



**Technical Report and Recommendations  
for three Li-Mo properties associated  
with the Preissac-Lacorne Batholith in the  
Abitibi Subprovince, Quebec, Canada:  
The Chubb, International and Athona properties  
MINERAL HILLS INDUSTRIES LTD.**

February 5, 2010



*Buff white to greenish laths of spodumene in a granitic pegmatite dyke, Bouvier showing, International property.*

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### **ITEM 3 SUMMARY**

This Technical Report evaluates the mineral potential of three lithium and molybdenum properties located in the Preissac-Lacorne Batholith (PLB), a composite intrusive complex in the Archean Abitibi subprovince of the Quebec Province. The three properties (Chubb, International and Athona) are 100% owned by Messrs. Fayz and Ramy Yacoub who irrevocably granted to Mineral Hills Ltd. the sole and exclusive right and option to acquire an undivided 100% interest in and to the three properties, free and clear of all liens, charges, encumbrances, claims, rights or interest of any other person.

One of the main conceptual guide for exploring rare-metal granitic pegmatite and proposed by Cerny (1991a, b), is that the further their site of intrusion from their monzogranitic parent, the more LILE and rare-metal elements-enriched they become (i.e. Li, Cs, Be, Ta,). As a corollary guide specific to the Preissac-Lacorne Batholith, rare-metal-enriched granitic pegmatites, are enclosed in a 1 to 2 km aureole surrounding their monzogranite parents within the metavolcanic and metasedimentary assemblages or the early metaluminous plutonic suite. These two concepts were applied in choosing the three properties optioned by Mineral Hills Industries Ltd. The properties are all located in the metavolcanic or metasedimentary wall rocks (International and Athona properties) or intrude early metaluminous quartz monzodiorites-granodiorites (Chubb property) at a distance less than 2 km from their parent monzogranites. Furthermore, granitic pegmatite dykes generally occur in swarms, so that exposed bodies may hint at nearby buried pegmatites. We have used Resistivity/IP geophysical ground-based surveys to detect such hidden mineralized pegmatites. The granitic pegmatites being enriched in quartz and feldspar are more resistive and less conductive than the surrounding wall rocks and may be associated with anomalous signatures.

The Chubb Property is located in Lot 11, Range II, and Lacorne Township. The property is located 2 km due south of Baillargé lake approximately 32 km north from the town of Val d'Or and 6.5 km south of the village of La Corne. Trenching and drilling in the 1950's by Great Lakes Carbon Corporation and American Lithium Corporation revealed several spodumene-bearing granitic pegmatites, 1.6 to 6 m wide, with spodumene contents varying from 5 to 15% at a depth of 100 m. The most recent historical work, conducted by for Abitibi Lithium Corporation,

consisted of 4 diamond drill holes with best intersections of 1.68 LiO<sub>2</sub> wt.% /3.72 m and 1.25 LiO<sub>2</sub> wt. %/2.38 m.

A grid was constructed to cover the principal spodumene-bearing granitic pegmatite dykes partially exposed on the property. Ground based magnetic and IP surveys were carried out on the grid lines. The IP/PP survey discovered six chargeability anomalies identified from the interpretation of pseudosections. Most anomalies are oriented NNW and located on the western resistive zone of the grid. The inferred surface projections of the resistivity/ IP sources correspond well to the broad trend defined by the localization of channel samples which were gathered from outcrops of spodumene-bearing granitic pegmatites. The orientation of the connected anomalies is also roughly parallel to the strike of most granitic pegmatite dykes exposed south of Baillargé Lake. Geochemical sampling consisted in 56 channel and 3 grab samples collected from granitic pegmatite outcrops. The three N-NW-oriented spodumene-bearing dykes display variable but generally elevated Li<sub>2</sub>O concentrations (0.01-2.84 wt. %; Av: 0.89±0.77 wt. % (n=59) which are considered economic. The main dyke, which is 300 m long, has a somewhat higher average Li<sub>2</sub>O concentrations (1.00±79 wt. %; n=41) than the other two smaller dykes (0.70±0.66 wt. % (n=8) and 0.56±0.78 wt. % (n=8)).

The International property consists of two main lithium showings: Bouvier and International. It is located in the Saint-Mathieu municipality, Figuery Township and extends 1 km westward from the western bank of the Harricana River, 3 km SE of the village of St-Mathieu d'Harricana. The Bouvier showing is located within a grazing field which is part of a cattle farm on Lot 31 to 38, Range II. A 67 x 11 m spodumene-bearing granitic pegmatite dyke containing 15 to 25% spodumene was first exposed in 1947. Eleven diamond drill holes were sunk in the early 1950's by the Lithium Corporation of America. The drilling campaigns constrain the dyke to a length of 183 m and width of 5 to 14 m with a N75°W strike and a 45°S dip. The International showing occurs on the western bank of the Harricana River. It was investigated by International Lithium Mining Corp. which drilled 85 holes focused in the central parts of Lots 39 and 40 in 1954-1955. The drill holes explored a zone of spodumene-bearing granitic pegmatite dykes that also contain tantalite. The zone explored by drilling includes several irregular shaped, subhorizontal granitic pegmatite dykes with some intersections reaching 6 m. Minerals Hills Industries Ltd. has

unearthed the principal Bouvier EW-oriented spodumene-bearing granitic pegmatite by digging 6 roughly NS-oriented trenches averaging 15 m in length and extending EW for 100 m. The exposed granitic pegmatites were sampled through cut channels for a total of 16 samples. The International showing was also submitted to channel sampling which yielded 12 samples of spodumene-bearing granitic pegmatite. A 750 x 550 m grid was installed in the farm's field containing the Bouvier showing. Magnetic and IP surveys were carried out on the grid lines. The resistivity map is characterized by an overall conductive background attributed to the thick layer of clay-rich overburden covering the area. Following the interpretation of pseudosections a total of three chargeability anomalies are apparent and display a broad NE to EW orientation parallel to that of the Manneville fault, but more importantly to the general strike attributed to the exposed and buried granitic pegmatite dykes. There is a close spatial association between the location and orientation of one anomaly (INT1) with the trenches area that exposed a previously investigated EW-oriented spodumene-bearing granitic pegmatite dyke.

The main EW-oriented spodumene-bearing dyke of the Bouvier showing displays variable but generally elevated  $\text{Li}_2\text{O}$  concentrations (0.04-2.91 wt. %; Av:  $1.51 \pm 0.91$  wt. % (n=20)) which are considered economic. Other rare metals such as Ta (Av:  $47.8 \pm 23.7$  ppm), Be ( $105.8 \pm 75.0$  ppm), Rb ( $853 \pm 512$  ppm) and Cs ( $51.7 \pm 24.5$  ppm) display moderate to low sub-economic average concentrations. Results from the International showing define variable and moderate Li concentrations (0.01-2.65  $\text{Li}_2\text{O}$  wt. %; Av:  $0.38 \pm 0.68$  (n=17)), with Ta (Av:  $96.4 \pm 21.5$ ) and Be (Av:  $252.0 \pm 184.9$  ppm) values significantly higher to that of the Bouvier pegmatite, but still remaining sub-economic.

Situated in the Landrienne Township, the Athona property contains molybdenite mineralization associated with intrusions of albitite dykes. A new grid was established in the northeastern corner of the property. A ground based magnetic survey conducted along the grid lines revealed two distinct magnetic domains. The limit between these two domains defines a geological contact between a granitic intrusion and volcanic assemblages of the Landrienne Formation. The northern half of the grid has a variable background with high magnetic readings corresponding to bands of ultramafic intrusive or komatiitic volcanic rocks, while moderate magnetic readings correlate with intermediate to felsic volcanic rock outcroppings. The magnetic background of



southern half of the grid is relatively stable and typical of the magnetic response of an intrusive body (granitoid stock). A total of 16 samples representing albitite dykes and veins were collected along the grid lines. The potential for molybdenum mineralization was confirmed by the new assays including five samples carrying MoS<sub>2</sub> values > 0.25 wt. %, with two samples having greater than 1.69 wt. % MoS<sub>2</sub>.

For the Athona property, the author recommends a mapping campaign conducted at a scale of 1:20,000 in the southern region of the property which exposes monzogranitic plutonic rocks of the Preissac-Lacorne Batholith and the metasediments of the Lac Caste Formation. These rocks are susceptible to contain Li and/or Be-mineralized granitic pegmatites. Upon the discovery of a sufficient density of rare metal-mineralized pegmatites, it is further suggested that a Resistivity/IP survey along an established grid could help find hidden pegmatite bodies. The cost of the exploration is evaluated at \$88, 594. For the Chubb property, we propose a drilling campaign that consists of a minimum of 12 DDH distributed on three main Li-mineral granitic pegmatite targets. The author also recommends that the property lying outside the established grid be roamed by prospectors to identify granitic pegmatite outcrops. The investigation should be followed by small scale mapping and sampling of targeted areas by a geologist. The results of this mapping campaign will be evaluated and, if needed, new grids constructed to carry out Resistivity/IP ground-based surveys. The cost of such program is estimated at \$339,117. Finally, a total of 21 diamond drill hole allotted to four different sites, corresponding to known Li-mineralized granitic pegmatite dyke exposures or presumed buried dykes, was recommended by the author as an exploration program for the International property at a cost of \$493,664.

#### **ITEM 4 INTRODUCTION AND TERMS OF REFERENCE**

This report was prepared for Mineral Hill Industries Ltd. in compliance with National Instrument 43-101 Standards of Disclosure for Mineral Projects and form 43-101F1. The report provides technical geological data relevant to Mineral Hill's Chubb, International and Athona properties located in the La Corne, Landrienne and Figuery townships. The purpose of this report is to present the status of current geological information generated from Mineral Hill's ongoing exploration program and to provide recommendations for future work. This report is based on

information gathered by the author and Luc Lepage (P. Geo) during the 2009 field work campaign and on the results obtained from the ground based geophysical surveys conducted in 2009. The author also extracted data and information from reports available in the public record with the Ministère des Richesses naturelles et de la Faune du Québec and general geological reports and maps. All these reports were prepared before the implementation of NI 43-101. Although many authors of such reports appear to be qualified and the information was prepared to standards acceptable to the exploration community at the time, the data does not fully meet present requirements. The author however believes the information provided is verifiable in the field, and that it is a reasonable representation of the mineralization. The author visited the Athona, Chubb and International properties on two occasions during the course of 2009. The last visit occurred on October 2009.

#### **ITEM 5 RELIANCE ON OTHER EXPERTS**

The author has relied upon information provided by Mineral Hill Industries Ltd. that described the purchase option agreement into which Mineral Hill entered into the project and on data that describe the exploration rights, obligations and claim titles. To the best knowledge of the author, there are no current or pending litigations that may be material to the Chubb, International and Athona assets. The writer also relied on two published geophysical reports. The first one entitled “Ontrack Exploration Limited, Ground Magnetic Survey, Athona project, Landrienne Township, Québec, Canada, Logistics and Interpretation report” by Martin Dubois of Abitibi Geophysics Inc. It contains maps and elements of interpretation which were included in this report. The second report entitled “Ontrack Exploration Ltd. Resistivity / Induced Polarization and Magnetic Field Surveys, Chubb Lithium Deposit Project, Chubb and International Grids, Northwestern Québec, Canada, Logistics and Interpretation Report” by Martin Dubois. It served as a basis for the interpretation of the IP/PP and Mag surveys as well as providing contour maps. However, the interpretations and conclusions derived from the consultation of these two documents and presented in the Technical Report are the sole responsibility of the author.

#### **ITEM 6 PROPERTY DESCRIPTION AND LOCATION**

### 6.1-The Chubb Property

The Chubb property is located in northern Québec in the Abitibi-East County, Lacorne municipality, Lacorne Township, NTS map sheet 32C05. The Property is located 2 km due south of Baillargé Lake approximately 32 km north from the town of Val d'Or and 6.5 km south of the village of La Corne. The Chubb property consists of 20 mineral claims (polygons) for a total area of 812 hectares or 8.12 km<sup>2</sup> (Figures 1 to 3). The claim block is centered at coordinates 77°57' 27" W Long. and 48°17'56" N. Lat or UTM coordinates 280653 E and 5353751 N (NAD83; Zone 18N), with the details of the titles given in Appendix 2.

