Beep-Mat Survey, Stripping & Lithogeochemical Survey of Malcolm Prospect Lyndoch Township

Assessment Report Prepared for the Ministry of Northern Development and Mines

Project Financed by Ontario Exploration Corporation OEC-2015-05

Report prepared by Marc Thomas Forget August 14, 2015

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Summary of Results

Execution of this project was conducted in accordance with MNDM Plan PL-15-10425. The commodity sought for was flake graphite. Three mineralized zones have been discovered. They are the West, Central and East Zones. Mineralized bedrock is for the most part under variable depths of sandy glacial drift and swamps. The proven, but discontinuous, strike length of graphite mineralization at the surface in the Malcolm Prospect is 2.4 km. This trend is about 100 metres north of and parallel to an east-northeast striking anomalous TDEM conductive lineament.

The mineralized sediments dip to the south, on average by roughly 60°, and this explains the up dip offset between the TDEM anomalies and mineralization at the surface. This simple fact was critical in the successful execution of a Beep Mat survey and discovery of graphite mineralization. The second and equally important method used in this project was mechanized excavation. The speed and depth that test pits can be put down (and re-buried) by an excavator cannot be over stated.

The West and Central Zones were discovered under shallow drift during a Beep-Mat survey and conventional prospecting of outcrop helped to discover the East Zone. An excavator was used to expose bedrock in the three new mineralized zones, and test pitting of five additional zones failed to reach bedrock due to the deep nature of drift. These deeply buried zones are considered very good drill targets. Quality samples of the three mineralized zones were extracted from bedrock using a rock saw and analyzed for total graphite at Actlabs in Ancaster, Ontario.

The most significant results come from the Central and East Zones, though the West Zone remains relatively unexplored. In the Central Zone, sample MP-01 assayed 6.51% Cg and sample MP-02 assayed 8.53% Cg¹. In the East Zone, sample MP-09 assayed 8.16% Cg. In the West Zone, MP-06 assayed 2.84% Cg.

The Central Zone is the most promising mineralized zone thus far. There are two reasons for this observation:

- 1. Multiple test pits within a 40 metre width have revealed economic grades of ore,
- 2. One ore in particular is a carbonate rock and devoid of sulphides $(MP-02)^2$.

The collar of DDH YD65-11 (1965) was discovered during test pitting in the West Zone. We were able to line up a test trench with the collar and intersected the up dip section of two mineralized zones. This was predicted from analysis of the corresponding DDH drill log (see Appendix). Additional trenching in this zone should reveal the additional down dip-mineralized zone.

Recommendations

The occurrence of economic grades of graphite in mineralized bedrock and the discovery of a new type of graphite ore warrants additional exploration. We recommend lateral and cross sectional stripping and multi-metre channel sampling of the three mineralized zones to test for average grade. In addition, further exploration using the proven method of mechanized test pitting in combination with the Beep-Mat is also recommended to fill in known "gaps" across a 2.4 kilometre strike length. We also recommend stratigraphic mapping and assaying (graphite) of mineralized float to use as vectors towards mineralization.

¹ MP-02 was assayed in triplicate to test for variance of the analytical method. Variance was negligible.

 $^{^2}$ To date all graphite ore from the Little-Bryan and Malcolm are a rusty arenites or quartzites and is due to varying amounts of pyrrhotite. The new ore is 65% calcite, 26.5% silica grains (quartz+diopside) and 8.5% Cg with no sulphides.

Property Information

Location & Directions

The Malcolm Prospect is located in Lyndoch Township, Ontario, of the South-eastern Ontario District, Southern Ontario Mining Division and is centred at UTM 316248E 5013890N, WGS 84, Zone 18, NTS 31F06.

The property is located approximately 7 kilometres south-southeast of Quadeville, Ontario. The property is accessible by a very good three-season gravel forest road called the (new) Hyland Creek Road. (See Road Map #2.) Starting at Quadeville, travel south for 5.9 kilometres on the Addington Road to the beginning of the new Hyland Creek Road. The "old" Hyland Creek Road goes due east at this point and the "new" Hyland Creek Road continues south. Continue on the new Hyland Creek Road for 3.6 kilometres to the property. The new Hyland Creek Road cuts diagonally through the bottom of claim 1500872. Though there are some old overgrown skidder trails on the property, at this time it is walk-in only and the terrain is very hilly.

Property Identification

The mining claims form a contiguous block of twelve, 20 hectare unpatented units of Crown Mining Lands. It includes Lots 19 to 24 of Concession 6 in Lyndoch Township, Ontario (See Mining Lands Claim Map #1). All claims are one hundred percent held by Marc Thomas Forget of Marmora, prospector license number 1001310, and all claims are in good standing.

Mining Lands Claim Lands

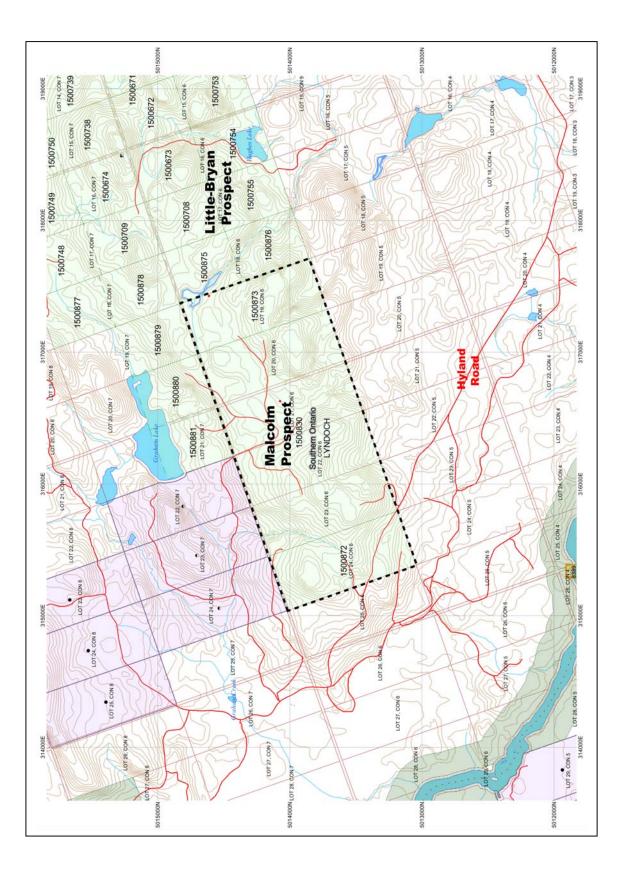
Claim Number	Lots	Concession	Parcel	Township Plan
1500873	19	6	NA	NA
1500830	20-23	6	NA	NA
1500872	24	6	NA	NA

Name & Address of Claim Holder

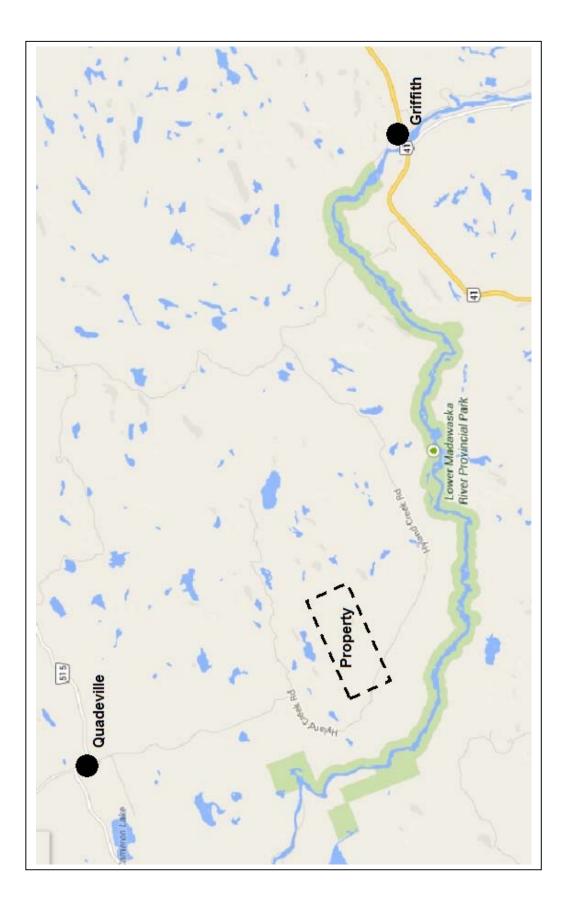
Marc Thomas Forget

Prospector License 1001310 MNDM Client Number 401287

8 North Hastings Avenue Marmora, Ontario K0K 2M0 (613) 472-0406 forget.marc@gmail.com



Mining Lands Claim Map



Road Map

Mining Claim Abstracts

SOUTHERN ONTARIO - Division 90		Claim No: SO 1500873		Status: ACTIVE
Due Date:	2016-Aug-25	Recorded:	2014-Aug-25	
Work Required:	\$ 800	Staked:	2014-Aug-25 09:30	
Total Work:	\$ 0	Township/Area:	LYNDOCH (G-3400)	
Total Reserve:	<u>\$ 0</u>	Lot Description:	Lot 24, Con 6	
Present Work Assignment:	\$ 0	Claim Units:	2	
Claim Bank:	\$ 0			

Claim Holders

Recorded Holder(s) Percentage	
FORGET, MARC THOMAS (100.00%)	

Transaction Listing

Туре	Date	Applied	Description	Performed Number
STAKER	R 2014-Aug-25	5	RECORDED BY FORGET, MARC THOMAS	R1490.01540
			(1001310)	

Client Number 401287

SOUTHERN ONTARIO - Division 90		Claim No: SO 1500830		Status: ACTIVE
Due Date:	2016-Jun-11	Recorded:	2014-Jun-11	l
Work Required:	\$ 3,200	Staked: 2014-Jun-11 14:33		14:33
Total Work:	\$ O	Township/Area:	LYNDOCH	(G-3400)
Total Reserve:	<u>\$ 0</u>	Lot Description: LOT 20, 21, 22 & 23, COM		, 22 & 23, CON 6
Present Work Assignment:	\$ 0	Claim Units:	8	
Claim Bank:	\$ 0			

Claim Holders	
Recorded Holder(s) Percentage	Client Number
FORGET, MARC THOMAS (100.00%)	401287

Transaction Listing

Type Date	Applied	Description	Performed Number
STAKER 2014-Jun-11		RECORDED BY FORGET, MARC THOMAS	R1490.01074
		(1001310)	

SOUTHERN ONTARIO - Division 90		Claim No: SO	1500872 Status: ACTIVE
Due Date:	2016-Aug-25	Recorded:	2014-Aug-25
Work Required:	\$ 800	Staked:	2014-Aug-25 09:30
Total Work:	\$ O	Township/Area:	LYNDOCH (G-3400)
Total Reserve:	<u>\$ 0</u>	Lot Description:	Lot 19, Con 6
Present Work Assignment:	\$ 0	Claim Units:	2
Claim Bank:	\$ 0		

Claim Holders

Recorded Holder(s) Percentage	Client Number
FORGET, MARC THOMAS (100.00 %)	401287

Transaction Listing

Type Date	Applied	Description	Performed Number
STAKER 2014-Aug-25		RECORDED BY FORGET, MARC THOMAS (1001310)	R1490.01540

Geology

Central Metasedimentary Belt

The Malcolm Prospect is located in the northeastern part of the Belmont Domain (Easton, 1995) of the Central Metasedimentary Belt (CMB) of the Grenville Province. The CMB is southeast of older rocks of the Central Gneiss Belt (CGB) in southeastern Ontario and southwestern Quebec. In Ontario the sediments were deposited in the Hastings Basin and in Quebec, the Mont Laurier Basin. The two basins are part of a continuous sedimentary basin split in two by the Ottawa-Bonnechere graben. Rocks of the CMB are middle Proterozoic sedimentary, volcanic and intrusive rocks. They range in age from about 1.3 Ga to 1.0 Ga. The CMB is divided into major tectonic domains and each domain into groups of formations as shown in Figure #1, 2 and 3.

The sediments were deposited on a passive margin along the CGB. Around 1300 Ma, the margin became active during the Elzevirian Orogeny when a volcanic arc developed. The fore-arc evolved into a back-arc, fore-arc complex prior to maturation around 1210 Ma. Subsequent to waning arc volcanism, the arc complex was subjected to two major deformations corresponding with the Shawingian (1110 Ma) and Ottawan Orogenies (1050 Ma) collectively called the Grenville Orogeny. As such, the rocks have been variously metamorphosed from greenschist to granulite facies.

