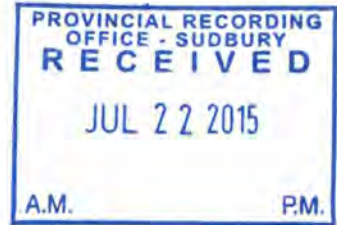


2-56123



NI 43-101 TECHNICAL REPORT (non compliant)

on the

J.C. Archibald

Galway Township-Loom Lake Graphite Occurrence
CLAIM 1191461

Peterborough County , Southeastern, Ontario

Prepared for:

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July 21, 2015

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Peterborough-Haliburton County Graphite Deposit
Galway Township Loom Lake Occurrence

Summary

The graphite properties, consisting of some 17,400 hectares of mining claims (including mining leases and extraction permits) and 566 hectares of graphite rights on Patented lands, is located between Bobcaygeon (Lindsay) in the southwest and Wilberforce in the northeast. The 2015 exploration program was performed on one claim (1191461) of 400 acres in size. The properties consist of a series of parallel zones with widths of 1.0 meter up to 400 meters wide, which continue several hundreds of meters in strike length and can be traced continuously for several kilometers and appear to be associated with a deformation zone that rings around the Anstruther Batholith (syenite complex). At least six graphite-bearing zones have been located on surface and several of these have been outlined as shallow defined targets at the contacts of marble-gneiss rock units. The initial exploration has indicated that there are many significant flake graphite zones and they need to have further definition before the full potential can be determined. There were four past producing flake-graphite mines along strike to the northeast but this section of the geological structure has had very little graphite exploration historically due to lack of access in the area until recently.

Graphite demand is 1.14 million tones per year and expected to rise to 1.6 million tones demand by the year 2020 (*Globe & Mail, May 2, 2012*). The price of flake graphite has increased from \$1500 per tonne in 2012 to \$2500 per tonne in 2012 (*Globe & Mail, May 2012*). In the latter part of 2012 the prices for flake graphite averaged between \$1,950 to \$2,300 per tonne (*Industrial Minerals, July 3, 2012*). The largest markets for graphite are: refractories, lithium batteries and storage cells, resistance to heat and high conductivity markets. Canada is the fifth largest graphite producer in the world (with China, Brazil, and India being the largest).

The property is located some two hours driving-time northeast of Toronto, Ontario, or one half hour driving-time northwest of Peterborough, Ontario. A series of highways, county roads, forest access roads, and ATV-snowmobile trails transect much of the areas and providing good access to the known mineral occurrences. There is a large workforce and equipment /

machinery available in the immediate area.

The local geology is made up of a series of intercalated and fault-truncated zones within biotite-gneissic marbles, syenitic marbles, and amphibolitic to clastic paragneiss-metasediments. The main graphite zones are associated with sheared and folded calcitic marbles and amphibolite gneiss units; usually along the contacts between these two rock units.

The exploration programs used in the graphite delineations consist of: geological reconnaissance and mapping, prospecting, backhoe excavator trenching, and whole rock/multi-element analyses. This report was compiled using data from between May 1, 2015 to August 1, 2015

This 2015 report covers a second phase program of excavator trenching and channel sampling of the graphite zone on claim **1191461**. Of the total expenditure of **\$23,620** spent on the 2015 exploration program (May to July, 2015) some \$4,454.39 was spent on direct excavation costs, \$12,100 on consulting fees, and \$1,068.53 on assaying.

The graphite zone was observed to cross at least 1600 meters of strike length across the claims and is up to 300 meters continuous width on surface; and does continue to both the northeast and southwest of this claim. The 2015 trenching program sampled a partial width of approximately 305 meters to determine the grade and continuity of the graphitic zone. The samples taken were over 5.0 meters to 20.0 meters widths (averaging 10.0 meter width).

This unique industrial mineral deposit is a very significant discovery due the fact it is of large-flake variety which is not common in Canada or North America, and the fact that some of these occurrences are over 120 meters

This *Graphite Occurrence* has several advantages as compared to other graphite deposits in North America which include:

1. The graphite is of superior-grade and quality than produced at other Ontario / United States graphite occurrences.

2. There has been very little exploration or geological mapping in this part of Ontario due to the fact that only recently have roads and trails been put into this area, and the fact that this area has been exclusively controlled by exploration companies.

3. Closeness to many markets will reduce transportation costs . There is on-site facilities available for concentration of the graphite.

4. This deposit is a short distance from railroad facilities (30 kilometers) and shipping ports (eighty kilometers).It also has the cheapest and most-competitive trucking rates in Ontario.

5. There is a concentration plant available in the central portion of the property which is ready to operate and has Ministry of Environment permits to allow for operation as a vermiculite staging/transfer plant.

6. Located within Townships which are unregulated and permit zoning for mining purposes. A majority of the local population positively acknowledges mining operations in the area; including First Nations.

7. Surface location of graphite-bearing material with essentially no overburden to remove.

9. Turmoil within the graphite market and limited world supplies of graphite has indicated that this deposit has great potential for competing and taking a large share in the world market.

This report covers exploration on the two new zones, the Crystal Zone and the Salerno Zone which are some ten and twenty kilometers northeast and along strike with the Main Bass Lake graphite discovery

Previously the **Loom Lake Zone**, appeared to be located within a fault-(contact)controlled deformation zone that is approximately 120 meters in width. There are two graphitic rock types associated with this deformation system: amphibolitic metasedimentary para-gneiss which averages 1.1% to 2.7% Cg within the central section, and gneissic-calcitic marbles which averages 2.5% to 2.9% Cg within the northern contact areas. The new program has indicated a zone of at least 305 meters width with continuous graphite content, and values averaging 2.25% Cg over 295.0 meters (3.63% Cg over 100.0 meters or 2.81% Cg over 155 meters). Both grades and widths have been extended which indicated higher tonnages with higher grades at depth. It is recommended and proposed that the next phase consist of diamond drilling and extending the zone along strike to the northeast and southwest.

Introduction -

In the early 1900's, two graphite mining operations occurred in the Wilberforce area (Virginia Graphite Co. and Tonkin-Dupont Graphite Co.). Other graphite occurrences were traced southwest into the Monmouth Township area. There are seventeen graphite occurrences in Monmouth Township and six graphite occurrences in Cardiff Township (see plate). This zone wraps around the west contact with the Anstruther Granite Batholith and is located within a marble complex which surrounds the main syenite complex.

From 1992 to 2004, the author has been mapping the surrounding complexes which are associated with the western contact areas of the Anstruther Batholith; in particular the vermiculite complexes which are associated with the marble units. During the mapping and trenching programs, zones of flake-graphite were observed but the focus on graphite did not occur until 2012. A total of approximately *151,565,223 tonnes @ 16.52% vermiculite* (**25,035,014 tonnes vermiculite**) has been delineated (to September 2004) within five zones adjacent and contiguous with several of the graphite-bearing zones. From 2003 to 2007, vermiculite has been mined from the area and sold to local (Montreal) users for both agricultural and heat resistant uses. Graphite has similar uses to vermiculite such as spray-on insulation uses.

Graphite is closely and spatially coincided with the vermiculite zones. Graphite zones were observed to be occurring closely and adjacent to the vermiculite zones; the vermiculite occurring within the marbles at the contact with para-gneiss units and the graphite within the para-gneiss units at the contacts with the marble units. Lakefield Research Limited (SGS LABS) has run metallurgical tests on the Galway flake-graphite; a report which is added to the appendix of this report. Shallow diamond-drilling has been used to delineated the main graphite vein, and due to the uniqueness, quality, and size-potential of graphite, it is warranted to proceed ahead on this project. There are seven significant graphite zones that have been located which have values over 1.0% Cg and have significant strike lengths. Values over 2.0% Cg are considered significant. All of these zones have been located on surface and can be easily trenched along strike.

The 2015 exploration program focused on sampling of 1600 meter length of a graphite-bearing zone and trenched a graphitic section that is over 300 meters in width to verify the continuity of graphite grades. Channel sampling

verified an average grade of 2.25% graphite (Cg) over a width of 295 meters with higher values associated with the contact areas between the para-gneiss metasediments (main graphite host rock) and the calcitic marbles.

This graphitic-paragneiss unit has been mapped by the author for some 14,500 meters to 19,500 meters in strike length.

Terms of Reference-

The author has prepared this report as a request of *John Charles Archibald* for assessment purposes. The author has been involved with mineral exploration and evaluations in the Peterborough-Haliburton County areas of Southeastern Ontario since the mid 1970's until present.

The claim group is registered in the name of *John C. Archibald* and have not been optioned to any other group or party. Previously these properties were optioned to Earth Resources Limited with the understanding that the claims were to be kept in good-standing and that there is a 3.0% NSR on all mineral commodities found on these claims. This agreement was terminated when some of the claims were allowed to lapse due to a third party "lack of funds" to keep them in good standing.

The author warrants that he spends from twenty to fifty percent of his time per year since 2001 investigating the mineral potential on a majority of these properties, and continues to update the mineral potential within these areas. The author has personally spent over \$1.4 million in mineral potential investigations (primarily limestone and vermiculite) on these claims which consist of trenching, drilling, mapping, assaying, environmental studies, and archeological studies.

The author has reviewed all of the data within this report and believes it to be accurate to within Industry and ministry standards. The purpose of this report is for assessment purposes and is therefore non-compliant for NI43-101 purposes to raise funds or for *BCSC* reporting issues.

Reliance on Other Experts-

The author has worked on exploration and development of the Peterborough vermiculite and graphite occurrences since 1968. F.T. Archibald (P.Geo. APGO 1052) used his knowledge and experience in vermiculite and graphite since 1968 to present through hands-on mapping, sampling and exfoliation studies aided by exposures of the vermiculite zones through excavator trenching, diamond drilling, and different mining operations conducted in the Peterborough area.

The author has relied on previous exploration records and reports, in particular those prepared by C.W. Archibald Limited, A.C.A. Howe International, Insulite Development Corporation, Goshawk Mines Limited, and public assessment archive information submitted to the Ministry of Northern Development and Mines by Regis Resources Inc., Blue Marble Mining Corp., and Valterra Resource Corporation.

In 1997, *Dino Titaro P.Eng.* and *Peter George P.Geo.* of *ACA Howe International* evaluated a portion of the Regis Vermiculite Deposit, namely the West Zone, which was eventually partially mined by *Regis Resources Inc.* from 2005 to 2008, and came to the conclusions in their vermiculite report that the studies of F.T. Archibald were accurate but conservative, and that the Archibald compilations are in accordance and acceptable with Industry standards.

F.T. Archibald has relied solely on his expertise to develop the vermiculite and graphite occurrences in the Galway-Cavendish Township and surrounding areas.

Disclaimer-

Any mineral resource calculations and estimates contained within this report are not 43-101 compliant and the author takes no responsibility for the quality and accuracy of the reported calculations. Proven calculations are taken as trench-defined mineral resources to the bottom of the trench (as channel samples) and probable mineral estimates taken as double the depth of existing trenches as indicated by drilling results below the trenches. Claims indicated within the property description are registered under *John Charles Archibald*. There are no legal-existing option agreements in good standing that exist on the claims that this work program was performed.

Valterra Resource Corporation had a direct option agreement with *Earth Resources Limited* but no direct option agreement with John C. Archibald or his 100% owned properties. The *Valterra Resource Corporation* Agreement was terminated as they allowed claims to come open and had no funds to pay property expenditures (including keeping claims in good standing) since March of 2013.

Agreements-

The J.C. Archibald properties were previously optioned to Earth Resources Limited with the condition that all of the claims would be kept in good-standing. In the past few years some of the claims have been allowed to lapse and the agreement has been terminated. There was a 3% NSR understood on the J.C. Archibald properties in an earlier agreement. Some of the claims were allowed to lapse and the agreement was terminated.

The properties consist of 60 units or some 1214 hectares. The claim 1191461 which is 162 hectares in size, is the focus of the 2015 exploration program and the most important as far as graphite significance.

F.T. Archibald (P.Geo. APGO 1052) was hired to evaluate the graphite potential on the claim group; in particular claim 1191461.

Property Description-

The property consists of some 1,214 hectares of crown land mining claims in Galway Township and Cavendish Township (60 units); District of Peterborough.

The claims are not continuous and were originally staked for vermiculite potential. It was not until 2003 that the graphite potential became evident. The claim access has been made easier over the last ten years by the many timber-snowmobile-ATV trails. During the latter part of 2014, many of these trails were upgraded to use by car and truck.

The claim group is listed as follows:

<i>Township</i>	<i>Claim Number</i>	<i># Units(20hect.each)</i>	<i>Anniversary Date</i>	<i>Concession & Lot #</i>	<i>Work \$</i>
Cavendish	1191672	6	November 3, 2016	Conc.16-Lots 8,9,10	15,007
	3014434	1	March 7, 2019	Conc.17- Lot 10(S1/2)	4,000
Galway	1191461	8	March 17, 2018	Conc.10-Lots 27-30	22,400
	1203014	6	March 30, 2018	Conc.2-Lots 12-14	12,000
	1235234	8	Oct. 21, 2017	Conc.7&8-Lots21-22	22,888
	1235235	2	Oct.21, 2019	Conc. 7-Lot 20	7,200
	1237569	10	May 8, 2016	Conc.7-Lot 13-17	20,008
	1237573	10	May 9, 2018	Conc.6-Lot 7-11	28,810
	1237574	1	May 15, 2019	Conc.4(S1/2)-Lot 12	3,200
	924322	8	October 21, 2017	Conc.8-Lot 28-31	22,400

A total of \$157,913 has been previously spent on the John Archibald claims of which there is remaining \$35,708 in reserves for future application. Of the 60 claim units in this group, a total of \$24,000 needs to be expended yearly to keep the claims in good standing. The next anniversary date is May 8, 2016.

Power is available in close proximity to the property to the west, south and north. The plant will most likely use propane heating on-site. Local manpower is available as is heavy machinery. Parts and fabrications are available in Peterborough which is some fifty kilometers to the southeast.

The length of the operating season is twelve months of the year with peak operating seasons being Spring and Fall

The property has several paved highways on all sides, and has local containerized trucks of all sizes which can ship to the local markets. The

closest exfoliator plant is that of W.R.Grace which is approximately 132 kilometers from site. There are three local shipping ports (Port of Oshawa, Port of Toronto, Port of Montreal), the closest being approximately 136 kilometers from the mine site.

Shipping by rail can be done from Peterborough (some 55 kilometers from the mine site) or from Concord (some 160 kilometers from the mine site).

The Galway-Cavendish graphite Occurrence can provide rapid delivery within most areas of Canada and the northeast United States. The northeast United States has 60% of the North American exfoliators and 36% of the United States population. The location of this deposit has advantages over most other world vermiculite producers as to road-rail-port access and distance which will affect the largest cost for vermiculite supply this being transportation.

At least eighty percent of the claim group has several years assessment applied; and part of this group has sufficient expenditures to bring them to lease. Seven claims have been brought to or applied to be brought to lease. Six claim groups have been and/or are in the process of permits for excavation quarry permits under the MNR Aggregate Act.

Topography & Vegetation-

The vegetation ranges from dense bush to wide open areas of mature to semi-mature birch, maple, white pine, spruce and cedar. In several of the areas, specifically on neighboring patented lots, the coniferous trees have been logged off within the past few years. Birch and maple hardwoods are found on the higher ridge areas and within extensive sand and gravel deposits. Coniferous trees tend to occupy the lower swampy areas of the property. Approximately thirty to forty percent of the property is at lower elevation and covered by varying thicknesses of overburden.

The terrain is generally rolling to flat with overburden thickness varying from a few centimeters to tens of meters. Overburden depth was generally greatest in swamp-covered fault areas and erosional gouges left by glaciation. The effect of glaciation is a series of whale-back ridges which are highly scoured and scarped along their northern faces. The geological units of greater resistance tend to be higher and less weathered, hence being outcrops. A total of five to ten percent of the claims are outcropped, and less than forty percent of the property has bedrock exposure. In most cases the bedrock is less than a few meters in depth below the overburden cover.

The vermiculite and graphite bearing marble generally erodes and weathers more readily than the granite and granite gneiss units, and for the most part is covered by overburden. In most cases the overburden cover on top of the marble complexes is 0.10 meter to 0.80 meter in thickness.



MINDEN

BOBCAYGEON

ELEVELON FALLS

LAKEFIELD

LIFTLOCK

PETERBOROUGH

LANDSAY

Stony Lake

Lower Buckhorn Lake

Clear Lake

Buckhorn Lake

Pigeon Lake

Chemong Lake

Balsam Lake

Sturgeon Lake

Mitchell Lake

Cameron Lake

Trent River

Percy River

505

35

121

649

507

28

36

36

36

507

LIFTLOCK

48

36

28

35

7

28

7

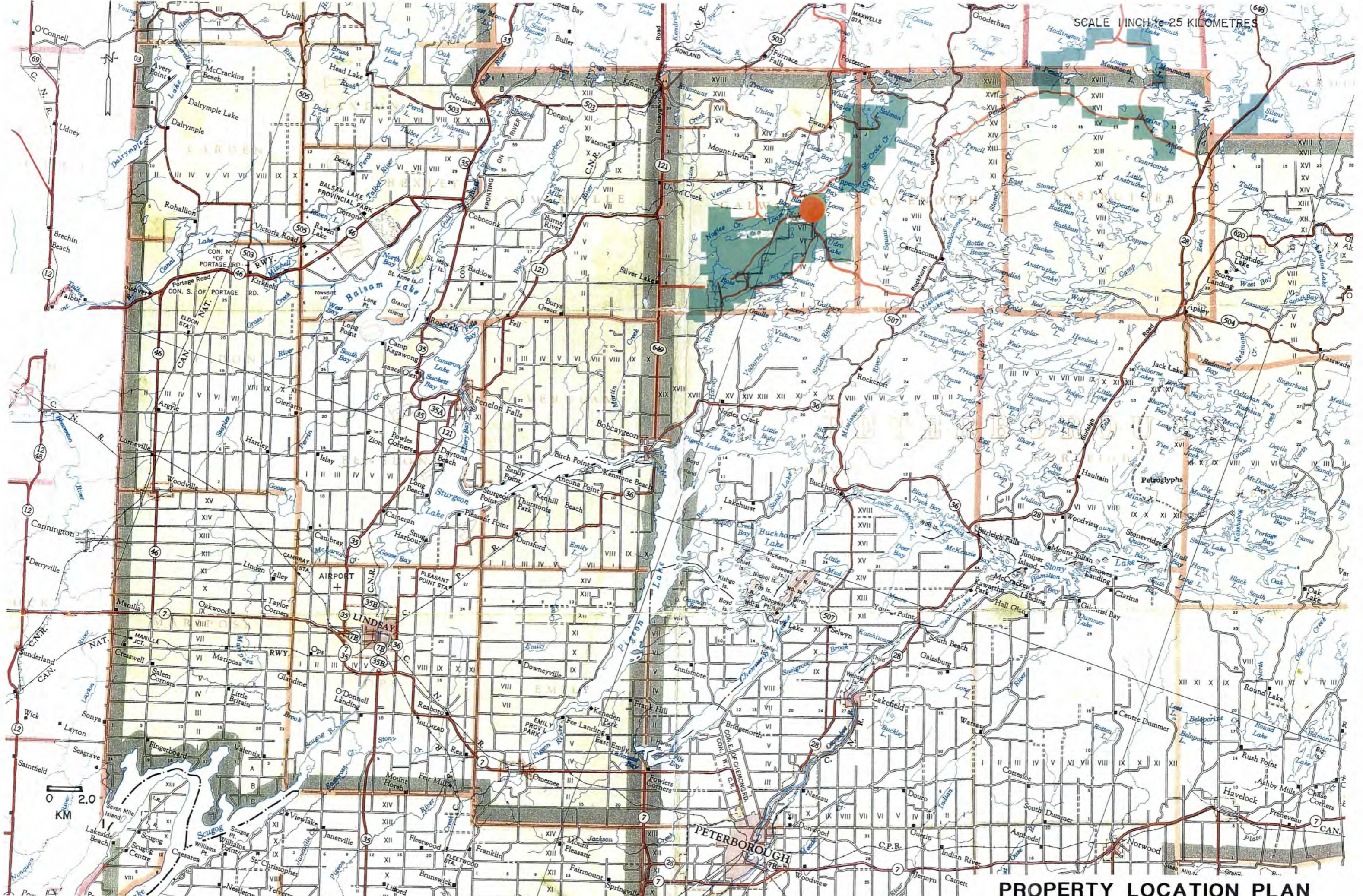
7

30

7

0 5.0 km

TOPOGRAPHY
AIR PHOTO



SCALE 1 INCH = 25 KILOMETRES

0 2.0
KM

PROPERTY LOCATION PLAN

Accessibility, Climate, Local Resources & Physiography-

The properties are located in an undeveloped wilderness area which is traversed by snowmobile/ATV trails and timber trails for access. These properties are located between Bobcaygeon in the southwest to Bancroft in the northeast. Areas south and west of Highway #36 (south of Bobcaygeon / Buckhorn / Lakefield) are generally developed farm-land and cottage areas with Lindsay and Peterborough being the major centres for equipment and manpower. The property is some 11 kilometers north of Bobcaygeon or some 50 kilometers northeast of Lindsay, and is some fifty kilometers northwest of Peterborough.