Pursuant to an Agreement dated May 11, 2009 between **Mineral Hills Industries Ltd** (the "Optionee") and **Fayz Yacoub and Ramy Yacoub** (collectively the "Optionors"), the legal and beneficial owners of a One Hundred percent (100%) interest in and to certain mineral claims of the Chubb property situated in the northwestern part of Quebec, approximately thirty (30) kilometers north of the town of Val d'Or, in La Corne Township, (the "Property"); the Optionors wish to grant and the Optionee wishes to acquire all such interest in and to the Property on the terms and subject to the conditions set out in this Agreement. The Optionors hereby irrevocably grant to the Optionee the sole and exclusive right and option to acquire an undivided One Hundred percent (100%) interest in and to the Property, free and clear of all liens, charges, encumbrances, claims, rights or interest of any other person, such option to be exercisable by the Optionee following the schedule presented below:

<b>DATE</b>	<b>Cash Payment</b>	<b>Shares</b>
Upon execution of this agreement	\$5,000	Nil
Upon approval by the TSX Venture Exchange (Effective date)	\$15,000	200,000
On or before the date that is one year anniversary from the effective date	\$20,000	200,000
On or before the date that is two year anniversary from the effective date	\$20,000	200,000
On or before the date that is three year anniversary from the effective date	\$20,000	200,000
<b>TOTAL</b>	<b>\$80,000</b>	<b>800,000</b>



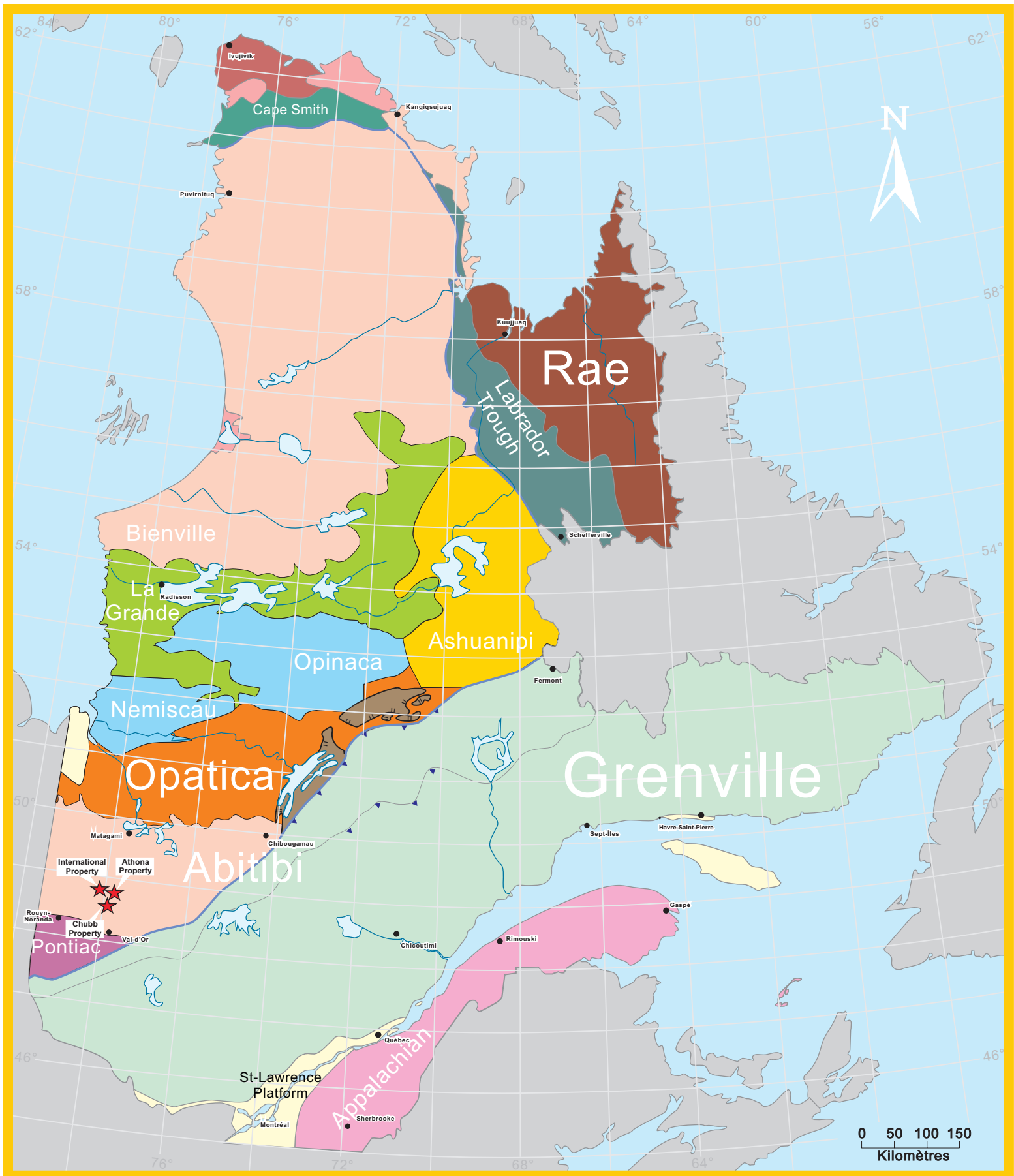


Figure 1. Geological map of the Quebec province illustrating the different geological provinces and subprovinces and the localization of the Chubb, International and Athona properties.

The **Optionors** hereby grant to the **Optionee** the sole and exclusive option to purchase

- (a) 50 % of the 2.0% Net Smelter Return Royalty at a purchase price of \$1 Million during the first year period commencing from the date upon which the **Chubb Property** is put into commercial production;
- (b) an additional 50% of the remaining Royalty from the Optionors for the sum of \$1 Million or such portion thereof as the Optionee may elect. Optionee's right shall expire 2 years following the date of commercial production on the Chubb Property.

### *6.2-The International Property*

The International property is located in northern Quebec in the Abitibi-East County, Saint-Mathieu municipality, Figuery Township, NTS map sheet 32D08. The property is located on the western bank of the Harricana River, 3 km SE of the village of St-Mathieu d'Harricana (pop. 701) and extends westerly for 1 km from the river. The International property consists of 15 mineral claims (polygons) for a total area of 534.4 hectares or 5.34 km<sup>2</sup> (Figures 1, 2 and 4). The claim block is centered at coordinates 78°05' 32" W Long. and 48°27'01" N Lat. or UTM coordinates 715001 E and 5370428 N (NAD83; Zone 17N), with the details of the titles given in Appendix 2.

Pursuant to an Agreement dated August 7, 2009 between **Mineral Hills Industries Ltd** (the "Optionee") and **Fayz Yacoub** and **Ramy Yacoub** (collectively, the "Optionors"), the legal and beneficial owners of a One Hundred percent (100%) interest in and to certain mineral claims of the International property situated in the northwestern part of Quebec, approximately fifteen (15) kilometers south of the town of Amos, in Figuery Township, (the "Property"); the Optionors wish to grant and the Optionee wishes to acquire all such interest in and to the Property on the terms and subject to the conditions set out in this Agreement. The Optionors hereby irrevocably grants to the Optionee the sole and exclusive right and option to acquire an undivided One Hundred percent (100%) interest in and to the Property, free and clear of all liens, charges, encumbrances, claims, rights or interest of any other person, such option to be

exercisable by the Optionee following the schedule presented below:

<b>DATE</b>	<b>Cash Payment</b>	<b>Shares</b>
Upon execution of this agreement	\$5,000	Nil
Upon approval by the TSX Venture Exchange (Effective date)	\$18,108	200000
On or before the date that is one year anniversary from the effective date	\$20,000	200000
On or before the date that is two year anniversary from the effective date	\$20,000	100000
On or before the date that is three year anniversary from the effective date	\$20,000	100000
<b>TOTAL</b>	<b>\$83,108</b>	<b>600000</b>

The **Optionors** hereby grant to the **Optioneer** the sole and exclusive option to purchase

- (a) 50 % of the 1.0% Net Smelter Return Royalty at a purchase price of \$ 500,000 during the first year period commencing from the date upon which the **International Property** is put into commercial production.
- (b) an additional 50% of the remaining Royalty from the Optionors for the sum of \$500,000 or such portion thereof as the Optionee may elect. Optionee's right shall expire 2 years following the date of commercial production on the Chubb Property

### *6.3-The Athona Property*

Situated in the Landrienne Township, NTS map sheet 32C05, the Athona property belongs to the municipality of Saint-Marc de Figury. The property is located at the intersection of the Chemin du Lithium and Rang des Montagnes roads (Figures 1, 2 and 5). The Athona property consists of 29 mineral claims (polygons) for a total area of 1286.3 hectares or 12.86 km<sup>2</sup>. The claim block is centered at coordinates 77°59' 17" W Long. and 48°25'30" N Lat. or UTM coordinates 278962 E and 5367852 N (NAD83; Zone 18N), with the details of the titles given in Appendix 2.



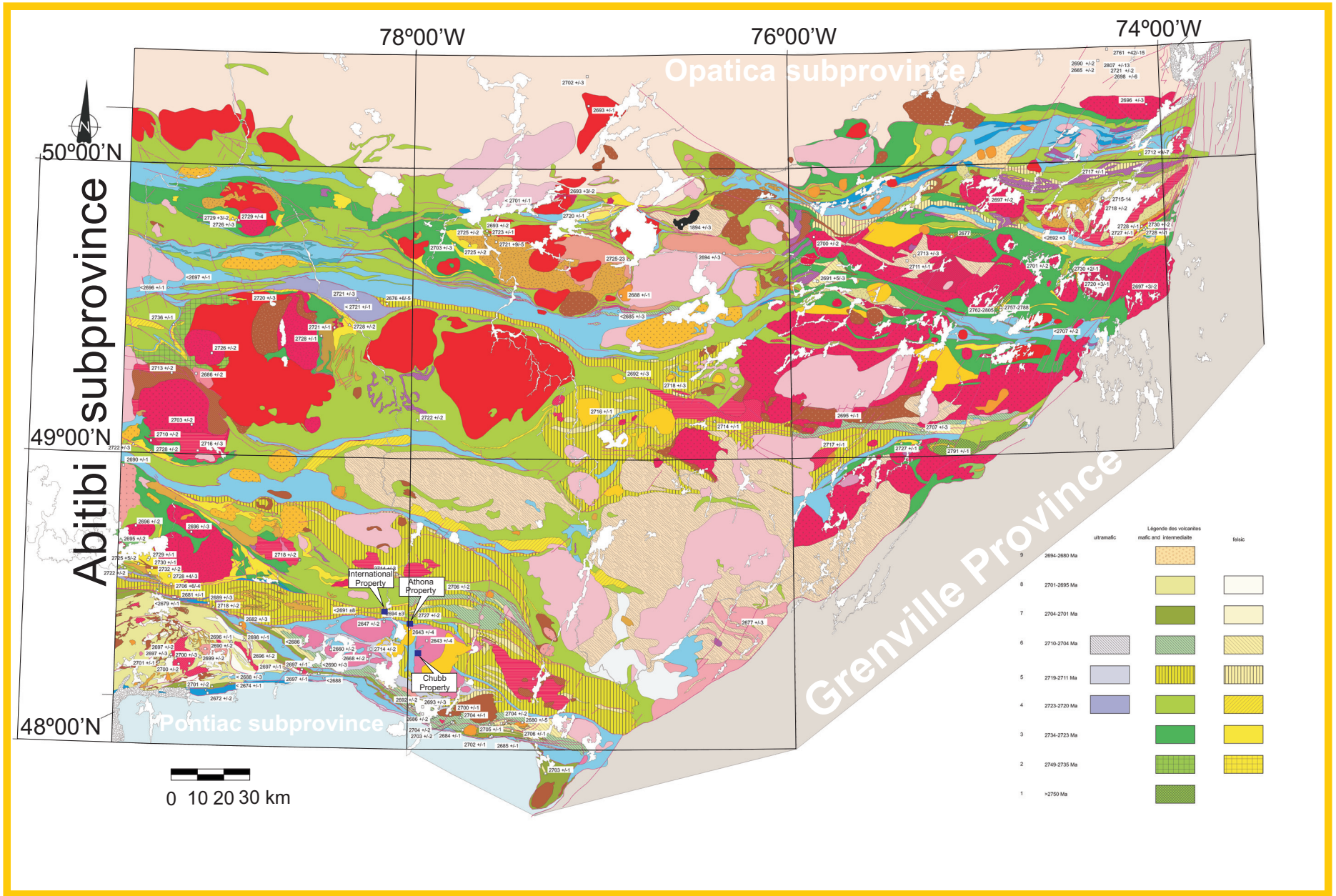


Figure 2. General geological map of the Abitibi subprovince with the localization of the Chubb, International and Athona properties.