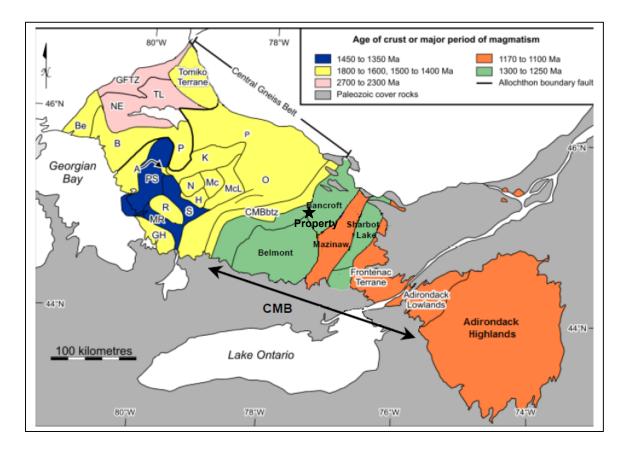


Figure #1: Central Metasedimentary Belt (CMB)

The most striking feature of the CMB is the exceptionally large volume and distribution of sedimentary rocks and hence the name. The CMB is an accreted and imbricated assembly of shelf sediments, back-arc and fore-arc basin terrains including remnants of the continental shelf associated with the older rocks of the Central Gneiss Belt. Certain basin features have been preserved, such as stromatolite bioherms that imply organic rich littoral zones along the coast of an ancient ocean. Carbonate facies include muddy rhythmites, turbidites, reefs, bio-herms, lagoonal and shelves. Carbonate textures vary from micritic to sparry to mylonitic. Metamorphic facies range from mid-greenschist to granulite. The property is located in rocks that have achieved on average upper-amphibolite facies. The CMB extends northeast into the Province of Quebec and southwest under Palaeozoic rocks into New York State and beyond. The property is located at the edge of the Bancroft Domain.

A second feature that dominates the CMB is the large volume and distribution of volcanic formations and co-genetic intrusive rock. The volcanics are bi-modal suites of basalts and rhyolites associated with back-arc extensional rifting and a suite of calc-alkaline basalts, andesites, dacites and rhyolites associated with island arcs. Several known volcanic centres are associated with deep-sea floor hydrothermal metallogenesis during island arc evolution and it is posited that this is the source of the rusty schists. These volcanic centres are the source of many sea floor volcanogenic base metal deposits in the CMB, including the Simon Copper, pyrrhotite and molybdenite occurrences near the property.

A third feature of the CMB that is very difficult to interpret is the gneisses. Some gneisses underlie volcanics and are intruded by younger granites. Zircons in these gneisses can have dates that include CGB rocks, therefore may be derived from erosional material of the Central Gneiss Belt. They were deposited onto a passive oceanic margin prior to arc genesis, are now granitized and are referred to as S-Type granites.

Younger or late granites of the Grenville Orogeny tend to have well-preserved igneous textures, circular or pipe shapes and high potassium content, but their emplacement and relative timing is not perfectly understood. There are several occurrences of pegmatites on the property and many occurrences north of the property that was explored for Uranium. These pegmatites may be anatectic melts and not true intrusives. The New Jersey Geological Survey has conclusive evidence that similar pegmatites in the New Jersey Highlands (a CMB outlier) are anatectic melts and they coincide with the New Jersey graphite deposits (Volkert & Drake, 1999).

Belmont Domain

The Belmont Domain has supracrustal rocks that are identical to those in the Black-Donald Domain (see Figure #2). The two domains connect imperceptibly at the north end of the Weslemkoon Pluton of the Grimsthorpe Domain where the supracrustal sequence thins. Hewitt & James (1955), Lumbers and Laakso of the OGS mapped many townships in the Belmont Domain and correlated siliclastic sequences with the Hermon Formation and carbonates with the Dungannon Formation. Together with volcanic formations they form part of the Mayo Group. The Dungannon and Hermon Formations are respectively, sequences of older passive margin and younger active basin sediments that have been folded, often intercalated into one another, and variously intruded by mafic sills and dykes, and late plutons. Unravelling the deposition, collision, deformation and intrusion sequences for the purpose of mineral exploration is extremely challenging.

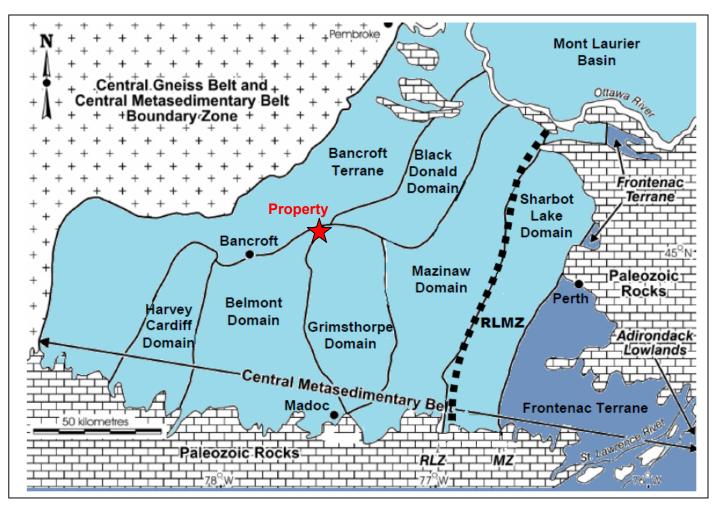


Figure #2: Domains within the Central Metasedimentary Belt

Local Geology

The local bedrock geology is a folded sequence of supracrustal and intrusive rocks as shown in Figure #3. Peak metamorphism is difficult to ascertain because alumina rich rocks that contain sillimanite and kyanite are absent from the area. Calc-silicate rich rocks, namely diopsidic dolomites in the carbonate sequence that appear to have formed under regional metamorphic conditions (i.e., are not contact skarns), suggest mid to upper amphibolite facies. Some sediment may have locally partially melted and a few rare pegmatites may be anatectic. The granitic rocks are foliated and may be S-type granites. There is also evidence of late potassium rich granite intrusions. Much more research is required to fully understand the genesis of these rocks.

Stratigraphically, the carbonate sequences are the oldest rocks and are associated with the margin of the continental platform prior to active arc genesis. They are relatively pure calcitic and dolomitic carbonates with or without pure quartz sand. If this sequence correlates with the carbonates of the Black-Donald Domain, then this explains the high purity of marbles at the OMYA calcium carbonate quarry. A siliclastic sequence overlies and intercalates with the marbles. This sequence of rocks contains evidence of volcanogenic input such as base metal rich sulphides and mafic minerals. It is

probably derived from erosion of the encroaching volcanic arc and associated submarine hydrothermal vents. Prior to closure of the basin by the volcanic arc, mafic magmas of a failed backarc intruded the sediments. These mafic rocks formed small plutons, laccoliths, sills and dyke swarms in the sediment sequences. The youngest rocks are potassium rich granite pegmatites and plutons that are associated with molybdenite deposits.

The rock formations have been dated from around 1300 Ma for the carbonates to 1070 Ma for the late granites. During the span of some 200 million years, the volcanic arc formed between 1280 to 1240 Ma. The back-arc formed between 1240 and 1220 Ma. The arc complex is called the Elzevirian Orogeny and stands on its own separate from the continental collision or Grenville Orogeny. The Grenville Orogeny is evidenced by two major deformations, the Shawingian around 1135 Ma and the Ottawan around 1080 Ma.

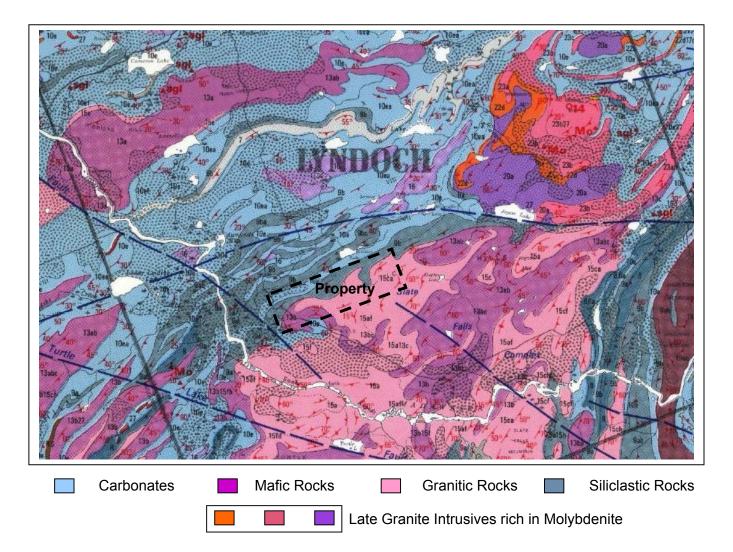


Figure #3: Bedrock geology surrounding the Malcolm Prospect.

Property Geology

Their are four formations on the property:

- 1. In the north, a west striking carbonate sequence of intercalated calcitic, dolomitic and siliceous marbles that correlates with the Dungannon Formation,
- 2. In the middle, a narrow west striking clastic sequence that correlates with a transition from the Dungannon to the Hermon Formation and contains graphite mineralization,
- 3. Back-Arc related gabbroic sills that have delaminated both sedimentary formations,
- 4. Gneissic rocks of the Hermon Formation in the south half of the property are epiclastic volcanics derived from erosion of an approaching volcanic arc (Elzevirian Orogeny).

Dungannon Formation

The applicant has verified the mapping of Lumbers shown in Figure #3 in the field. Very white and pure calcitic, dolomitic, siliceous and diopsidic marbles strike west south of McLaughlin and Grahams Lake and through the north of the property. The maximum thickness of the carbonate pile is around 800 metres. Mapping of the Little-Bryan property and of the Malcolm Prospect has revealed the approximate thickness and stratigraphic relationships of the calcitic and dolomitic sequence. The carbonate sediments were deposited onto a passive continental margin. Evidence of two major deformations is present in these rocks.

Hermon Formation

A thick layer of clastic sediments of the Hermon Formation (mostly hornblende quartz gneisses) is presumably derived from erosion of the encroaching volcanic arc from the southeast of the basin. During active arc volcanism, a shallow basin formed in front of the arc and volcanogenic sediments periodically mixed and intercalated with carbonates eventually overcoming them. It is not a coincidence that the Malcolm graphite occurrence is found at this transition. Petroleum geologists look for oil plays at the contact of these transitions in basins. Coincidental with the graphitic schists and gneisses are sulphides, probably of an exhalative origin. These gneisses form multiple topographic ridges and scarps that suggest either folding or multiple slab thrusting. Cake like graphite ore found all along the mineralized zone may fault gouge associated with thrusting. This ore always occurs under hanging wall gneissic scarps. In fact, the bottom of these scarps is becoming an important exploration target.

Raglan Gabbro Belt

It has been observed that a narrow belt of gabbroic rocks starts at the Chenaux Gabbro and continues to the Trooper Lake Gabbro. The Raglan Hills Gabbro is in the centre of this belt. An attempt to date and link them is ongoing (Pehrsson, 1995). The Icy Hills gabbro sills belong to this belt and it is appropriate to group them together at this time. This narrow belt of gabbros is over 150 kilometres long. The Raglan Hills are the most studied and explored mafic rocks in the belt because of several Ni-Cu and PGE occurrences.

The gabbros on the property are intrusive sills. They intrude and have delaminated the sediments. At the property scale form knobs and scarps and resistant topographic ridges. The gabbro sills in the east of the property are cut by a fault and a break or magnetic low anomaly coincides with this structure. Similar topography, associated with gabbroic sills, is seen the entire length of a 4.5 kilometre long TDEM anomaly along the Icy Hills.

Icy Hills

The Icy Hills is a geographical name applied to the ridge and valley topography that runs east west across the Little-Bryan and Malcolm Prospects. Gabbroic sills dominate the ridges on the Little-Bryan and gneisses dominate the ridges on the Malcolm. Calcitic marbles dominates the valleys and two lakes. Coincident with the calcitic marbles are two long and narrow lakes, namely the Graham and McLaughlin Lakes. The writer concludes that the name Icy Hills reflects the very white and massive nature of dolomites and diopside found between the lakes and the ridges.

Structural Geology

- 1. The formations were subjected to two major deformations related to the Shawingian circa 1130 Ma and Ottawan Orogenies 1080 Ma.
- 2. Sediment bedding that is sometimes preserved, strikes east northeast.
- 3. Gabbros have no schistosity. Igneous textures are preserved and no biotite has been observed except for the next comment.
- 4. A major offset and break in magnetic surveys indicate that there is one northwest striking fault. Kinematic fault indicators such as hydrothermal quartz veins and biotite schists have been discovered, confirming a normal fault.
- 5. The sediments are relatively free of micas and have very weak or no schistosity.
- 6. Lumbers mapped sediment dip and vary from 40° to 70° to the south, but average 60° .
- 7. The writer analyzed the dip from DDH1 and DDH2 core logs (Little-Bryan Prospect). The median is 65° and 67° respectively to the south and variance was minimal.
- 8. DDH YD65-11 drilled in the west end of the Malcolm prospect reveals a sediment dip of 60° to the south.
- 9. There is no data for formation level plunge, therefore the dip is perceived dip.

Metamorphism

Facies indicators at the property level are:

- 1. Calc-silicates (diopside rich dolomites),
- 2. Locally re-crystallized dolomites into very large rhombs,
- 3. Locally re-crystallized calcitic marbles into very large calcite crystals,
- 4. Paucity of talc, tremolite, forsterite and wollastonite,
- 5. Paucity of micas in general.

The complete absence of magnesium rich olivine (forsterite) and wollastonite helps to constrain maximum PT conditions. The absence of talc and tremolite, and the huge volume of diopside indicate very dry or low partial pressure of water during regional metamorphism and reached lower to mid-amphibolite and possibly upper-amphibolite conditions.

The Gabbro Hills, only fifteen kilometres to the west, have been thoroughly studied, and they are at middle to upper amphibolite facies. Therefore, it is reasonable to conclude that the Icy Hills rocks have achieved the similar PT conditions. Magnus (2013) states in his doctoral thesis on the Raglan Hills gabbro: "A lower limit for peak metamorphic conditions of roughly 600°C and 3 kilobars, with a rough estimate for an upper limit of 700°C and 8 kilobars." The presence of so much diopside in the Icy Hills strongly supports this conclusion.