The properties are accessed along Highway #649/121 north from Bobcaygeon from the southwest and then using side roads (ie- Bass Lane or Crystal Lake Road) , Highway #517 north from Flynn's corners and then using side roads (ie- Salmon Lake Road or Parnell Quarry Road), east from Gooderham on Highway #503, east from Tory Hill on Highway #118, and north from Apsley on Highway #28.

The topography is gently rolling with most vermiculite-bearing zones within low-lying valley areas that are up to fifty meters above the lake levels.

Climate is temperate with winter season from beginning of December through the beginning of March, although all of the quarries can operate throughout the year and the mining permits on this project are allowed to work throughout the year.

There are three mining permits in which both surface and mining rights are leased for a 21 year renewable period. A majority of the lands are crown land mining permits and several leases have been issued or are pending issuing on the main graphite-bearing areas. There are several prime areas of private patents which are controlled by the author for the purpose of mining if necessary. Power and water are readily available. There is a local workforce available; some of which are trained to operate a vermiculite processing plant which operated between 2005 and 2008. A graphite processing plant is available in Cavendish Township along with issued Ministry of Environment permits for operation and tailings disposal; and this site is located within a renewable lease permit area (due in 2017). Agreements with some of the limestone quarry operators allow for processing plant sites, water and waste

disposal site, and storage or processing sites. The limestone pits that are remaining are areas for waste disposal. Some of the private patents are also available for storage or disposal sites.

Exploration History -

Graphite was mined within the *Bancroft Terrane* between 1896 to 1954. The Black Donald Flake Graphite Mine produced some 86,300 tonnes of graphite.

In the early 1900's, flake graphite was mined by Virginia Graphite Co., Tonkin-Dupont Graphite Co., Harcourt Graphite Mine, And Wilberforce Graphite Mine in Cardiff Township and Monmouth Township. There are some two dozen historical graphite occurrences in Cardiff and Monmouth Township.

There are only two historical graphite occurrences in Galway Township and non in Harvey , Cavendish , or Anstruther Townships.

Vermiculite mineralization was discovered by the late Harvey Greene in Cavendish Township (southeast section), to the east of Galway Township, in 1950, and several vermiculite mining permits and mining operations have been established in the area (as recently as 2008).

From 1975 to 1977, Bright (OGS) mapped Cavendish Township. During this period, Teck and St. Joe Minerals intersected zinc-bearing marbles in Cavendish township which are graphite-bearing.

In the mid 1970's (1975-1977), another program of renewed vermiculite exploration occurred in Cavendish Township under C.W.Archibald Ltd. when Harvey Greene transferred his properties to C.W.Archibald. These properties were optioned to Goshawk Mines Ltd. and Insulite Development Corporation under management by C.W.Archibald Ltd. During this period one deposit with inferred resources was discovered and mining permits were issued. The zones average 122 meter to 274 meters in width by 183 meters to 823 meters in length with a total of three pods in the same zone. The total length of the zone is 1737 meters. Approximately \$79,000 was spent to delineate this zone. The vermiculite in this zone has an average density of 10.1 lbs./cubic foot.

Between 1992 and 1995, another vermiculite deposit (West Zone) with inferred resources was discovered to the west of the first discovery. The potential for the West Zone and the East Zone was estimated at 2,673,220 to 3,636,060 tons averaging 20.2% vermiculite (to a depth of 6.0 meters).

From 1996 to 1999, Regis Resources Inc. trenched the area west of the original discovery to confirm vermiculite resource calculations and grades, and has since performed bulk sample analyses and marketing studies. The most recent vermiculite resource estimate by *F.T. Archibald* (based on the additional

trenching) is 3,002,220 tons to 3,965,060 tons averaging 27.7 percent vermiculite to a depth of 6.7 meters. (This was upgraded by A.C.A.Howe International Limited in 2000 to 4,888,409 tonnes averaging 21.4% vermiculite). Regis Resources Inc. have secured Aggregate Mining permits to begin mining the vermiculite. The proposed pit averages 286 metres width and 1190 meters in length, and has been tested to an average depth of 6.7 meters. It was observed that the quality of the material improves and the flake size increases with depth until the vermiculite grades to (un-weathered) biotite. Approximately \$92,878 was spent to delineate this zone. Regis Resources Inc. have engaged Minpro Inc. of Timmins to assemble a pilot plant, and stripped a surface area of 60 meters by 120 metres on site for assembly in the latter part of 2001.

In 1997, a bulk sample of 590 kilograms from the West Zone, which previously indicated a value of 21.0% vermiculite by field tests, returned values of between 50.0% and 55.6% by lab tests (rotary-kiln) carried out by *Lakefield Research Laboratories*. Samples sent to the *Mandoval Technical Center* in England, where plants are designed for exfoliation of vermiculite, proved that although grade is small, the colour and size of material is excellent for certain markets.

In 1999, *John C. Archibald* prospected the areas surrounding the first two discoveries and located two additional vermiculite-bearing zones through reconnaissance mapping in Galway Township. It was at this time that J.C. Archibald and Alan A. Archibald applied for and were awarded OPAP Grants for the area acquired in Galway Township.

As the OPAP program in 1999 continued, new zones and continuations of the discovery zones of vermiculite-bearing carbonate were identified and mapped.

The Ontario Department of Mines had previously mapped the northwest section of Galway Township, and no mapping had been done in the areas of the marble complexes. Previously, Galway Township was known for iron, silver, and uranium exploration. The only active mining presently is for limestone slabs used for landscaping purposes.

In 2000-2001, *F. T. Archibald* managed a program for Blue Marble Mining Corp. in the northeastern section of Cavendish Township. This Company holds rights to approximately 1092 hectares. A continuation of the Regis-Cavendish Vermiculite Deposit was delineated, and at least five to seven parallel zones

containing vermiculite values were traced over distances of between 3000 and 5900 metres. Values averaging 17.2% to 22.9% vermiculite were indicated (to a 1.5 meter depth) within seven zones by a survey using 972 auger holes. A total of 17.8% of the holes returned vermiculite values. Backhoe trenching of three of the seven zones indicated a probable resource of 1,574,408 tonnes @ 11.58% vermiculite to a depth of 1.9 metres.

In 2001, a backhoe trenching program using eight trenches across the Zone A (north trend), nine trenches across the Zone B (mid trend), and one trench across Zone C (south trend) in Galway Township, confirmed 22,574,650 tonnes averaging 20.62% vermiculite (with 7.0% cut-off grade) in the proven-probable category. It is estimated that there is another 26,250,724 tonnes at 20.1% vermiculite in the possible category, for a total of 48,825,375 tonnes @ 20.4% vermiculite.

In 2001, exploration in the northeast sections of the Anstruther Batholith contact area (Anstruther Township), indicated a continuous vermiculite-bearing band within a group of approximately 546 hectares which averages 16.8% vermiculite (on the west side of the property), and values ranging from 5.8% to 29.1% vermiculite. This zone has been traced for approximately 8000 meters and with widths up to 100 meters.

In 2003, the first flake graphite was observed within Galway Township within vein structures while trenching and mapping the vermiculite zones.

In 2005, it was estimated that production was approximately 9,000 tons operating 96 hours per week (E.Moeller, May 3, 2005). As of October 31, 2005, Regis Resources Inc. have been into commercial production, selling fine sized vermiculite at between \$100 per ton and \$169 per ton and it was estimated that there is a ten year supply outlined within the West Deposit (E.Moeller, May 3, 2005). As of June 2007, Regis Resources Inc. indicate they have run out of Grade 4 (fine) vermiculite and do not have any Grade 1 to 3 (medium to coarse) vermiculite, and that they can only supply Grade 5 (super-fine and micron) vermiculite of which there is a limited market (E.Moeller, June, 2007).

From 2001 through 2007, investigations by the author of surrounding areas and within six adjacent townships, it was observed that Galway Township has the largest tonnage potential for vermiculite and the best potential for coarser vermiculite. A total of some 9,200,730 tons of vermiculite (38,368,348 tons grading 24%) has been delineated by some twenty-two trenches and extension trenches, some of which are confirmed by diamond

drilling beneath the trenches. In 2003, flake graphite was discovered in Galway Township while trenching the vermiculite-bearing zones.

Regis Resources Inc. (Vermiculite Canada) operated a vermiculite mining and vermiculite marketing operation between 2005 and 2009. Several thousands of tones of vermiculite concentrates were produced and sold to mainly *Perlite Canada* for horticultural use, and *GE* for industrial-insulation. Insufficient funds and lack of management expertise led to the closure of this operation. The Regis vermiculite processing plant was sold to pay creditors and is available for future vermiculite processing. As of March, 2009 Regis Resources Inc. sold 1770.55 tons of vermiculite at an average cost of \$193.49 per ton.

F.T. Archibald continued to map and test the vermiculite bearing zones in the local and regional area from 1992 to present, and continued to apply for mining extraction permits and purchasing of private patents over the most significant areas.

From 2005 to 2012, several limestone and granite quarries in Galway Township were permitted. These include: Don Young Aggregates, Redstone Quarries, Aecom (Preston) granite Quarry, Merv Johnson Quarry, BSL Quarry, and Smerchanski Quarry (Harvey Ridge Quarry).

In 2012, Valterra Resource Corporation optioned the Earth Resource Limited properties to explore for graphite; especially those areas surrounding the flake-graphite discovery. The main flake-graphite occurrence in Lot 8-Concession 3&4 of Galway Township was delineated by: trenching, diamond drilling and geophysical surveying (induced polarization and magnetometer). At least six other significant surficial graphite zones were uncovered; the most recent the *Crystal Zone* in northeastern Galway Township and the *Salerno Zone* in northern Cavendish Township. Funding for this program dried up in early 2013 although the author continued to locate and extend several graphite-bearing zones.

In 2014, the author sampled graphite-bearing zones in Galway Township and Cavendish Township (Loom Lake Zone and Salerno Zone respectively).

In 2015, the author trenched across the graphite-bearing units associated with the Loom Lake Zone and observed they were graphite-bearing over a width of 305 meters (true average width of graphite estimated 248 to 300 meters) and a minimum estimated length of 3050 meters). The depth of graphite can only be determined by diamond drilling to depth.

<u>Township</u>	<u>Occurrence Name</u>	<u>Concession</u>	<u>Lot</u>	<u>UTM (Easting)</u>	<u>UTM (Northing)</u>
<u>Galway</u>	Venner Creek	8	6	692348	4952728
	Mount Irwin (lead & zinc occurrences)	13	15-16	694055	4959433
<u>Cavendish</u>	non recorded (zinc & Copper & Lead occurrences)				
<u>Harvey</u>	non recorded (copper & molybdenite & zinc occurrences)				
<u>Anstruther</u>	Parks (molybdenite & copper occurrences)	1	38	732375	4959901
<u>Monmouth</u>	Elliot R.	4-5	3	712152	4976242
	Hotspur	8	15	714600	4980750
	East Tory	9	23	717511	4982316
	Watkins	5	7	713789	4976611
	Carter	7	33	722150	4982104
	Dump	10	24	717350	4983750
	Ward	11	24	716808	4984423
	Teds West	12	28	718150	4986000
	Wilbermere Resort	13	34	719917	4988043
	South Wilberforce	13	32	719260	4987401
	Concession 13	13	32	719195	4987775
	East McCaslim	14	10	710550	4985800
	Barnes	14	35	720028	4989266
	Morrison	14	35	720130	4988693
	South Wilberforce	15	35	719823	4989612
	Virginia Graphite Co.	16	34	719113	4930677 (Producer
Tonkin-Dupont Graph.Co (molybdenite occurrences)	16	35	719113	4990677 (Producer	
<u>Cardiff</u>	Cobe Lake	21	10	723400	4993300
	National Graphite	22	9-11	722940	4994649
	Ironsides	21	2-3	720134	4992546
	Tonkin	20-21	1N & A	719626	4990793
	Bick	19	1,2,A	719836	4987946
	Cup Lake	15	18	728673	4988586

General Geology Setting-

Subdivisions of the Grenville geological Province into terranes and domains are based on lithologies, structure, and geophysical characteristics. The Galway Township graphite is between the Bancroft Terrane and Harvey-Cardiff Domain. The Bancroft Terrain is dominated by graphitic and deformed calcitic and dolomitic marbles, and quartzo-feldspathic gneisses and para-amphibolites derived from clastic sedimentary rocks formed from shallow marine type environments. These units have been intruded by syenites and granites at 1279 to 1220 Ma (Miller, 1983).

Flake graphite occurs within marbles and amphibolites (para-gneiss metasediments), and within the amphibolites are associated with pyrite and pyrrhotite along with minor nickel, copper, zinc, and vanadium mineralization. The graphite occurrences are usually stratabound and occur within folds and fold-noses. Disseminated graphite occurs within carbonaceous sedimentary rocks that have been subjected to granulite facies metamorphism deformation

The area covered by the claims is underlain by carbonate-rich metasediments of marble and diopside (Grenville Province of the Precambrian Shield), carbonated biotite-schists (metasediments), amphibole-rich metasediments, intrusive amphibolite schist, syenite / syenite-gneiss intrusions, pegmatite intrusions, quartz monzonite, and crystalline limestones. These rocks are of mid Proterozoic age (1280-1300 Ma). The metasediments are formed from metamorphosed limestone. Bands of altered biotite or amphibolite rich rock can be observed in areas of intense deformation and shearing.

The structural geology of the Grenville Province is Complex and is dominated by large-scale regional fold structures that have been folded and re-folded by tectonism, high-grade metamorphism, and intrusive activity.

A period of major orogenic deformation occurred pre 1300 Ma when the volcanic and sedimentary rocks were deposited on the basement rocks. Felsic Intrusions dating 1240 to 1270 Ma indicates a mid Proterozoic orogenic period as most of the orogenic period occurred between 1220 to 1160 Ma period. During the Grenville Orogeny, rock units around the Anstruther Batholith and Cheddar Batholith were metamorphosed and deformed into flow-folds situated around the rim of the felsic-alkali batholiths.

The area was glaciated during the Pleistocene. In areas where

geological trend is in a north-south direction the rocks have been scoured cleanly and little to no glacial till has been deposited. In areas where the geological trends are east-west, there is some glacial till deposited at the bases of hills and at the edge of valleys where there are catch-basins. In some cases there is 1.0 to 2.5 metres of glacial till which is deposited intermittently.

Graphite occurs in areas where there is significant biotite mica; in particular close to faults and shears. It is believed that the source area for the biotite is from the biotite rich syenite and syenite-breccia units which lie along the east and southeast boundary of the metasediment units, and are related to carbonatite and pyroxenite structures which rim a series of four felsic (granite-syenite) batholith structures. These gneissic source rocks are hosted within marbles and metasediments, and the majority are situated in the southeast corner of Galway Township and within the west section of Cavendish Township.

The bedrock generally appears to dip steeply (70 to 85 degrees) southeasterly and strikes northeasterly although most of the graphite occurrences tend to dip flatly at 45 degrees to 50 degrees. This is in contrast to the flat-lying bedding found within the deposits to the east and south of Catchacoma Lake. Weathering increases with depth where the dip steepens. In some areas close to shears and faults the dip is crenulated and flow banded.

Geological mapping has located several parallel bands of biotite-bearing marble which diverge and converge around intrusive syenite-granite-gabbro-pyroxenite units. The two most exceptional vermiculite-bearing trends, the North Zone and the South Zone, appear to average 330 metres and 200 metres in width respectively. One section of the North Zone is approximately 800 metres in width whereas one section of the South Zone is over 1300 metres in width. Where the biotite and iron-rich phlogopite mica is weathered it has altered to vermiculite. It is thought that some of the zones are actually the same but are divided by dyke systems of syenite granite, quartz monzonite, and pegmatite. Generally, the zones are continuous except where block-faulted by northeasterly trending faults. Several of these faults have been mapped either by topographical controls or geological inconsistencies between the close-spaced trenches. There appears to be an absence of any fibrous mineralization such as actinolite, asbestos, or crysotile associated with the marble units (calcitic or dolomitic varieties).

It appears that the Galway graphite bands dip steeply to the east southeast and the Cavendish graphite bands dip steeply to the west-northwest which would confirm a synclinal structure which plunges gently southwest with the "nose" of the structure in the northeast part of Cavendish Township (Northwest Anstruther Township). Biotite host rock consisting of syenite and amphibolite is observed in-between these structures and within the mid-axis.

It is believed that the syenite-rich rocks with associated surrounding marble-rings are in fact of carbonatite origin and the deposits are associated with a ring structure around a pyroxenite-rich carbonatite and alkalic-complex. Several brecciated faults with carbonatite fragments have been observed. The higher-grade green mica shearing is probably associated with pyroxene altered to chlorite with minor epidote. The highest-grade purple-golden-brown vermiculite is probably associated with high iron content with iron formation affiliations.