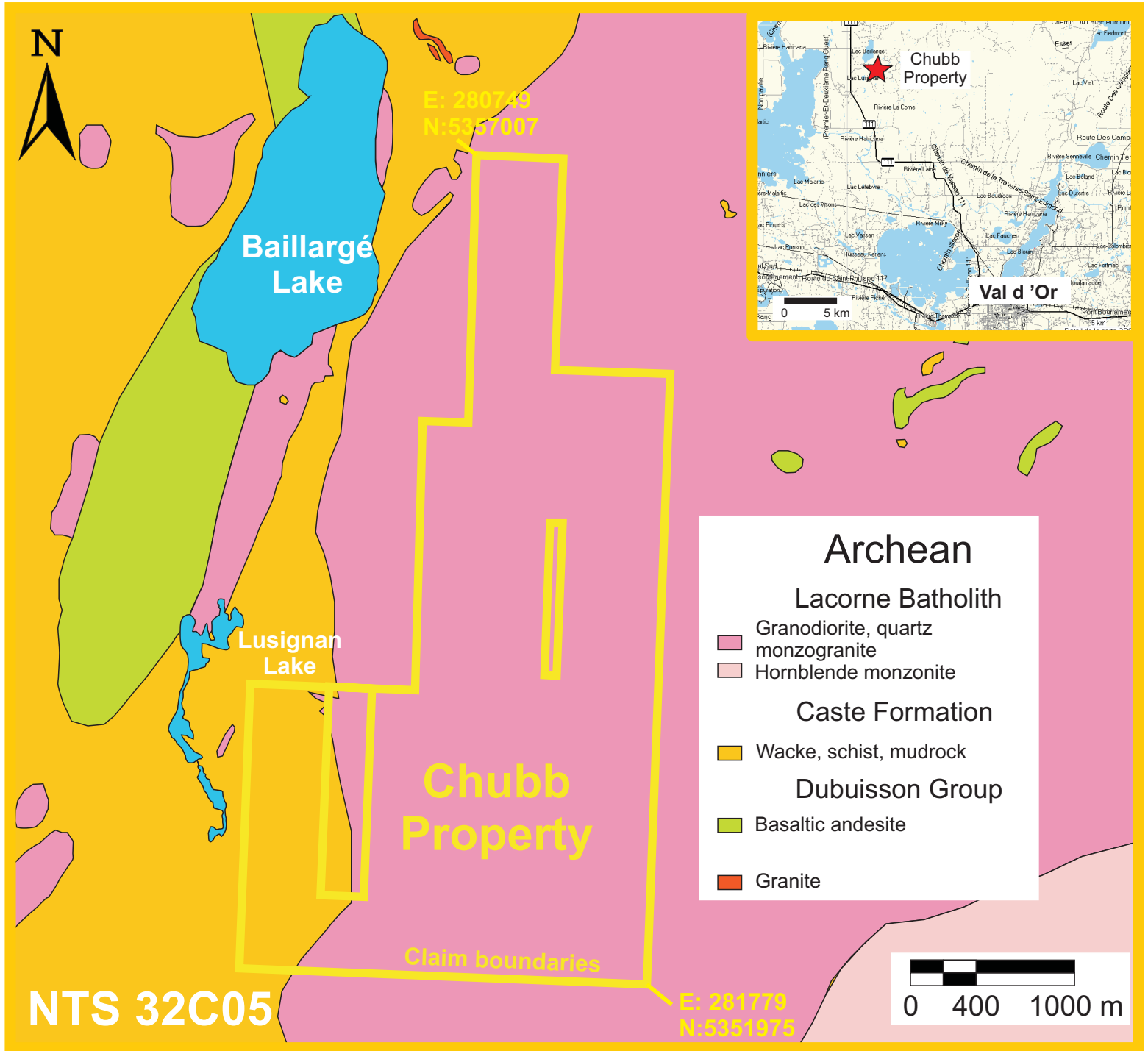


Figure 3. Claim boundaries and geology of the Chubb property. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



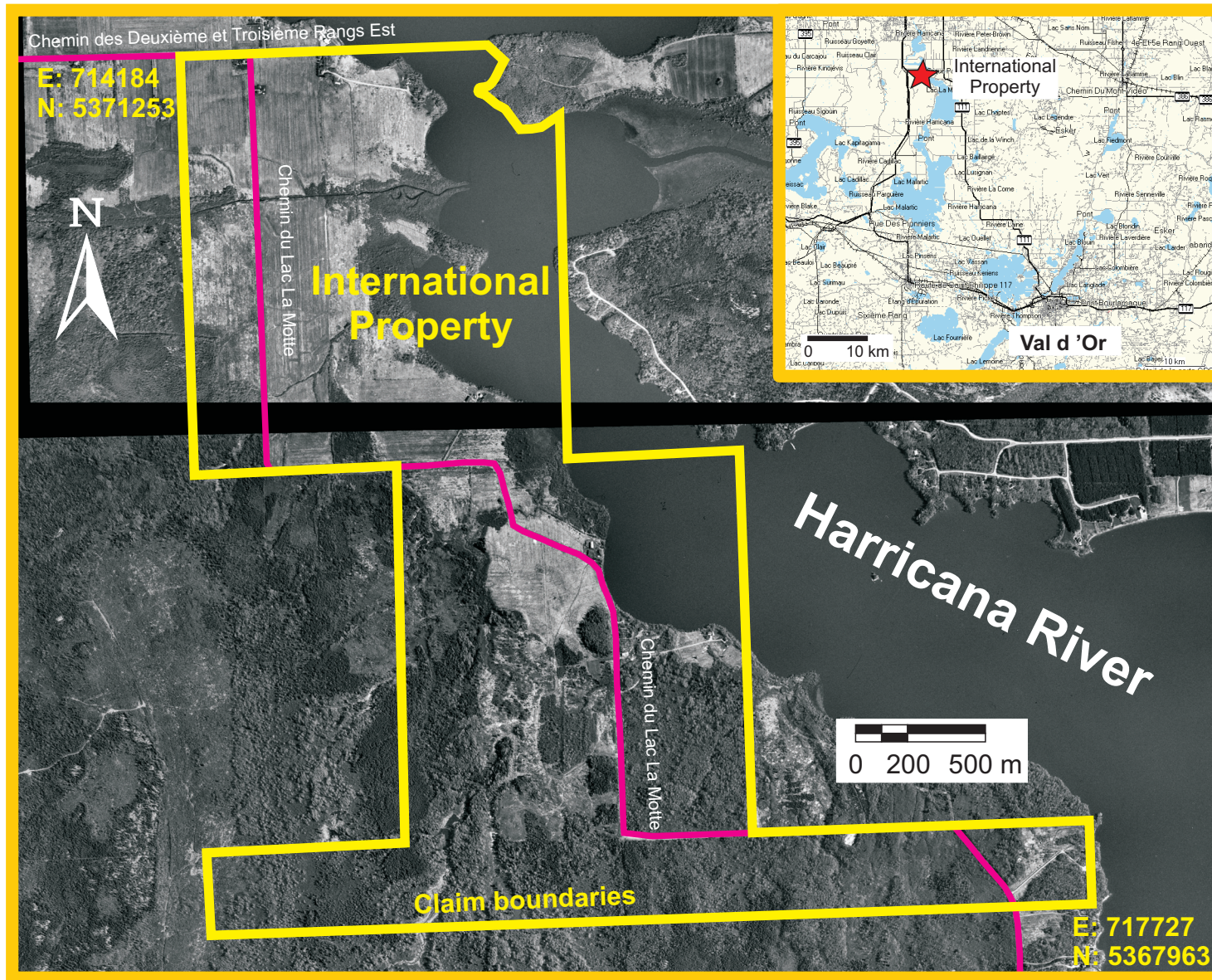


Figure 4. Claim boundaries, International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

Pursuant to an Agreement dated September 16, 2009 between **Mineral Hills Industries Ltd** (the "Optionee") and **Fayz Yacoub** and **Ramy Yacoub** (collectively, the "Optionors"), the legal and beneficial owners of a One Hundred percent (100%) interest in and to certain mineral claims of the Athona property situated in the northwestern part of Quebec, approximately fifty (50) kilometers north of the town of Val d'Or, in Landrienne Township, (the "Property"); the Optionors wish to grant and the Optionee wishes to acquire all such interest in and to the Property on the terms and subject to the conditions set out in this Agreement. The Optionors hereby irrevocably grants to the Optionee the sole and exclusive right and option to acquire an undivided One Hundred percent (100%) interest in and to the Property, free and clear of all liens, charges, encumbrances, claims, rights or interest of any other person, such option to be exercisable by the Optionee following the schedule presented below:

<b>DATE</b>	<b>Cash Payment</b>	<b>Shares</b>
Upon execution of this agreement	\$3,500	Nil
Upon approval by the TSX Venture Exchange (Effective date)	\$11,500	150 000
On or before the date that is one year anniversary from the effective date	\$15,000	150 000
On or before the date that is two year anniversary from the effective date	\$15,000	75 000
On or before the date that is three year anniversary from the effective date	\$15,000	75 000
<b>TOTAL</b>	<b>\$60,000</b>	<b>450 000</b>

The optionee agrees and commits to incur at least \$25,000 on exploration expenditures within the year 2009.

The three properties (Chubb, International and Athona) were staked by Mr. Fayz Yacoub through the GESTIM website run by the Ministère des richesses Naturelles et de la Faune du Québec. The UTM coordinates and grid contours on the geological maps are extracted from the information given on the GESTIM website. The boundary of each claim, expressed as UTM