Exploration History

Synopsis of Past Exploration

- 1. In 1956, Lloyd Malcolm drilled 6 holes on the east half of Lot 1, Range B, of Lyndoch Township for copper. This drilling project is six kilometres south of the Malcolm prospect.
- Lloyd Malcolm continued to explore for copper and staked the west side of Icy Hills (now called the Malcolm Prospect) in 1961 and optioned the property to Prospectors Airways Company Limited.
- 3. Prospectors Airways conducted a VLF-EM survey in 1962 and delineated a 2 kilometre long conductor. This conductor is due west of the Little-Bryan prospect and is essentially a continuation of the Little-Bryan conductor.
- 4. In 1962, Noranda Mines followed up and drilled 13 more holes in Lot 1, Range B, and is now called the Simon Copper Prospect.
- 5. In 1965, W.H. Morrison of Toronto hired a contractor to drill a 338' deep hole (DDH YD65-11) in the south half of Lot 24, Concession 6, Lyndoch Township (Claim 1500872) and the collar is located on the west end of the Icy Hills conductor. The drill hole intersected two graphite/pyrrhotite zones between 100'-138' and 170'-226'. This is the first historical record of graphite in the Icy Hills, but was ignored because Lloyd Malcolm was looking for copper.
- 6. In the summer of 1974, James Bryan and Murray Little staked and explored the adjacent property to the east for graphite. The Little-Bryan prospect is now named after them. Ministry records indicate that they used explosives and a bulldozer to strip and trench. They also drilled two holes, DDH1 (1974) and DDH2 (1975) south of the east pit (Bryan, 1975). The drill logs indicate both holes intersected graphite +/- pyrrhotite. A report (Lab certificates cannot be found) indicates that the best DDH 2 assay was 8.57% and averaged 3.77% over an interval of 4 metres.
- 7. In 1988, Allen Dubblestein of Maple Leaf staked and prospected the Little Bryan property.
- 8. In 1989, Dubblestein optioned the Little Bryan property to Harrington Sound Exploration Inc. Harrington (1989a) conducted a magnetic and VLF-EM survey over the property in the early spring of 1989. EM mapping show several parallel sets of conductors. Based on the interpretation, seven trenches were stripped in an attempt to intersect mineralized zones. Trenches T1, T2, T3 and T7 were stripped over weak conductors and average channel samples assayed poorly for Cg. Trenches T4 to T6 were over a strong conductors and average channel samples assayed 4.5% Cg over ten metres.
- 9. In 2011, Standard Graphite optioned both properties and contracted Prospectair Surveys to fly a magnetic and high-resolution airborne TDEM survey in 2012 over the area. The geophysical data was submitted for assessment and is in the public domain. See Figure #5 and # 6 for map details.
- 10. MPH Consulting conducted a recon level lithogeochemical survey in 2012 for Standard Graphite. New and important samples from the Malcolm Prospect were assayed.
- 11. In 2013, some of the Little-Bryan properties started to come open for staking and Allen Dubblestein began re-staking them.
- 12. Allen Dubblestein completed a Phase I OEC exploration program in 2014 on the Little-Bryan Prospect and a new westerly extension of the deposit assayed 3.25% Cg over five metres. This mineralization trend continues west into the Malcolm Prospect.
- 13. The property west of the Little-Bryan Prospect, called the Malcolm Prospect, came open for staking during the summer of 2014 and prospector Marc Forget staked them.
- 14. Combined, the total strike length of the graphite conductor is approximately 5 km.

Analysis of Past Exploration

Drill Core Log from DDH YD65-11

A review of the core log aided in vectoring towards a surface target and identifying graphite mineralization that had been overlooked. In 1965, W.H. Morrison drilled a 338-foot hole in the south half of Lot 24, Concession VI of Lyndoch Township, probably to test a surface showing of rusty gneiss discovered by Lloyd Malcolm and to test Conductor A2 found by Prospectors Airways Co. Limited in their 1961 VLF-EM survey.

The drill core and assays cannot be located. The drill core log (MNDM Assessment File 31F03NW9494) is included with a core profile in Appendix C and D. Two zones of rusty gneisses was intersected, both of which contain an unknown quantity of graphite. Assuming no pinch-out and using an orthogonal projection to the surface, Zone A measures 35 feet in width and Zone B measures 50 feet in width. A map of the DDH collar location relative to the old corner post #1 has been utilized to establish an approximate UTM location for the collar.

TDEM & VLF-EM Surveys

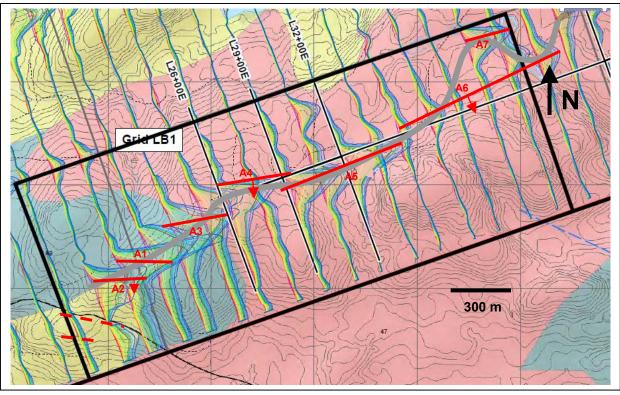
Prospectors Airways (MNDM Assessment File 31F06SW9428) completed a ground VLF-EM survey in 1961 and Prospectair Geosurveys flew a high definition airborne TDEM in 2012 for Standard Graphite. A plot of TDEM profiles across the Malcolm Prospect is shown in Figure #4 along with a plot of the VLF-EM anomalies from the 1961 survey. Notice the very tight spatial coupling of the two geophysical methods.

The amplitude of the TDEM signal is anomalous across the entire property except for a gap coincident with the very strong VLF-EM anomaly A6. This zone is discussed in greater detail in the next section on magnetometry. The intersection of rusty graphitic gneiss in DDH YD65-11 is consistent with the strike of the TDEM conductor in the west end of the property and with the surface projection of conductive gneisses.

Magnetometry

Standard Graphite also flew an airborne magnetometer survey with the TDEM. A plot of the total magnetic field (see Figure #5) reveals a strong linear magnetic anomaly, which coincides exactly with the strike of EM conductors. From this data we can conclude that graphite and pyrrhotite are common associates throughout the entire mineralized zone. The association of pyrrhotite with graphite is undesirable because it increases the cost of beneficiation. Fortunately, pyrrhotites in these rocks have a high magnetic susceptibility and a high specific gravity. The denseness and magnetic properties of pyrrhotite lends itself to magnetic and gravity separation techniques.

There is a distinct magnetic low (anomaly) in the magnetic field at the claim boundary between the Little-Bryan and Malcolm Prospects. This break coincides with a topographic lineament and is interpreted as a fault or shear zone that postdates a major folding event. It is also coincident with axial offsets of TDEM anomalies L and M (see figure #6 for locations of TDEM anomalies). It is equally possible that pyrrhotite has been altered to non-magnetic pyrite or that pyrrhotite has been leached from the bedrock during hydrothermal activity associated with the structure. Since there are three conductor anomalies, namely L, M and N that lie within this zone, graphite probably remains in the bedrock, but may also indicate pyrite. Leaching of sulphides would be welcomed because they are deleterious to beneficiation. The rocks in this zone deserve special attention with respect to mineral species and relative quantity of sulphides. The report for the Standard Graphite geophysical work is not available on line yet, but is available from the OGS Resident Geologist in Tweed.



 Prospectors Airways VLF-EM (1961)
 Standard Graphite TDEM (2012)

 Figure #4: TDEM profiles and VLF-EM conductors

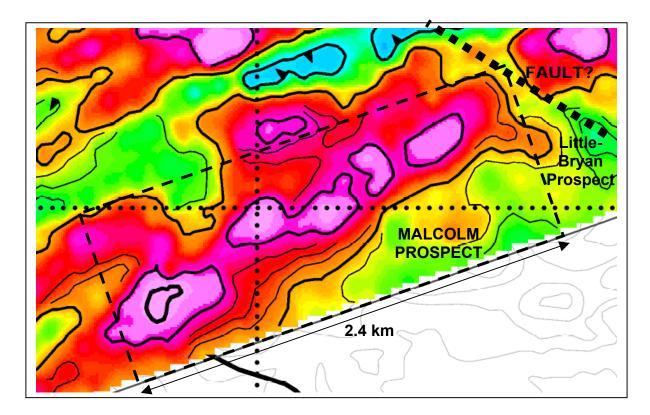


Figure #5: Total Magnetic Field of the Malcolm Prospect

Lithogeochemical Survey by MPH Consulting in 2012

In April of 2012, MPH Consulting (2012) did a reconnaissance level lithogeochemical survey (grab samples of bedrock) of the Malcolm Prospect for Standard Graphite. MPH personnel extracted and assayed eight samples from the Malcolm Prospect for total graphite. Results are shown in the table below and laboratory certificates are in Appendix E.

Sample #	Easting	Northing	Description	Sample Type	%Cg
542676	315424	5013375	gossan with graphite	Subcrop	0.51
542677	315425	5013377	gossan with graphite	Subcrop	0.77
542678	315048	5013987	silicified Amph, pyrr, cpy tr, and graphite	Float	0.76
542672	316933	5014432	rusty calcareous amph w/ pyrr and trace cpy	Outcrop	0.43
<mark>542673</mark>	<mark>316660</mark>	<mark>5014185</mark>	rusty schist with graphite	Outcrop	<mark>1.38</mark>
<mark>542674</mark>	<mark>316671</mark>	<mark>5014170</mark>	rusty schist with graphite	Outcrop	<mark>4.90</mark>
<mark>542675</mark>	<mark>316682</mark>	<mark>5014168</mark>	Sandy marble schist	Outcrop	<mark>9.81</mark>
328013	317484	5014699	ang FL f, rusty graphitic schist	Subcrop	< 0.05

There are two significant results. First and foremost, samples 542673, 542674 and 542675 are from bedrock that coincides with the centre line of the TDEM conductor. They assayed 1.38%, 4.9% and 9.8% total graphite respectively. Secondly, all other samples came from bedrock, and one float of unknown origin, distal to the centreline of the TDEM conductor. Clearly, rocks associated with the TDEM conductive zone are mineralized with economic head grades of graphite. Locations of the samples are shown on Figure #6 below. In addition, a control line for the proposed survey is shown.

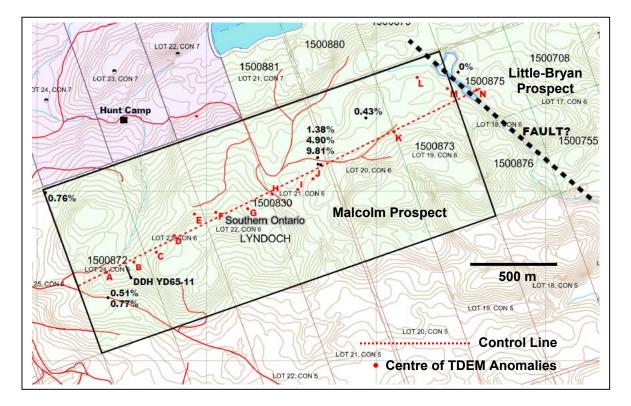


Figure #6: Location of MPH Consulting samples, DDH YD65-11 and TDEM anomalies.

Economic Geology and Past Producers

Graphite Deposits

Flake graphite has many applications in metallurgy as a refractory, an alloy in steel manufacture, in batteries as an electrode and brushes in electric motors, and also in high tech lightweight metal composites and lubricants. The largest consumer of flake graphite is the foundry industry where it is used in refractory crucible and liner applications. For more information on the properties and applications of graphite please refer to Appendix B.

Graphite is a crystalline form of pure carbon. The carbon comes from the decay of living matter. Since the rocks of the Central Metasedimentary Belt are over one billion years old, and the only life forms back then were primitive green algae, cyanobacteria and other single celled organisms. Graphite is the fossilized remains of these life forms. Graphite is found in sediments that have been subjected to high metamorphism, where as oil is found in the same rocks subjected to lower diagenetic temperatures. Some scientists believe that graphite deposits are fossil oil deposits.

Graphite is relatively common in the Central Metasedimentary Belt (CMB) and the Central Gneiss Belt (CGB) because of the profusion of sediments and high metamorphic grades. The Grenville Province is the most significant source of graphite mineralization in Quebec, Ontario, New York and Texas where the Grenville Province is exposed in highlands.

Graphite typically occurs in four types of deposits:

- 1. Clastic paragneiss-hosted disseminated deposits.
- 2. Carbonate-hosted disseminated and massive deposits.
- 3. Vein-type deposits.
- 4. Graphite disseminated in pegmatite and intrusive rocks.

The first type of deposit is the most economically significant throughout the Grenville Province and is the type of deposit at the Malcolm Prospect.