Diamond drilling in the latter part of 2001 has indicated a possible affinity of the vermiculite and graphite with carbonatite-nepheline complexes which border with syenite-pyroxenite complexes which band around an alkali-rich granite core. Zinc, chalcopyrite, and molybdenum occurrences are spatially located around the syenite complexes but not necessarily coincident with the graphite or vermiculite bands. Graphite is most likely influenced by folding, pinching and truncation / trapping structures. Original graphite appears to be associated with contact areas of amphibolite intrusions with later marble fold structures.

Flake graphite is found within folds within the calcitic marbles (Galway and Cavendish Townships), and within stratabound-sulphide rich amphibolite gneisses (Galway Township). The amphibolite gneiss units are visible on surface due to the shallow-overburden cover throughout the area and visible by rusty-red surficial soil horizons.

Geological Table of Formations

Phanerozoic- Cenozoic- peat, marl , sand and gravel (glaciofluvial)

Paleozoic- Ordovician (middle) (453-478 Ma)

-Bobcaygeon Formation Limestone

-Gull River Formation Limestone

(trilobite and gastropod interfaces)

-Shadowe Lake Formation Limestone Precambrian-

Proterozoic-1160-1220Ma

Carbonatite Suite-Pegmatite

Carbonatite

Granite

Syenite

Diorite-Gabbro

Alaskite Suite- Felsic Intrusive (gneisses)1240-1270Ma

Diorite Suite - Felsic Intrusive(granodiorite gneiss)

Mafic Intrusive (gabbro gneiss)

Trondhjemite Suite- Medium Intrusive(monzonite gneiss)

Medium Intrusive(granite gneiss)

Medium Intrusive(granodiorite gneiss)

Mafic Intrusive(diorite gneiss)

Nepheline Suite-Alkalic Syenite Intrusive(potassic syenite gneiss)

Nepheline Syenite Intrusive

Mafic Alkalic Intrusive(nepheline gabbro)

Anorthosite Suite- Mafic Intrusive (gabbro gneiss)

Calcareous Metasedimentary Suite-

Calcitic Marble (gneissic to massive)

Dolomitic Marble(gneissic to massive)

Amphibolitic mudstone-greywacke

Calcitic-siliceous mudstone-greywacke

Siliceous Metasedimentary Suite-

gneissic greywacke

gneissic arkose

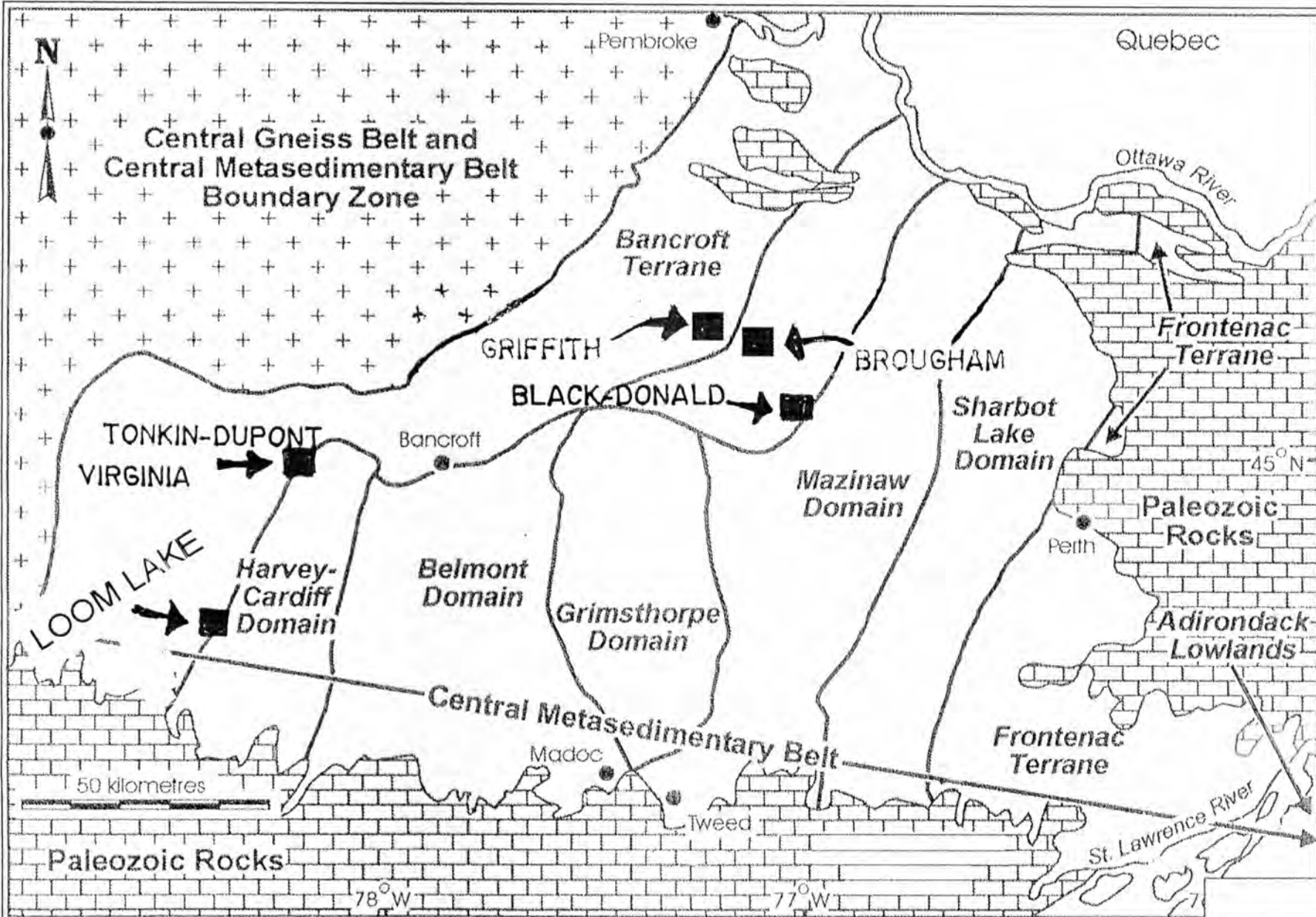
Metavolcanic Rocks-Andesite-Dacite Suite-

Felsic Metavolcanics (gneissic)

Rusty-graphitic-pyritic-pyrrhotitic

Tonalite Gneiss Basement Rock Suite

(After- S.B.Lumbers 2000, Ontario Geological Survey)



Domain subdivisions in the Central Metasedimentary Belt
(modified after Easton 1992).

Domains of the Central Metasedimentary Belt

Domains of the Central
Metasedimentary Belt

July 2012

Regional Geological Mapping -

The Bancroft Terrane and the Harvey-Cardiff Domain are dominated by deformed calcitic and dolomitic marbles and quartzo-feldspathic gneisses and amphibolites which have been intruded by felsic syenites and granites and by mafic gabbros and anorthosites. The syenites and granites are 1279 Ma to 1220 Ma (A. Miller, 1983). These have undergone shallow-water deposition and upper amphibolite facies metamorphism. Graphite is associated or parallel to carbonate hosted vermiculite, zinc, copper, and nickel mineralization.

The graphite-rich zones have been extended through several Townships which include: Galway Township, Cavendish Township, Glamorgan Township, and Monmouth Township.

The graphite rich calcitic-marble to gneissic amphibolite units are associated with both the felsic-alkali rich Anstruther Batholith and the Cheddar Batholith complexes. The Anstruther Batholith Intrusive, a gneissic-oblong structure of fifteen to eighteen kilometers in diameter, is mainly trochilite to granodioritic in composition. The Cheddar Batholith Intrusive, a gneissic-oblong structure some nine to ten kilometres in diameter, is peralkalic alaskite to syenite in composition.

Although the graphite rich units probably wrap around all sides of the batholith structures, the most important are those associated with the west side of the Cheddar and Anstruther Batholith, and the north side of the Anstruther Batholith. The graphite zones on the west side are generally associated with gneissic-syenitic marbles, while those along the north side of the Anstruther Batholith are associated with gneissic-syenitic-amphibolitic marbles.

The graphite bands are generally associated with highly sheared calcitic marbles which are in close association with syenites (alkali feldspar rich) and amphibolite units. There is also a relationship between nepheline syenite marble and carbonatite marble which is probably predominantly *Malignite* (nepheline syenite) with a lesser degree *Ijolite* (nepheline pyroxenite).

A) The **Western Graphite Belt**, which is comprised of at least four to five parallel-bearing structures ranging from a meter to over 100 meters in width and was first discovered in 1999 but the original graphite find not until

2002/2003. These units converge and diverge and are directly influenced (ie-pinched-out) by later stage granodiorite, syenite intrusive units, amphibolite-pyroxenite intrusive units, and gabbro-anorthosite intrusive units. The intrusive units influence pinching around the contact areas (ie-Hadlington Lake gabbro-pyroxenite Intrusive, Trooper Lake anorthosite-gabbro Intrusive, Greens-Pencil Lake syenite, Wolf Lake gabbro Intrusive, Loom Lake syenite Intrusive, Concession Lake granodiorite Intrusive).

The Western Graphite Belt has been traced for a strike distance of at least 29.0 kilometres.

B) The **Eastern Graphite Belt** has been traced for a strike distance of at least 36.0 kilometres. No graphite exploration has occurred on this part of the deformation structure although the composition is similar to the Western Belt.

North Extensions (Picard Lake Area)- Zones A & B, paralleling each other, have been tested over a strike length of approximately 400 metres. Zone C, tested over a length of 1000 metres and an average width of 61.7 metres. Zone C has been traced for at least another 1800 metres to the north for strike length total of at least 2800 metres. Zone D, traced for a strike length of approximately 3800 metres, consists of two zones averaging 30.0 to 130.0 metres width for each zone.

Northeast Cavendish (Pencil Lake Area)- Zones A through C were trench tested over a length of approximately 3000 metres. Zone A, traced for some 5900 metres strike length, averages 12.6% vermiculite over an average width of 65.0 metres. Zone B, traced for some 2975 metres strike length, averages 11.1% vermiculite over a width of 42.5 metres. Zone C, traced for some 2975 metres strike length.

West Monmouth (Hadlington Lake Area)- Zones A through C of the Pencil Lake Zone (Cavendish Township) converge as one zone, which has been traced for approximately 3500 metres. Zone A, some 80.0 to 120.0 metres width.

Cheddar Batholith (Ring Structure)- This zone, varying between 350 metres and 1000 metres in width, has been traced around the west and south sections of the Cheddar Syenite Intrusive.

Generally there are two deformation belts which converge in the central sections and split where the Cheddar Batholith-Anstruther Batholith and the Burleigh-Anstruther Batholiths meet. These zones dip 45 degrees

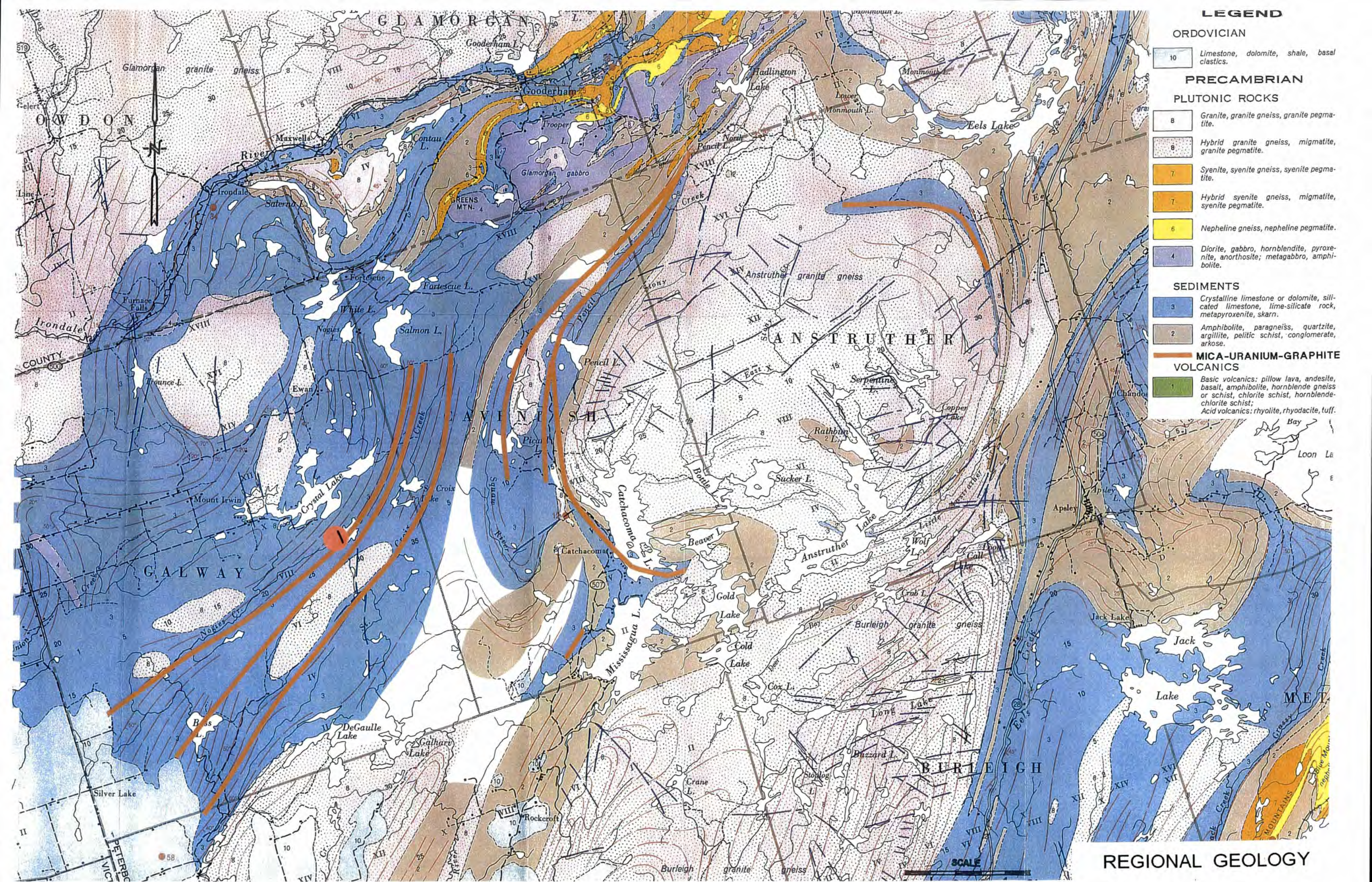
northwesterly to vertical (mainly steeply dipping northwesterly).

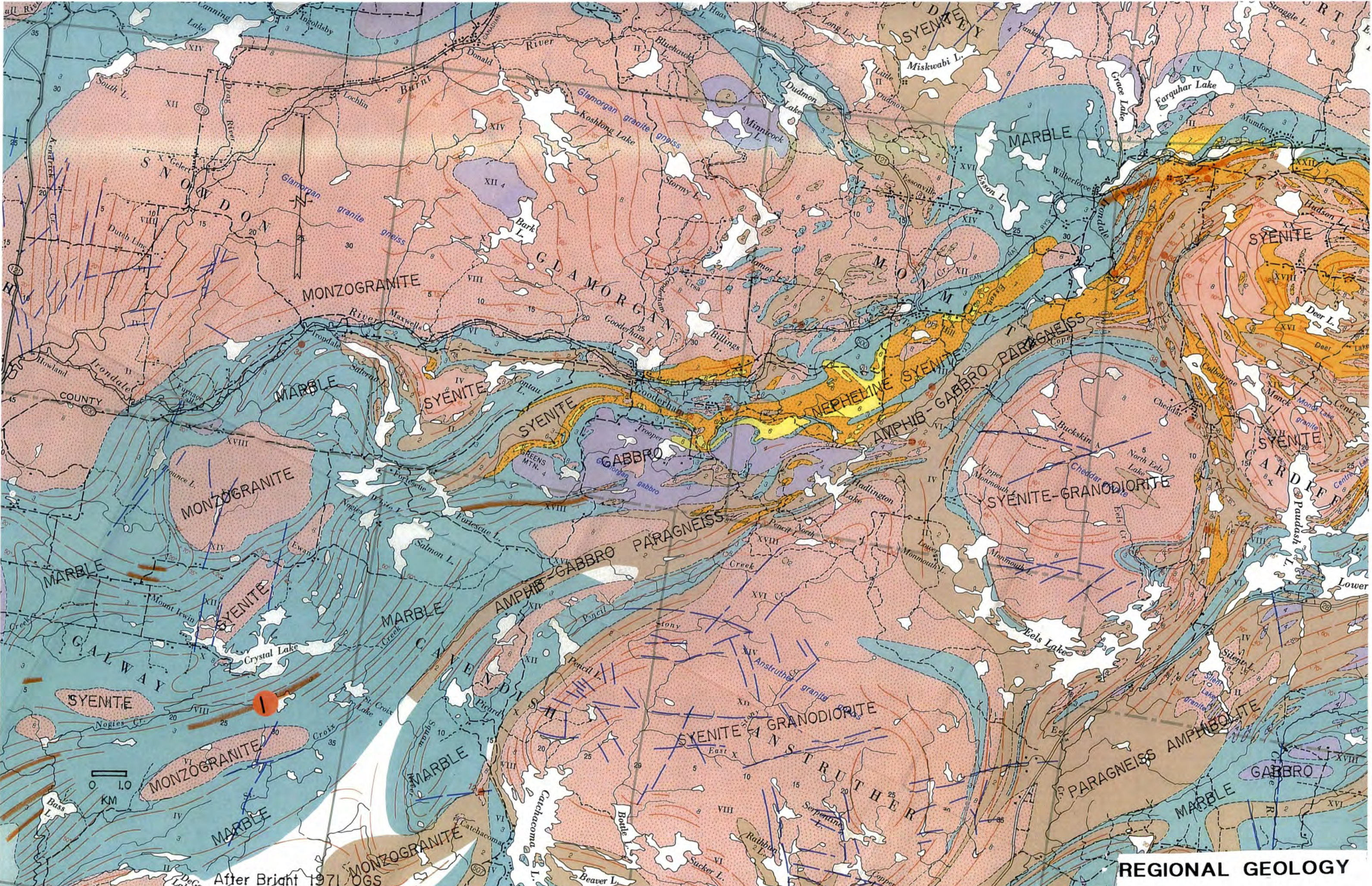
It is possible that the Western Belt and the Eastern Belt are in fact part of a synclinal trough system and in actuality are part of the same system. There are several major cross-cutting faults trending north-south and northwest-southeast; the most significant being the Bass Lake-Nogies Creek Fault and the Otter Lake-Loom Lake Fault. It appears some of the mineralized-marble units are truncated and/or offset along these faults.

A majority of the delineated tonnages of vermiculite have been calculated from the southwest portion of the Western Vermiculite Belt, and first production (possibly in mid-2002 at 40,000 tons vermiculite per year) will come from the southwest portion of the Eastern Vermiculite Belt.

It appears that the best grade vermiculite is associated with steeply dipping or crenulated-banded marbles whereas the graphite is associated with shallow-dipping structures and fold-noses. Where there is a shallow dip, the marbles appear to be mainly crystalline and only superficially weathered. The marble units along the west edges of the Cheddar and Anstruther Batholiths are steeply dipping (southeasterly and northwesterly) whereas the marble units along the eastern contacts of the Cheddar and Anstruther Batholiths are shallow-flat dipping (southeasterly) .

