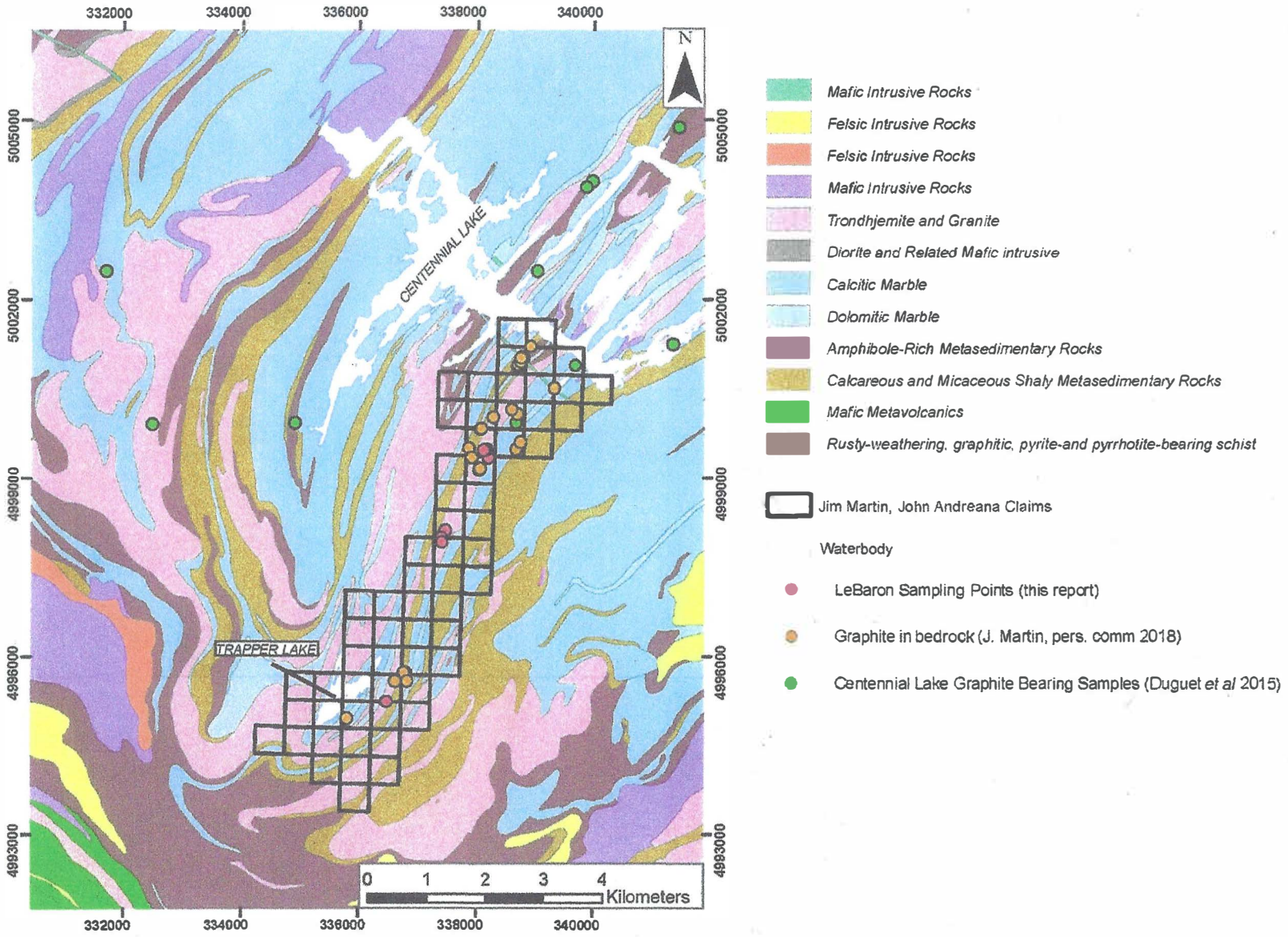


Figure 10. Geological map of the Centennial Lake area, showing locations of the Black Mountain property and graphite occurrences (geology from Lumbers and Vertolli 2001).