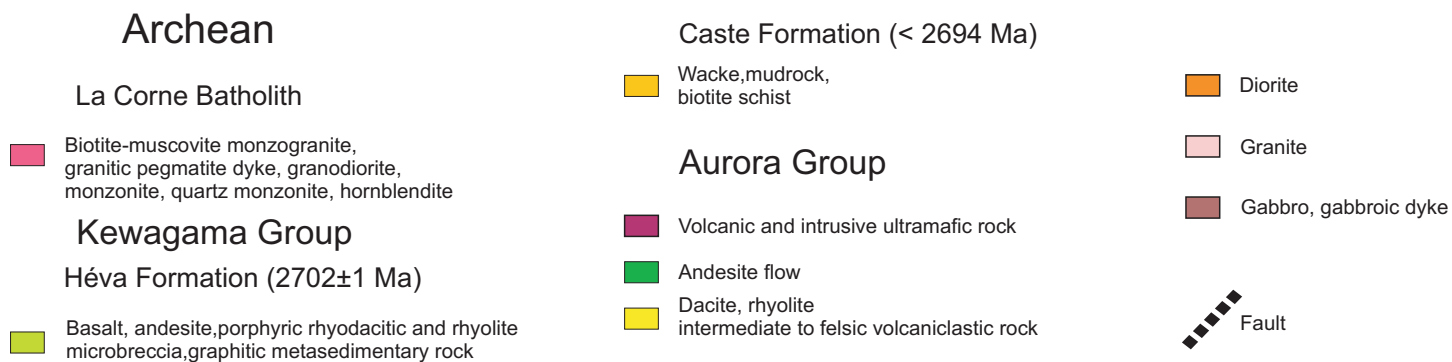
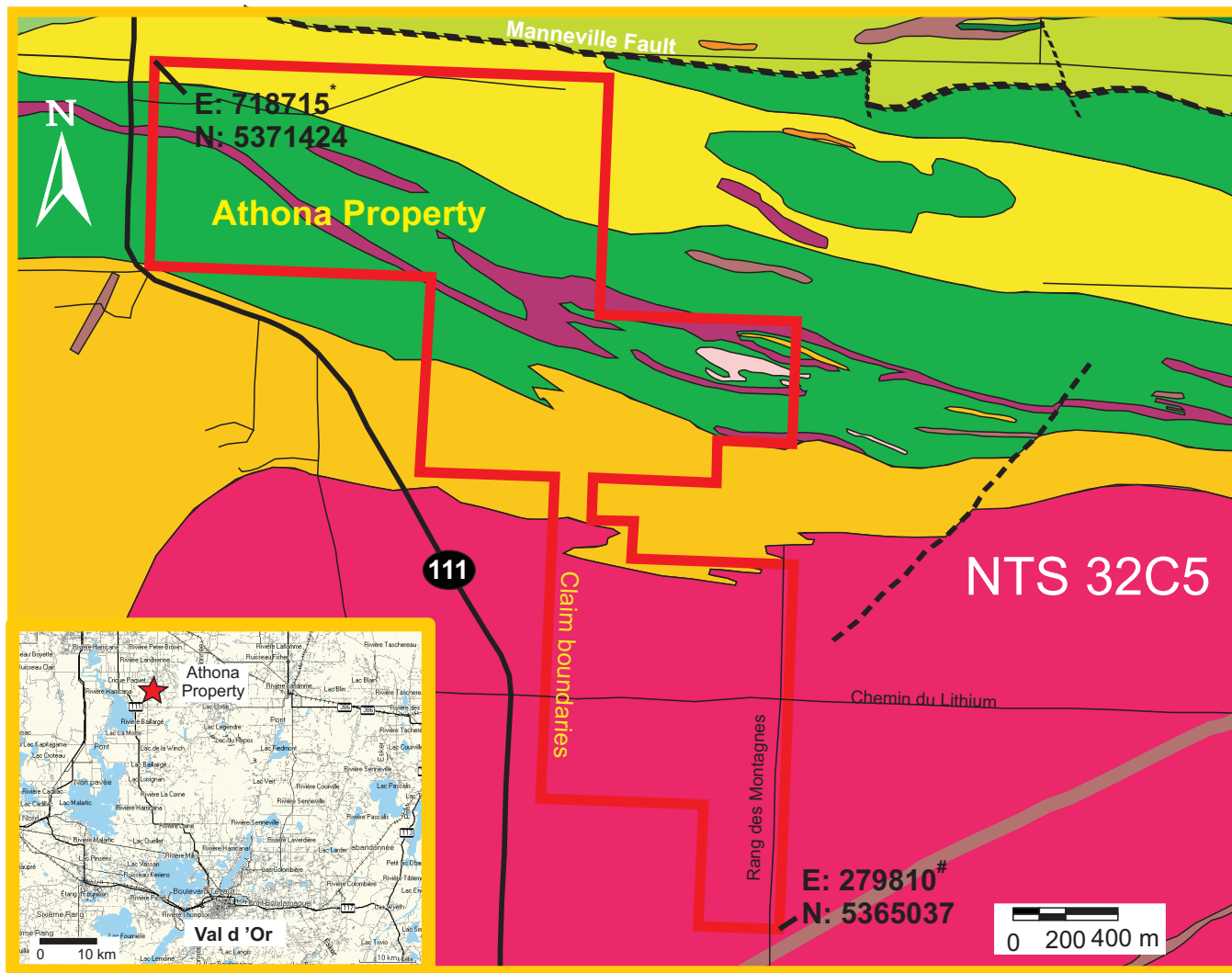


Figure 5. Claim boundaries and geology of the area of the Athona property. UTM Coord.; NAD83; \*Zone 17N; #Zone 18N; E=Eastings; N=Northing.



coordinates or Longitude and Latitude, can also be obtained through the GESTIM site. There are no mineral resources or mineral reserves on the three properties according to the 2005 CIM Definition Standards. There are no mine workings, tailing ponds, waste deposits and important natural features and improvements relative to the outside property boundaries. However, each property contains mineralized zones manifested by outcrops, small pits and/or trenches. The name and coordinates of these showings/prospects are given in the table below:

<b>Property Name</b>	<b>Showing/Prospect</b>	<b>Township</b>	<b>Easting *</b>	<b>Northing</b>	<b>Zone</b>
Chubb	Chubb	La Corne	280631	5354728	18N
International	International	Figury	715341	5370490	17N
	Bouvier	Figury	714559	5370630	17N
Athona	Athona	Landrienne	279817	5369478	18N

\* UTM coordinates (NAD83)

According to Quebec government records, no part of the land covered by the properties is a park or mineral reserve. To our knowledge, the properties are devoid of back royalties, back in rights, payments or other encumbrances. They are not subject to environmental liabilities except for those specified in the “Loi sur les Mines” (L.R.Q. chapter M-13.1). An intervention permit must be obtained from the Quebec Province government in order to initiate a drilling campaign.

In Quebec, the mining claim is valid for a period of 2 years. During this period and/or until renewal, the owner or optionor must spend \$1, 2000 per claim; an amount which needs to be validated as exploration expenses (i.e. geological mapping, geophysical survey, drilling...) for the claim to remain in good standing. The renewal must be forwarded to the Quebec government, at a cost, 60 days before the claim expiration date. The renewal is obtained only if the exploration expenses satisfy all the requirements demanded by the Ministère des Richesses naturelles du Québec.

## **ITEM 7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES INFRASTRUCTURE AND PHYSIOGRAPHY**

## *7.1- Accessibility*

### *7.1.1-The Chubb Property*

Access to the Chubb Property is via road 111 going north from Val d'Or for approximately 32 km until it intersects an old logging gravel road located on the east flank of the paved road. The gravel road leads westward for 2.3 km to a beaver dam and an opening to a muddy track.

Walking for 500 m south and then southeast on the track we reach the gridlines cut for the purpose of running geophysical surveys on the main lithium showings. The Chubb property lies within a relatively flat region comprising small hills and several swampy areas. The mean ASL altitude is 350 m.

### *7.1.2-The International Property*

The International property is located largely within a grazing field which is part of a cattle farm. The property is easily reachable by paved and gravel road from the town of Amos (pop. 12,584) via route 109 south in direction of Val d'Or. Travelling 13 km on this paved road, we turn east (left) on the Chemin des Deuxième et Troisième Rangs Est for 2 km, then turn south (left) on the Chemin du Lac La Motte for 500 m. A small gravel road crosses the property in an EW direction to the Pointe du Moulon on the west bank of the Harricana River. The International property sits on flat ground. The mean ASL altitude is 300 m

### *7.1.3-The Athona Property*

Access to the Athona property is via the Chemin du Lithium from the intersection with the regional road 101. Travelling eastward for 2.1 km on this well maintained gravel road, we reach the intersection with the Rang des Montagnes. Turning north (left), we drive 1.2 km to the end of the road. A NS-oriented bush path leads for 1.14 km to the main grid. The Athona property also rests on relatively flat ground except for a small hill located in the east central area reaching an ASL altitude of 350 m.

*904/Erko cvg. 'NqecnlTguqwt egu. 'Kpht cwt wewt g'cpf 'Rj {ukqi t crj }"*

The Abitibi region sits on some of the oldest rocks of the Precambrian Canadian Shield (about



2.7 Ga). The region forms a vast plateau with sporadic elevations and was heavily sculpted by the glaciations and the landscape often reflects the effect of glacial deposits (clay, esker, drumlin etc...). The area north of Val d'Or is characterized by a subarctic cold continental climate with cool summers (May to September) and very cold winters (October to April). Mean averages temperature for the month of July are 23.4°C max. and 11°C min., whilst the month of January averages maxima of -10.9°C and minima of -23.5°C. Average snow precipitation from October to April is 296 cm.

The vegetation is dominated by the boreal forest. White and black spruce and balsam fir repeat itself endlessly across the region. Tamarack and jack pine, along with fast-growing deciduous species such as poplar and birch, are other important members of the Abitibi forest cast. The harsh climate results in an open coniferous forest with a thick mat of lichens growing between the trees. Numberless bogs and fens support the spruce, Labrador tea, blueberries and their kin, bog rosemary, cloudberry and other acid-loving species. The beaver and the loon are the animal symbols of this boreal forest. Other typical wildlife includes the moose, wolf, snowshoe hare, spruce grouse, ruffed grouse, lynx, black bear and caribou (old-growth forests providing their critical winter range). In summer, the spruce woods ring with the calls of warblers and other migratory birds.

Val d'Or (pop. 31,123), a mining town located just 32 km south of the Chubb property, provides all the technical expertise, manpower and resources necessary for the development of a mining property. At the Chubb property, water can easily be collected from the numerous lakes and streams present. At the International, water can be brought from the Harricana River or from an EW-oriented stream that follows a gravel road to the Du Moulon point. Electricity could be obtained from a link through the village of La Corne located just 6.5 km to the north of the entry to the Chubb Property on road 111, while a NS-power line parallel to road 109 is located just 2 km west of the International property (Figure 1). Val d'Or is located just 46 km south of the Athona property. The village of Barraute (pop. 2, 046) is situated 26 km to the east of the property and can be attained by driving on the Chemin du Lithium road. There is a local power line on the Rang des Montagnes road just 1.4 km from the main grid. There are several streams and ponds on the Athona property which may facilitate the use of water

## **ITEM 8 HISTORY**

### *8.1-The Chubb Property*

The initial discovery of the lithium showings is attributed to F.W. Chubb who in 1944, unearthed spodumene in granitic pegmatite dykes in Lot 11, Range II, Lacorne Township. Then in 1951, Great Lakes Carbon Corporation did substantial trenching and drilled eight short holes totaling 640 m to evaluate the downward projection of the surface lithium values (see Table 1 and Figure 6). These holes indicated spodumene contents varying from 5 to 15% at a depth of 100 m (cited in Brett, 1960).

In 1956, American Lithium Corporation carried out more work consisting of digging of ten trenches in granitic pegmatite dykes. Seven of the trenches were blasted over the principal dyke area. The width of the exposed pegmatites varied from 1.6 to 6 m (Alex, 1956: GM 38956).

In 1961, Denison Mines Ltd. established a grid with EW-oriented lines and several EW-trending trenches were blasted while conducting a geological mapping program. The Lithium Corporation of America returned in 1976 to drill two additional holes totaling 152.4 m near the main granitic pegmatite dyke (Blanton, 1976; GM32243). Campbell (1981, GM37894) also carried out geological mapping in the showing area while conducting a sampling campaign. Campbell noticed numerous quartz stringers and granitic pegmatite dykes varying in width from a few cm to 2 m; some attaining 175 m in length. He further observed spodumene, tantalite and beryl in several pegmatite dykes. Descarreaux (1991; GM51854) and Rennick (1991; GM51853) summarized the geology and history of a large property that included the Chubb showing, while recommending future exploration work for the Abitibi Lithium Corporation.