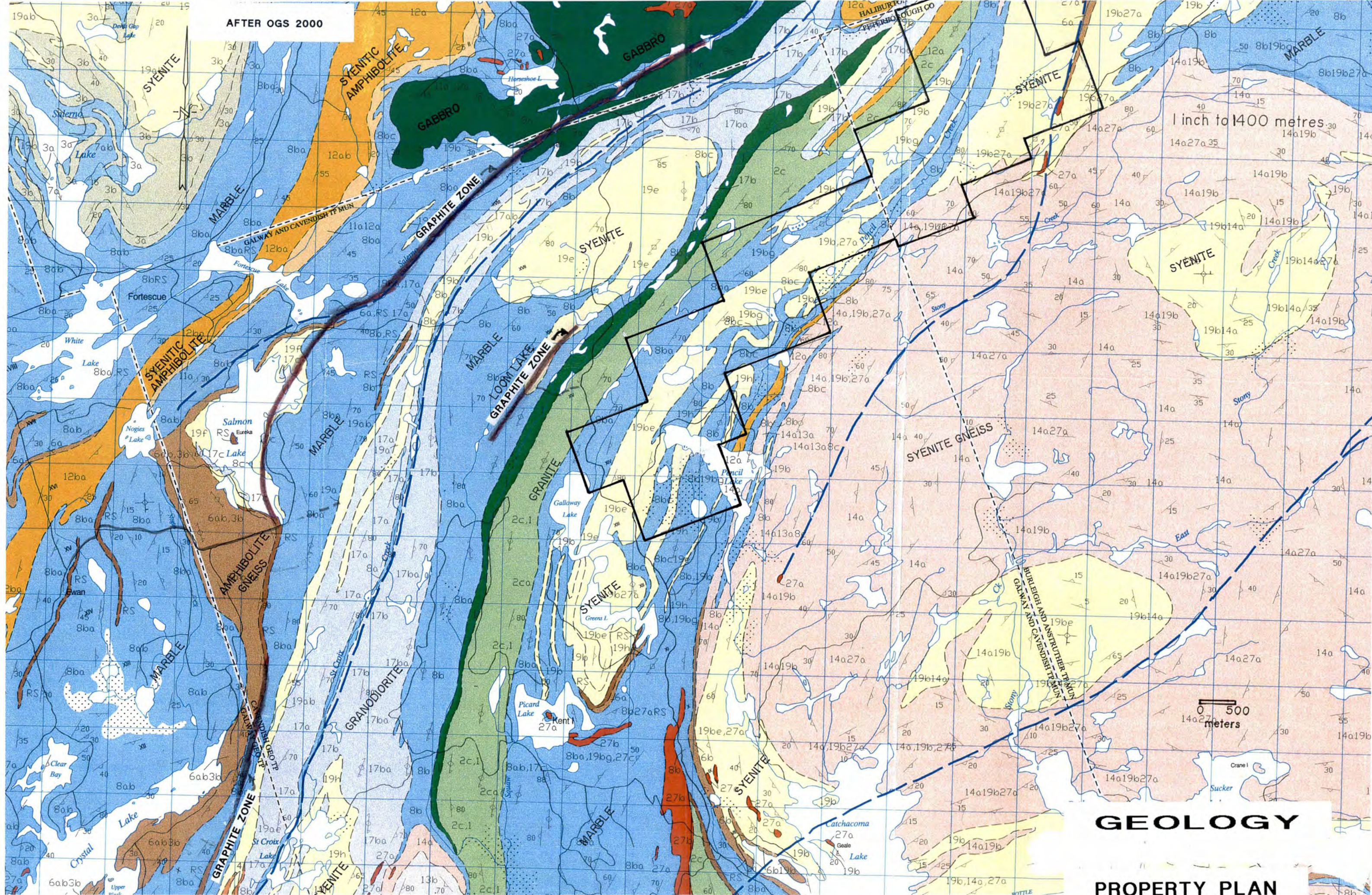
Mapping of the graphite and vermiculite zones (generally associated with calcitic marbles and amphibolite gneiss dykes) by the author from 1992 to 2007, show a greater continuity than do the Ministry mapping programs which show a system of more intense faulting and truncation. Ministry mapping programs are aided by interpretations of regional settings whereby the F.T. Archibald mapping programs use field mapping, till sampling, cross-country trenching, and drilling techniques to define more localized settings.





REGIONAL GEOLOGY

AFTER OGS 2000



GEOLOGY

PROPERTY PLAN

Property Geology-

Mapping in the area by Ontario Geological Survey (Bright) occurred in the area in 1976. A second mapping program occurred in 2013 by the Ontario Geological Survey (Mike Easton). The Cavendish Township and northern part of Galway Township was mapped during both programs.

The graphite host rock is calcitic to dolomitic marble and medium to coarse grained siliceous metasedimentary gneiss (amphibolitic para-gneiss). These units occur close to rocks that have undergone intense metamorphism and deformation (ie- shear or fault zones). These rocks also contain biotite (changing to vermiculite with intense temperature and metamorphism). Feldspar (plagioclase), silliminite, and garnet are also present along with pyrite and pyrrhotite (up to +/-10% sulphides).

An indicator of graphite has a grey appearance within the marble units and is designated by a red (rusty gossan) colour within the para-gneisses or above soils).

These highly deformed graphitic units have been folded within northwest trending and easterly steeply-dipping recumbent folds which are refolded by large broad open-folds. The quartz and feldspar has been remobilized during metamorphism and appears to be migmatitic in sections due to the shearing. The micaceous-biotite layers and pyrite-pyrrhotite concentrations (iron-formation type) are usually indicative to concentrations of graphite.

The graphitic para-gneiss is distinctive by the grey colour and recessive weathering of rocks with a profound red-ankerite soil on surface-oxidized areas. In the area of the claim the graphitic-bearing rocks (calcareous-quartzofeldspathic para-gneiss) usually contain 1% to 4% flake graphite that is expected to increase in value within contact or shear areas. Biotite (and graphite expectively) increase in amounts when closely associated with the steeply-dipping shears versus the flat-lying zones.

These graphite-bearing fold zones can be over 300 meters in thickness (as observed at the west end of Loom Lake. At the east end of Loom Lake they appear to narrow but are continuous for several kilometers and are thought to be part of the Salmon Lake-Salerno Creek gneissic zones. This particular horizon has been mapped and traversed by the author for between 14,500 meters to 19,500 meters in strike length. The eastern end appears to be non-

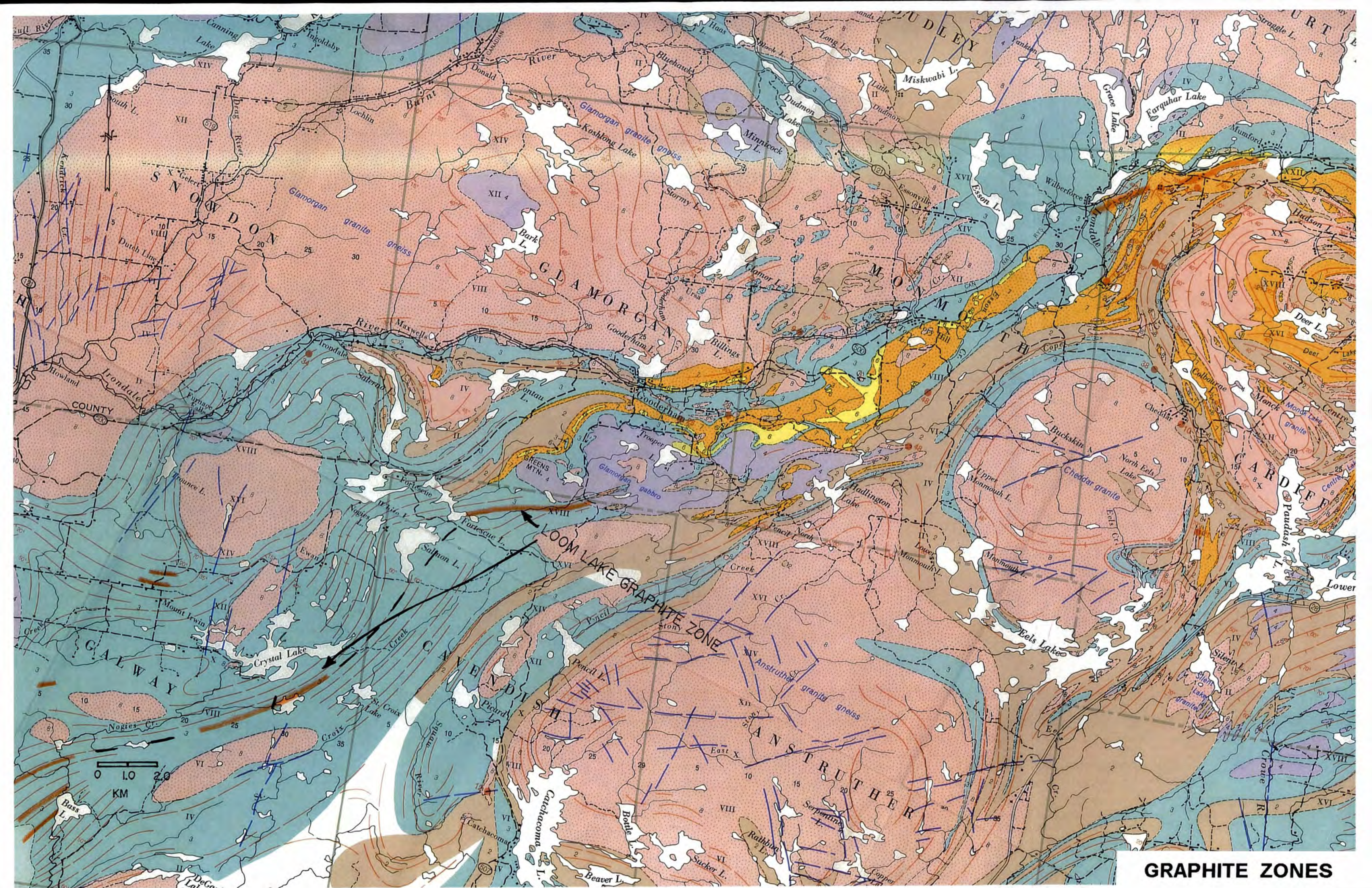
graphitic although more detailed work needs to be done. The Salmon Lake para-gneiss is over 400 meters thick but has never been systematically sampled.

Higher grades of graphite occur usually along rock contacts or closer to major shears and faults. It has been observed that there are major faults at the north and south side of the Loom Lake para-gneiss unit.

The most common composition of the graphitic schist-bearing belts are the biotite-feldspathic-siliceous schists and para-gneisses. Pegmatite dykes are common particularly along the south contacts where coarse-vermiculite bearing dykes can be found. Also along the contacts can be found graphitic-micaceous quartzites (usually along the southern contacts).

Flake graphite veins can also be found within the calcitic and dolomitic marbles along the contact with the paragneisses. Along the contacts between the paragneiss and marbles can be seen vugaceous (flake) graphite pods with pyrite-pyrrhotite mineralization (as denoted by a yellow-weathered colour versus the red-oxide colour within the gneisses).

It appears that there is some association between vermiculite and graphite; vermiculite formed from highly metamorphosed (high temperature and pressure) biotite mica usually within areas of intense shearing. Graphite is also formed from high metamorphic temperatures above 400 degrees Centigrade (Landis, 1971). Pegmatites have intruded shears and large flake biotite is formed during a period of slow cooling of hydrothermal fluids.



GRAPHITE ZONES

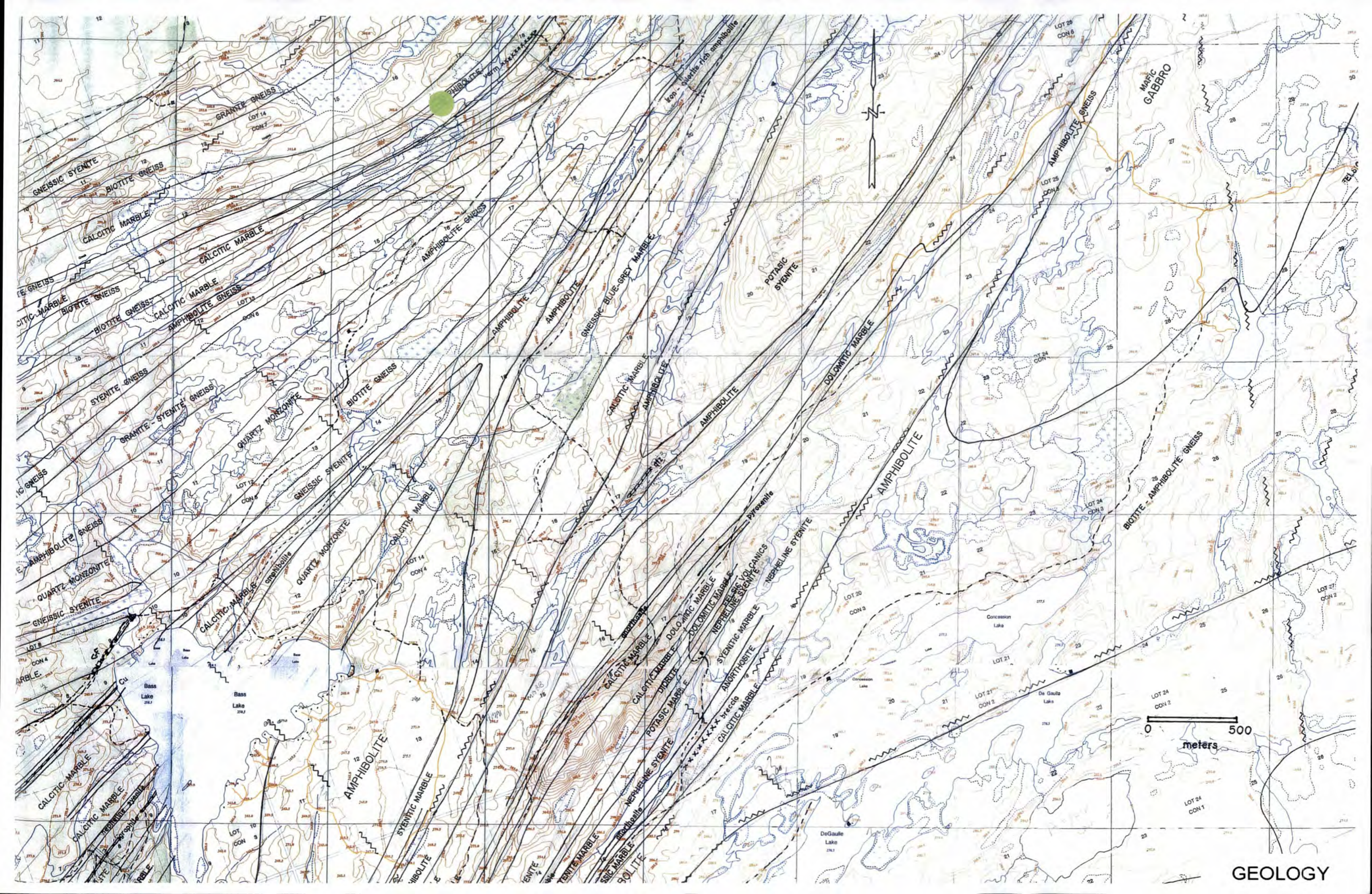
2015 Exploration Program Specifics-

The areas of northeastern Galway Township and northern Cavendish Township were mapped by Frederick T. Archibald BSc. Geology (graduate of Carleton University in Ottawa in 1978). These mappings were done in greater detail than those of previous mappings done by ODM and OGS and do vary considerably from the Ministry mappings in both contact boundaries and rock type units.

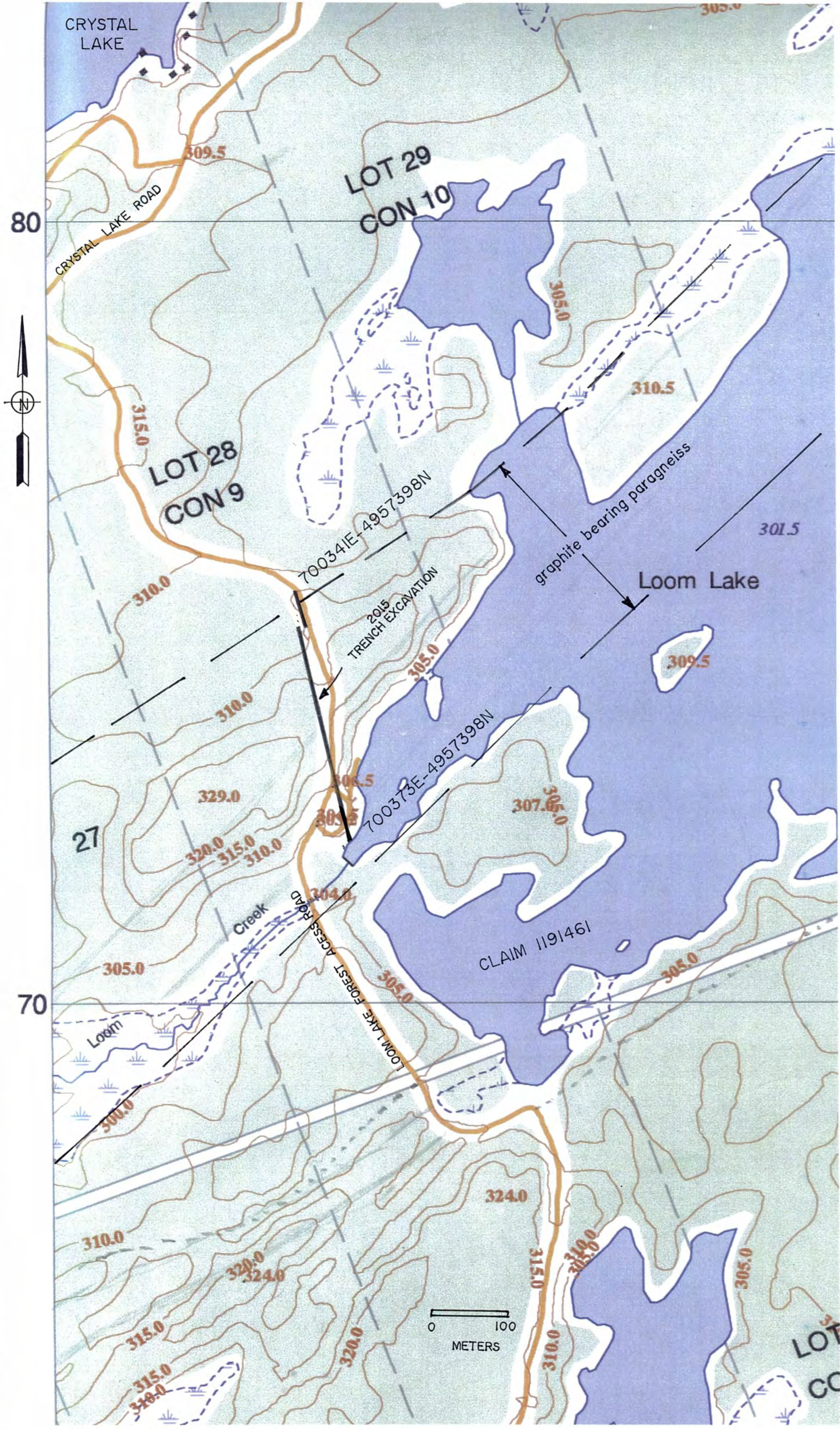
The areas within claim **1191461** were mapped with 50 meter traverses running north-south (and cutting against the regional northeasterly geological strike). These lines were flagged with flags pulled after the surveys were completed. All sampling points were done using a Garmin GPS with +-3m sensitivity. Access to the *Crystal* site is by car or truck from the Crystal Lake Road to Loom Lake Fire Access Route, and access to the *Salerno* site is by car along the Salmon Lake Road via County Road #507 and by ATV along the snowmobile trails.