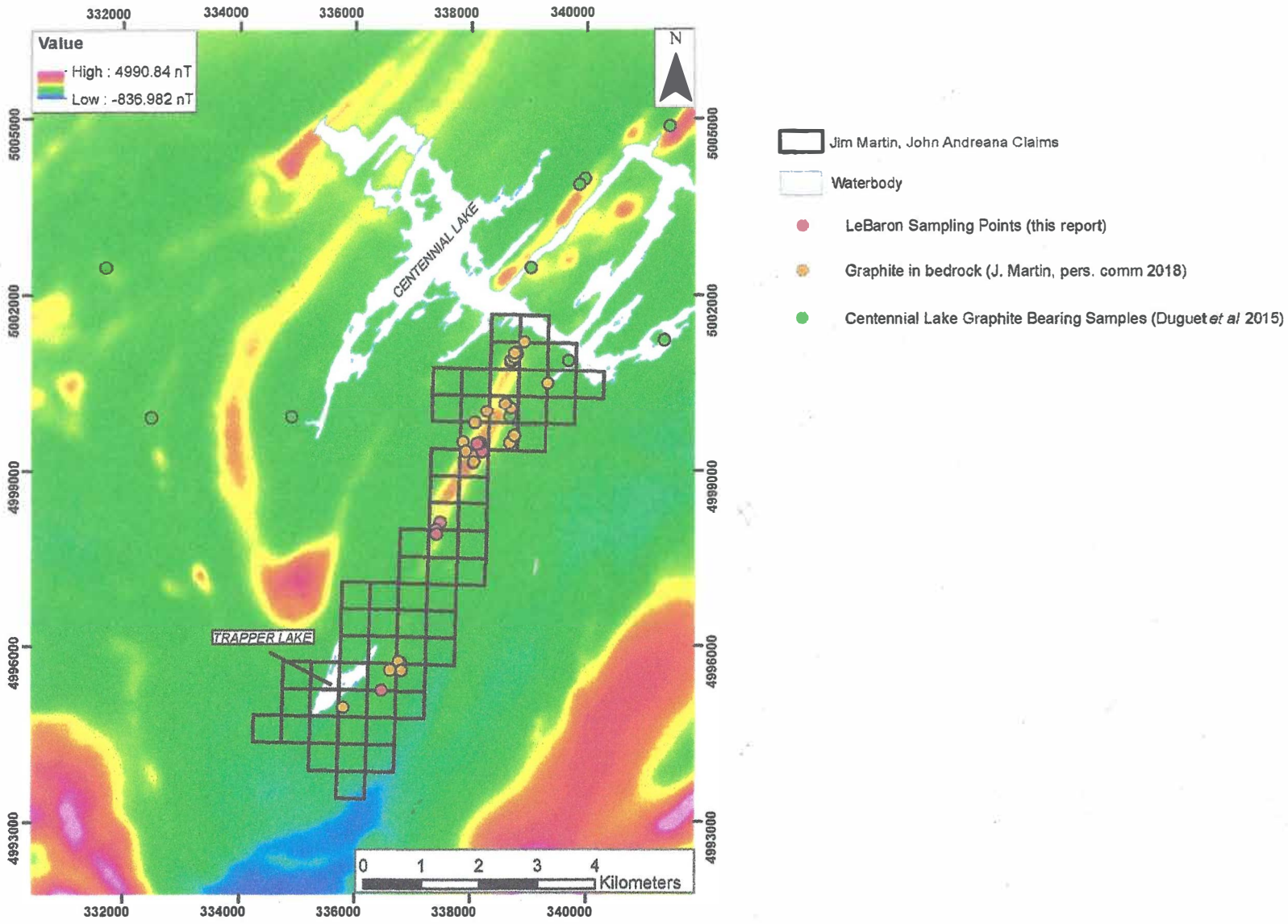


Figure 11. Airborne magnetic survey map of the Centennial Lake area, showing locations of the Black Mountain property and graphite occurrences (magnetic survey from Ontario Geological Survey 2014).