Black Donald Graphite Mine

The Kirkham deposit north of Kingston, Ontario, is a large sediment hosted graphite deposit and past producer. The past-producing Black Donald Graphite Mine is an example of carbonate hosted graphite and was the largest graphite mine in Ontario. The mine opened in 1896, and produced a total of 85,164 short tons of graphite from about 130,000 tons of ore. Average grade was 65% flake graphite. Production ceased in 1954. The Black Donald deposit lies in the Dungannon Formation, the same sequence of carbonates stratigraphically below the Malcolm rusty graphitic gneisses.

The Central Gneiss Belt also contains a large proportion of clastic metasediments and, for this reason; clastic paragneiss-hosted disseminated graphite deposits are prevalent. These deposits tend to be large and relatively lower grades than carbonate-hosted deposits. The Cal Graphite deposit south of North Bay, Ontario, is an example of this type of deposit. Cal Graphite is now called the Kearny deposit of Ontario Graphite. Their latest resource figure is 51.5 million tonnes @ 2.14% Cg. (http://www.ontariographite.com/i/pdf/ppt/FactSheet.pdf).

The Malcolm Prospect deposit is a paragneiss hosted graphite deposit. Close examination of the rock that the graphite is in reveals certain important physical and mineralogical features. This rock is primarily made of two minerals: large quartz grains (an arenite) plus minor hornblende, mica and pyrrhotite. The rock is very grainy and the quartz grains are not well cemented together. In some places, the rock weathers to a sand and is very rusty in appearance. Graphite flakes are oriented in every direction within the rock matrix and some are up to two millimetres in size. Large clots of pyrrhotite have also been observed in the rock. The deposit is essentially a western extension of the Little-Bryan Prospect.

Project Information

Purpose

The purpose of the project is to explore the Malcolm Prospect for graphite mineralization in rusty clastic metasediments of the Central Metasedimentary Belt by locating high quality stripping and trenching targets along strike of a 2.4 km conductive zone of rusty graphitic gneisses, using geophysical equipment called a Beep-Mat, and sample and analyze mineralized bedrock found by digging test pits in glacial till down to bedrock³

Justification and Rational for Graphite

Even though the total worldwide industrial consumption of flake graphite is quite small, flake graphite is often considered a strategically important industrial mineral by the United States Department of Defence and other American agencies such as the CIA because:

- 1. It is a critical additive in refractory crucibles and other metallurgical applications,
- 2. All flake graphite is imported by the USA,
- 3. There is no current production of flake graphite in the continental USA,
- 4. The American graphite reserve size and flake quality is not well understood,
- 5. Imports of flake graphite by the USA has doubled since 2009,
- 6. Canadian flake graphite represented 17% of all US imports from 2009 to 2013,
- 7. Canada is the most reliable and trusted political and trading partner of the USA.

In consideration of the above, there is a tremendous opportunity for Canadian graphite exports to increase by as much as 500%. Medium to large flake is the most desirable form of flake graphite. According to the USGS (see Appendix A), prices for quality flake are approaching that of Sri Lankan lump graphite and exceed the cost of production in Canada by twice. Therefore, there exists a good market for quality natural flake graphite in North America and this trend is expected to continue for many decades. The single largest consumer is the USA and since they are close to the Malcolm Prospect, there is a very good transportation cost advantage as well.

Sampling & Analytical Procedures

Brick sized samples were cut from clean bedrock using a Stihl 410 rock saw, cleaned, fizz tested for carbonates (10% HCI), tamped dry and placed in a tagged polybag. The tag number, a brief description and the UTM were noted. Each night, the samples were thoroughly cleaned and dried

³ If no mineralized bedrock was uncovered, the pit was immediately re-buried.

(in an oven) back at the cabin. The samples were hand delivered and tested for total graphite at Actlabs in Ancaster using the LECO graphite furnace Infrared method.

Project Plan

The proposed project shall consist of ten days of fieldwork, one day of off-site sample prep, one day to deliver samples to the lab in Ancaster, Ontario and three days of report writing. Ten days of fieldwork will be broken down into two separate weeks:

- 1. One week of control line running/cutting, and locating anomalies using a Beep Mat and
- 2. One week of mechanized pit digging to bedrock, and sampling using a rock saw.

Week 1:

- 1. A 400 m control line will be run daily in the AM, and will include line cutting and flagging,
- Followed by a Beep Mat Survey that will consist of a series of +/- 50 metres traverses spaced 50 metres apart accompanied by random patterns where deemed necessary. Conductor anomalies shall be flaged and locations recorded along the way.

Week 2:

- 1. An excavator will be used to dig test pits at locations identified in Week 1, starting at the Hyland Creek road and moving east along the control line by 500 metres daily.
- 2. Once bedrock is exposed, a rock saw shall be used to extract brick sized samples.
- 3. A bedrock contact reading (Beep Mat) shall be recorded as well as the surface reading.
- 4. The sample location shall be fenced off, and marked and tagged for future reference.

At the end of the project, a total of 2.4 km of control line will have been run and surveyed. This is the exact distance from the east end of the property to the west end. The control line is a "best-fit" straight line through the centre of TDEM anomalies as shown in Figure #6. It spans the entire width of the property (~2.4 km), coincides with the centre of TDEM conductors and magnetic anomalies and strikes 62° from true north. In theory, we expect to find ten good candidates for stripping and channel sampling, which is the purpose of the project.

Statement of Qualifications

Marc Forget is a qualified MAAP supervisor for this project. He has successfully managed and completed seven OEC projects to date. Marc, now retired, received his post secondary education in pure chemistry and electronic engineering and has over forty years of experience in the fields of science and technology, including systems engineering and project and senior management in both the private and public sectors. Although self taught, Marc has combined his formal knowledge of chemistry and physics to earth sciences and has applied this to mineral exploration.

Acknowledgements

Marc Forget thanks Peter LeBaron, District Geologist of the Ontario Geological Survey, for his invaluable assistance in the evaluation of this property and project. Marc also thanks the Ontario Exploration Corporation for their financial assistance for this project (OEC-2015-05), for without capital investment, mineral exploration would not be possible.

Reference Letter from District Geologist

Reference Letter for Marc Forget - Prospector, Marmora, Ontario RE: OEC Phase 1 Exploration Proposal, 2015: the Malcolm Prospect, Lyndoch Township

April 8, 2015

I have known Marc Forget since October, 2006, when I accompanied him on a property examination of his base metal prospect in Tudor Township in the course of my duties as District Geologist at the Ministry of Northern Development and Mines in Tweed. Since that time, I have had many interactions with Marc, involving both field excursions and geological discussions, and consider him to be a dedicated and enthusiastic prospector.

Having seen examples of Marc's work in the field, including claim staking, line cutting, results of his geophysical and geochemical surveys, trenching, and channel sampling, I can attest that his work is methodical, thorough, and precise. His research and report writing skills are excellent and his background in science is evident in his ability to assimilate and understand geological reports and academic papers. His exploration projects are well-considered with respect to mineral potential and exploration methodology, based upon research of historical exploration work, local geology, and current theories of ore deposit models and he understands that thorough field work remains the foundation of a successful exploration project.

The proposed program of prospecting, beep mat survey and trenching/ bedrock sampling in the vicinity of a known airborne TDEM anomaly which has been proven to host significant graphite mineralization along strike (the Little-Bryan prospect), is a valid first phase to undertake on the property. Property reports on the adjacent Little-Bryan prospect have been included in the Southern Ontario Regional Resident Geologist's Report of Activities in the past 2 years. In addition to potential for graphite mineralization, the sequence of dolomitic and diopsidic marble, quartzite, and graphitic/sulphidic siliceous metasediments is considered to have potential for industrial minerals, dimension stone and possible SEDEX zinc mineralization.

Peter S. LeBaron, P.Eng District Geologist, Southeastern Ontario Ministry of Northern Development and Mines BS 43, Tweed, ON K0K 3J0 613-478-2195 peter.lebaron@ontario.ca

Results From this Survey

Beep-Mat Survey

The purpose of the Beep-Mat Survey was to find shallowly buried graphite mineralization. This survey took six days beginning May 31, 2015 and ending June 5, 2015. Prior to the survey, a series of UTM coordinates was established by analyzing TDEM profiles from the Standard Graphite Airborne Survey. Geo-reference points were extracted from the peaks of the profiles along the flight path of the antenna. The estimated distance of the 60° up dip to the surface from the UTM coordinate was determined by assuming an average depth of 120 metres⁴. This estimate is a "best guess" based on experience and the type of lithology and was used as a guideline. The actual control line at the surface used coordinates from this calculated horizontal offset. The total strike length of the control line is 2.4 km and is essentially the entire width of the property.

A 400-metre control line was run first thing each morning. Afterwards, 100 metre traverses at 50metre spacing were walked to create a grid along the control line. Results of this survey are shown on Maps 1, 2 and 3. To test the hypothesis that the TDEM anomalies were about 120 metres deep, intersections over known shallow anomalies where located and an adjustment to the control line was necessary to place the survey over top of known conductors. The adjusted depth of TDEM anomalies (assuming a 60° dip) is about 200 metres deep. Accordingly traverses were increased to 150 metres as shown on the maps. The survey resulted in the discovery of several Beep-Mat anomalies in the West and Central Zones as shown on the map. The anomalies where flagged in preparation for test pitting.

The East Zone deserves special consideration and discussion. Analysis of all of the TDEM anomalies associated with the West and Central Zone fall along a straight line and a straight control line was appropriate to determine and walk the survey grid.

TDEM anomalies in the East Zone are randomly scattered around a swamp. The swamp itself is a topographic lineament that strikes almost perpendicular to the dominant east-west striking trend of the TDEM anomalies. A map of the magnetic field (see Figure #5) shows a magnetic low along the swamp. It was hypothesized that a fault coincides with the swamp and may have altered the magnetic minerals responsible for the anomaly. Since a straight control line was not feasible for this area, a different approach was used: circling out in a spiral pattern from a central point. Since the geophysical data from the Beep-Mat was not being used for contouring purposes as in a magnetometry survey, this method works very well.

Using a geo-referenced centre of the down dip TDEM anomaly, a continuous spiral with spacing of about twenty metres is walked to a radius of 100 metres. This pattern is shown on Map 3 (East Zone) and is only representative of the actual path walked. No Beep-Mat anomalies where found using this technique. Biotite schists and hydrothermal quartz veins were discovered along the margins of the swamp. The schistosity of the schists is approximately at right angles to the main trend of the TDEM and magnetic anomalies. These kinematic indicators confirm the presence of a shear zone and perhaps a fault. It is posited that a late hydrothermal system destroyed the magnetic minerals responsible for the magnetic anomaly that strikes through the property boundary of the Malcolm and Little-Bryan prospects.

⁴ In a personal communication with Eric Desaulniers of ED Geophysique, he estimated that the average depth of TDEM anomaly was about 120 metres deep. During the survey, this estimate would be revised to 200 metres. ED Geophysique wrote the geophysical report for Standard Graphite.

Test Pitting and Lithogeochemical Survey

This part of the project was executed from June 14 to June 19, 2015. Test pitting and short trenches were put down using a CAT Model 305 excavator equipped with a fixed plough over known Beep-Mat or TDEM anomalies. Samples were extracted using a Stihl Model 410 rock saw fitted with a diamond grade blade (model SB-80). A portable pressure bottle was used to supply water to the diamond blade. Diesel, water and equipment were hauled in a trailer behind an ATV. Rock sample descriptions are found in Table 1 towards the end of this report and their locations on three separate "zone" maps. Beep-Mat readings and depth of drift for each sample is listed in Table 1. At the end of this report are photographs and microphotographs of each sample that enhance the descriptions of rock samples.

West Zone

Refer to Table 1 and Map 1 at the end of the report for locations of test pits and samples. This zone was of special interest because in 1965 a hole was drilled and graphite was noted but ignored because they were looking for copper. On several occasions prior to this project, the writer was unable to locate the collar for DDH YD65-11 (see Appendix C & D for details). In retrospect, the difficulty was due to a 70-metre offset error in the original claim staking survey done back in 1962. The referenced corner post (CP1) was located in the wrong place and the collar location was referenced to CP1. During exploration in this project, we located the collar and its UTM is noted on Map 1.

Using the collar azimuth and surface projections from Appendix C, we surveyed the area and trenching intersected the upper mineralized zone of two mineralized zones identified from the core log. The trench intersection corresponded with Beep-Mat anomalies found at the surface. Samples MP-05 (hanging wall), MP-06 mineralized zone and MP-07 (foot wall) were extracted from this trench. Sample MP-06 assayed at 2.84% Cg. There are other known Beep-Mat anomalies in this general area, but time did not allow for a more extensive trenching and test-pitting program.

An attempt to intersect a mineralized zone between the West and Central zone failed to reach bedrock. Test pits TP7 and TP8 exposed deep drift identical to TP3 to TP5. TP6 was an experimental pit to test a suggestion that notches in TDEM anomalies correspond to surface mineralization, but failed to intersect mineralized rock. Gneiss very similar to MP-10 but far less rusty looking was intersected. Drift in this area is around one metre deep and gneissic bedrock was easily reached. The Beep-Mat failed to produce any anomalous signals in the area of TP6.

Central Zone

Refer to Table 1 and Map 2 at the end of the report for locations of samples and test pits. Sample MP-03 (3.73% Cg) is from a well-known rusty outcrop located along the side of the forest road just east of the Hunt Camp. The mineralized rock is a very hard quartzite with relic bedding, and contains visibly disseminated graphite flakes and pyrrhotite. The surface weathers to a characteristic gossan. This rock has also been observed in the Little-Bryan Prospect. The unit strikes 240° (west). The width and strike length are unknown.