The main *Loom-Lake* graphite occurrence is at the northwest end of Loom Lake where "sheets" of graphite can be seen on the hillside which has been exposed by ATV traffic, and along the Loom Lake Forest Access Road from Loom Creek to the north for over 300 meters along the road.

The 2015 excavator trenching program consisted of one long trench (perpendicular to the regional strike) of some 300 meters in length from the marble contact to the north but not reaching the marble contact in the south. The trench varied from 0.50 meters to 2.0 meters in depth with surface organics averaging 0.10 to 0.15 meters in depth. A 2 inch by 2 inch channel was dug in the bottom of the pit and sampling widths varied generally from 5 meters to 20 meters (averaging 10.0 meters) in width. The samples were quartered and bagged, sealed, and then sent to Activation Labs in Ancaster, Ontario by Fedex courier. The trenches were mapped and then filled in to rehabilitate the disturbed areas. A work-exploration permit was obtained from MNDM in August of 2013 and is in good standing until August of 2016 (see claim abstract on Ministry website for claim 1191461). This exploration permit was approved by Jamie Fairchild, MNDM for Southern Ontario. The trenches were covered and the land rehabilitated upon completion of the sampling and mapping program.



GEOLOGY



TRENCH LOCATION PLAN

Deposit Types & Mineralization-

The graphite occurs within fault and shear zones which surround the contacts with alkalic syenite and granite complexes. They occur within carbonatite- nepheline- pyroxenite rich zones which were introduced to intense hydrothermal currents within the rocks; thus highly porous rock environments such as those within deep-seated fault deformation zones.

Vermiculite is an alteration product of biotite (higher grade) and muscovite (lower grade) micas which have been subjected to intense surficial weathering and oxidation, intense water percolation, and high temperatures such as those encountered within deep-seated fault zones.

Graphite-bearing zones are associated with highly sheared (micaceous) rocks are associated with biotite rich calcium carbonate marbles and muscovite rich dolomitic marbles which were layed down under marine-lake environments. The Loom Lake graphite bands is the widest continuous-graphitic band located to date in Galway and Cavendish Townships although there are wider bands of less-dense graphite reported within the Salerno Creek belt.

A secondary source for graphite-bearing zones is amphibolitic gneiss which lies close to the contacts with both faults and marbles and have a nepheline-syenite association.

It appears that a majority of the graphite occurrences are flat lying and dip 45 degrees to 55 degrees. It is suggested that graphite veins are controlled by amphibolite gneiss dykes and are controlled by folding within the marble units. The amphibolite gneiss units are up to 150 meters width and both the graphitic amphibolite and graphitic marble units can be traced for several hundreds of meters. Rusty (red-orange) overburden is a good indicator that there is graphitic and or sulphide-rich material directly underneath.

In summary, the graphite zones are located as or within:

- A) disseminations within layered amphibolite- biotite-silica gneiss metasediments (usually limonitic to ankeritic horizons)
- B) disseminated to coarse-crystalline flake graphite veins within contact calcitic and dolomitic marbles

- C) veins within calcitic marbles near folding / fracturing / trap-structures
- D) contact metasomatic calcareous marbles

Sampling Method & Approach -

A backhoe excavator , Cat model 330LC with a flat blade and rented from Buckhorn Sand & Gravel, was used to trench across a known graphite bearing gneiss unit located on the west side of Loom Lake in Galway Township. One trench was put in perpendicular to the regional strike (the trench generally in a northwest to southeast direction to a north-south direction). This trench was dug down to unweathered bedrock face, then mapped, channel sampled, and filled-in (rehabilitated).

Generally, the surface layers of bedrock have been weathered and can easily be trenched perpendicular to the regional strike of the rock units. Once a trench is dug, channel sample is done from the sides of the trench from an intermediary / mid level and from the bottom of the trench. Samples taken were generally in 0.50m to 1.0m lengths. Samples were visually logged before being sent to Activation Labs in Ancaster, Ontario for graphite (using LECO method) analyses.

Activation Labs of Ancaster, Ontario are ISO-Accredited as per the Standards Council of Canada. The graphite assay is derived from graphitic carbon using the LECO method. A 0.10 gram sample is leached by hydrochloric acid to remove carbonate and inorganic carbon. After leaching, washing, and drying the sample is roasted at 425 degrees centigrade to remove any organic carbon. The final roasted concentrate is analyzed for graphitic carbon using a high temperature LECO furnace with infrared detection. Samples are submitted with blanks and duplicates to ensure lab integrity.

Sampling Preparation, Analysis and Security-

F.T. Archibald and F.T. Archibald Consulting Ltd. have been involved with a majority of the sampling programs in the immediate area since 1992. F.T. Archibald and F.T. Archibald Consulting Ltd. have been registered in Ontario under the APGO under permit # 1052.

Surface samples are either chip or sawed channel samples from exposed rock outcrop. From site the samples are bagged and security tagged with duplicate samples. They are logged on site or at the warehouse in Concord, Ontario (668 Millway Ave. Unit 15) and then taken by FEDEX courier in sealed bags to *Activation Labs* in Ancaster, Ontario (41 Bittern St. lab).

Sampling & Assaying Techniques-

Soil and Rock samples were taken as chip samples and/or channel samples from outcrops and trenches respectively. Every tenth sample is run using standards, duplicates and blanks.

Pulps and rejects are stored at the lab for 6 months and sent back for storage at 668 Millway Ave. in Concord, Ontario for permanent storage.

Assaying at Activation Labs is done under package number 5DC-graphitic which is assay for graphitic carbon using LECO Method. Along with the graphite package the samples are run under ICP/MS using acid digestion for multi element including gold and precious metals. The ICP is under the code Au+63 (ultrabasic 3) package.

Data Verification-

Data is verified by F.T. Archibald, P.Geo. (APGO Permit # 1052) who is the qualified person on-site looking after the sampling program and reporting for this report. F.T. Archibald is a graduate of Carleton University in Ottawa (B.Sc. 1978), and has spent 38 years in the area locating vermiculite deposits and privately mapping the area. The author has mapped several areas in detail and has found that geological trends and structures do differ from the reporting by Ontario Geological Survey and Department of Mines; probably due to the fact that Ministry has not covered a much of the area and those covered have wide traverse spacings.

Activation Labs of Ancaster , Ontario is accredited under Canadian Standards.

Adjacent Properties-

The *Vermiculite Corporation of Canada Inc.* has been extending eleven parallel zones for up to several tens of kilometers in length. Six areas have been chosen for bulk sample studies in 2007, and materials will be custom blended dependent upon grade (sizes), colour of exfoliated product, density, purity, and water retention.

Vermiculite Corporation of Canada Inc. controls at least 89% to 90% of the total vermiculite in the area and almost all of the coarser vermiculite (coarser than 1.0 mm un-exfoliated size).

In 2012, Valterra Resource Corporation optioned the graphite rights on properties owned by Earth Resources Limited. It has been found that the graphite-bearing zones are adjacent and coinciding directly with the vermiculite-bearing zones. Valterra Resource Corporation have not provided funds for this project since March of 2013; and their option agreement has not been full-filled.

There are several aggregate operations in the area for limestone and granite trap-rock. The limestone generally covers over the vermiculite-bearing host rocks and the granites (syenites) are younger than the vermiculite host rocks and have intruded into them.

There is potential for uranium and thorium mineralization coinciding with the vermiculite-bearing areas, and there are several areas of molybdenum / zinc / gold / silver / copper occurrences which parallel the vermiculite zones or have intruded within dykes which cut across the vermiculite. Zinc, silver, and molybdenum are spatially related to the graphite occurrences but are sometimes inter-related with the same units.

The Loom Lake Graphite Occurrence and the Salerno Graphite Occurrence have no associated vermiculite lenses although the Salerno Graphite Occurrence appears to follow the SCDF (Salerno Creek Deformation Zone) between Nogies Lake to the west and Highway #507 to the east. The graphite zone splits along the contact with the *Glamorgan Gabbro Batholith* complex.

Mineral Processing & Metallurgical Testing-

One bulk sample was taken from the main graphite discovery on the west side of Bass Lake and taken to SGS Labs in Lakefield for analysis. This sample was taken from a backhoe excavator composite of the main graphite showing on Lot 9-Concession 3 & 4 of Galway Township. The sample was taken from a composite along the backhoe trench wall some 2.0 meters below surface and over some 10 meters horizontal distance. The results are described in the Valterra Resource Corporation public news releases for 2012-2013.

The bulk sample test from the main graphite discovery zone was performed in October of 2012 by SGS Canada Inc. of Lakefield, Ontario.

The tests indicated 65.6% large and jumbo flake content which include 45.6% jumbo flake +48 mesh size, and 99% carbon recovery into the flash and rougher concentrate which graded 65-70% C(g).

Bulk tests show that preliminary concentrates to 91.05% C(g) contain 55.9% fine flake (-150 mesh); and leaching of the concentrates upgraded to 99.14% C(g) (Double LOI) and 100.0% C(t) by LECO. Some 31.7% of the concentrate is large and jumbo flake (+80 mesh) grading 94.9% C(g) (Double LOI). Total of 93.3% concentrates have been observed by bulk testing.

Further testing by SGS Lakefield Labs (May of 2013) has produced an ultra high purity, fine flake graphite concentrate of 99.8% Carbon by LOI method using flotation and a two-stage leaching process.

2013-2015 Exploration Results-

The *Loom Lake Occurrence* has indicated consistency of graphite percentages and potential for large surficial volumes of graphite. The percentages are similar to those reported by Northern Graphite Corporation on their Bissett Creek Project and to those reported by Alabama Graphite Corporation on their Coosa Project.

The 2015 channel excavation program has indicated significant and consistent graphite grades and potential for large surficial tonnages. It is recommended that more trenching be done along strike which is open in both directions, and that diamond drilling is warranted for a third phase.

It appears that the material becomes coarser and richer with depth below the depth of 1.5 meters.

Mapping indicated several trends of faulting, the most prominent being a northwesterly trend. These northwesterly trending faults show block faulting and/or strike-slip displacement. The *Loom Lake Occurrence* can be followed visually for 14.5 kilometers to 19.5 kilometers.

It appears that the marble complexes splay off the Anstruther Batholith Complex around Fortescue Lake, and different zones diverge towards the southwest where they are overlain by a limestone layer.

The graphite (vermiculite)-bearing zones with the main units being two to three pseudo-parallel converging and diverging units, are controlled by biotite schist faults that trend in both northeasterly and northwesterly directions. It is believed that the northeasterly faults control the biotite impregnation within the marbles, and that the northwest faults are later stage and control the displacement and widths (by erosion and weathering) of the zones.

The average depth of backhoe trenching was 1.50 to 4.7 metres in depth (averaging 1.8 metres depth until crystalline non-weathered rocks are reached although weathered surface rocks have been found to be as deep as 12.0 to 14.0 meters in depth).

In 2012 and 2013, several areas with surficial graphite were surface sampled and trenched. The main flake-graphite occurrence (Line 00-Base line 00) on Lot 8-Concesion 3&4 (Galway Township) is several meters thick and dips down to the southeast at 45 to 50 degrees and plunges down to the northeast and southwest; it was trenched for some 5 meters length and is truncated by an amphibolite gneiss dyke to the northeast. Further exploration uncovered another graphite bearing zone (with +2% graphite) at Line

2+25South at 4+00W to 4+25W and coinciding with a +30meter wide paragneiss unit. Some 1.0 to 1.4 kilometers to the north of the main graphite discovery two other graphite occurrences were uncovered. One, some 700 meters strike length, is associated with calcitic marble along the contact with paragneiss unit, and another (some 100meters + width) is associated with an amphibolite gneiss unit.

Another zone with values exceeding 2.0% graphite and located (Spring of 2013) over 100meter+ width and associated with amphibolite gneiss has been located within a mineralized amphibolite gneiss unit which can be traced over several kilometers strike at Loom Lake.

Another flake-graphite rich zone (some 20 meters width) has been located (Spring of 2013) within calcitic marbles. This zone coincides with zinc-bearing marbles that were drilled by St.Joes' in the mid 1980's and drilling indicated wide widths of graphite-bearing marbles adjacent to the zinc-bearing marbles.

A total of some 41 channel / chip samples were taken from the 2014 rock sampling program at the Crystal Zone and the Salerno Zone. There have also been total element samples taken from sites adjacent and surrounding these sites.

In 2015, an excavator-channel sampling program across a section of the Loom Lake Graphite Occurrence uncovered 295 meters width of which 24 continuous channel samples were taken. Values appeared to be higher than those taken over the surficial areas in 2014 suggesting that values increase in less-weathered phase of the paragneiss units. Mapping of claim 1191461 was done and graphite rich zones were observed by surficial "red-rusty soils" which generally overlie the graphitic rich para-gneiss rocks.

Mineral Resource Estimate-

Not available for graphite-bearing zones as only preliminary data is available and only limited preliminary data is available. The most competent and continuous zone (width and length) are found within the Loom Lake graphite occurrence under claim 1191461. The 2015 excavator trenching and stripping program has confirmed this.

Some six surficial graphite zones, most of which show significant tonnage potential, have been outlined. At least two of these indicate significant flake graphite. The Loom Lake Occurrence is considered to date to be the third most important zone (as compared to the Salerno Creek Occurrence and the West Bass Lake Occurrence).

Diamond drilling of these zones and the induced polarization anomalies will indicate zones with the best potential (grade and tonnage combined) along with excavator-trenching along strike.

Environmental Aspects-

The vermiculite-bearing lenses are associated with marble complexes (calcitic-carbonate and dolomitic phases), and within amphibolite gneiss complexes. There are also variances within these two types of complexes varying to granitic to syenitic phases.

The marble host rocks are generally free of any gangue mineral and/or fibrous minerals such as tremolite, crysotile, or asbestos. The amphibolites are likely to have tremolitic fibres and therefore they are least favourable for vermiculite sources. Asbestos fibres and radioactive minerals have been found and located within pegmatite dykes and coarse-grained granitic rocks; and sampling in close to these units are generally not suggested.

The vermiculite within marble host rocks has never shown indications of gangue or fibrous minerals, and testing since 1992 using three different labs has confirmed this. Continuous breathing of non-exfoliated or exfoliated vermiculite can cause abrasion to the lungs but there are no long-term side-effects known to be caused by vermiculite.

Calcium-carbonate associated vermiculite, although usually smaller in size, tends to have better expansion qualities and lighter in colour than dolomitic associated vermiculite. The dolomites appear to have greater magnesium content than the calcium carbonates.

There are no known environmental detriments associated with the known graphite-bearing areas. Several monitors have been placed around the main graphite discovery and all elements (including metals and e-coli) are below the Ministry of Environment prescribed guidelines for Ontario; with exception of one water sample from one monitor which returned higher acceptable for drinking sample for sodium analysis. It is possible one of the local hunters placed some salt from their close-located salt-licks used during deer hunting season.

Other Relevant Information & Data-

Within the one kilometer square grid that was set around the original flake-graphite showing, several significant graphite anomalies were outlined for further testing. Exploration within the grid area uncovered one other significant surficial graphite showing some 400 to 500 meters northwest of the original discovery. Some four other significant graphite showings (with both width and strike length potential) have been located in other sections of the property.

Due to the fact that this area has not had limited historical prospecting for graphite, and the present program has focused on one small area, there is significant potential to find other flake-graphite occurrences.

Geological mapping compilations by F.T. Archibald have indicated areas which have potential for graphite mineralization. This data is part of a private data-base owned by F.T. Archibald and is not part of the public (MNDM or GSC) files.

Graphite Properties and Uses-

Graphite is lightweight, high strength and rigidity (resistant to heat over 3600 degrees centigrade), and highly conductive which makes it unique mineral. It is used in lithium batteries, steel-making (autos and airplanes), solar power, nuclear, and computers. In the steel industry graphite increase the carbon content in steel. In the auto industry it is used in hybrid batteries, brake linings, gaskets, , and cluth materials. In industry graphite is used in lubricants, fire retardants, and for plastic strengthening. Industrial demand for graphite is growing by at least 5% per year.

Flake graphite is in high demand and only a few occurrences in Canada have a source of large or jumbo flake graphite.

Graphite World Production & Markets-

China is the largest producer and user of graphite, with Canada being the fifth largest producer. India and Brazil respectively are the next largest producers of graphite after China.

The price of flake graphite averages \$2000 to \$3000 per tonne and demand since 2010 has increased substantially; the price increasing three-fold since 2005. Graphite demand is growing by at least 5% per year. The graphite market uses over 1 million tones per year of which 60% is amorphous graphite and 40% is flake graphite. Flake graphite can be upgraded to 99.9% purity and is ideal for use in lithium ion batteries.

Interpretation & Conclusions-

Vermiculite bearing zones are both adjacent and intercalated with the graphite zones. Biotite mica is related to both the vermiculite (as weathered biotite mica) and graphite (within sheared marble and paragneiss units). A total resource estimate of 94,468,990 tons @ 16.0% vermiculite has been delineated by the preliminary feasibility study of five zones within Galway Township down to an average depth of 4.7 meters. As well these zones average 16.0% to 29.0% MgO and 8% to 14% Al₂O₃ within marble bands which suggest a potential for carbonatite complex in the area. In Galway Township alone, it is estimated that there is 11,457,551 tonnes of vermiculite concentrate which would supply all of North America's demands for at least 27.6 years (Canadian demand for 188 years) at the current rate of consumption. There are bands of vermiculite bearing marbles mostly along the south contact area of claim 1191461, but also along the marble contact areas with the graphite-bearing para-gneiss in the central section of claim 1191461 and extending past the east and west boundaries (along strike).

The vermiculite-bearing zones can be used as marker horizons for locating the graphite-bearing zones. SGS Lakefield has indicated graphite with vermiculite (Ni/Cu/Zn) associations and it is known that the vermiculite zones are consistent over many kilometers of strike length.