The most recent work was conducted by Lamarche (1994; GM52881) for Abitibi Lithium Corporation. The company established a grid totaling 8.435 km while carrying out 4 drill holes, 3 on the main granitic pegmatite dykes, totaling 91.4 m. The best intersections for their lithium content are presented below:



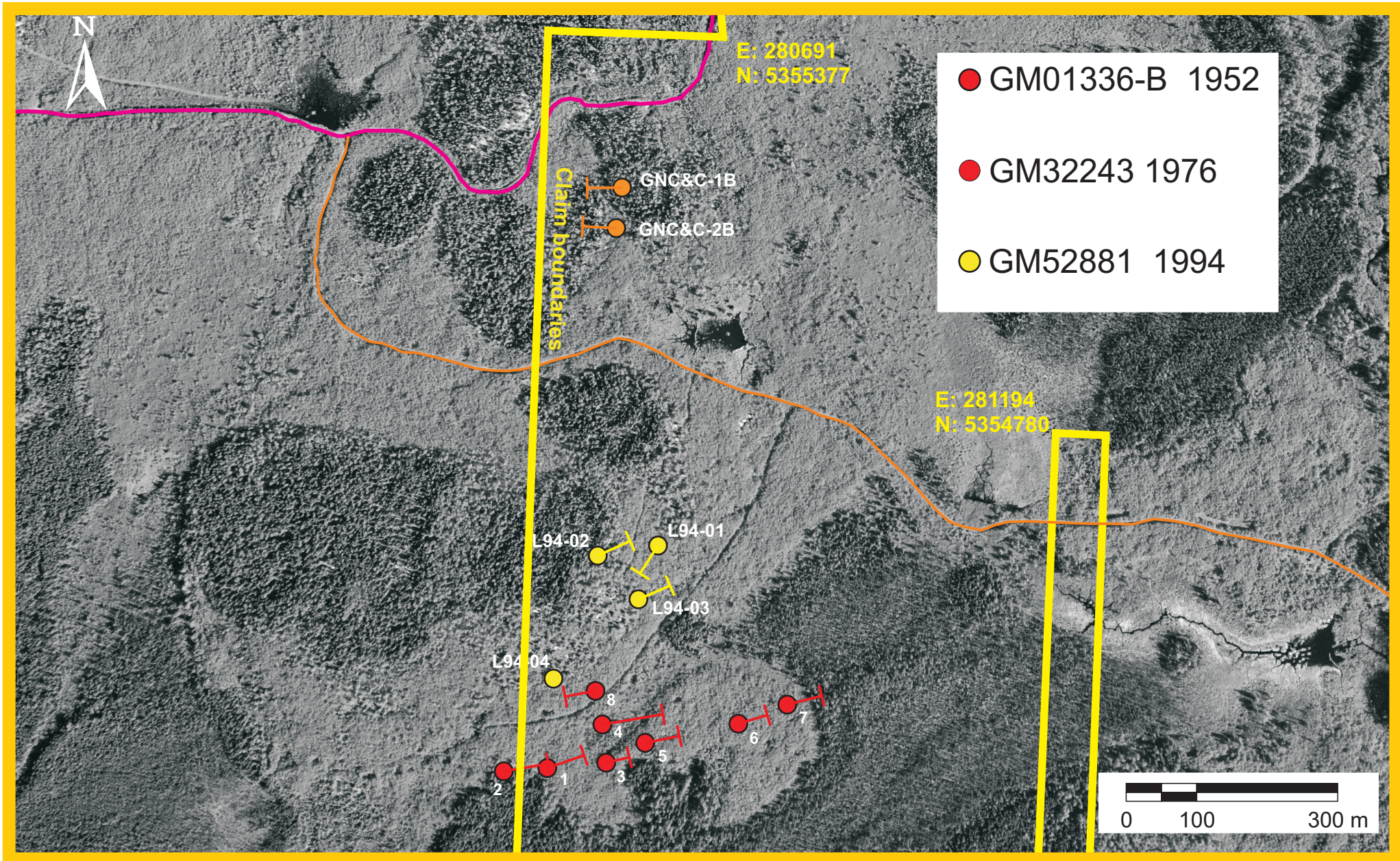


Figure 6. Localization of historical DDH, Chubb property. UTM Coord.; NAD83; Zone18N; E=Easting; N=Northing.



**Table 1.** Historical diamond drill holes on the Chubb property.

No. Report	Hole no.	Township	Lot	Range	Easting *	Northing	Azimuth (°)	Plunge (°)
GM 01336-B (1952)	1	La Corne	11	II	280424	5354276	71	45
GM 01336-B	2	La Corne	11	II	280362	5354271	81	45
GM 01336-B	3	La Corne	11	II	280515	5354287	80	47
GM 01336-B	4	La Corne	11	II	280510	5354342	80	45
GM 01336-B	5	La Corne	11	II	280574	5354315	79	45
GM 01336-B	6	La Corne	11	II	280710	5354344	75	45
GM 01336-B	7	La Corne	11	II	280789	5354372	74	45
GM 01336-B	8	La Corne	11	II	280497	5354392	259	41
GM 32243 (1976)	GNC&C-1B	La Corne	11	II	280540	5355149	270	45
GM 32243	GNC&C-2B	La Corne	11	II	280533	5355091	270	45
GM 52881 (1994)	L-94-01	La Corne	11	II	280593	5354615	210	55
GM 52881	L-94-02	La Corne	11	II	280505	5354596	66	45
GM 52881	L-94-03	La Corne	11	II	280564	5354531	66	45
GM 52881	L-94-04	La Corne	11	II	280439	5354414	237	45

\* NAD83; Zone 17N

Hole no.	Azimuth (°)	Plunge (°)	Depth (m)	Intersection	Length (m)	Li <sub>2</sub> O (wt.%)
L94-1	210	55	91,40	31.18-34.90	3,72	1,68
L94-2	66	45	76,20	61.42-63.58	2,16	0,15
L94-3	66	45	76,20	25.66-28.04	2,38	1,25
				47.79-50.54	2,75	1,00
				51.82-53.28	1,46	1,05
L94-4	237	45	61,00	1.37-1.98	0,61	1,06
				9.44-11.13	1,69	0,16

### 8.2-The International Property (Bouvier and International Showings)

The Bouvier showing is located in a farmer's field on Lots 31 to 38, Range II, Figuery Township. The first discovery of spodumene is attributed to Mr. J. Cyr in 1947 whose work consisted in bulldozing the field to expose a 67 x 11 m spodumene-bearing granitic pegmatite dyke. The dyke contained 15 to 25% spodumene. In 1951, four DDH were put down in Lot 36 by the Lithium Corporation of America. Seven subsequent DDH were sunk in 1953. Three holes were located 61, 107 and 146 m west of the 1951 section and cut the main spodumene-bearing dyke, but two holes located 37 and 84 m to the east failed to reach the dyke. The drilling campaigns constrain the dyke to a length of 183 m and width of 5 to 14 m. The strike is N75°W and the dip 45°S (Sharpe, 1961; Latulippe, 1954; GM02686A). In 1976; two DDH totaling 152 m planted east of the main zone extension failed to reach any spodumene-bearing dyke (Blanton, 1976; GM32243). International Mining Corp. also drilled some boreholes on the southern edge of the property (Figure 7). The holes encountered a mixture of muscovite-biotite monzogranite, aplites, granitic pegmatites and biotite schists. Although, some beryl, molybdenite and spodumene were observed no significant mineralization could be found in the granitic dykes (GM30699). A summary of the drilling campaigns is given in Table 2 and Figure 7.

Sharpe (1961) reported that in 1954, International Lithium Mining Corp. owned a large property in the Figuery Township which covered Lots 38 to 48, Range II and Lots 31 to 42, Range III. In 1954-1955, the company carried an extensive drilling campaign that included 85 DDH, focused in the central parts of lots 39 and 40. The drill holes explored a zone of spodumene-bearing granitic pegmatite dykes located in part under the western shore of the Harricana River

**Table 2.** Historical diamond drill holes sunk on the International property.

No. Report	Hole no.	Township	Lot	Range	Easting*	Northing	Azimuth (°)	Plunge (°)
GM 01336-C (1951)	1A	Figury	36	II	714612	5370588	360	45
	4	Figury	36	II	714608	5370638	180	45
GM 01336-D (1953)	4	Figury	36	II	714627	5370565	360	45
	5	Figury	36	II	714479	5370546	360	60
	6	Figury	36	II	714579	5370523	360	60
	7	Figury	35	II	714435	5370577	360	60
	8	Figury	35	II	714398	5370598	360	60
	9	Figury	35	II	714359	5370619	360	60
GM 03227-A (1954)	1	Figury	39	II	715349	5370449	45	50
	4	Figury	40	II	715653	5370380	360	90
	7	Figury	40	II	715619	5370437	235	55
	8	Figury	40	II	715684	5370297	245	55
	17	Figury	39	II	715266	5370503	360	90
	18	Figury	39	II	715258	5370430	9	45
	19	Figury	39	II	715255	5370403	10	50
	35	Figury	39	II	715349	5370609	195	50
	36	Figury	39	II	715354	5370640	195	50
	37	Figury	39	II	715378	5370601	195	50
	42	Figury	39	II	715366	5370540	195	50
	43	Figury	39	II	715381	5370445	15	50
GM 03699 (1955)	50	Figury	40	II	715661	5369724	45	50
	53	Figury	39	II	715343	5369840	6	50
	54	Figury	40	I	715550	5369625	45	50
	56	Figury	39	II	715332	5369717	6	45
GM 30571 (1974)	P.150	Figury	39	II	715390	5370979	180	45

\*UTM Coord.: NAD83; Zone 17N



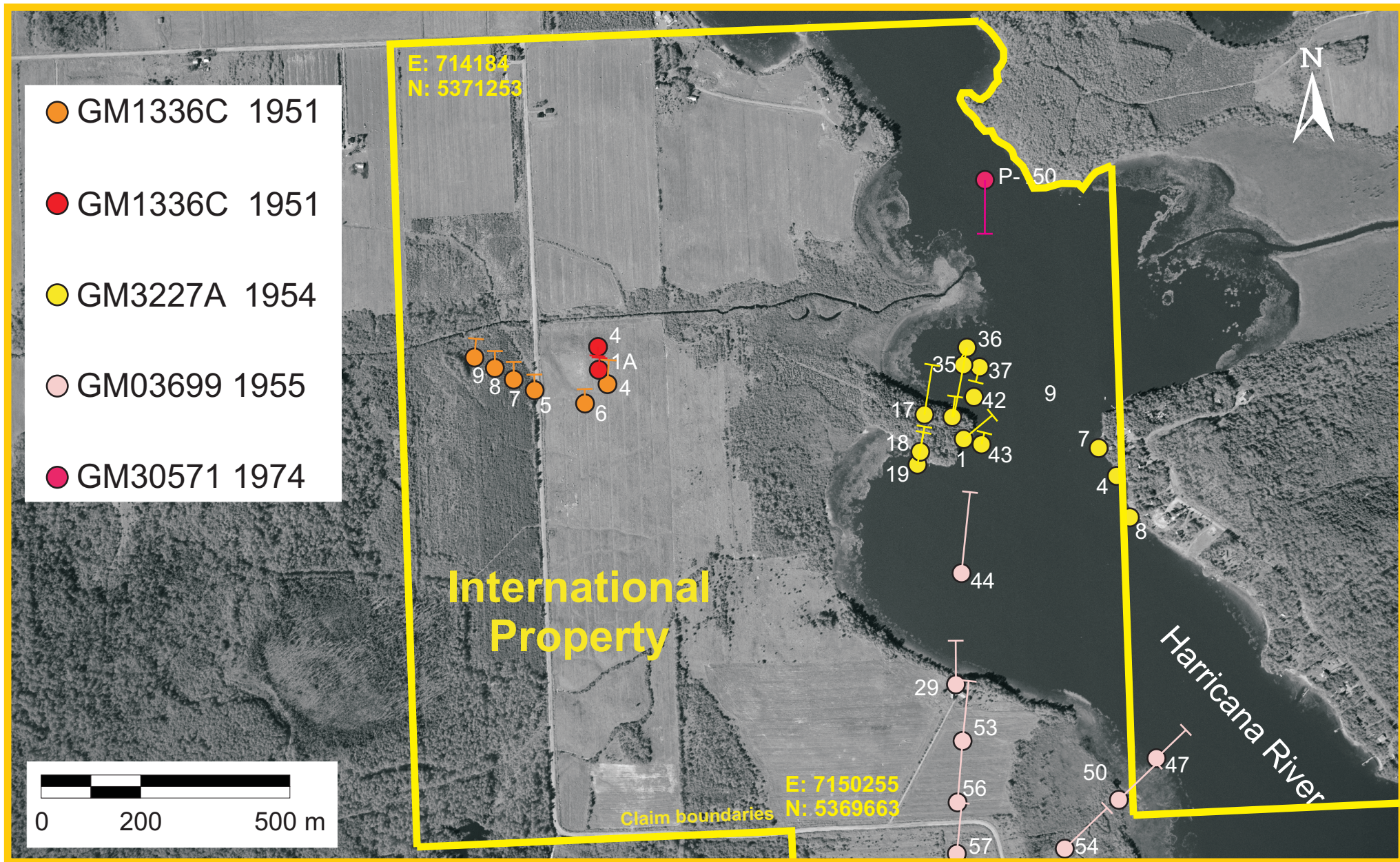


Figure 7. Localization of historical DDH sink principally during the 1950's on the International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.



(GM03227A; also see Table 2 and Figure 7) which now constitutes the International showing. The dykes lie along a bend in the sedimentary-volcanic contact which veers from an EW to a SE direction. The spodumene-bearing dykes are exposed on the western bank of the Harricana River and also contain tantalite. The zone explored by drilling includes several irregular shaped, subhorizontal granitic pegmatite dykes with some intersections reaching 6 m. The drilling was pursued northward to seek for an extension to the pegmatites. Exploratory drilling and trenching was conducted southward of the Harricana River shore in Lot 40, Range I. The work revealed a complex zone of spodumene-bearing granitic pegmatites and monzogranite rocks with erratic distribution of spodumene, beryl, tantalite and fluorine (?). Spodumene was estimated to form 4 % of the exposed rock.