The next mineralized area of the Central Zone located during the Beep-Mat survey is on the north shore of a 300 metre long swamp. It is approximately 40 metres south of the strike of the rusty outcrop ML-03 and to the east. This area was discovered (blind) under shallow drift with the Beep-Mat. A test pit was put down over the anomaly and a considerable amount of the cake like graphite

ore common to TW and T4 in the Little-Bryan Prospect was found. Sample MP-01 is from this test pit and assayed 6.51% Cg. Time did not allow to trench this showing, but is strongly recommended. We did have time to put down a test pit, three metres north of the showing to test for width of the mineralized zone.

This test pit uncovered Sample MP-02, which assayed 8.51% Cg. It was decided to analyze this ore in triplicate to test the variance of the analytical procedure. The variance was extremely small and confirms the reproducibility of Actlabs analytical procedures. This sample is very different from the quartz rich ore typically found in the both the Malcolm and Little-Bryan Prospects. It contained a considerable amount of calcite marble and was analyzed for solid residue by complete digestion in concentrated HCI. The results of this analysis indicate that the ore was 65% calcite, 26.5% insoluble (mainly quartz grains, some diopside and minor phlogopite) and assayed 8.51% Cg.

To trace the mineralization along strike we test pitted along the north shore of the swamp (TP1 & TP2). We discovered a very rapid drop (perhaps a Paleo-canyon) along the swamp because the excavator could not reach bedrock and considerable wet clay and sand mix was intersected at depth. The wet material posed a hazard due to rapid sidewall cavitations and we had to immediately re-fill the test pits along the north shore without ever hitting bedrock. We were very interested in finding the bedrock where MPH sample 542675 came from (9.81% Cg). Were unable to locate this rock. We consider this rock so important that we will continue to search for it at another date.

We moved the excavator to the southeast shore of the swamp and trenched a known Beep-Mat anomaly. This short trench uncovered Sample MP-04 that assayed 2.49% Cg. The mineralized rock is a quartz arenite that weathers into a kind of sandy laterite. To try and intersect mineralization on the west side of the Hunt Camp, we put down a series of test pits, namely TP3, TP4 & TP5 as shown on the Map 2. The soil here is reasonably dry glacial sand and rare scattered large boulders. There was no clay or silt, pebbles, cobbles or small boulders. We could not reach bedrock and reburied the pits.

East Zone

A fault and shear zone traverses the property along the eastern boundary of the property with the Little-Bryan Prospect. The northeast north trending schistosity of biotite schist along a scarp and proximal hydrothermal quartz veins supports this interpretation. Along this lineament is a swamp and it intersects another swamp that runs along the north boundary of the property. Three TDEM anomalies are randomly associated with this lineament. During the Beep-Mat survey and some follow-up to MPH sampling, a train of graphitic gneiss float was observed (see Map 3). The Beep-Mat survey itself turned up nothing and a pit was put down overtop of one of the TDEM anomalies to test for graphite. This drift was so deep that no bedrock was found and the pit was re-buried.

We decided to prospect the periphery of the entire swamp complex because graphite mineralization is associated with swamps in these prospects. We found ML-08 and ML-09 during this survey. Though we did not know at the time, they are located just metres inside the Little-Bryan Prospect, but since they dip under the Malcolm Prospect, they are legitimate sampling targets and Allen Dubblestein of the Little-Bryan Prospect is working hand in hand to promote both properties. The graphite showing was in outcrop and we moved the excavator over and test pitted the outcrop (ML-08) and base (ML-09). This completed the project as there was no more time left in the budget.

Discussion & Conclusions

Economic grades of graphite in bedrock have been identified in the Central and East Zones (6% to 10% Cg). The West Zone did not show as well, but remains essentially unexplored. We do not know the full extent of these showings at this time because time constraints in this project did not permit for any meaningful trenching accompanied with multi-metre channel sampling and assaying.

Prior to this survey, two historical geophysical surveys had established that a narrow 2.4 km long EM conductor crossed the Malcolm Prospect, striking true north 61°. MPH analyzed several grab samples from the Central Zone in 2012 as a reconnaissance follow-up to the airborne TDEM survey. Based on the strength of the assays (MPH Sample 542675 = 9.81% Cg) and high quality TDEM data, we were able to confirm and identify graphite mineralization in bedrock from three zones: two of which yielded economic grades. We discovered that depth of drift across the mineralized zones varies significantly from outcrop to over 3 metres deep (safe limit of CAT 305 excavator). Time did not allow for a thorough exploration of the entire property. This means that important gaps exist along strike and further exploration is strongly recommended.

Exploration on the adjoining Little-Bryan Prospect has proven an ice flow direction (glaciation) of 190° (true north). The occurrence of mineralized (graphitic) float correlates strongly with up ice bedrock mineralization and should be fully exploited in the search for graphite. This will compliment the successful combination of Beep-Mat and mechanized test pitting. The Central and East Zones are associated with swamps. The crumbly and soft nature of the best-mineralized rocks and co-incidence of swamps strongly suggests that the best material may lay under these swamps.

Recommendations

Limited, but important assay results (6% to 10% Cg) from this project suggest that economic grades of graphite may persist across a significant area and strike length of 2.4 km. To prove this, it is proposed that an extensive trenching and multi-metre channel sampling project should be designed and implemented for the West, Central and East Zones. Additional exploration using the proven combination of Beep-Mat and mechanized test pitting (an excavator⁵ is preferred) and basic mineralized float train prospecting is recommended to fill in gaps between the three zones.

The TDEM, VLF and Beep-Mat geophysical methods have help to constrain and identify specific mineralized rock. One rock in particular, ML-02, is not particularly conductive and is blind to the Beep-Mat, yet assayed 8.5% Cg. This important new graphite ore speaks volumes about the over dependence on geophysical techniques in general. Stratigraphy, basic metamorphic petrology and some structural geology should be emphasized in future exploration to better understand what is going on in these rocks and predict where mineralization may occur.

Over the past fifty years, exploration has focused on the south 5km long TDEM lineament. (see Standard Graphite MNDM AFRO 2.54604 2012b) There is a parallel anomalous conductive lineament about one kilometre north of the south one. It is recommended that systematic exploration of this highly prospective rock be commenced at once.⁶

⁵ A CAT 305 excavator equipped with fixed plough is ideally suited for this work and terrain. Backhoes are not recommended because of the difficult terrain and additional set-up time for stabilization.

⁶ Marc Forget has learned from personal research done at the Land Registry Office in Pembroke that Lots 22, 23 & 24 of Concession 7, Lyndoch Township are not SRO, but Crown Lands. Marc has formally applied to map stake these lots. Recording of the claims is pending due diligence by the Ministry.

Daily Work Log

Date	Activity		Km	Hours
Week 1	Beep-Map Survey			
May 31, 2015	Mobilized from Marmora to Gun Mountain Chateau		150	2
	Ran first 400 metre section of control line		80	2
	Surveyed (Beep-Mat) West Zone, Flagged anomalies			5
	Looked for DDH collar (no go), did some mapping			1
June 1, 2015	Ran 2nd 400 metre section of control line		80	2
	Surveyed (Beep-Mat) West Gap, Flagged anomalies			5
	Surveyed overgraown skidder trail for excavator access			1
June 2, 2015	Ran 3rd 400 metre section of control line		80	2
	Surveyed (Beep-Mat) Central Zone, Flagged anomalies			6
June 3, 2015	Ran 4th 400 metre section of control line		80	2
	Surveyed (Beep-Mat) East Gap Zone, Flagged anomalies			7
June 4, 2015	Ran 5th 400 metre section of control line		80	2
	Surveyed (Beep-Mat) East Zone, Flagged anomalies			6
June 5, 2015	Surveyed West Zone (Spiral surveys & prospecting)		80	7
June 6, 2015	Cheked out, de-mobilized & returned to Marmora		150	2
		Totals	780	52

Week 2 Excavation, Sampling & Mapping

	Totals	790	50
	Return to site to pick up tools, samples & de-mobilized	150	2
	Returned ATV to Allen	45	2
	Walked excavator back to parking & did more mapping on the way		2
	Moved excavator & trenched and sampled MP-08&09		3
June 19, 2015	Cheked out of Gun Mountain Chateau in AM	80	
East Zone	Test pit TP9. Prospected swamp and found graphite outcropping		6
June 18, 2015	Walked excavator to East Zone, mapped from Central to East Zone	80	3
	Mapped from West to Central Zone		3
	District Geologist meeting, showed Central Zone over lunch time		1
June 17, 2015	Trenched west anomaly, Samples MP05 to 07	80	4
West Zone	Located DDH collar & mapped out trench		5
June 16, 2015	Walked excavator towards West Zone, three test pits TP6-8	80	5
	Returned to cottage	40	
	Test pits TP3-5 west of Hunt Camp along old skidder trail		2
	Test pits TP1&2 north of swamp, trenched south shore MP-04		3
	Started excavating and sampling Central Zone MP-01 to 03		2
Central Zone	Floated & Walked excavator up to Central Zone		2
June 15, 2015	Met Rick (excavator operator in Palmer Rapids) continued to site	40	1
	Pick-up Allen's ATV & dropped off at Malcolm Prospect	45	2
June 14, 2015	Mobilized from Marmora to Gun Mountain Chateau	150	2

Project Costs

To help the Ministry and the OEC compare the costs in the table below with the proof of payment (invoice & receipts), the relevant invoices or receipts have been stamped with a unique number and the corresponding number is cross referenced in the table below.

Notable changes in actual cost compared with the original budget are:

- 1. The excavator was required for 50 hours instead of 40 hours,
- 2. Fewer samples were analyzed then anticipated,
- 3. There were no contingent expenses.

In the final analysis, actual cost of the project was less than budgeted for. Logistics and scheduling went extremely well, as well as the weather. The excavator contractor remains highly recommended.

Product Code	Description	Units	Cost	Subtotal	HST	lnv#
4F-C Graphitic	% Graphite (Infrared) Analysis	11	25.00	275.00	35.75	1
RX1-Graphite	Crush & Pulverize + collect dust	11	10.50	115.50	15.02	1
Shipping to ActLabs	Marc delivered 350 km @\$0.50/km	350	0.50	175.00	22.75	NA
Excavator	CAT 305 Excavator	50	80.00	4000.00	520.00	2
Trailer Rental	Marc's trailer for equipment, samples	2	250.00	500.00	65.00	NA
Rock Saw Rental	Marc's Rock Saw	2	250.00	500.00	65.00	NA
Prospecting Labour	Marc (Daily rate)	11	250.00	2750.00	357.50	NA
Report Writing & Maps	s Marc (Daily rate)	3	300.00	900.00	117.00	NA
Mileage (in km)	Marc (Mobilization & Demobilization)	600	0.50	300.00	39.00	NA
Mileage (in km)	Marc (Daily Commute from cabin)	880	0.50	440.00	57.20	NA
Meals	Marc	1	73.14	73.14	9.51	3
Motel	Marc (weeks)	2	400.00	800.00	0.00	4
Rock Saw Blade	Stihl SB-80 Diamond Blade	1	300.00	300.00	39.00	5
Fuel	For rock saw	1	18.41	18.41	2.39	6
Safety Supplies	Fencing for pits, safety tape, etc.	1	229.74	229.74	29.87	7
Prospecting Supplies	Markers, flagging tape & polybags	1	104.73	104.73	13.61	8

Subtotal 11,481.52 1,388.60

NA = Not Applicable

MNDM TOTAL = 12,870.12

PAID Invoice #1

Invoices

Quality Analysis ...



Innovative Technologies

This is your final copy. If you require an original to be mailed by post please advise, otherwise this email will be deemed sufficient.

Invoice No.:	A15-04821
Purchase Order:	OEC-2015-05
Invoice Date:	20-Jul-15
Date submitted:	02-Jul-15
Your Reference:	MALCOLM PROJECT
GST # :	R121979355

Frontenac Ventures 8 North Hastings Ave Marmora ON K0K 2M0 Canada

ATTN: Marc Forget

INVOICE

No. samples	Description	Unit Price	Total
9	RX1-Graphite	\$ 10.50	\$ 94.50
1	RX1	\$ 10.00	\$ 10.00
11	8-Graphite-C-Graphitic	\$ 25.00	\$ 275.00
1	1C-Exp	\$ 20.00	\$ 20.00
12	Disposal	\$ 0.25	\$ 3.00
		Subtotal:	: \$ 402.50
		HST-13%	\$ 52.33
		AMOUNT DUE: (CAD)	: \$ 454.83

Net 30 days. 1 1/2 % per month charged on overdue accounts.

The above amount has been charged by Visa.Thank you for your payment! Auth#082182,July 22,2015.

Please reference the invoice number when making a payment by Bank/Wire transfer. Intermediary Bank Fees are the responsibility of the client.

Thank you!

ACTIVATION LABORATORIES LTD.