Graphite bearing zones within Galway Township (claim 1191461) are also associated with contact paragneiss and contact marble units, and are also observed in sulphide rich (iron-formation amphibolite gneisses). A graphite bearing zone averaging 248 to 300 meters width and some 1600-1900 meters in strike length was observed on the central portion of claim 1191461. The average value over the entire width is 2.25% Cg (graphite). Higher values up to 4.15% Cg (graphite) are found along the northern contacts of the paragneiss host rock. The higher grades are designated by larger boudinages within sulphide rich (yellow weathered) rocks. The graphitic bearing paragneiss is distinctly notable by its red-rusty appearance, and is sheared-faulted at both contacts. At both the north and south contacts are marble units with biotite (vermiculite) rich lenses. The width of the graphitic paragneiss varies along strike due to cross-cutting (block fault) structures, folding (anticlinal and synclinal structures, and intense surface weathering and glaciation). To the

west this graphitic unit disappears under swampy-overburden areas, and to the east it is truncated by a cross-cutting fault structure. This graphite unit on claim 1191461 appears to be in line of strike with the 300m wide graphitic-paragneiss structure to the north of Bass Lake, and also with the folded graphitic-paragneiss structure to the southeast of Fortescue Lake (ie-Salerno Creek Deformation Zone).

There is potential for significant graphite discoveries in Galway and Cavendish Township. Mineral Resource Estimates can be expanded along strike, along width, and to depth for several of the significant graphite zones known to date. Only one zone has been explored in detail, and there is potential in at least five other zones (not including the many targets outlined by the induced polarization geophysics. The graphite zones were located during the trenching of the vermiculite zones and are found both adjacent and associated with the higher-grade vermiculite which lies along the contacts between marble units and amphibolitic (arkosic metasediment and paragneiss) gneiss units and quartz monzonite-pegmatite dyke systems.

The Galway-Cavendish graphite zones dip southeast lie within major deformation zones along the contact between the Bancroft Terrane and the Harvey-Cardiff Arch Domain. The graphite zones are within a synclinal system of highly folded marble units and are probably controlled by fold structures and amphibolite-gneiss dyke feeder zones. It is thought that the "main feeder" for this system is from biotite-rich syenite to nepheline syenite intrusives. At least two potential carbonatites (one of which is fault-displaced) have been observed to be associated with the higher-grade vermiculite (and graphite related) systems. The vermiculite is a product of altered biotite mica which occurs within a syenite-rich marble host rock of marine origin.

Induced Polarization surveys work well to define the flake graphite/vein type graphite conductors and visible rusty-red soils overlying the sulphide-graphite rich amphibolite gneiss units are used to detect new graphite zones in the area. Several targets, some of which have indicated graphite associated with them, are ready for channel sampling and diamond drilling

There is close-spacial relationship between graphite-bearing marbles and amphibolites; most likely due to shearing and deformation.

Several significant graphite zones (six in total of which two are of flake-graphite nature) have been located by the limited initial exploration program and there is good potential to locate new zones of graphite. The most

significant is located within claim 1191461 as confirmed by the 2015 exploration program.

Although there are seven significant graphite zones that have been located, some of which are parallel and adjacent units, several appear to be located within the same deformation corridor which can be traced for over 25.0 kilometers in strike length. This same deformation corridor appears to be in strike with several past-producing graphite occurrences within Cardiff and Monmouth Townships (Wilberforce / Cardiff area).

The **Loom Lake (Crystal) Zone**, which can be trace on surface for at least 1200-1900 meters, appears to be located within a fault-(contact) controlled deformation zone that is approximately 300 meters in width. There are two graphitic rock types associated with this deformation system: amphibolitic metasedimentary para-gneiss which averages 2.0-3.0% Cg (graphite) within the central section, and gneissic-calcitic marbles which averages 2.0% to 4.0% Cg (graphite) within the northern contact areas.

It is believed that the Loom Lake graphite occurrence extends to at least the southeast corner of Fortescue Lake (to the northeast) and to the north side of Bass Lake (to the south west). Although these zones have been privately mapped by the author (1996 to 2007), there are a series of block faults and slip faults in areas of low-swampy ground which complicate following these zones along strike. A series of parallel graphite-rich zones have been observed in the Bass Lake area.

Recommendations-

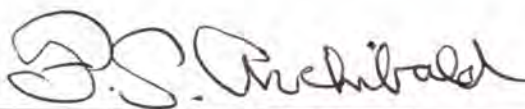
It is recommended that excavator trenching be used to further delineate the *Loom Lake (Crystal)* graphite zone, followed prospecting/mapping and by a shallow diamond-drilling program. At least two short drill holes, one at -45 degrees and the other at -70 degrees, would be used to test consistency-contenuity of width and depth of the graphitic-bearing structures.

Backhoe-excavation has been useful in delineating surficial targets in the area due to lack-of or shallow overburden and weathered bedrock near surface. Some of the zones exposed on surface need to be cleaned off by backhoe and channel sampled prior to drilling. Shallow drilling using the Prospector 89 Drill could be used for preliminary reconnaissance prior to deeper drilling. Permits take up to several months to be approved although the smaller drill can be used without going through this process as it is under 150 kilo weight. Channel sampling can also be done without Exploration Permits.

Once detailed sampling (channel sampling) and drilling has been completed then detailed resource estimates can be carried out. Priority targets on the six known graphite veins can be selected upon channel sampling across these zones. Limited backhoe trenching is needed to clear off some of the outcrops prior to channel sampling. All of these new zones have good access and road construction is not needed to reach them. Drill pads can be set up on the edge of the roads and/or trails, and water for drilling is within 100 meters of all sites.

Grade and quality (bulk) metallurgical tests can be done by *SGS Lakefield Labs or Activation (Ancaster) Laboratories*. Before production begins a marketing study must be completed to firmly establish what markets are available for the grade and flake sizes which will eventually be produced from this deposit.

August 1, 2015
Concord, Ontario



F.T. Archibald, B.Sc. Geologist, P. Geo APGO # 1052



References-

- Archibald,C.W. 1976 Qualifying Report-Cavendish Vermiculite Property Jun.1976
- Archibald,F.T. 1994 Cavendish Vermiculite Occurrence Summary Nov.1994
- Archibald, F.T. 1996 Cavendish Vermiculite Deposit (Main New Zone) Aug.1996
- Archibald,F.T. 2001 Galway Township Vermiculite Deposit July 2001
- Archibald,F.T. 2003 Vermiculite Grade & Tonnage Summary April 2003
- Archibald,F.T. 2005 Vermiculite-Limestone Marketing Study 04/05 July 2005
- Archibald,F.T. 2006 Bulk Sample Project for Verm. Corp. Canada Inc. Oct. 2006
- Archibald,F.T. 2011 Technical Report on C.W.Archibald Vermiculite April 2011
- Arch.Res.AssocLtd/04 Arch.Assessment Stage 1&2-Harvey Township Aug.2004
- Beck,P. ,2007 Jacques-Whitford Vermiculite Quarry Application Aug. 2007
- BowfinEnv.Con.Inc/03 Crystal Lake (Galway) Vermiculite Environmental Oct.2003
- BowfinEnv.Con.Inc/04 Vermiculite Operations for VCCI-Galway Townshp Aug.2004
- Childs, F.E. 2001 The Vermiculite Association- Test Methods October 2001
- F.Hyde Ltd,1951 Mining Vermiculite Ore September 1951
- Hindman,1991 Evaluation Stanleyville Vermiculite January, 1991
- Hindman,J. 1998 Cavendish Vermiculite Feasibility(Regis Res.) March 1998
- Fitchet,G.A. 2003 IBI Corporation- Uganda Vermiculite, January, 2003
- Kretschmar,U. 2003 Namekara, Uganda Vermiculite Mine August, 2003
- Mackinnon,A. 1983 OGS- Vermiculite in Stanleyville Area,Ont. Sept.1983
- McPhee,P. 2005 SGSLakefield Vermiculite(Galway)Operation Feb.2005
- Niblett,P. 2006 Harvey Ridge Quarry-Environmental Tec.Report May 2006
- OGS, 1981 Precambrian Geology of Cavendish Township P.2421
- Paterson,T. 2006 Skelton-Brumwell Archeology-Cultural Assessment Jun2006
- Paterson,T. 2007 Vermiculite Aggregate Pit Operation(North&South)May,2007
- SGS 1997 Vermiculite Mineralogy Study-Evaluation December 1997
- SGS 2005 SGS Lakefield Res.-Vermiculite Operation February 2005
- Swayze,P. 2003 Loom Creek (Galway) Vermiculite Mine Archeology Oct2003
- Titano,D. 2000 ACA Howe Int.Cavendish Vermiculite Occurrence Aug.2000
- The Verm.Assoc.2001 Vermiculite Technologies Update (Vol.1-3) July 2001
- Transplan Assoc.2005 Vermiculite Project-Traffic Impact Study March 2005

Date & Signature Page-

I, Frederick Thomas Archibald, B.Sc., P.Geo., do hereby certify that:

1. I am a consulting exploration geologist and President off F.T. Archibald Consulting Ltd. of 668 Millway Avenue, Unit 15, Concord, Ontario L4K 3V2
2. I graduated with a Bachelor of Science degree in 1978 from Carleton University, Ottawa, Ontario, Canada.
3. I am a Licenced Professional Geologist, being a member of the *Association of Professional Geoscientists of Ontario* (Permit # 1052).
4. I have worked as a geologist for the past 35 years since graduation from University.
5. I am responsible for the preparation of the Technical Report on the C.W. Archibald Vermiculite Occurrence (VCCI Deposit) in Peterborough and Haliburton Counties of Southeastern Ontario, Canada.
6. I have been involved with the exploration and mapping programs in the area since 1992 and have been involved in vermiculite exploration on these deposits since 1975. I have accumulated the data and have prepared the data within this report.
7. I was original Vendor of adjacent properties in Galway and Cavendish Townships that have achieved Commercial Production of vermiculite; the first commercial vermiculite producer in Canada. I made the original graphite discoveries for Valterra Resource Corp.
8. I am the author of this report and have prepared the entire report. I have conducted numerous site visits since 1992 and the most recent being June 23, 2015.
9. I am not aware of any material fact or material change in the subject matter of this Technical Report, nor am I aware of any data that could make this Technical Report misleading.
10. I have read the National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared as a non-compliant report for assessment purposes only.



F.T. Archibald, B.Sc Geol. P.Geo APGO# 1052
August 1, 2015

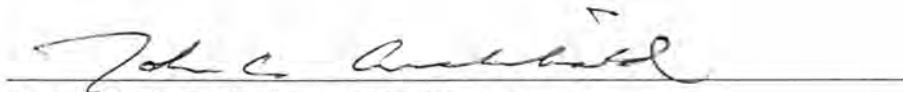


Appendice A- Owner Consent Agreement

PROPERTY OWNER WORK CONSENT AGREEMENT

The properties are owned 1005 by John Charles Archibald and John Archibald gives Fred Archibald / F.T.Archibald Consulting Ltd. (APGO Permit # 1052) permission to conduct exploration and assessment work on the Cavendish and Galway Township claims held by John Archibald (Client Number 102825). In particular, assessment work will be conducted on claim 1191461 in Galway Township under approved exploration permit # PR13-10393 which is in good standing until September 27, 2016.

Sincerely,

A handwritten signature in cursive script, reading "John C. Archibald", is written over a horizontal line.

John C. Archibald, claim owner

May 1, 2015

Appendice B- Expense Summary

2015 EXPENDITURES (Loom Lake Graphite Zones- Claim **1191461**)

Consulting & Sampling & Mapping & Trenching(14 days field)	\$ 7,700.00
Assaying Activation Lab, Ancaster , Ontario	\$ 1,068.53
Travel+mob/demob	
Truck rental – 5600 km.X 0.50	\$ 2,800.00
Fuel-(May 8,17,21,23,28, -	\$ 344.70
(June 1,5,8,11,16,21,23,26)	\$ 267.20
(July 2)	\$ 87.40
Office + photocopying	\$ 27.15
Wade Eng. Reproduction of maps	tba
Repairs to ATV	\$ 318.71
Excavating Buckhorn Sand & Gravel) trenching	\$ 1,311.08
Excavating Buckhorn Sand & Gravel #56197	\$ 616.98
Excavating Buckhorn Sand & Gravel rehabilitation #56227	\$ 2,526.33
Rentals & Equipment ATV 14 days @ \$60/day	\$ 840.00
Office Report- 8 days @ \$550 per day-----	\$ 4,400.00
TOTAL EXPENDITURES CLAIMED-----	\$ 22,308.00

Appendice C- Summary of Assays + Associated Assays

Summary of Assays (Loom Lake Zone)

960251-960274 inclusive ; 24 channel samples total

assayed by Activation Labs, Ancaster, Ontario

Summary of Significant Graphite Occurrences- Galway & Cavendish Twp.

<u>Sample #</u>	<u>UTM Coord</u>	<u>Width</u>	<u>Description</u>	<u>Cg %</u>
Loom (Crystal) Lake Zone				
960671	700368-4957607	3.0m	hem+sulphide amphib.gneiss	2.33
960713	700402-4957544	2.0m	graphitic amphibolite gneiss	1.87
960715	700379-4957617	2.0m	graphitic paragneiss (arenac-marb)	2.65

Appendice D- Daily Schedule Breakdown

Property Visits & Diary for John C. Archibald Claim; Galway Township
(May 8, 2015 to July 15, 2015)

2015 - claim 1191461

May 8	mapping & prospecting NW 1191461	10hr
May 17	mapping & prospecting W 1191461	10hr
May 21	mapping& prospecting SW 1191461	10hr
May 23	mapping&prospecting N 1191461	10hr
May 26	mapping& prospecting E & SE 1191461	10hr
June 1	8AM to 5PM excavating 300m trench 1191461	9 hr
June 2	Channel sampling	9 hr
June 3	sample description	8 hr
June 4	mapping& prospecting South 1191461	9 hr
June 17	mapping and bulk sampling SE 1191461	9 hr
June 21	mapping and bulk sampling South 1191461	9 hr
June 23	mapping and prospecting SW1191461	9 hr
June 16	excavating pits and trenches 6 hr	9 hr
June 23	excavating and rehabilitation 7AM-5PM	10 hr
July 2	mapping & prospecting	8 hr
July 6-10	report preparation 5 days X 8hr day	40hr
July 13-15	report preparation 3 days X 8hr day	24 hr

Appendice E- Sampling & Assay Specifics

2015 TRENCHING SAMPLING PROGRAM SPECIFICS

<u>SAMPLE#</u>	<u>EASTING</u>	<u>NORTHING</u>	<u>SAMPLING TYPE</u>	<u>WIDTH (meters)</u>	<u>CLAIM I191461</u>	<u>SAMPLE DESCRIPTION</u>	<u>Cg %</u>
960251	700321	4957676	chip/channel	5.0m-north	Galway-Loom Lk.-	marble-metased contact;graphite blebs/seams-rusty red	1.99
960252	700345	4957687	chip/channel	10.0m	Galway-Loom Lk.-	red-rusty amphibolitic gneiss metasediment- siliceous-miner.	3.68
960253	700353	4957674	chip/channel	10.0m	Galway-Loom Lk.-	red-rusty amphibolitic gneiss metased- cse. Grained	4.15
960254	700352	4957663	chip/channel	10.0m	Galway-Loom Lk.-	yellow-orange gneissic/amphibolitic metasediment	3.11
960255	700327	4957657	chip/channel	10.0m	Galway-Loom Lk.-	red-rusty dark grey amphibolitic gneiss metased-siliceous	2.34
960256	700331	4957650	chip-channel	10.0m	Galway-Loom Lk.-	red-rusty dark grey amphibolitic gneiss metasediment	2.73
960257	700339	4957638	chip-channel	10.0m	Galway-Loom Lk.-	red-rusty dark grey amphibolitic gneiss metased-siliceous	2.08
960258	700338	4957627	chip-channel	10.0m	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasedimet	2.52
960259	700342	4957626	chip-channel	10.0m	Galway-Loom Lk.-	red-rusty dark grey amphibolitic gneiss metasediment	2.19
960260	700346	4957608	chip-channel	10.0m	Galway-Loom Lk.-	red-rusty dark grey amphibolitic gneiss metasediment	2.51
960261	700352	4957600	chip-channel	10.0m	Galway-Loom Lk-	red-rusty-yellow (min.-graphitic) coarse grained gneiss metas	3.72
960262	700357	4957591	chip-channel	10.0m	Galway-Loom Lk-	red-rusty, graphitic, dark grey, coarse gneissic metasediment	3.45
960263	700356	4957578	chip-channel	10.0m	Galway-Loom Lk-	red-rusty, graphitic, dark grey, coarse gneissic metasediment	2.8
960264	700358	4957569	chip-channel	10.0m	Galway-Loom Lk.-red,	norust Lk.- red but lacking rust-fine amphibolitic metased.	2.41
960265	700360	4957560	chip-channel	10.0m	Galway-Loom Lk.-	non rusty coarse gneissic-amphib.metasediment	2.59
960266	700364	4957550	chip-channel	15.0m	Galway-Loom Lk.-	orange-red,dark grey gnissic metased. Felsic-siliceous	1.93
960267/68	700368	4957533	chip-channel	0m	Galway-Loom Lk.-	orange-red,dark grey gnissic metased. Felsic-siliceous	no sample
960267	700365	4957527	chip-channel	15.0m	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasedimet	1.03
960268	700371	4957515	chip-channel	10.0m	Galway-Loom Lk.-	rusty-graphitic cse. Amphibolitic-gneissic metasediment	1.45
960269	700366	4957508	chip-channel	10.0m	Galway-Loom Lk-	red-rusty, graphitic, dark grey, coarse gneissic metasediment	0.27
960270	700365	4957496	chip-channel	10.0m	Galway-Loom Lk-	red-rusty, graphitic, dark grey, coarse gneissic metasediment	0.9
960271	700366	4957485	chip-channel	10.0m	Galway-Loom Lk-	red-rusty, graphitic, dark grey, coarse gneissic metasediment	2.36
960272	700355	4957476	chip-channel	10.0m	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasedimet	1.23
960273	700354	4957465	chip-channel	10.0m	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasedimet	1.8
960274	700349	4957458	chip-channel	10.0m-south 245m channel	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasedimet	2.52
760715	700353	4957440	chip-channel	20.0m	Galway-Loom Lk-	orange- fine amphibolitic/gneissic metasediment	2.65
760714	700363	4957419	chip-channel	20.0m	Galway-Loom Lk-	orange- fine amphibolitic/gneissic metasediment	1.14
760713	700373	4957398	chip-channel	20.0m-south 305m (1000 ft.) channel across zone	Galway-Loom Lk.-	red-orange rusty dark grey amphibolitic gneiss metasediment (rusty/graphitic metasedimentary gneiss)	1.87

Appendice F- Photos of Excavating & Trenching















REHABILITATION





REHABILITATION





Appendice G- Claim Abstracts



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Mining Claim Abstract

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SOUTHERN ONTARIO - Division 90		Claim No. SO 1191461		Status: ACTIVE
Due Date:	2018-Mar-17	Recorded:	1999-Oct-04	
Work Required:	\$ 3,200	Staked:	1999-Sep-04 16:30	
Total Work:	\$ 22,400	Township/Area:	GALWAY (G-1287)	
Total Reserve:	<u>\$ 9,648</u>	Lot Description:	LOTS 27,28,29,30, CON.10.	
Present Work Assignment:	\$ 0	Claim Units:	8	
Claim Bank:	\$ 0			