Subsequent work was performed in 1963 with a series of ground based magnetic and electromagnetic surveys which produced little results (Woakes, 1963a, b; GM13126 and GM13127 and Woodard, 1963; GM13129).

### 8.3-The Athona Property

There is little information concerning the previous work carried out on the Athona property. Sharpe (1960) mentions that New Athona Mines Ltd. conducted detailed geological mapping in 1960 (Forgrave et al., 1960; GM10822). Molybdenite Corporation of Canada (Molycorp) sunk 5 DDH on the property to evaluate the potential of molybdenite mineralization related to the albitite-granitic pegmatite dykes exposed to the north of the property (see Table below and Figure 8). Best intersections are: 0.5 MoS<sub>2</sub> wt. % /1.22 m; 0.5 MoS<sub>2</sub> wt. % / 1.68 m and 0.11 MoS<sub>2</sub> wt. % /1.74 m. Boily et al. (1989) also examined the property. Selected grab samples from Mo-bearing pegmatite dykes produced MoS<sub>2</sub> concentration between 5 to 20 wt. %.

No. Report	Hole no.	Township	Lot	Range	Easting*	Northing	Azimuth (°)	Plunge (°)
GM 17912 (1966)	L-1	Landrienne	6	I	279808	5369448	320	45
	L-2		6	I	279633	5369459	347	45
	L-4		6	I	279702	5369478	343	45
	L-5		6	I	279623	5369618	348	55
	L-7		6	I	279623	5369618	20	40



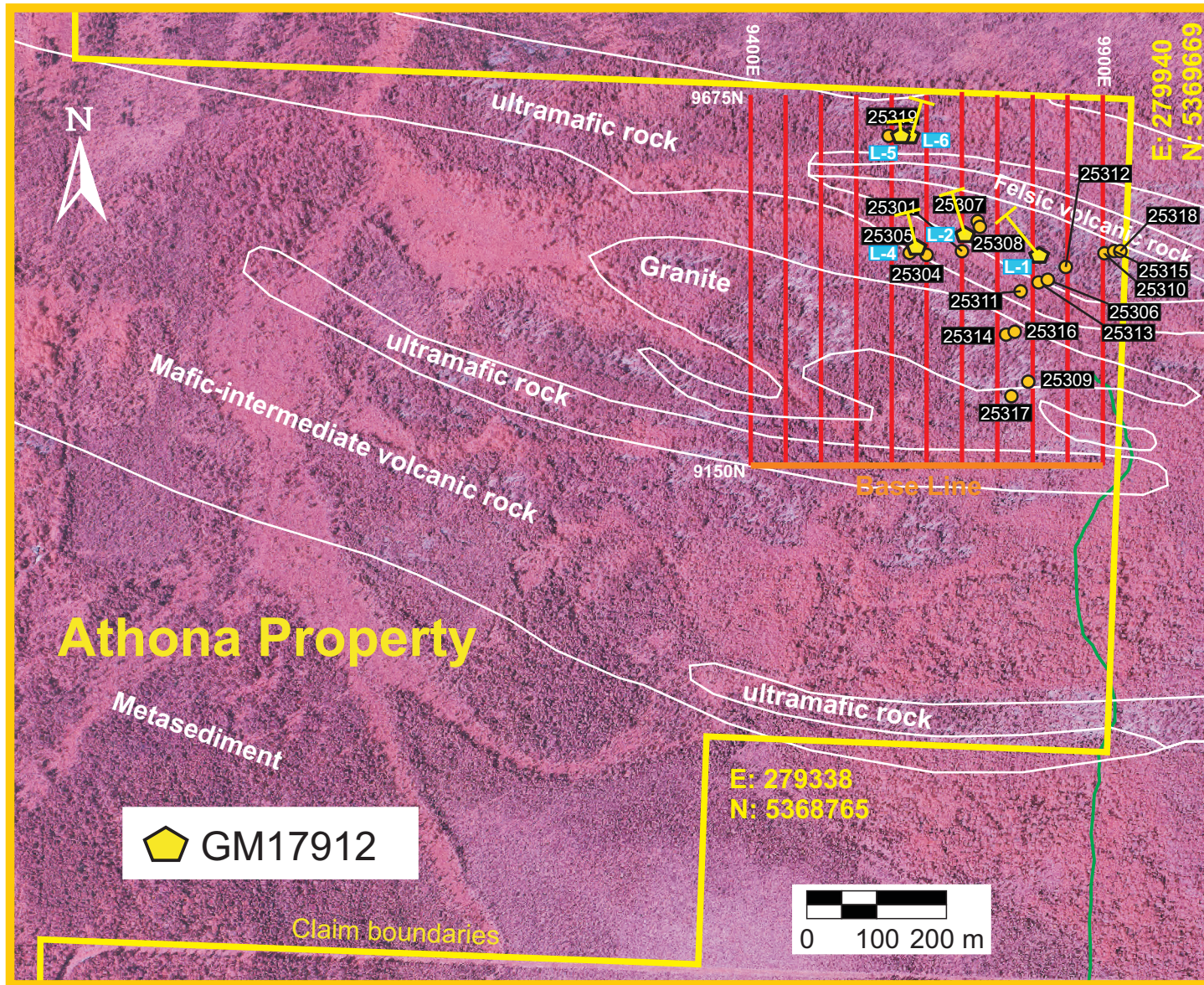


Figure 8. Localization of the Athona grid put in place in 2009. The localization of the samples collected during the summer season are also plotted accompanied by the sites of historical DDH sunk by Molycorp. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

\*UTM coord.; NAD83; Zone 18N

## **ITEM 9 GEOLOGICAL SETTING**

### *9.1- The Abitibi Subprovince*

The Abitibi subprovince is located in the Superior Province of the Canadian Shield. The largest Archean greenstone belt in the world, it is bounded to the west by the Kapuskasing Structural Zone and to the east by the Grenville Front. In the southern part of the subprovince, the Larder Lake-Cadillac fault juxtaposes the Abitibi Belt against the metasedimentary Pontiac suprovince. The Opatica subprovince, consisting mainly of orthogneiss and plutonic rocks, lies to the north (Figure 2).

Volcanic strata of the southern Abitibi Belt were deposited between 2747 and 2698 Ma (Mortensen, 1993) and soon after were intruded by tonalite-trondhjemite-granodiorite plutons (TTG suite). These rocks are unconformably overlain by alluvial-fluvial sedimentary rocks of the Temiskaming Group, deposited between 2680 and 2677 Ma (Corfu et al., 1991), and intruded by coeval syntectonic syenitic and monzonitic plutons. Post-tectonic muscovite-biotite monzogranites intruded the regionally metamorphosed strata (2643±4 Ma; Feng and Kerrich, 1991).

The Abitibi subprovince is composed of lozenge-shaped domains of weakly deformed, moderately to steeply dipping units separated by narrow (usually < 100 m) high-strained zones that have been extensively metasomatized (Hubert et al., 1984; Daigneault and Archambault, 1990). These faults can be subdivided into two distinct sets: (1) east-west trending faults, including the Cadillac-Larder Lake and Destor-Porcupine faults, that are spatially associated with gold mineralization and are characterized by steeply plunging stretching and mineral lineations (Robert, 1989) and (2), northwest-southeast trending faults that commonly exhibit a shallow plunging lineation and kinematic indicators that suggest a dextral sense of movement (Daigneault and Archambault, 1990).

### *9.2-The Val d'Or-Malartic Area*



The Val d'Or-Malartic area is located in the southern part of the Abitibi subprovince. The geology consists of a succession of Archean volcanic and sedimentary assemblages. From south to north we observe the Pontiac, the Piché, the Cadillac, the Blake River, the Kewagama groups, the Malartic Composite Block and the lac Caste Group. This volcanosedimentary assemblage is invaded by pre to post-tectonic dykes and plutons of tonalitic to monzogranitic composition. The volcanosedimentary rocks were metamorphosed to the greenschist facies. All Archean rocks are crosscut by NE-SW trending Proterozoic diabase dykes. The volcanosedimentary assemblages underwent two major deformation phases. The first phase (D1) produced EW to NW-SE-oriented folds (Dimroth et al., 1983). The second phase (D2) is represented by EW-oriented schistosity and interpreted as the result of a N-S compression (Hubert, 1990).

Following the stratigraphic classification and model of Imreh (1984), the Malartic Group is composed of komatiitic to tholeiitic basaltic lavas of the La Motte-Vassan and Dubuisson formations which are overlain by a calco-alkaline volcanic assemblage interpreted as central complexes associated with arc volcanism. The tholeiites/komatiites are the oldest volcanic rocks of the studied area ( $2714 \pm 2$  Ma; Pilote et al., 1997). The lower part and flanks of the central complexes are made of komatiitic to basaltic lavas and breccias of the Jacola Formation. The latter is overlain by the calco-alkaline lava flows and volcanoclastic rocks of the Val d'Or Formation and the pillowed basaltic and andesite flows, rhyodacitic breccias and flows and epiclastic rocks of the Heva Formation (Figure 9). The latter contains the youngest volcanic rocks of the region ( $2705 \pm 1$  Ma; Wong et al., 1991). Following the emplacement of the volcanic sequences, the wacke and pelitic sedimentary sequences now forming the lac Caste Group ( $2691 \pm 1$  Ma; Feng and Kerrich, 1991) were deposited.

The Harricana Group makes up the other major volcanic assemblage of the region (Imreh, 1984; Otis and Béland, 1986) (Figure 10). The basal portion of the group is formed by the Lower Figury Formation which contains basaltic to andesitic pillowed and brecciated flows and volcanic epiclastic rocks locally invaded by a thick differentiated mafic-ultramafic sill. The Upper Figury Formation consists of andesitic flows, intermediate to felsic pyroclastic rocks and clastic and chemical sediments. This formation is overlain by the Landrienne Formation revealing a thick sequence of brecciated and pillowed basaltic flows with a sommital sequence of rhyolitic breccias.

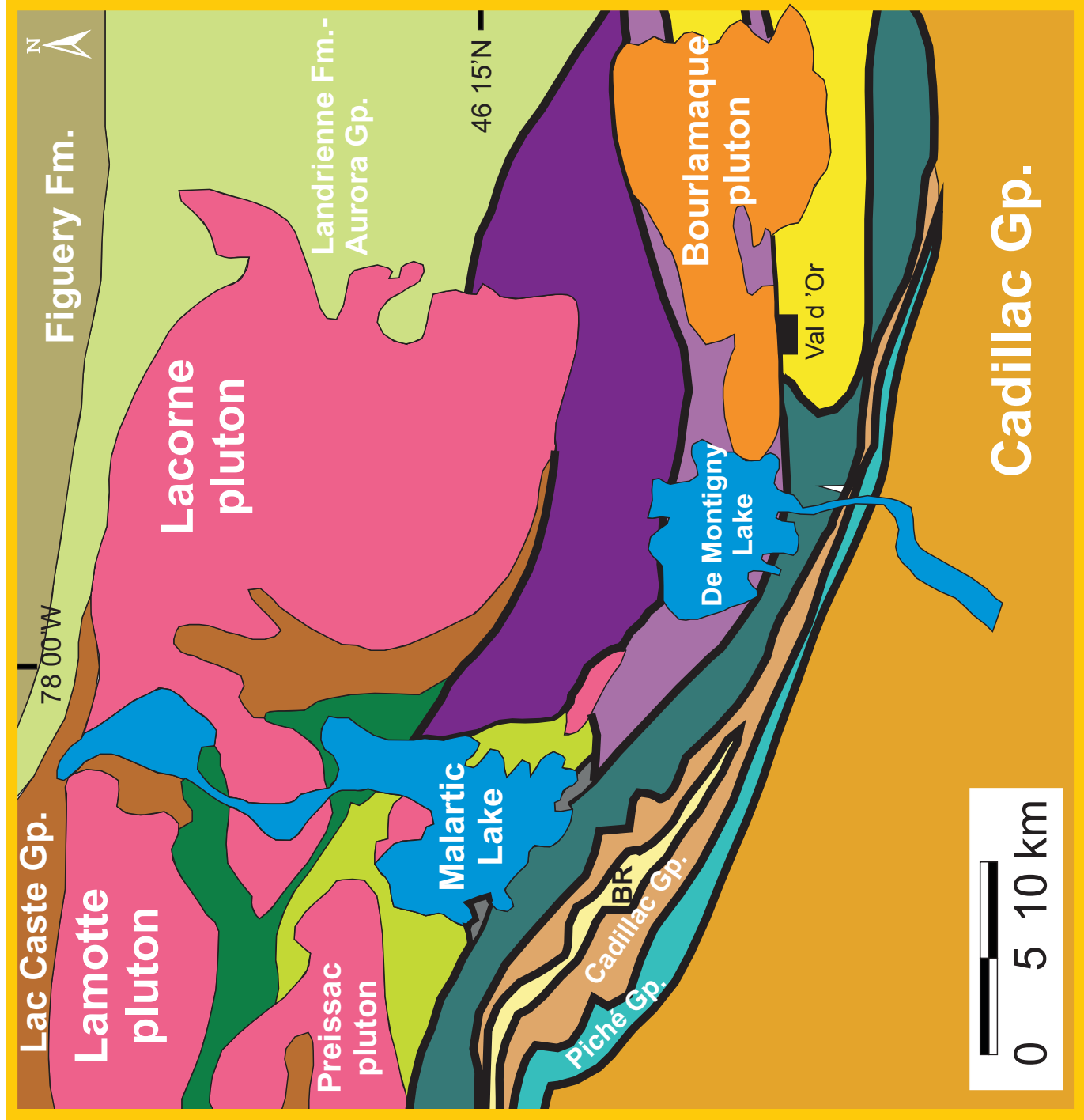


Figure 9. Tectonostratigraphy of the Val d'Or-Malartic area according to Desrochers et al. (1993) and Imreh (1984).