41 Bittern Street, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or +1.888.228.5227 FAX +1.905.648.9613

E-MAIL ancaster@actlabs.com ACTLABS GROUP WEBSITE http://www.actlabs.com



PAID Invoice #2



320 Mallard Lake Rd. Bancroft, ON K0L 1C0

(613) 332-5023 GST/HST No. 123194060

Invoice To	
Marc Forget	
8 North Hastings Ave,	
PO Box 605	
Marmora, ON	
K0K 2M0	

Invoice

Date	Invoice #
6/22/2015	9964

Balance Due \$4,531.30



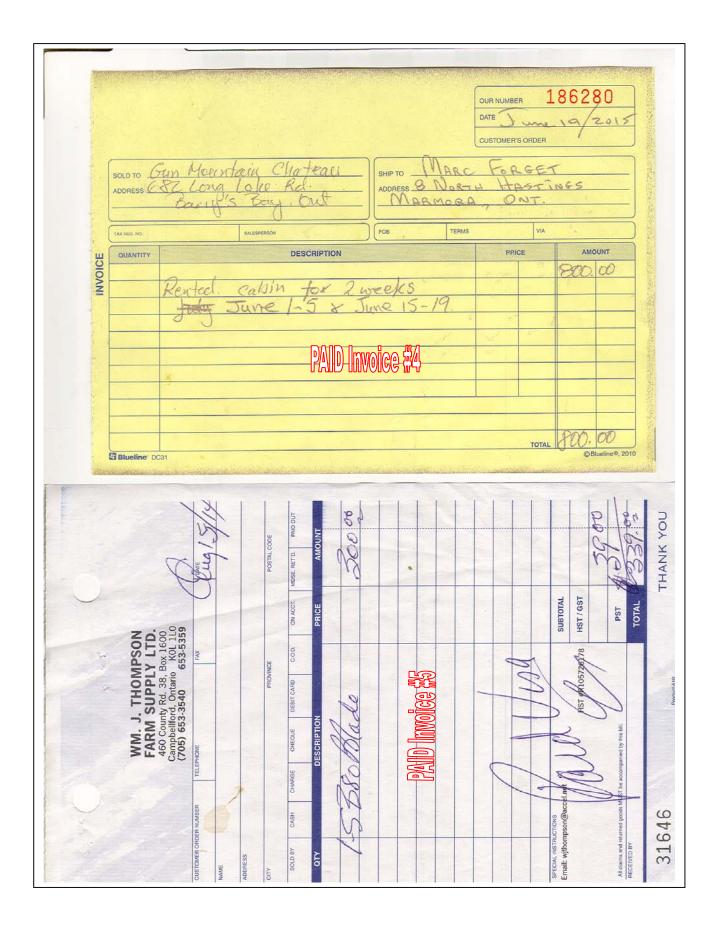
Description	Qty	Rate	Amount
une 15 - June 19, 2015 - Malcom Prospects			
P.O. OEC2015-05			
ïlt'n Load Kenworth /hr (for floating purposes)	2	85.00	170.0
05 CAT Excavator /hr (Operator - Ricky Aide) IST 13% Collected	48	80.00 13.00%	3,840.00 521.30
		Subtotal	\$4,010.0
		HST Total	\$521.3

PAID Invoices #3 Guest Check Guest Check 63631 636320 8 APPT - SOUP/SAL - ENTREE - VEG/POT - DESSERT - BEV APPT - SOUP/SAL - ENTREE - VEG/ROT - DESSERT - BEV Sche 1/2 6.99 99 6 +X 9 91 HST +A L HST Merci Merci PST PST Thank You 916 Thank You C Total Total NCC 23516 GUESTCHECK" www.nationalchecking.com NCCO23516 GUESTCHECK™ www.nationalchecking.com

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ITEM 1 ICL	8198 08:24TM

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HOME TOWN RESTAURANT	HOMETOWN RESTAURANT
06-16-2015 TUE #0	06-17-2015 WED #0
CLASSIC 2 6.99T TAX 0.91 CASH 7.90	CLASSIC 2 6.99T CLASSIC 2 6.99T TAX 1.82
ITEM 1 1CL 8582 08:09TM	CASH 15.80 ITEM 2 ICL 8612 08:17TM
Thank you Call gagin	Thank you Call again Your receipt
Thank you Call again Your receipt HOME TOWN RESTAURANT 06-18-2015 THU #0 06-18-2015 THU #0 LASSIC 2 6.99T LASSIC 2 6.99T AX 1.82 ASH 15.80	Thank you Call again Your receiptHOME TOWN RESTAURANT06-19-2015 FRI#006-19-2015 FRI#0CLASSIC 26.99T 2.05THOMEFRIES2.05TSM TEA COFF1.19T 1.33 CASH11.56





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Certificates of Analysis

Quality Analysis ...



Innovative Technologies

Date Submitted:02-Jul-15Invoice No.:A15-04821Invoice Date:17-Jul-15Your Reference:MALCOLM PROJECT

Frontenac Ventures 8 North Hastings Ave Marmora ON K0K 2M0Canada

ATTN: Marc Forget

CERTIFICATE OF ANALYSIS

12 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT A15-04821

Code 1C-Exp Fire Assay-ICP/MS Code 8-Graphite-C-Graphitic Infrared

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

We recommend reanalysis by fire assay Au, Pt, Pd Code 8 if values exceed upper limit.

CERTIFIED BY:

Emmanuel Eseme , Ph.D. Quality Control



ACTIVATION LABORATORIES LTD.

41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5 TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613 E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Page 1/3

A15-04821		
Report:		
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ories Ltd		Pag
Laborate		
Activation Laboratories Ltd.		
Ac		
	C-Graph % 0.05 1.48 0.48 0.48 0.48 0.48 1.44 8.16 8.55 8.55	
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	Pd FA-WS	
	Analyte Symbol Unit Symbol Lower Limit MP-02-1 MP-05 MP-06 MP-06 MP-06 MP-06 MP-02-2 MP-09 GF-01 MP-02-3	

Technical References

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1955: Geology of Dungannon and Mayo Townships, Ontario Dept. of Mines, Vol. 64, pt.8 and Map 1955-08

Magnus, S. J.

2013: Geology and geochemistry of the Raglan Hills metagabbro, Ph.D. Thesis, Carleton University, Ottawa, Ontario, Canada, page 74.

Morrison, W.H.

1965: Diamond Drill Hole Log for DDH YD65-11, AFRI 31F03NW9494, Ministry of Northern Development and Mines

Prospectors Airways

1962: Electromagnetic Survey covering the Malcolm Option, AFRI 31F06SW9428, Ministry of Northern Development and Mines

Standard Graphite MNDM AFRO 2.54604

- **2012a:** Report on Prospecting on the Little-Bryan and Black Donald Graphite Properties, Ontario, Canada, Report submitted by MPH Consulting Limited of Toronto, for Standard Graphite.
- **2012b:** Heliborne Magnetic and TDEM Survey, Black Donald, Little Bryan, B.Lyall Properties 2011 Report submitted by Eric Desaulniers of Prospectair Geosurveys in February of 2012

Volkert, Richard A., Drake, Avery, A.

1999: Geochemistry and stratigraphic relations of Middle Proterozoic rocks of the New Jersey Highlands, Geologic studies in New Jersey and eastern Pennsylvania, USGS Geological Survey professional paper 1565.

GRAPHITE (NATURAL)

(Data in thousand metric tons unless otherwise noted)

<u>Domestic Production and Use</u>: Although natural graphite was not produced in the United States in 2013, approximately 90 U.S. firms, primarily in the Northeastern and Great Lakes regions, used it for a wide variety of applications. The major uses of natural graphite in 2013 were, in decreasing order by tonnage, refractory applications, steelmaking, brake linings, foundry operations, batteries, and lubricants. These uses consumed 70% of the total natural graphite used during 2013.

Sallent Statistics-United States:	2009	2010	2011	2012	2013*
Production, mine	_	_	_	_	_
Imports for consumption	33	65	72	57	60
Exports	11	6	6	6	8
Consumption, apparent ⁴	22	60	66	50	51
Price, Imports (average dollars per ton at foreign ports):					
Flake	694	720	1,180	1,370	1,360
Lump and chip (Sri Lankan)	1,410	1,700	1,820	1,960	1,720
Amorphous	249	257	301	339	433
Net import reliance' as a percentage	100	100	100	100	100
of apparent consumption	100	100	100	100	100

<u>Recycling</u>: Refractory brick and linings, alumina-graphite refractories for continuous metal castings, magnesiagraphite refractory brick for basic oxygen and electric arc fumaces, and insulation brick led the way in recycling of graphite products. The market for recycled refractory graphite material is growing, with material being recycled into products such as brake linings and thermal insulation.

Recovering high-quality liake graphite from steelmaking kish is technically feasible, but not practiced at the present time. The abundance of graphite in the world market inhibits increased recycling efforts. Information on the quantity and value of recycled graphite is not available.

Import Sources (2009-12): China, 48%; Mexico, 25%; Canada, 17%; Brazil, 6%; and other, 4%.

Tariff: Item	Number	Normal Trade Relations 12-31-13
Crystalline flake (not including flake dust) Powder Other	2504.10.1000 2504.10.5000 2504.90.0000	Free. Free. Free. Free.

Depletion Allowance: 22% (Domestic lump and amorphous), 14% (Domestic flake), and 14% (Foreign).

Government Stockplie: None.

Prepared by Donald W. Olson [(703) 648-7721, dolson@usgs.gov]

GRAPHITE (NATURAL)

Events. Trends. and Issues: Worldwide demand for graphite steadily increased throughout 2012 and into 2013. This increase resulted from the improvement of global economic conditions and its impact on industries that use graphite. Principal import sources of natural graphite were, in descending order of tonnage, China, Mexico, Canada, Brazil, and Madagascar, which combined accounted for 97% of the tonnage and 90% of the value of total imports. Mexico and Vietnam provided all the amorphous graphite, and Sri Lanka provided all the lump and chippy dust variety. China, Canada, and Madagascar were, in descending order of tonnage, the major suppliers of crystalline flake and flake dust graphite.

During 2013, China produced the majority of the world's graphite. Graphite production increased in China, Madagascar, and Sri Lanka from that of 2012, while production decreased in Brazil from 2012 production levels.

Advances in thermal technology and acid-leaching techniques that enable the production of higher purity graphite powders are likely to lead to development of new applications for graphite in high-technology fields. Such innovative retining techniques have enabled the use of improved graphite in carbon-graphite composites, electronics, foils, friction materials, and special lubricant applications. Flexible graphite product lines, such as grapholi (a thin graphite cloth), are likely to be the fastest growing market. Large-scale fuel-cell applications are being developed that could consume as much graphite as all other uses combined.

World Mine Production and Reserves: The reserve data for Brazil were revised based on information reported by Associação Brasileira do Aluminio, 2012–2013; Instituto Brasileiro de Mineração, 2012–2013; and Summario Mineral 2011–2012.

	Mine pr	oduction	Reserves ²
United States	2012	2013*	
Brazi	110	105	58,000
Canada	25	25	30,000
China	800	810	55,000
India	160	160	11,000
Korea, North	30	30	
Madagascar	4	10	940
Mexico	8	8	3,100
Norway	2	2	Ö
Russia	14	14	ä
Srl Lanka	4	5	Ö
Turkey	5	5	e
Ukraine	6	6	0
Zimbabwe	6	6	0
Other countries	2	2	<u> </u>
World total (rounded)	1,170	1,190	130,000

<u>World Resources</u>: Domestic resources of graphite are relatively small, but the rest of the world's inferred resources exceed 800 million tons of recoverable graphite.

<u>Substitutes</u>: Manufactured graphite powder, scrap from discarded machined shapes, and calcined petroleum coke compete for use in iron and steel production. Finely ground coke with olivine is a potential competitor in foundry facing applications. Molybdenum disulfide competes as a dry lubricant but is more sensitive to oxidizing conditions.

*Estimated — Zero

¹Defined as imports – exports

²See Appendix C for resource/reserve definitions and information concerning data sources.

Included with "World total."

U.S. Geological Survey, Mineral Commodity Summaries, February 2014

Appendix B: Graphite Primer

Natural graphite is elemental carbon. Carbon is the sixth element on the periodic table and has an atomic weight almost exactly equal to twelve. Carbon has several stable isotopes. C_{12} tends to accumulate in biological systems (organic carbon). Inorganic carbon C_{13} is enriched in carbonates that tend to be somewhat depleted in C_{12} . Most natural flake graphite deposits in the Grenville are enriched in C_{12} and it is hypothesized that the Malcolm graphite is also a fossilized oil deposit because the graphite occurs in rock formations identical to those where oil is found today. The graphite deposits in the CMB are important event markers and add to our understanding of the evolution of the Hastings and Mont Laurier basins of the CMB.

Natural graphite occurs in several forms and man-made graphite is called synthetic graphite. Natural graphite occurs as amorphous, crystalline vein or lump and crystalline flake. Amorphous graphite implies no crystalline structure, but all graphite is crystalline. Amorphous carbon is actually coal or lamp black (soot) and amorphous graphite is an industry term that means very fine flake size or powder. Synthetic graphite is made into a fine powder or fibre form and is very similar to amorphous graphite.

Natural graphite pricing depends on the flake size and the purity of the product being sold. Coarse flaked, high purity graphite commands the highest prices. Sri Lanka has the best "super" large flake (called lump) high purity graphite deposits in the world. They are the gold standard by which all other natural graphite is compared. Improvements in technology and quality control at the manufacturing level have placed a very high demand on the highest purity graphite. As such, secondary treatment of mined graphite is becoming the norm.