Claim Holders

Recorded Holder(s) Percentage	Client Number
ARCHIBALD, JOHN CHARLES (100.00 %)	102825

Transaction Listing

Type	Date	Applied	Description	Performed	Number
STAKER	1999-Oct-04		RECORDED BY ARCHIBALD, JOHN CHARLES (A45242)		R9990.00074
OTHER	2000-Dec-19		WORK PERFORMED (ASSAY, GEOL) APPROVED: 2001-MAR-19	\$ 5,464	<u>Q0090.00092</u>
WORK	2000-Dec-19	\$ 6,824	WORK APPLIED (ASSAY, GEOL) APPROVED: 2001-MAR-19		<u>W0090.00092</u>

WORK	2001-Jan-09	\$ 1,810	WORK APPLIED (ASSAY) APPROVED: 2001-MAY-14	<u>W0190.00002</u>
OTHER	2001-Oct-10		WORK PERFORMED (INDUS, PDRILL, PSTRIIP) \$ 6,058	<u>Q0190.30904</u>
			APPROVED: 2001-DEC-10	
WORK	2001-Oct-10	\$ 6,058	WORK APPLIED (INDUS, PDRILL, PSTRIIP)	<u>W0190.30904</u>
			APPROVED: 2001-DEC-10	
OTHER	2001-Nov-20		PENDING PROCEEDINGS COMMENCED	P0190.30090
MISC	2001-Nov-29		COMMISSIONER'S ORDER TO FILE	M0190.30145
MISC	2001-Dec-19		MINING & LANDS COMMISSIONER'S ORDER-	M0190.30157
			APPLICATIONS ADJOURNED SINE DIE A	
MISC	2001-Dec-19		MINING & LANDS COMMISSIONER'S ORDER	M0190.30154
			RESCINDS- ORDER TO FILE- M0190.30145	
OTHER	2002-Aug-30		WORK PERFORMED (BENEF, GEOL, PDRILL, PITS) \$ 5,116	<u>Q0290.01404</u>
			APPROVED: 2002-DEC-21	
WORK	2002-Aug-30	\$ 7,708	WORK APPLIED (BENEF, GEOL, PDRILL, PITS)	<u>W0290.01404</u>
			APPROVED: 2002-DEC-21	
ORDER	2003-Jan-16		PROCEEDING TRANSFERRED TO THE SUPERIOR	O0390.00055
			COURT OF JUSTICE, SECTION 107 OF THE MINING	
			ACT. COURT FILE NO. 224184>	
MISC	2005-Apr-13		PENDING PROCEEDINGS BY COMMISSIONER	M0590.00075
MISC	2006-Nov-06		ORDER OF THE MINING AND LANDS	M0690.00233
			COMMISSIONER	
MISC	2006-Nov-06		PENDING PROCEEDINGS REMOVED FROM ORDER	M0690.00234
			(P0190.30090)	
ORDER	2011-May-02		COMMISSIONER EXCLUDES 3451 DAYS (SECTION	O1190.00150
			67) AND SETS NEW ANNIVERSARY DATE 2018-MAR-	
			17	
ORDER	2011-May-02		COMMISSIONER'S ORDER DISMISSES APPEAL	O1190.00176
OTHER	2011-May-02		COMMISSIONER REMOVES PENDING PROCEEDINGS	P1190.00030
ORDER	2011-May-02		COMMISSIONER DETERMINES NO COMPENSATION	O1190.00177
			PAYABLE	
OTHER	2014-Aug-06		WORK PERFORMED ASSAY, GEOL, PSTRIIP \$ 7,563	<u>Q1490.01642</u>
			APPROVED: 2014-SEP-02	
OTHER	2014-Oct-14		EXPLORATION PERMIT NO. PR13-10393 EFFECTIVE	J1490.00305
			FROM 2013-SEP-27 TO 2016-SEP-27 FOR THE	
			FOLLOWING ACTIVITIES: (PHYSICAL / PTRNCH,	
			PHYSICAL / PSTRIIP, DRILLING / PDRILL)	

Claim Reservations

- 01 400' surface rights reservation around all lakes and rivers
- 02 Sand and gravel reserved
- 03 Peat reserved
- 04 Other reservations under the Mining Act may apply
- 05 Including land under water



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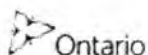
Mining Claim Client Reports

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SOUTHERN ONTARIO Mining Division - 102825 - ARCHIBALD, JOHN CHARLES

Township/Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
CAVENDISH	1191672	2002-Oct-15	2016-Nov-03	A	100 %	\$ 1,793	\$ 15,007	\$ 0	\$ 0
CAVENDISH	3014434	2006-Apr-26	2019-Mar-07	A	100 %	\$ 400	\$ 4,000	\$ 0	\$ 0
GALWAY	1191461	1999-Oct-04	2018-Mar-17	A	100 %	\$ 3,200	\$ 22,400	\$ 9,648	\$ 0
GALWAY	1203014	2001-Oct-17	2018-Mar-30	A	100 %	\$ 2,400	\$ 12,000	\$ 0	\$ 0
GALWAY	1235234	1999-May-10	2017-Oct-21	A	100 %	\$ 2,712	\$ 22,888	\$ 0	\$ 0
GALWAY	1235235	1999-May-10	2019-Oct-21	A	100 %	\$ 800	\$ 7,200	\$ 0	\$ 0
GALWAY	1237569	1999-Nov-26	2016-May-08	A	100 %	\$ 3,992	\$ 20,008	\$ 0	\$ 0
GALWAY	1237573	1999-Nov-26	2018-May-09	A	100 %	\$ 3,190	\$ 28,810	\$ 24,460	\$ 0
GALWAY	1237574	1999-Dec-02	2019-May-15	A	100 %	\$ 400	\$ 3,200	\$ 1,600	\$ 0
GALWAY	924322	1999-May-10	2017-Oct-21	A	100 %	\$ 3,200	\$ 22,400	\$ 12,800	\$ 0

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Appendice H- Expense & Receipt Copies



Astley - Gilbert

ON DEMAND IMAGING. ON PAPER. ONLINE.

ORDER FORM

astleygilbert.com

PU ID #

ACCOUNTING #

HEAD OFFICE 42 CARNFORTH RD, NORTH YORK 416.288.8666

ADELAIDE BRANTFORD CAMBRIDGE CONCORD GUELPH KITCHENER LONDON MARKHAM MISSISSAUGA OSHAWA OTTAWA RENFREW VAUGHAN WELLINGTON
416.591.9010 519.754.4500 519.740.3040 905.660.4200 519.763.5100 519.884.1350 519.679.5757 905.479.7881 905.624.5500 905.571.3300 613.274.0100 613.599.2063 905.738.4555 416.348.0002

SON010
SONIC SOIL SAMPLING INC.
668 MILLWAY AVE., UNIT 15--14
CONCORD, ON, L4K3V2, 905-660-0501



ORIGINAL®

WTH

*** PICKUP ***

ORDERED BY: **FRED .**
(FIRST & LAST NAME, PLEASE PRINT)

CONTROL NO. **3235877**

TIME REQUIRED 1:30 PM Jul-14	PURCHASE ORDER NO. / JOB NAME 2015 loom lake trenching prog	TERMS NET 30 DAYS	DATE OF ORDER 9:50 AM Jul-14
--	---	-----------------------------	--

HOW MANY ORIGINALS ENCLOSED	DESCRIPTION OF ORIGINALS	NO. OF PRINTS OF EACH	TOTAL IMPRESSIONS	TYPE OF PRINT REQUIRED	UNIT SQ. FT.
3	Hardcopy	3		Bond ColourMaster Copy LW Loose	3
2	Hardcopy	2		Bond Print Loose	3

TBA

PRODUCTION

Additional Info	<input type="checkbox"/> SEE ATTACHED INSTRUCTION SHEET	QUALITY CONTROL
-----------------	---	-----------------

BINDERY	<input checked="" type="checkbox"/> LOOSE	<input type="checkbox"/> SPECIAL WRAPPING	BINDING
	<input type="checkbox"/> BOUND		
	<input type="checkbox"/> FOLDED TO		PACKAGING
	<input type="checkbox"/> OTHER		

SHIPPING	<input type="checkbox"/> ALL TO ABOVE	<input type="checkbox"/> Parts of this job are with _____ to be shipped together
	<input type="checkbox"/> Split; above and _____ transmittal(s)	
	<input type="checkbox"/> Nothing above, ALL to _____ transmittal(s)	
	<input checked="" type="checkbox"/> Pick-up at 577 Edgeley	
	<input type="checkbox"/> 3 rd Party Delivery (FedEx, UPS, Purolator etc.)	<input type="checkbox"/> DELIVERY TO ASTLEY GILBERT BY CUSTOMER

DIRECT DRIVE RATES MAY APPLY

LINEMASTER CADD PLOTTING	LINEMASTER LARGE FORMAT COPYING	SMALL FORMAT BLACK & WHITE COPY/PRINTING	SMALL FORMAT COLOUR COPY/PRINTING	HI-DEF COLOUR PRINTING	GRAND FORMAT GRAPHICS	MOUNTING LAMINATING FRAMING	OFFSET PRINTING	PROJECT CENTRAL	CREATIVE SERVICES	SUPPLIES
--------------------------	---------------------------------	--	-----------------------------------	------------------------	-----------------------	-----------------------------	-----------------	-----------------	-------------------	----------

ANY DISCREPANCIES PERTAINING TO THIS ORDER MUST BE REPORTED WITHIN 5 DAYS OF DELIVERY.

BUCKHORN SAND & GRAVEL

P.O. Box 100, Buckhorn, Ontario K0L 1J0
 (705) 657-9311 Office
 (705) 657-9627 Fax
 E-Mail: bsg@nexicom.net
 Web Site: buckhornsandgravel.com
 Sold to:

F.T. Archibald
 c/o F.T. Archibald Consulting
 668 Milway Ave.,
 Unit #16
 Concord, Ontario L4K 3V6

INVOICE

Invoice No.: 56197
 Date: Jul 10, 2015
 Ship Date:
 Page: 1
 Re: Order No.

Ship to:

F.T. Archibald
 LOOM LAKE PROJECT
 CLAIM 1191461 Galway Township

Business No.: 89777 3073RT

Item No.	Unit	Quantity	Description	Tax	Base Price	Disc %	Unit Price	Amount
	hours	4	Excavator to dig test holes 5% fuel surcharge	HT HT	130.00		130.00	520.00 26.00
			HT - HST 13% not included HST					70.98
Shipped By: _____ Tracking Number: _____								
Comment: Payment due upon receipt of invoice.							Total Amount	616.98
Sold By: _____								

BUCKHORN SAND & GRAVEL

P.O. Box 100, Buckhorn, Ontario K0L 1J0
 (705) 657-9311 Office
 (705) 657-9627 Fax
 E-Mail: bsg@nexicom.net
 Web Site: buckhornsandgravel.com

INVOICE

Invoice No.: 56227
 Date: Jul 10, 2015
 Ship Date:
 Page: 1
 Re: Order No.

Sold to:

F.T. Archibald
 c/o F.T. Archibald Consulting
 668 Milway Ave.,
 Unit #16
 Concord, Ontario L4K 3V6

Ship to:

F.T. Archibald
 RE: 1191461 Galway Township

Business No.: 89777 3073RT

Item No.	Unit	Quantity	Description	Tax	Base Price	Disc %	Unit Price	Amount
	hours	11.50	308 Exc to clean up the brush and spread material	HT	85.00		85.00	977.50
	hours	10.00	Off road truck to move material	HT	85.00		85.00	850.00
	tonnes	40.23	2" Crush	HT	7.50		7.50	301.73
			5% fuel surcharge	HT				106.46
			HT - HST 13% not included HST					290.64
Shipped By: Tracking Number:							Total Amount	2,526.33
Comment: Payment due upon receipt of invoice.								
Sold By:								

Judy Diamantopoulos
Turnaround Time Manager
Activation Laboratories Ltd.

41 Bittern Street
Ancaster, Ontario
L9G 4V5 Canada

T: 905.648.9611 x101
TF: +1.888.228.5227
F: 905.648.9613
judy@actlabs.com
www.actlabs.com



ISO/IEC 17025 (Lab 266), NELAP (E87975), Health Canada Licensed, FDA Inspected and registered

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Quality Analysis ...



Innovative Technologies

This document contains confidential information and is intended for the use of the client only. Please advise the laboratory if you are not the intended recipient.

Invoice No.: A15-04099
Purchase Order:
Invoice Date: 18-Jun-15
Date submitted: 05-Jun-15
Your Reference: GALWAY-LOOM
GST #: R121979355

Fred Archibald
66 Millway Ave
Unit 15
Concord On L4K 3V2

ATTN Fred Archibald

INVOICE

No. samples	Description	Unit Price	Total
24	RX1-Graphite	\$ 19.50	\$ 232.00
24	5D-C-Graphitic	\$ 28.90	\$ 693.60
Subtotal :			\$ 945.60
HST-13% :			\$ 122.93
AMOUNT DUE: (CAD) :			\$ 1,068.53

Net 30 days. 1 1/2 % per month charged on overdue accounts.
Bank Transfers can be made to
ACTIVATION LABORATORIES LTD at
ROYAL BANK OF CANADA
59 WILSON STREET WEST
ANCASTER, ONTARIO CANADA L9G 1N1
TRANSIT #: 00102 003 ACCOUNT #: 100 154 4
SWIFT CODE#: ROYCCAT2

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





INVOICE NUMBER / NUMÉRO DE FACTURE : 41227475
F T ARCHIBALD CONSULTING

CUSTOMER NUMBER NUMÉRO DE CLIENT	CREDIT LIMIT LIMITE DE CREDIT	TERMS CONDITIONS	CYCLE DAYS CYCLE DE FACTURATION (JOURS)	BILLING DATE DATE DE FACTURATION	PAYMENT DUE DATE DATE LIMITE DE PAIEMENT	PAYMENT DUE PAIEMENT DÙ
134343	1,207.00	30 Days/Jours	31	2015-06-08	2015-07-08	542.28

CARD CARTE	LOCATION EMPLACEMENT	DATE (YYYY-MM-DD) DATE (AAAA-MM-JJ)	TIME HEURE	TICKET BORDEREAU	TRANSACTION COST/COÛT DE LA TRANSACTION			AMOUNT MONTANT
					PRODUCT PRODUIT	LITRES LITRES	COST/LITRES COÛT / LITRE	
		2015-05-26			PAYMENT - THANK YOU			333.55CR
8503225750	168 EAST ST S BOBCAYGEON	2015-05-08	09:01	KFUA3737	UNe	46.6	1.071	49.90
	331 HWY 17 W MCKERROW ON	2015-05-09	12:08	PIUE9102	UNe	66.2	1.166	77.20
	331 HWY 17 W MCKERROW ON	2015-05-16	11:34	PIU56324	UNe	62.7	1.156	72.48
	168 EAST ST S BOBCAYGEON	2015-05-17	08:29	KFU64671	UNe	81.8	1.070	87.55
	168 EAST ST S BOBCAYGEON	2015-05-21	14:37	KFU55204	UNe	82.4	1.049	86.45
	168 EAST ST S BOBCAYGEON	2015-05-23	11:59	KFU55376	SUP	26.4	1.282	33.85
	5241 BLOOMINGTON STOUFFV	2015-05-24	14:24	LHID0316	UNe	42.5	1.127	47.90
	168 EAST ST S BOBCAYGEON	2015-05-28	09:12	KFUA5817	UNe	74.3	1.170	86.95
							SUBTOTAL	542.28
							SOUS-TOTAL	

MAY 8, 17, 21, 23, 28

PURCHASES, RETURNS AND PAYMENTS MADE JUST PRIOR TO BILLING DATE MAY NOT APPEAR UNTIL NEXT MONTH'S INVOICE STATEMENT
LES ACHATS, RETOURS ET PAIEMENTS EFFECTUÉS PEU DE TEMPS AVANT LA DATE DE FACTURATION SONT SUSCEPTIBLES DE FIGURER SUR LE RELEVÉ DU MOIS SUIVANT

YTD BILLED PURCHASES ACHATS FACTURÉS ACJ	PREVIOUS BALANCE SOLDE PRÉCÉDENT	(-)PAYMENTS (-)PAIEMENTS	(-)FUEL DISC. (-)REMISE CARB.	(+)LATE FEE (+)FRAIS DE RETARD	(+)NEW PURCHASES (+)NOUVEAUX ACHATS	(+/-)ADJUSTMENTS (+/-)AJUSTEMENTS	(=)NEW BALANCE (=)NOUVEAU SOLDE
2,728.96	333.55	333.55	0.00	0.00	542.28	0.00	542.28

The Late Fee is determined by applying a daily rate of Les frais de retard sont calculés à partir d'un taux quotidien de	Which is an EFFECTIVE ANNUAL RATE of Ce qui correspond à un TAUX ANNUEL EFFECTIF de	The Average Daily Balance Subject to Late Fees for the period is Le solde moyen quotidien assujéti aux frais de retard pour la période est de
0.05%	19.6%	0.00

For account information or to report a lost or stolen card, call:
Pour des renseignements sur votre compte, ou pour signaler une
carte perdue ou volée, veuillez appeler au : **1 888 662-4510**

For address changes, fax request and account number to:
Pour les changements d'adresse, faxez la demande et le numéro de
compte au: **1-800-395-0809**

IMPERIAL OIL TAX ID NUMBERS NUMÉROS D'INSCRIPTION AUX FINS DE TAXE - L'IMPÉRIALE	MEMO GST MÉMO TPS	MEMO HST MÉMO TVH	MEMO QST MÉMO TVQ
IOL GST/TPS - CPIL : R121461107 IOL QST/TVQ - CPIL : 1015506284	0.00	62.38	0.00



340 County Road 36
Lindsay, Ontario K9V 4R3
Telephone: (705) 324-5672
Fax: (705) 328-3943
www.lindsaycycle.com



H.S.T. # R103337069

LINDSAY CYC & PWR PRDT
R R 3 K9V4R3
LINDSAY ON
20132803

PURCHASE

06-05-2015 08:24:51
Acct #3525 C
Exp Date ' / ' Card Type VI
Name: FREDERICK ARCHIBALD
A0000000031010 VISA

ME DATE

15:20:00 05 Jun .15

Trace # 190001
FS2013280301
Inv. # 34433
Auth # 036076 RRN 001807001

Total \$318.71

(00) APPROVED-THANK YOU

Retain this copy for your records
Customer copy

TO
ARCHIBALD, FREDERICK
68 MILLWAY AVE
CONCORD
ONT
4K 3V6 (905) 660-0501 (905) 764-2361

NO.	ORDER NO.	TAX NO.	TERMS	SHIP VIA
11				

QTY	PRODUCT NO.	DESCRIPTION	AMOUNT
	LABOR.....	128.80 GST.....	
	Sublet Labor.....	0.00 PST.....	
	PARTS.....	150.24 Sublet (A)...	
	Enviro Fee.....	0.00 Sublet (B)...	
	Shop Supplies.....	3.00 Sublet (C)...	
	Storage.....	0.00 Sublet (D)...	
	Pickup/Deliverv.....	0.00 OtherOtherDth	
	Deduct./Warrantv.....	0.00 Deductible...	
	Variable.....	0.00	
	Deposit. (-).....	0.00	
	Credit Note.....	0.00	
	TOTAL.....		318.71

H.S.T.	TOTAL	CREDIT	CURRENT DEPOSIT	EPOSIT	BALANCE OWING
282.04	318.71	0.00	0.00	0.00	0.00

NO RETURN OF ELECTRICAL PARTS OR SPECIAL ORDERED PRODUCT
RESTOCKING CHARGE OF 25% OF INVOICE PRICE PLUS FREIGHT
OF PURCHASE.