Proposing a different tectonostratigraphic model, Desrochers et al. (1993) have subdivided the volcanic assemblages corresponding to the Malartic Group into seven lithostratigraphic domains designated under the Malartic Composite Block (MCB). The MCB comprises from north to south: the North, Vassan, Central, Montigny, Baie-Carpentier, South and the Val d'Or domains (Figure 9). These are delimited by important faults or deformation zones and are defined by their lithological, structural and geochemical characteristics. This interpretation alleges that the MCB is a collage of allochthonous lithotectonic assemblages. It also suggests that the Val d'Or Domain (the Val d'Or Formation of Imreh, 1984) rests unconformably on a tectonic collage of already deformed mafic volcanic rocks. Desrochers et al.'s model indicates that the South, de Montigny, Central, North and Vassan domains are constituted of mafic to ultramafic volcanic flows with a small proportion of intermediate volcanic rocks. The tholeiitic and komatiitic compositions of these lavas reflect a formation in an oceanic plateau environment. The Baie Carpentier Domain is dominated by intermediate volcanoclastic rocks with a small proportion of basalts and komatiites. Geochemical signatures of the volcanic rocks suggest an island arc tectonic environment. The Val d'Or Domain is composed of calco-alkaline intermediate to felsic volcanoclastic rocks suggesting an origin by anatexis of mafic to ultramafic basement rocks.

Support for the Imreh stratigraphic model comes from U-Pb geochronology indicating that the volcanism in the Val d'Or-Malartic region was continuous and that entire volcanic sequence from the base of the La Motte-Vassan Formation to the Val d'Or and Heva formations was deposited in a short span of 10 to 12 Ma (Pilote et al., 1998).

### *9.3-The Preissac-Lacorne Batholith (PLB)*

The Preissac-Lacorne Batholith is a syn- to late-tectonic composite intrusive complex emplaced between 2681-2647 Ma in greenschist to amphibolite-grade Archean volcanosedimentary rocks of the Malartic Group. Bourne and Danis (1987), Boily et al., (1989), Boily (1993) and Mulja et al., (1995) have divided the Preissac-Lacorne Batholith in two major magmatic suites: 1) an early foliated, metaluminous dioritic to granodioritic suite with numerous metasedimentary and metavolcanic xenoliths and 2), a late peraluminous monzogranitic moderately foliated to unfoliated, xenoliths-free suite genetically and spatially associated with an aureole of Li, Mo, Be

and Ta-mineralized granitic pegmatites. The monogranitic suite is represented by four plutons emplaced in distinct magmatic pulses: the Lacorne, Lamotte ( $2647 \pm 2$  Ma), Preissac (2681-2660 Ma) and Moly Hill plutons (Ducharme et al., 1997) (Figure 9).

### *9.3.1-The Peraluminous Monzogranitic Plutons*

The peraluminous monzogranites are well exposed, homogeneous, and present a white color. They are fine to coarse-grained with allotriomorphic and seriated textures (Mulja et al., 1995). The monzogranites are crisscrossed by granitic pegmatite dykes filling fractures and joints. The proportion of pegmatite dykes vary from 5 % (Preissac pluton) to nearly 80 % (Lacorne pluton). They are constituted by quartz, plagioclase, microcline, perthite, biotite and muscovite. Garnet is the main accessory phase with subordinate amount of monazite, zircon, apatite and molybdenite. SEM analyses identified accessory tantalite, xenotime ( $YPO_4$ ), fergusonite ( $YNbO_4$ ) and sitibnite in inclusions in quartz and feldspar or intergrown with zircon and garnet (Mulja et al., 1995). Only plagioclase (sericite) and biotite (chloritization) show signs of alteration.

The monzogranites display three paragenetic facies: 1) biotite monzogranite; 2) biotite-muscovite monzogranite and muscovite-garnet monzogranite, the latter being associated with molybdenite mineralization at the Moly Hill and Preissac plutons. A crude facies zonation in which the biotite monzogranites occur at the center of the pluton and biotite-muscovite and rare muscovite-garnet monzogranites located at the fringe of the plutons is apparent.

### *9.3.2-Granitic Pegmatites and Aplites*

Ayres and Cerny (1982) and Cerny (1982) have shown that the granitic pegmatites are distributed in concentric envelopes (aureoles) around their parental monzogranite plutons, each containing a different facies defined by the mineral paragenesis of the pegmatites. In the Preissac-Lacorne area, the granitic pegmatites located at the core and margins of the Lacorne and Lamotte plutons commonly contain beryl and tantalite, with those occurring inside the Preissac pluton being sterile. Spodumene-rich granitic pegmatites intrude exclusively the surrounding metavolcanic and metasedimentary rocks or the plutonic rocks of the early metaluminous magmatic suite (Figure 11a and b).

The Preissac-Lacorne pegmatites and aplites present two distinct morphologies: 1) zoned and unzoned dykes with sharp and straight contact and steep dips ( $> 45^\circ$ ) and 2), irregular masses incorporating a mixture of aplitic and pegmatitic material. More than 90 % of granitic pegmatite dykes are less than 30 cm wide, but their width can vary from 5 cm to 30 m (Dawson, 1966). The zoned granitic pegmatite dykes show a fine-grained aplite border (i.e. quartz, albite, muscovite and garnet) in which garnet and muscovite form discontinuous thin bands. The aplites commonly contain disseminated molybdenite and tantalite (usually  $< 1\%$ ) (Figure 12a). The contact between pegmatitic and aplitic zone is underlined by muscovite layers which can be found at the contact with the wall rocks when aplite is absent. The muscovite layers are succeeded by coarse-grained graphic potassic feldspar and perthite in a quartz, albite, muscovite, and K-feldspar matrix. Toward the center, we generally observe quartz, albite, muscovite and K-feldspar zones with various contents of beryl, spodumene and lepidolite (Figure 12b). The core of the pegmatite often displays quartz lenses with occasional beryl. Unzoned granitic pegmatite dykes are usually restricted to the Li-rich variety which is composed of albitic plagioclase and potassic feldspar (25-40 %), quartz (30-40%), spodumene (5-20 %), muscovite (0-5%) and several accessory minerals such as garnet, beryl, tantalite, lepidolite, molybdenite, bismuthine and betafite.

#### *9.4-Economic Geology*

Three past-producing molybdenite mines (Preissac Molybdenite, Cadillac Molybdenite and Moly Corp.) are associated with the peraluminous suite of the PLB. The mineralization occurs as disseminated molybdenite ore in K-feldspar, muscovite and quartz veins emplaced in fractured muscovite-biotite monzogranites. The Quebec Lithium mine, in operation from 1955 to 1967, contains inferred reserves of 18 Mt grading 1.4 wt. %  $\text{Li}_2\text{O}$  (Karpoff, 1957). The deposit consists of 13 granitic spodumene-rich pegmatite dykes ( $\text{N}170^\circ/50^\circ\text{-}70^\circ$ ) oriented parallel to the Manneville Deformation Zone. The granitic dykes extend for 30-500 m along strike with a thickness of 3 to 40 m.

The dykes invaded fractures in altered metasedimentary (biotite schists) and mafic metavolcanic rocks (hornblende schists) as well as a quartz monzonite intrusive associated with the

metaluminous magmatic suite.

## *9.5-Property Geology*

### *9.5.1-The Chubb Property*

The Chubb property sits in an area dominated by quartz monzodiorite and metasomatized quartz diorite (tonalite) with subordinate amount of quartz monzonite and granodiorite rocks. These constitute the early metaluminous plutonic suite of the Preissac-Lacorne Batholith (Dawson, 1966; Bourne and Danis, 1987) (Figure 4). The plutonic rocks contain various proportions of hornblende and biotite with plagioclase, microcline and quartz forming the major constituents. The plutonic rocks are fine to medium grained and are strongly foliated. The early metaluminous rocks are characterized by their numerous cm to meter-sized biotized metasedimentary and chloritized/amphibolitized metavolcanic enclaves. The metaluminous plutonic rocks intrude, to the east of the property, the metasedimentary rocks of the Lac Caste Formation which consists of metawacke, biotite schist and mudrock. A 2 km SW/NE-oriented sliver of tholeiitic metabasaltic and metandesitic volcanic rocks metamorphosed to the upper greenschist-lower amphibolite facies extends to the south of Lake Baillargé (Figure 4).

Spodumene-rich granitic pegmatite dykes intrude fractures and small faults within the metaluminous plutonic rocks. The pegmatite dykes are 1 to 6 m thick, oriented 345°-350°; and vary in length from 25 to 250 m. They are crudely zoned, some having quartz cores and border zones of aplite. The granitic pegmatites are composed of quartz, albite and/or cleavelandite, K-feldspar, muscovite, with 5 to 25% spodumene. Accessory minerals are beryl, tantalite, garnet, bismuthine and molybdenite.