An example of secondary treatment is the manufacturing of spherical graphite. Medium flake graphite is first leached of all impurities to 98%+ carbon. It is then rolled into very tiny microscopic spherules. Spherical graphite is used to make electrodes, and is especially desirable for lithium ion battery electrodes in electric cars. Naturally occurring graphite is sold according to their grain size and price ranges from the USGS in US\$ are in the table below.

United States (\$/ton by Year):	2009	2010	2011	2012	2013
Flake Lump and chip (Sri Lankan) Amorphous		720 1,700 257	,	1,960	,

Notice that flake prices have risen faster than Sri Lankan prices since 2009. This is because added value post processing of flake graphite is on the rise. For example, Northern Graphite has just recently announced that medium flake from its' Bissett Creek mine in the Central Gneiss Belt (a deposit very similar to the Malcolm Prospect) has produced a high quality spherical graphite product. It is very important to realize that because new technologies and processes are being developed, so too are prices changing rapidly and are very difficult to predict. However, the demand for spherical graphite may become high due to the push towards electric cars.

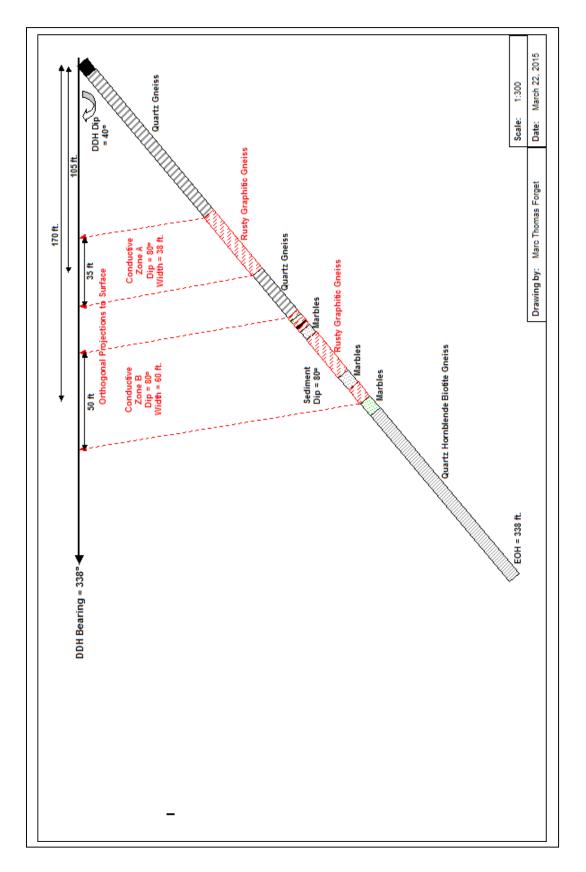
Synthetic graphite is a fine powder and can be made into a fibre. Synthetic graphite powder is made from amorphous carbon at high temperatures (2200° C). Synthetic graphite represents 90% of all graphite used by industry in the world today. It can be manufactured down the street from a customer, but mines are not so conveniently located. Industry (except for foundries) prefer this product because it is a pure homogeneous graphite and has extremely predictable properties. Whereas, natural flake graphite is riddled with impurities, has a great flake size distribution and many transportation challenges related to mine locations.

Synthetic graphite fibres are made by the pyrolization of threads spun from rayon or other synthetic fibres. These strong lightweight fibres are used in the aerospace and sporting goods industries. Synthetic powder and fibres are specialty products so they tend to be extremely expensive and cannot be priced on a bulk form basis. If a medium or large flake could be synthesized, it would instantly kill forever the natural flake mining industry, including Sri Lankan graphite.

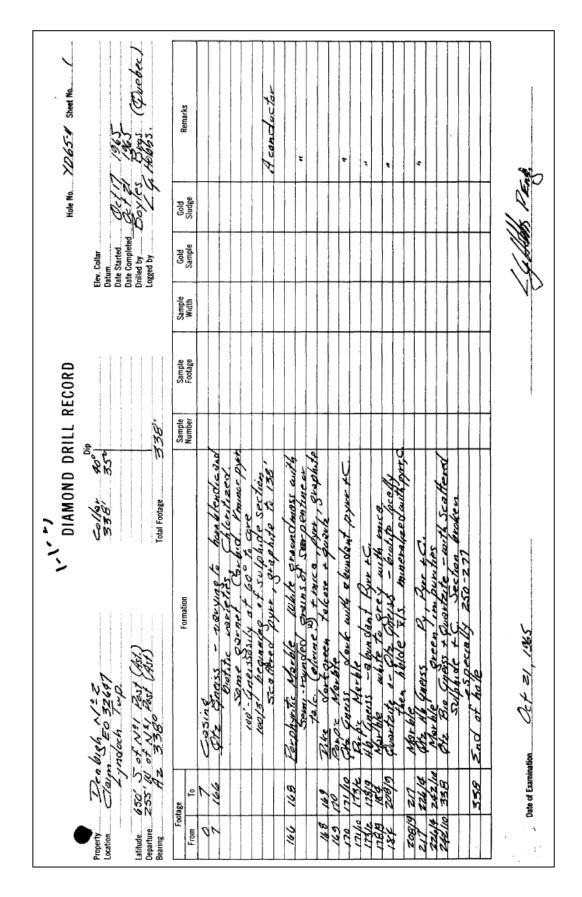
Graphite is used in many industries because of its' unique chemical and physical properties. Some of the properties that this mineral possess are: high thermal and electrical conductivity, high thermal shock resistance, non-weltability, electrical and thermal anisotropy (preferred direction, resistance to oxidation, acids and bases. The uses and breakdown of amount of graphite used in each case are given below:

Use	Size & Type	% Cg
REFRACTORIES	Flake Graphite	
Clay/Cg Crucibles Si-Carbide/Cg Crucibles Mag-Carbon Bricks Alumina-carbon	45% flake > 250 um 30% flake > 250 um min flake > 150 um flake > 420 um	90 80 90 85
POWDERS	Synthetic Graphite	
Brake Linings Battery Electrodes Brushes Metallurgy Lubricants Conductive Coatings Pencils Foundary Facings Recarb steel	often blended with synthetic mostly synthetic < 75 um synthetic prefered < 50 um < 5 um synthetic prefered 50-150 um Amorphous Amorphous Recylced graphite 50-75 um synthetic prefered < 5 um	98 99 99 98 50 90

Note that flake graphite is currently preferred in refractory applications. This can change overnight if a new crucible formula with all the qualities of graphite is invented and adopted by metal foundries. This industry is very conservative and traditional but has undergone a major shake-up and competitive pressures are forcing the metals industry to innovate and get the cost of production down. For example, the automotive industry continues to replace steel with aluminium and plastics in the manufacture of cars and trucks to get the weight down. The graphite industry is complex and natural graphite producers (such as Northern Graphite) must innovate to add value to their products.



Appendix C: DDH YD65-11 Profile



Appendix D: DDH YD65-11 Drill Core Log

Appendix E: MNDM Exploration Plan PL-15-10425

Ministry of Northern Development and Mines

Mineral Development and Lands Branch

Ministère du Développement du Nord et des Mines

Direction de l'exploitation des minéraux et de la gestion des terrains miniers

933 Ramsey Lake Road, B6 Sudbury ON P3E 6B5 Tel.: (705) 670-5815 Fax: (705) 670-5803 Toll Free: 1-888-415-9845, Ext 5815

April 7, 2015

933, chemin du lac Ramsey, étage B6 Sudbury ON P3E 6B5 Tél.: (705) 670-5815 Téléc.: (705) 670-5803 Sans frais : 1-888-415-9845, poste 5815



Marc Forget PO Box 605 8 North Hastings Avenue Marmora ON K0K 2M0

Dear Mr. Forget:

Re: Exploration Plan # PL-15-10425 Marc Forget – Malcom Prospect OEC Phase I Lyndoch Township, Renfrew County

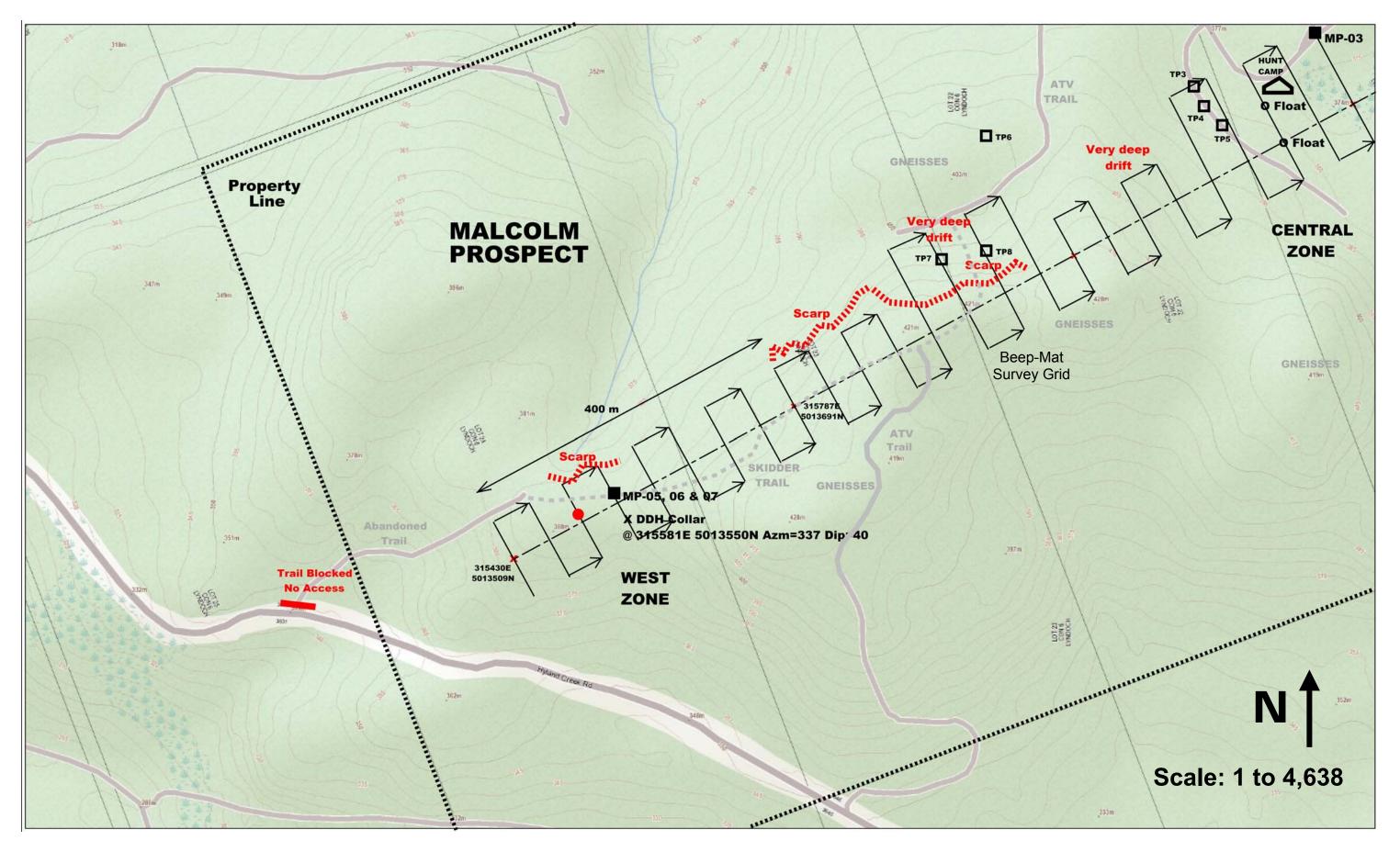
The Ministry of Northern Development and Mines (MNDM) received your exploration plan on March 30th, 2015.

I have identified the Algonquins of Ontario to be notified about your early exploration activities. A copy of the exploration plan was sent to them on April 7th, 2015, the Circulation Date, advising that comments with respect to potential adverse effects of the proposed activities on the communities' Aboriginal rights be provided to MNDM.