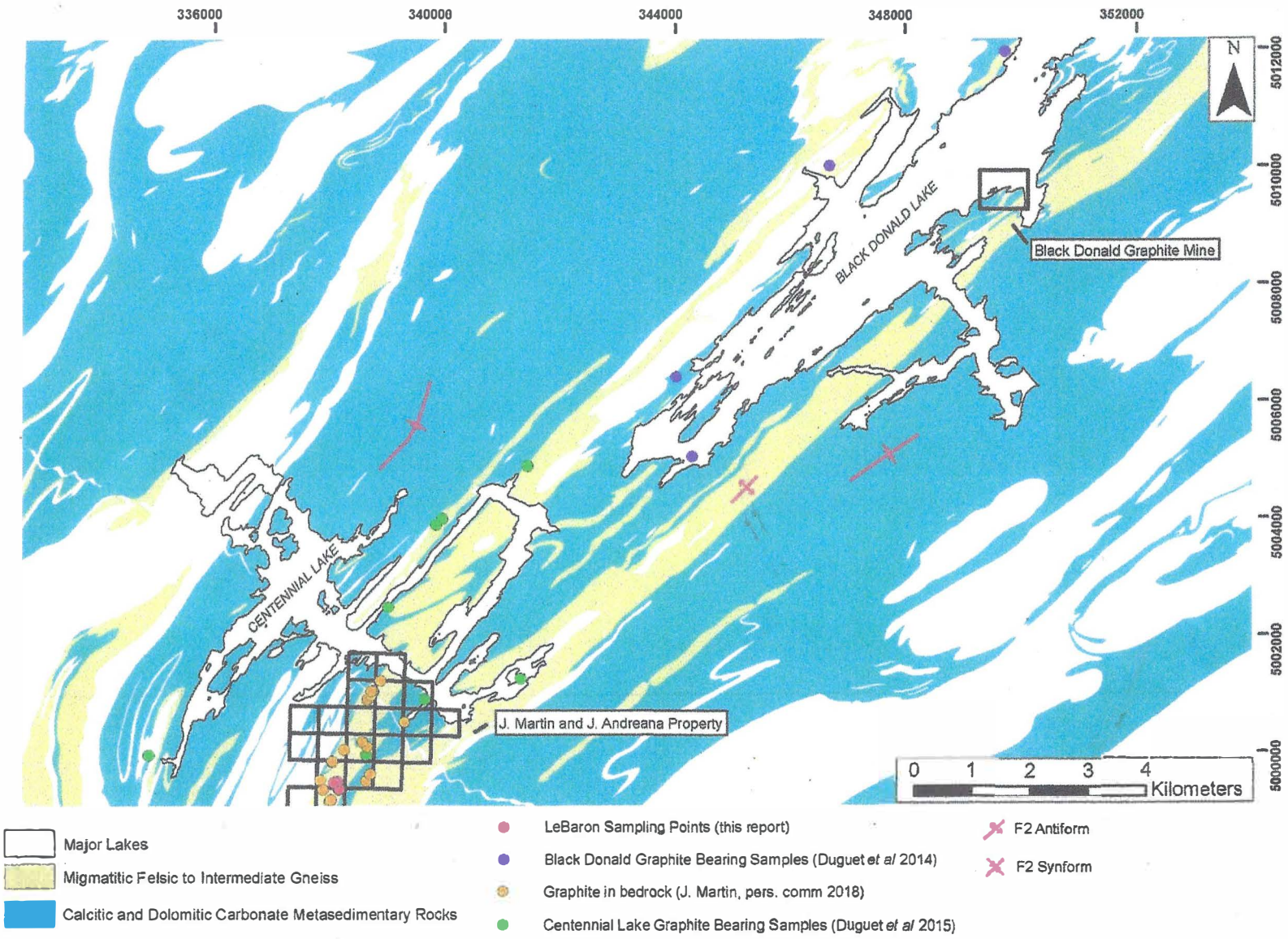


Figure 12. Simplified geological map of the Centennial Lake-Black Donald Lake area, showing locations of the Black Mountain graphite prospect and the Black Donald mine (geology after Lumbers and Vertolli 2001).