INVOICE

TOTAL 318.71

WORK ORDER

VISA..... 318.71 W034433

ORDERED BY: _____

JUNE 11, 21, 20, JULY 2



INVOICE NUMBER / NUMÉRO DE FACTURE : 41575106
F T ARCHIBALD CONSULTING

CUSTOMER NUMBER NUMÉRO DE CLIENT	CREDIT LIMIT LIMITE DE CRÉDIT	TERMS CONDITIONS	CYCLE DAYS CYCLE DE FACTURATION (JOURS)	BILLING DATE DATE DE FACTURATION	PAYMENT DUE DATE DATE LIMITE DE PAIEMENT	PAYMENT DUE PAIEMENT DÙ
134343	1,207.00	30 Days/Jours	30	2015-07-08	2015-08-07	524.45

CARD CARTE	LOCATION EMPLACEMENT	DATE (YYYY-MM-DD) DATE (AAAA-MM-JJ)	TIME HEURE	TICKET BORDEREAU	TRANSACTION COST/COÛT DE LA TRANSACTION			AMOUNT MONTANT
					PRODUCT PRODUIT	LITRES	COST/LITRES COÛT /LITRE	
		2015-06-25			PAYMENT - THANK YOU			542.28CR
8503225750	168 EAST ST S BOBCAYGEON	2015-06-11	09:18	KFV07443	UNe	83.4	1.129	94.20
	883340 HWY 65 NEW LISKEA	2015-06-14	12:26	PJP01012	UNe	42.8	1.238	53.00
	2319 HWY 11 S RR1 GRAVEN	2015-06-18	15:31	PHLA3880	UNe	58.7	1.158	68.00
	8786 HWY 115 S/B ORONO O	2015-06-21	17:47	LPJ71260	UNe	82.4	1.178	97.10
	8786 HWY 115 S/B ORONO O	2015-06-26	18:41	LPJ72322	UNe	64.9	1.169	75.90
	2900 STEELES AVE THORNHI	2015-06-28	21:47	LGVB7297	SUe	34.9	1.400	48.85
	8786 HWY 115 S/B ORONO O	2015-07-02	15:33	LPJ73529	UNe	74.8	1.168	87.40
							SUBTOTAL	524.45
							SOUS-TOTAL	

PURCHASES, RETURNS AND PAYMENTS MADE JUST PRIOR TO BILLING DATE MAY NOT APPEAR UNTIL NEXT MONTH'S INVOICE STATEMENT
LES ACHATS, RETOURS ET PAIEMENTS EFFECTUÉS PEU DE TEMPS AVANT LA DATE DE FACTURATION SONT SUSCEPTIBLES DE FIGURER SUR LE RELEVÉ DU MOIS SUIVANT

YTD BILLED PURCHASES ACHATS FACTURÉS À CJ	PREVIOUS BALANCE SOLDE PRÉCÉDENT	(-)PAYMENTS (-)PAIEMENTS	(-)FUEL DISC. (-)REMISE CARB.	(+)LATE FEE (+)FRAIS DE RETARD	(+)NEW PURCHASES (+)NOUVEAUX ACHATS	(+/-)ADJUSTMENTS (+/-)AJUSTEMENTS	(=)NEW BALANCE (=)NOUVEAU SOLDE
3,253.41	542.28	542.28	0.00	0.00	524.45	0.00	524.45

The Late Fee is determined by applying a daily rate of Les frais de retard sont calculés à partir d'un taux quotidien de	Which is an EFFECTIVE ANNUAL RATE of Ce qui correspond à un TAUX ANNUEL EFFECTIF de	The Average Daily Balance Subject to Late Fees for the period is Le solde moyen quotidien assujéti aux frais de retard pour la période est de
0.05%	19.6%	0.00

For account information or to report a lost or stolen card, call:
Pour des renseignements sur votre compte, ou pour signaler une carte perdue ou volée, veuillez appeler au : **1 888 662-4510**

For address changes, fax request and account number to:
Pour les changements d'adresse, faxez la demande et le numéro de compte au: **1-800-395-0809**

IMPERIAL OIL TAX ID NUMBERS NUMÉROS D'INSCRIPTION AUX FINS DE TAXE - L'IMPÉRIALE	MEMO GST MÉMO TPS	MEMO HST MÉMO TVH	MEMO QST MÉMO TVQ
IOL GST/TPS - CPIL : R121461107 IOL QST/TVQ - CPIL : 1015506284	0.00	60.33	0.00



GALWAY TP. 1191401
MAY 21 - JUNE 23 / 2015

Limited time offer!

Convert your RBC Rewards® points into Asia Miles from July 1 to August 31, 2015 and get 20% more Asia Miles.
Visit rbc.com/cathayconversion

RBC Visa Infinite Avion

FREDERICK T ARCHIBALD 4514 01** **** 3525
STATEMENT FROM MAY 20 TO JUN 19, 2015

MAY 21
JUNE 5, 8
1 OF 2

PREVIOUS STATEMENT BALANCE

\$3,120.97

FREDERICK T ARCHIBALD
4514 01** **** 3525 - PRIMARY

TRANSACTION DATE	POSTING DATE	ACTIVITY DESCRIPTION	AMOUNT (\$)
MAY 19	MAY 21	MNDM MINING RECORDER SUDBURY ON	\$180.00 ✓
MAY 21	MAY 25	LINDSAY CYC & PWR PRDTS LINDSAY ON	\$31.62 ✓
MAY 25	MAY 27	MNDM MINING RECORDER SUDBURY ON	\$150.00 ✓
MAY 25	MAY 27	THE HOME DEPOT #7106 RICHMOND HILL ON	\$538.26
MAY 26	MAY 27	LOWES #03097* VAUGHAN ON	\$336.74
MAY 26	MAY 27	SWISS CHALET 1973 TORONTO ON	\$14.41
MAY 26	MAY 27	DR. TRINA E. MACRAE DENTITONTO ON	\$239.00
MAY 27	MAY 29	THE HOME DEPOT #7004 MARKHAM ON	\$26.62
MAY 30	JUN 01	PRINCESS AUTO NEWMARKET ON	\$106.15
MAY 30	JUN 01	SUNSET GRILL NEWMARKET ON	\$12.71
MAY 31	JUN 01	PETROCAN-3005 HIGHWAY 35 NEWCASTLE ON	\$91.20
JUN 01	JUN 01	PAYMENT - THANK YOU / PAIEMENT - MERCI	-\$3,120.97
JUN 02	JUN 03	SWISS CHALET 1209 RICHMOND HILL ON	\$15.58
JUN 03	JUN 04	PETROCAN-8760 BAYVIEW AVERICHMOND HILL ON	\$86.40
JUN 04	JUN 08	FTN TIRE VAUGHAN F403 VAUGHAN ON	\$1,894.13
JUN 04	JUN 08	GTA T3 MISSISSAUGA ON	\$21.00
JUN 05	JUN 08	LINDSAY CYC & PWR PRDTS LINDSAY ON	\$318.71
JUN 08	JUN 09	TIM HORTONS 1282 QTH BOBCAYGEON ON	\$8.04
JUN 10	JUN 12	MNDM MINING RECORDER SUDBURY ON	\$1,830.00 ✓
JUN 10	JUN 11	PETROCAN-8760 BAYVIEW AVERICHMOND HILL ON	\$85.00
JUN 11	JUN 15	MNDM MINING RECORDER SUDBURY ON	\$720.00 ✓
JUN 12	JUN 15	PRINCESS AUTO WHITBY ON	\$79.03 ✓
JUN 14	JUN 16	MOTEL VILLA MON REPOS LA SARRÉ QC	\$119.79 ✓
JUN 14	JUN 15	TIM HORTONS 0332 QTH NEW LISKEARD ON	\$8.04 ✓
JUN 14	JUN 15	MAGASIN CDN TIRE #00233 LASARRE QC	\$11.49 ✓
JUN 14	JUN 15	SHELL 9305 HWY 11 N ORILLIA ON	\$91.60 ✓
JUN 15	JUN 17	REST AUX QUATRES SAISONS PALMAROLLE QC	\$8.84 ✓
JUN 15	JUN 16	MAGASIN CDN TIRE #00233 LASARRE QC	\$21.24 ✓

2880 MNDM

IMPORTANT INFORMATION

RBC REWARDS POINTS

Previous Points balance	168,717
Points earned this statement	7,759
Bonus points earned this statement	30
New points balance	176,506

CONTACT US

Customer Service / Lost & Stolen	1-800-769-2512
Collect Outside North America	(416) 974-7780
RBC Rewards Travel Redemption	1-877-636-2870
Merchandise Redemption	1-800-769-2512
Web site	www.rbc Rewards.com

PAYMENTS & INTEREST RATES

Minimum payment	\$10.00
Payment due date	JUL 10, 2015
Credit limit	\$17,000.00
Available credit	\$9,241.01
Annual interest rates:	
Purchases	19.99%
Cash advances	21.99%

CALCULATING YOUR BALANCE

Previous Statement Balance	\$3,120.97
Payments & credits	-\$3,120.97
Purchases & debits	\$7,758.99
Cash advances	\$0.00
Interest	\$0.00
Fees	\$0.00
NEW BALANCE	\$7,758.99

BUCKHORN

SAND & GRAVEL

INVOICE

P.O. Box 100, Buckhorn, Ontario K0L 1J0
 (705) 657-9311 Office
 (705) 657-9627 Fax
 E-Mail: bsg@nexicom.net
 Web Site: buckhornsandgravel.com

Invoice No.: 55541
 Date: Jun 09, 2015
 Ship Date:
 Page: 1
 Re: Order No.

Sold to:

F.T. Archibald
 c/o F.T. Archibald Consulting
 668 Milway Ave.,
 Unit #16
 Concord, Ontario L4K 3V6

Ship to:

F.T. Archibald

Business No.: 89777 3073RT

Item No.	Unit	Quantity	Description	Tax	Base Price	Disc %	Unit Price	Amount	
	hours	8.5	Excavator to dig a trench 5% fuel surcharge	HT HT	130.00		130.00	1,105.00 55.25	
			HT - HST 13% not included HST					150.83	
PAID									
Shipped By: Tracking Number:							Total Amount	1,311.08	
Comment: Payment due upon receipt of invoice.									
Sold By:									

Appendice J- Assay Certificates

Date Submitted: 05-Jun-15
Invoice No.: A15-04099 (i)
Invoice Date: 17-Jun-15
Your Reference: GALWAY-LOOM

Fred Archibald
66 Millway Ave
Unit 15
Concord On L4K 3V2

ATTN: Fred Archibald

CERTIFICATE OF ANALYSIS

24 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 5D-C-Graphitic Infrared

REPORT **A15-04099 (i)**

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:

CERTIFIED BY:



Emmanuel Esemé, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.

41 Biltmore 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



Results

Analyte Symbol	C-Graph
Unit Symbol	%
Lower Limit	0.05
Method Code	IR
960251	1.99
960252	3.68
960253	4.15
960254	3.11
960255	2.34
960256	2.73
960257	2.08
960258	2.52
960259	2.19
960260	2.51
960261	3.72
960262	3.45
960263	2.80
960264	2.41
960265	2.59
960266	1.93
960267	1.03
960268	1.45
960269	0.27
960270	0.90
960271	2.36
960272	1.23
960273	1.80
960274	2.52

Results

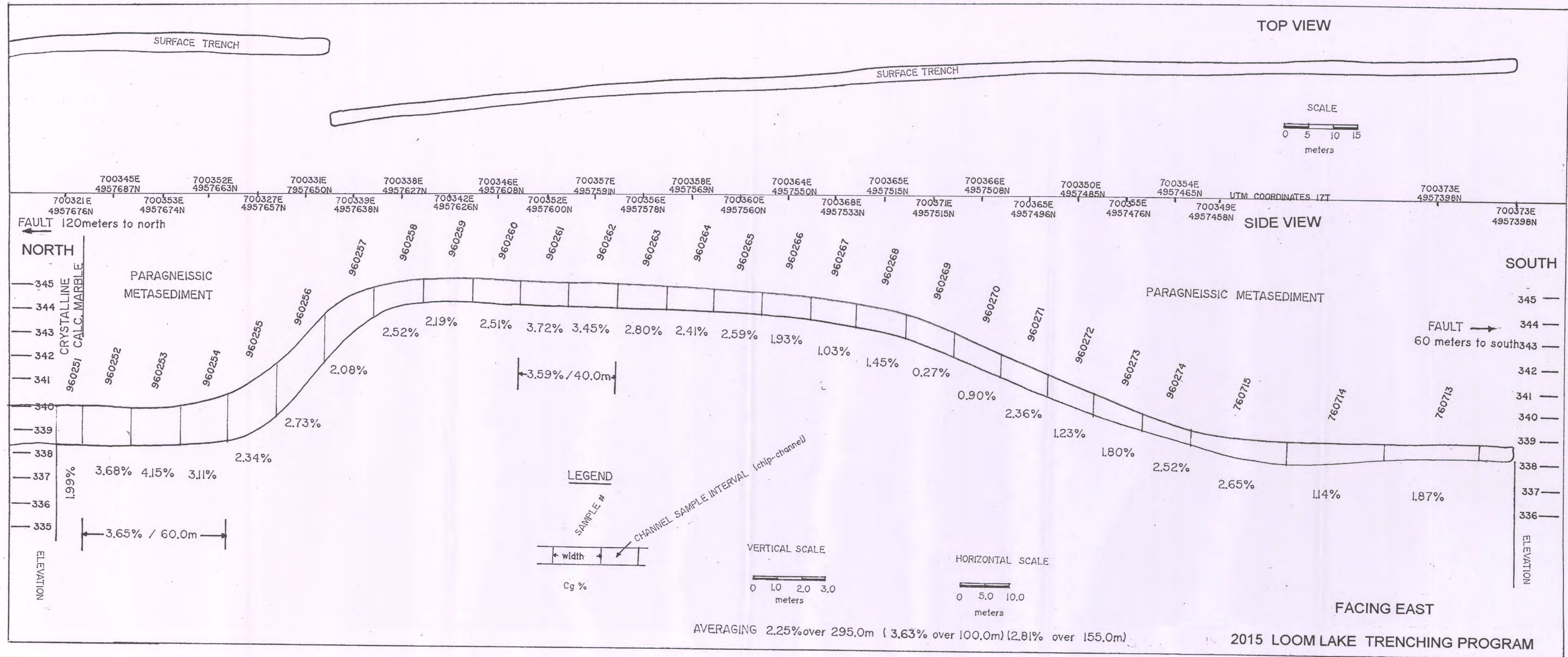
Analyte Symbol	C-Graph
Unit Symbol	%
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960251	1.99
960252	3.68
960253	4.15
960254	3.11
960255	2.34
960256	2.73
960257	2.08
960258	2.52
960259	2.19
960260	2.51
960261	3.72
960262	3.45
960263	2.80
960264	2.41
960265	2.59
960266	1.93
960267	1.03
960268	1.45
960269	0.27
960270	0.90
960271	2.36
960272	1.23
960273	1.80
960274	2.52

QC

Analyte Symbol	C-Graph
Unit Symbol	%
Lower Limit	0.05
Method Code	IR
Graphite 4A Meas	4.23
Graphite 4A Cert	4.18
Graphite 4A Meas	4.24
Graphite 4A Cert	4.18
Graphite 4A Meas	4.17
Graphite 4A Cert	4.18
Graphite 4A Meas	4.18
Graphite 4A Cert	4.18
Graphite 14 Meas	14.2
Graphite 14 Cert	14.55
Graphite 14 Meas	14.2
Graphite 14 Cert	14.55
Graphite 14 Meas	14.3
Graphite 14 Cert	14.55
Graphite 14 Meas	14.4
Graphite 14 Cert	14.55
960255 Orig	2.32
960255 Dup	2.37
960264 Orig	2.41
960264 Dup	2.40
960270 Orig	0.90
960270 Split	0.89
960273 Orig	1.79
960273 Dup	1.80
960274 Orig	2.52
960274 Split	2.60
Method Blank	< 0.05
Method Blank	< 0.05
Method Blank	< 0.05
Method Blank	< 0.05

QC

Analyte Symbol	C-Graph
Unit Symbol	%
Lower Limit	0.05
Method Code	IR
Graphite 4A Meas	4.23
Graphite 4A Cert	4.18
Graphite 4A Meas	4.24
Graphite 4A Cert	4.18
Graphite 4A Meas	4.17
Graphite 4A Cert	4.18
Graphite 4A Meas	4.18
Graphite 4A Cert	4.18
Graphite 14 Meas	14.2
Graphite 14 Cert	14.55
Graphite 14 Meas	14.2
Graphite 14 Cert	14.55
Graphite 14 Meas	14.3
Graphite 14 Cert	14.55
Graphite 14 Meas	14.4
Graphite 14 Cert	14.55
960255 Orig	2.32
960255 Dup	2.37
960264 Orig	2.41
960264 Dup	2.40
960270 Orig	0.90
960270 Split	0.89
960273 Orig	1.79
960273 Dup	1.80
960274 Orig	2.52
960274 Split	2.60
Method Blank	< 0.05
Method Blank	< 0.05
Method Blank	< 0.05
Method Blank	< 0.05



LEGEND

Geological Table of Formations

Pleistocene - Recent	
15	clay, bog, peat, silts, glacial deposits, till
Paleozoic (Gull River Formation)	
14	limestone
Precambrian	
13	late mafic intrusive- amphibolite-diabase
INTRUSIVE CONTACT	
12	late felsic intrusive- pegmatite dykes
INTRUSIVE CONTACT	
11	late granitic intrusive- granite-quartz monzonite
INTRUSIVE CONTACT	
10	early granitic intrusive- breccia & gneissic granite
INTRUSIVE CONTACT	
9	Grenville - syenite & syenite gneiss
INTRUSIVE CONTACT	
8	early mafic intrusive- amphibolite-gabbro gneiss
INTRUSIVE CONTACT	
7	felsic metavolcanics- biotite gneiss
6	mafic metavolcanics- amphibolite&h.gneiss
5	Carbonate Metasediments- cryst.&biot. marble
4	Amphibole Metasediments- amphibolite gneiss
3	Biotite Metasediments- gneiss-hornblende
2	Quartz-Feld. Metasediments- biot.-horn. gneiss
Middle Precambrian	
UNCONFORMITY	
1	biotite-hornblende gneiss and migmatites

(After E.G. Bright, OGS, 1981)

VERMICULITE RICH

GRAPHITE RICH