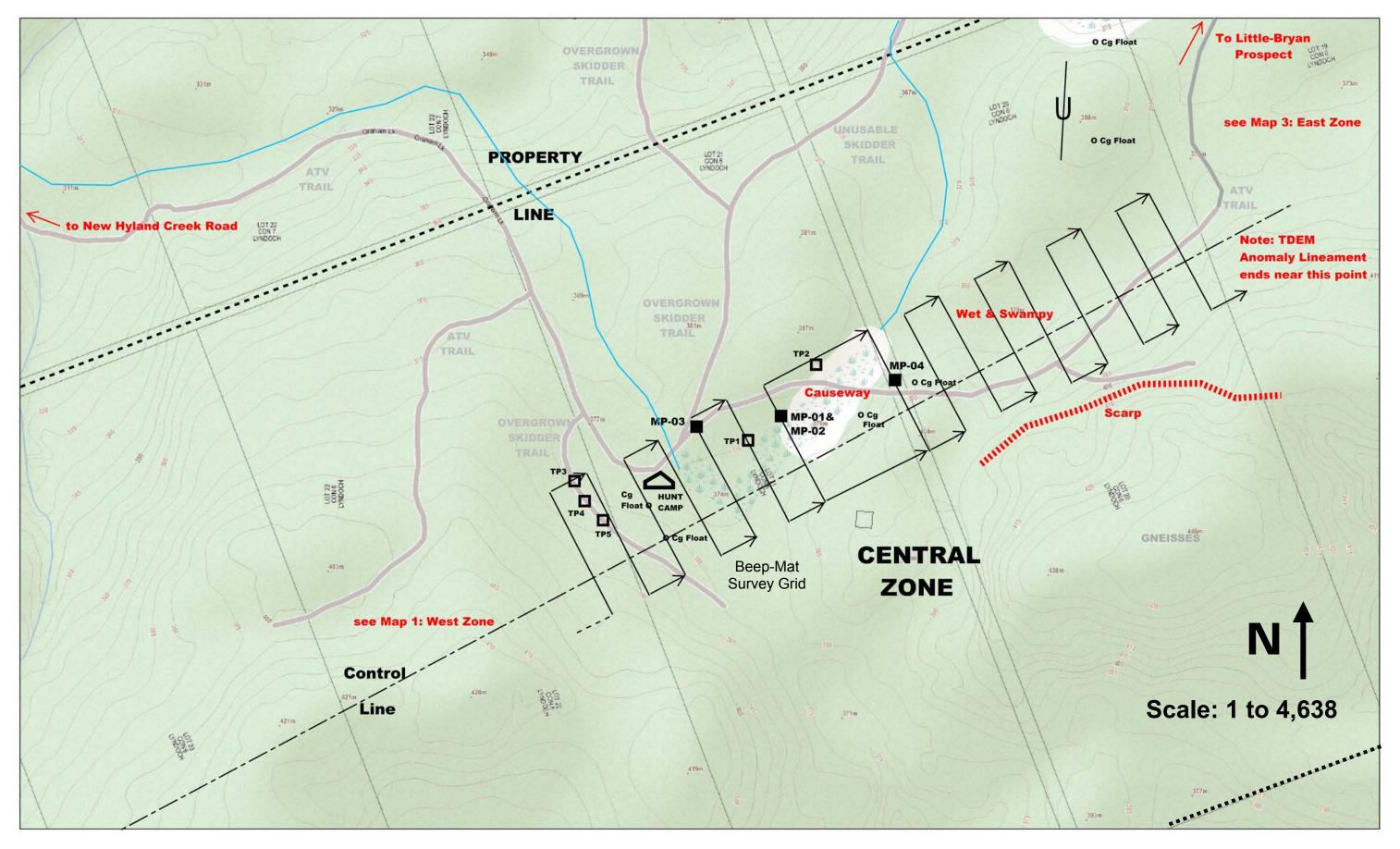
Through this circulation the Crown will lead consultation with the identified community. Comments received by MNDM from this or any other Aboriginal communities, which may require your consideration, will be communicated to you. If you receive any feedback directly from a community, we ask that you forward them to MNDM. Should further discussions regarding your plan be required, the Crown may require your participation to explain your activities or consider adjustment to mitigate potential impacts identified through the consultation process.

Unless otherwise directed by the Director of Exploration, the activities included in your exploration plan can commence on Tuesday, May 7th, 2015 (30 days following the circulation date). The exploration plan is effective for a period of two years from that date.

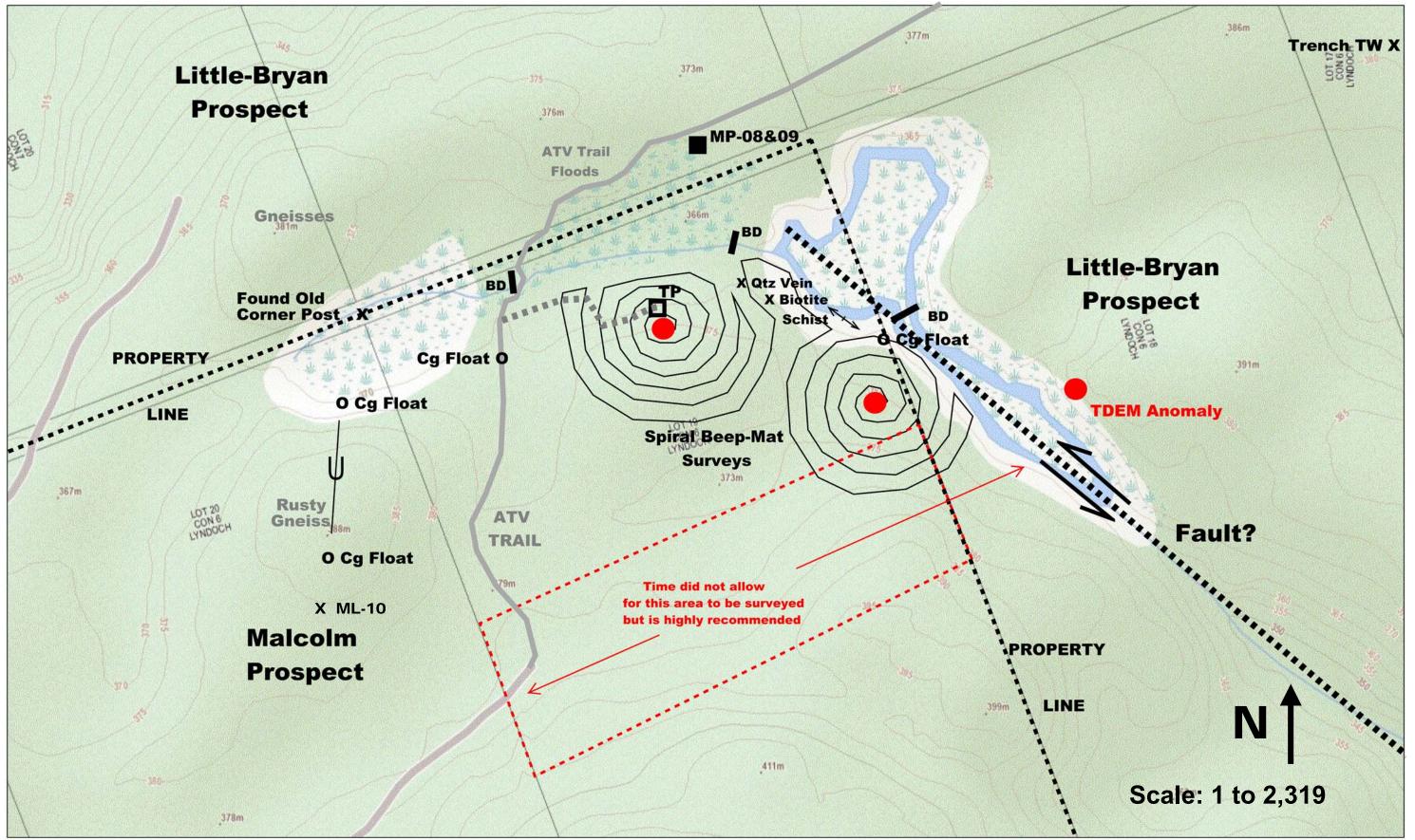
In conducting Aboriginal consultation, circumstances may arise that lead the Director of Exploration to decide that an exploration permit is required for some or all of the early exploration activities proposed in your exploration plan. If that should happen, you will be advised in writing and MNDM will explain the process to be followed to obtain an exploration permit.



MAP 1: Malcolm Prospect West Zone



MAP 2: Malcolm Prospect Central Zone



MAP 3: Malcolm Prospect East Zone

Sample Cg% Description

Easting Northing Beep-Mat

Over Drift

					see Note 1
MP-01	6.51	Rusty dark grey cakelike mass of exfoliated quartz arenite. Graphite flakes & much amorphous graphite. Very dirty to handle. Extremely conductive. Possible fault gouge. Smells of sulfur. Common in trenches TW & T4 of Little-Bryan Prospect. Very soft rock. No carbonates	316608	5014147	4000
MP-02-1 see Note 3	8.49	Soft "salt and pepper" silicified calcite marble. Peppering is due to graphite. No sulfides. Total digest of calcite in concentrated HCI yeilded 65% CaCO3 + 26.5% Silica + 8.5% Cg w/w This rock unit is probably in contact with MP-01. Looks a bit like diorite under foot.	316605	5014150	200-300
MP-03	3.73	Very hard quartzite with visible graphite flakes and pyrrhotite. Relic bedding yeilds gneissic look. This rock unit is roughly 30 metres down dip from MP-01 & MP-02 assuming within fold axis	316480	5014152	outcrop
MP-04	2.49	Brecciated rusty quartz arenite with many visible graphite flakes and some pyrrhotite. Weathering causes this poorly cemented rock to crumble into a sandy laterite. This may be due to inadequte re-cementation after shearing along supposed thrust fault.	316693	5014190	300-400
MP-05	0.48	Brecciated Quartzite hanging wall. Rare visible graphite flakes and some visible pyrrhotite.	315564	5013590	150
see Note 5 MP-06	2.84	Brecciated rusty quartz arenite with many visible graphite flakes.	315564	5013595	200-300
MP-07	0.09	Hornblende quartz gneiss footwall. No visible graphite or pyrrhotite	315564	5013560	80
MP-08	1.44	Brecciated rusty quartz arenite with many visible graphite flakes. Identical to MP-04.	317254	5014815	outcrop
see Note 4 MP-09	8.16	Dark charcoal to black graphitic laterite at base of MP-08 wall rock under 1 metre of wet sandy drift.	317254	5014816	400-600
MP-10	NA	Rusty Hornblende Quartz Gneiss (same area as MPH sample 542672 see page 19)	316959	5014451	outcrop
	0.54				

MP-02-2 8.54 Triplicate MP-02-3 8.55

Triplicate

Notes: 1) Beep-Mat conductivity in uncalibrated units read on top of drift during survey. Background levels are normally less than 150.

2) Beep-Mat conductivity in uncalibrated units read on stripped bare bedrock before channel sampling.

3) Beep-Mat reading of MP-02 is surprisingly low considering % Cg. This fact raises many questions about possible "false negative" geophysical signals.

4) This zone is proximal to a supposed normal fault and may coincide with a thrust fault.

5) DDH YD65-11 collar was located at 315581E 5013550N, Azimuth = 337 Mag North, Dip =40 degrees

Economic Grades of Cg assuming standard industry cut-off of 5%

Table 1: Description and Location of Rock Samples

-	Beep-Mat On Bedrock	Мар
	see Note 2	
30 cm	Off the Scale	2
110 cm	3000	2
0 cm	4000	2
120 cm	2800	2
80 cm	150	1
90 cm	1400	1
110 cm	55	1
0 cm	900	3
100 cm	8900	3
0 cm	145	3



Photo 1a: MP-01

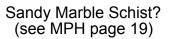
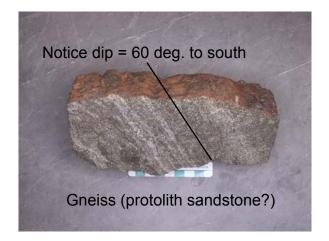




Photo 2a: MP-02



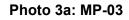




Photo 5a: MP-05



Photo 6a: MP-06

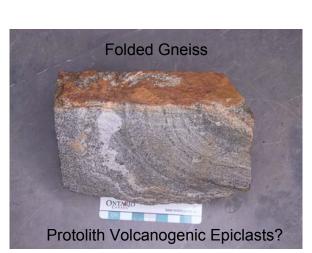


Photo 7a: MP-07

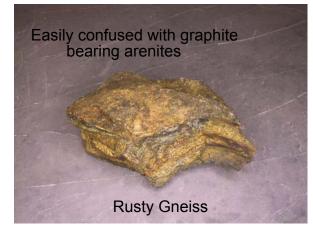


Photo 10a: MP-10

Very substantial graphitic Laterite (coarse sand)



Photo 9a: MP-09

Photographs of Rock Samples



Photo 4a: MP-04



Photo 8a: MP-08

Grey & black minerals = graphite



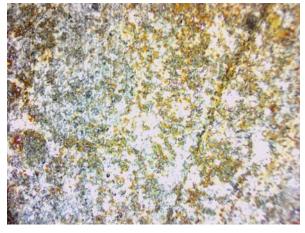
Microphoto 1b: MP-01

Grey & black minerals = amphiboles



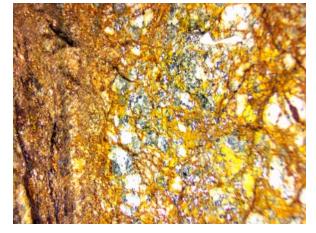
Microphoto 5b: MP-05

Grey & black minerals = graphite (8.5% Cg) White = calcium carbonate



Microphoto 2b: MP-02

Grey & black minerals = graphite



Microphoto 6b: MP-06

Blue-Grey minerals = graphite Charcoal minerals = smoky quartz White minerals = white quartz No amphiboles!



Microphoto 3b: MP-03 Grey & black minerals = amphiboles



Microphoto 7b: MP-07

Blue-grey minerals are graphite. (8% Cg) Charcoal minerals are smoky quartz grains. No amphiboles!



Microphoto 9b: MP-09

The absolute best test for graphite in the field is to rub (hard) a clean thumb on the hand sample. If it comes up pencil grey or black, you have graphite!

— This one turns everything black!

This one you could rub until you bleed!



Microphotographs of Rock Samples (10X Mag)

Grey & black minerals = graphite



Microphoto 4b: MP-04

Grey & black minerals = graphite



Microphoto 8b: MP-08

Grey and black minerals are amphiboles. No graphite!

Microphoto 10b: MP-10