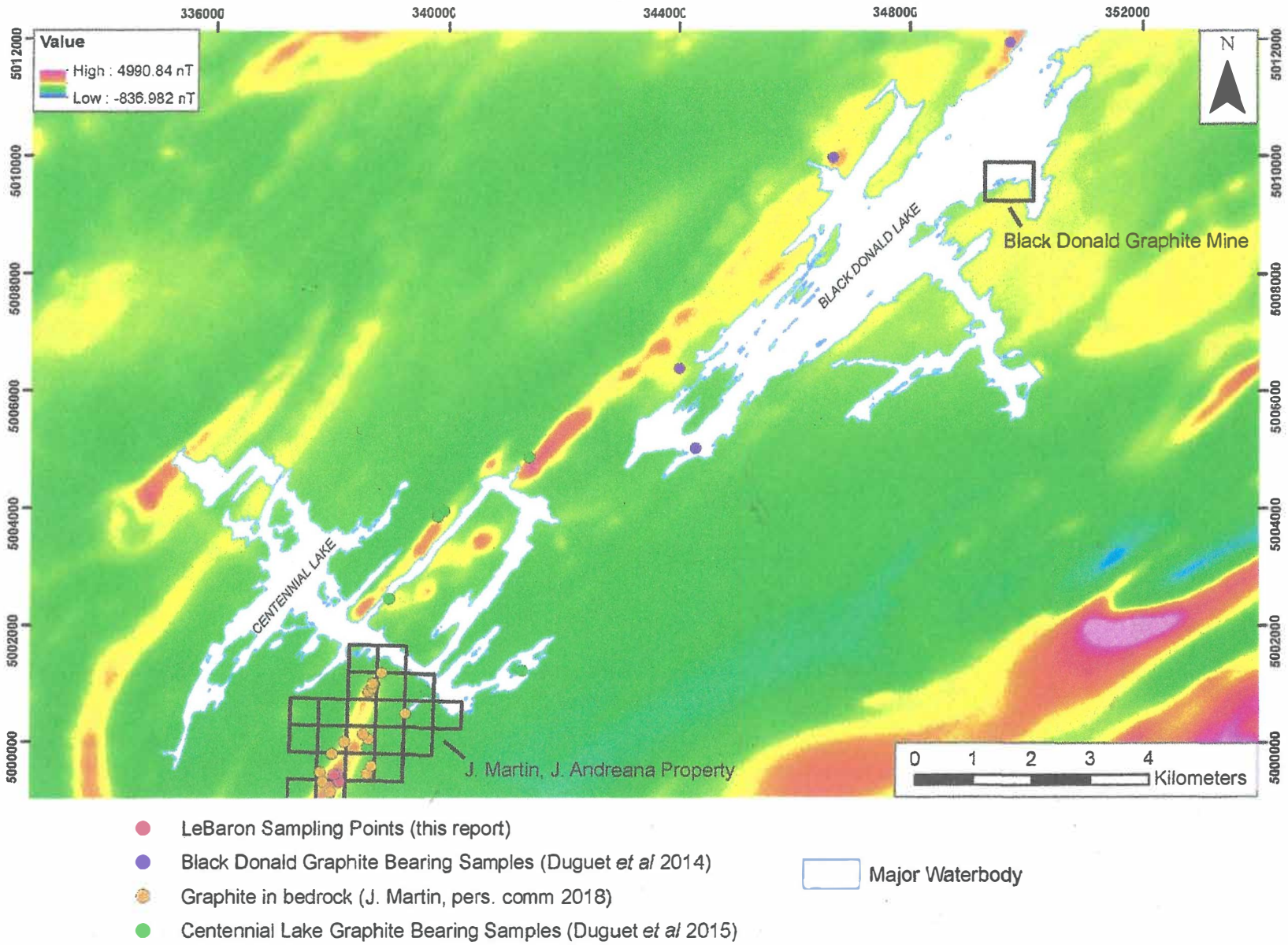
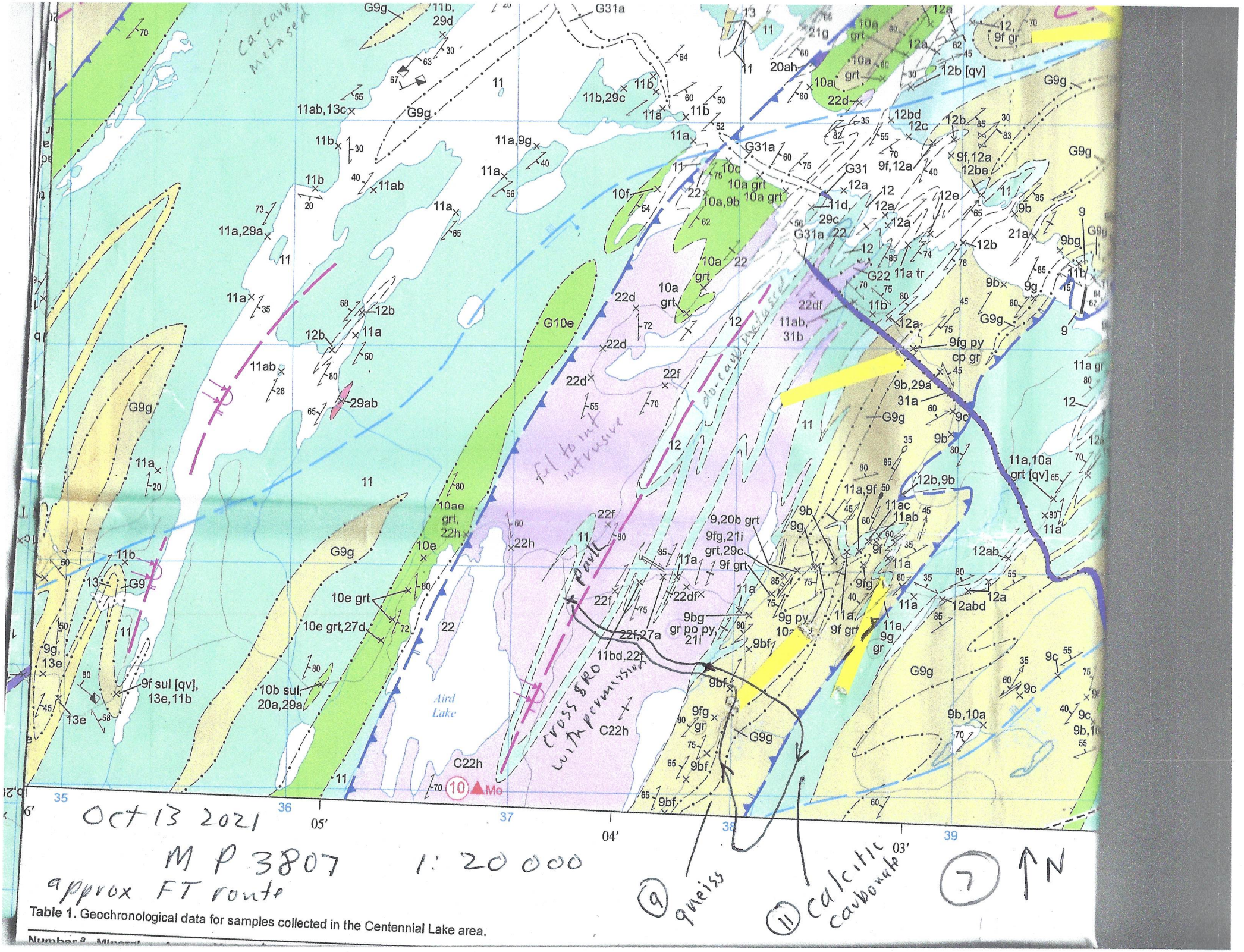


Figure 13. Airborne magnetic survey map of the Centennial Lake-Black Donald Lake area, showing locations of the Black Mountain graphite prospect (J..Martin, J. Andreana property) and the Black Donald mine (magnetic survey from Ontario Geological Survey 2014).


Aird Lake
Oct 13 2021
MP 3807
1:20 000
approx FT route
(9) gneiss
(11) calcitic carbonate
(7)
N
Table 1. Geochronological data for samples collected in the Centennial Lake area.

Sample 1 Black Mtn
Oct 13, 2021

Sample 2 Black Mtn
Oct 13, 2021

Sample 3 Black Mtn
Oct 13, 2021