### *9.5.2- The International Property (Bouvier and International Showings)*

The International property covers a region showing several exposures of monzogranitic plutonic rocks that belong to the late peraluminous suite of the Preissac-Lacorne Batholith (Figure 10). According to Boily (1993), the granitic rocks are part of the Lacorne pluton which consists of



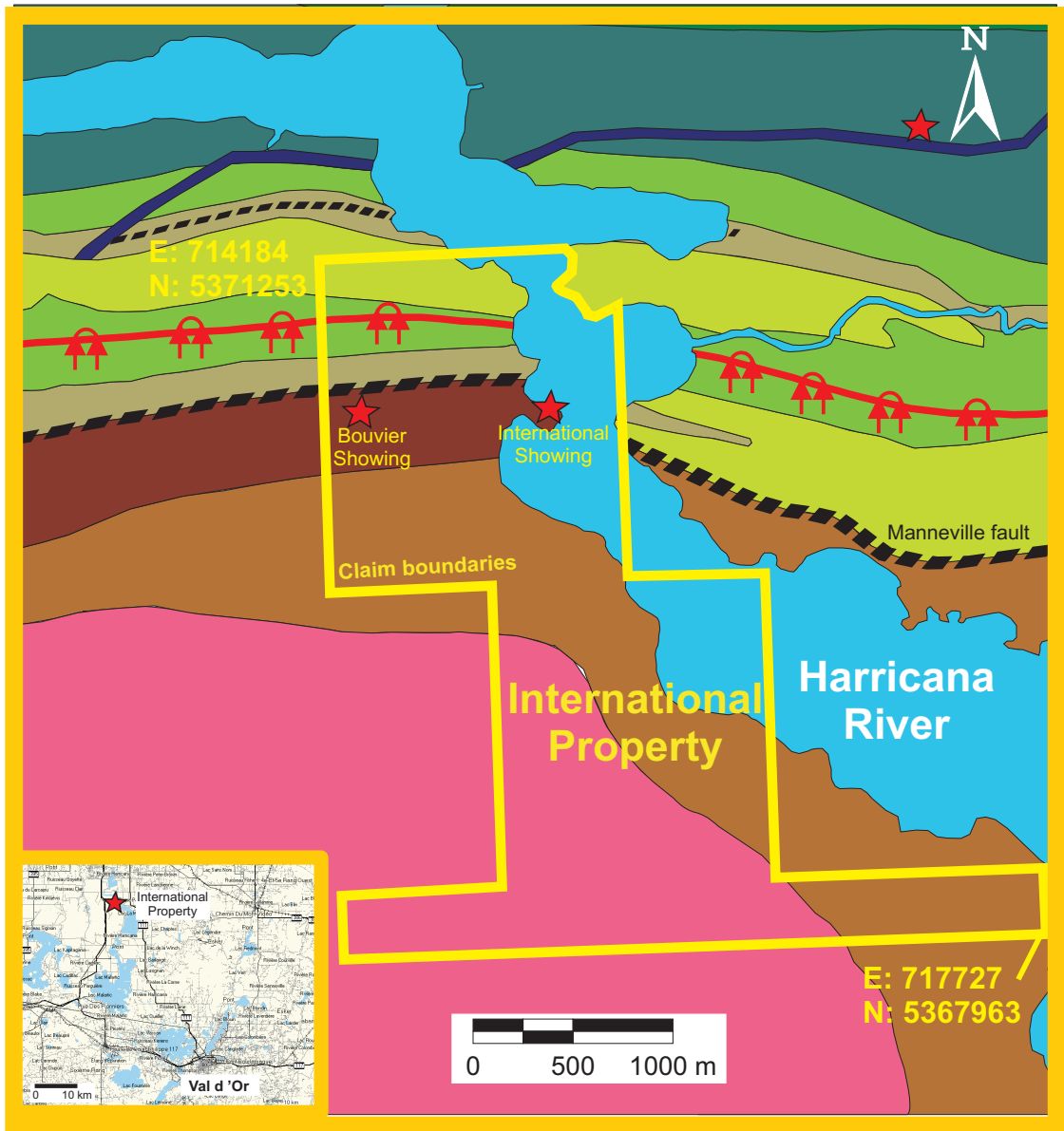



Figure 10. Geology of the International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.


**Archean**

La Motte Batholith (2641±2 Ma)



 Biotite-muscovite monzogranite, granitic pegmatite dyke

**Kewagama Group**

Héva Formation (2702±1 Ma)




 Basalt, andesite, porphyric rhyodacitic microbreccia, graphitic metasedimentary rocks

**Caste Formation (< 2694 Ma)**

 Wacke, scheelite  
 Wacke



**Malartic Group**

**Upper Dubuisson Formation**

 Massive and pillowed komatiitic flow  
 Massive basaltic flow, pillowed andesite  
 Basaltic flow, massive, pillowed, brecciated basaltic and andesitic pillowed breccia

**Harricana Group**

**Landrienne Formation**

 Magnetite and chlorite-rich andesitic and basaltic breccia  
 Trachyandesite  
 Gabbroic dyke



 Overturned syncline  
 Fault



Figure 11a. Typical assemblage of spodumene-quartz-feldspar-muscovite observed in a granitic pegmatite exposed on the Chubb property. UTM Coord.: Easting: 280477; Northing: 5354638; NAD83; Zone 18N.



Figure 11b. White laths of spodumene with feldspar, quartz and muscovite. International property, Bouvier showing. UTM Coord.: Easting: 714525; Northing: 5370634; NAD83; Zone 17N.





Figure 12a. Channel sample in a spodumene-bearing granitic pegmatite showing an aplitic border zone. Chubb property. UTM Coord.: Easting: 280618; Northing: 5354745; NAD83; Zone 18N.



Figure 12b. Channel sample in a spodumene-bearing granitic pegmatite. International property, Bouvier showing. UTM Coord.: Easting: 714516; Northing: 5370361; NAD83; Zone 17N.



biotite monzogranite and muscovite-biotite±garnet monzogranite showing a moderate foliation especially at the edges of the pluton. The peraluminous monzogranites are homogeneous and present a white color. They are fine to coarse-grained with allotriomorphic and seriated textures (Mulja et al., 1995). They are constituted of quartz, plagioclase, microcline, perthite, biotite and muscovite. Garnet is the main accessory phase with subordinate amounts of monazite, zircon, apatite and molybdenite. The monzogranites are invaded by granitic pegmatite and aplite dykes and pods that constitute nearly 20% of the rock especially within a 500 m zone at the periphery of the pluton. Many granitic pegmatites contain beryl and tantalite, but very few have spodumene. In the central part of the property, the monzogranite rocks are intrusive in the metawacke (biotite schists) of the lac Caste Formation (Figure 10). To the north, the metasediments are in structural contact with the metavolcanic rocks of the Malartic and Harricana groups. The Malartic Group is represented by the Upper Dubuisson Formation which consists of tholeiitic komatiitic, basaltic and andesitic flows, both pillowed and massive, and of subordinate layers of basaltic and andesitic breccias. The Harricana Group exposes magnetite and chlorite-rich andesitic and basaltic breccias and trachyandesites of the Landrienne Formation. The Manneville fault marks the contact between the metasedimentary and metavolcanic formations. The Manneville Fault or Manneville Deformation Zone is a regional structure rarely exposed in the basaltic lava outcrops along the north side of Preissac-Lacorne Batholith (Dawson 1966). The Manneville Fault strikes N80° W and is believed to be a dip-slip fault showing some evidence of strike-slip displacement in the Lac Caste biotite schists.

Spodumene-bearing granitic pegmatite dykes occur only to the south of the Manneville Fault and were emplaced in the metasediments of the Lac Caste Formation. The dykes are oriented parallel to the Manneville Fault and can reach 100 m in length and 10 m in apparent thickness, one pegmatite dyke was seen to be dipping 45°S (Latulippe, 1961). Most granitic pegmatites are zoned, some having quartz cores and border zones of aplite. The granitic pegmatites are composed of quartz, albite and/or cleavelandite, K-feldspar, muscovite, with 5 to 25% spodumene. Accessory minerals are beryl, tantalite, garnet, bismuthine and molybdenite.

### *9.5.3-The Athona Property*

The southern part of Athona property exposes monzogranitic plutonic rocks that belong to the late peraluminous suite of the Preissac-Lacorne Batholith (Figure 5). The peraluminous monzogranites are homogeneous and present a white color. They are fine to coarse-grained with allotriomorphic and seriated textures (Mulja et al., 1995). They are constituted by quartz, plagioclase, microcline, perthite, biotite and muscovite. Garnet is the main accessory phase with subordinate amounts of monazite, zircon, apatite and molybdenite. Boily (1993) recognized three major plutonic facies: biotite monzogranite, biotite-muscovite monzogranite and biotite-muscovite±garnet monzogranite. The biotite monzogranite constitute the bulk of the Lacorne pluton and is characterized by large volume of granitic pegmatite and aplite dykes oriented N080°-N100° and N150°-N190°. These may form up to 80% of the granitic outcrops. The granitic pegmatite dykes may contain up to 2% green beryl and disseminated tantalite.

The central and northern parts of the Athona property exhibits metasedimentary rocks of the Lac Caste Formation (metawacke, biotite schist and mudrock) and metavolcanic rocks of the Aurora Group. The group is dominated by mafic-intermediate tholeiitic flows with intercalations of komatiitic flows and ultramafic intrusive rocks. A large band of dacitic and rhyolite flows interlayered with intermediate to felsic volcanoclastic rocks occurs at the northern edge of the property.

Rare lithium mineralization appears in the form of spodumene within granitic pegmatite dykes. The molybdenite is present in albitite dykes; a sodic-rich, coarse-grained or porphyritic igneous rock containing albite and very little quartz with muscovite, garnet and apatite as common accessory phases. Albitite dykes are emplaced in mafic to ultramafic metavolcanic rocks of the Aurora Group.

## **ITEM 10 DEPOSIT TYPES**

Study of fertile peraluminous granites from which rare elements-rich granitic pegmatites are generated have been investigated by Cerny (1981, 1982) and Cerny and Meintzer (1988). These authors identify two principal Archean geological environments susceptible to contain economic rare element mineralization: tectonized metasedimentary basins and volcanoplutonic belts. In

these environments, the mineralization occurs exclusively in granitic pegmatites surrounding fertile monzogranitic rocks. These are generally emplaced in upper greenschist to lower amphibolite metamorphosed sedimentary and volcanic rocks. In the Superior Province of Canada, the monzogranites and granitic pegmatites are found: 1) within EW-oriented metavolcanic belts commonly enclosed by gneissic granitoid massifs (tonalites to potassic granites) and 2), inside highly metamorphosed paragneissic and orthogneissic belts.

Archean parental monzogranites to the granitic pegmatites are late to post-tectonic intrusive, weakly to moderately deformed. In greenstone belts the monzogranites are emplaced along large deformation zones that limit crustal blocks. Fertile monogranites rarely contain hornblende (Trueman and Cerny, 1982), but do exhibit biotite, muscovite and garnet which accompany quartz, albite and microcline as essential mineral phases. Accessory minerals are tourmaline, tantalite, beryl, molybdenite, cassiterite, cordierite and andalousite.

Chemically, the fertile granites are highly siliceous (72-76 wt. % SiO<sub>2</sub>) and peraluminous ( $Al_2O_3 / (Na_2O + K_2O + CaO)$  (molar) > 1. They display low concentrations in TiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3T</sub>, MgO, CaO, Sr, Ba, Zr and Hf and high Al<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O, K<sub>2</sub>O, Rb, Nb, U and Ta values. They possess variable Li, Be, Cs and Th contents although these are higher relative to the Archean TTG (Tonalite-Trondhjemite-Granodiorite) suite (Goad and Cerny, 1981; Cerny and Meintzer, 1988).

Following Cerny's (1982) classification, granitic pegmatites form eight genetic types with distinct mineralogical and geochemical compositions: 1) sterile biotite-magnetite granitic pegmatite, 2) sterile pegmatite with plagioclase, microcline (locally graphic), biotite and tourmaline, 3) microcline pegmatite, commonly graphic, 4) zoned microcline-albite pegmatite containing muscovite, beryl and tourmaline, 5) zoned albite-microcline pegmatite, commonly metasomatized, and enriched/mineralized in Li, Rb, Cs, Be, Ta and rich in B, P and F, 6) albite pegmatite mineralized in Li, Be, Sn and Ta, 7) homogeneous albite-spodumene pegmatite with secondary mineralization in Be, Ta, Sn and Mo and 8), quartz veins with some feldspar and frequent beryl, cassiterite and wolframite occurrences. A simpler classification elaborated by Černý (1991b) proposed four major class of granitic pegmatites: 1) abyssal, 2) muscovite,) rare element and 4), miarolitic.

The Preissac-Lacorne pegmatites are classified as rare element pegmatites (i.e. Li, Be, Ta, Cs) and exhibit mineralogical and geochemical characteristics associated with types 4, 5, 6 and 7 of Cerny's (1982) classification.

The following genetic model related to the formation of rare-metal granitic pegmatites serves as a basis for the exploration program of Mineral Hill Industries Ltd. The genesis of rare metal-rich, particularly Li, Be, Ta-rich granitic pegmatites starts with the formation of unfractionated monzogranitic magmas through anatexis of H<sub>2</sub>O, F and Cl-rich metasedimentary or quartzofeldspathic crust (Cerny, 1991a; Boily, 1993). Source enrichment in alkalis and rare elements may arise from metasomatism by aqueous fluids in a subduction or accretion prism setting. Crustal anatexis generates peraluminous granitic magmas that percolate upward to reside in an upper-crustal magma chamber. Fractional crystallization on the roof and walls of the magma chamber possibly concomitant with the formation and upward migration of rare elements chloro-complexes lead to the formation of differentiated apical zone enriched in volatile and rare elements (Boily, 1993). Expulsion and injection of H<sub>2</sub>O saturated monzogranite magmas in fractures within the granitic cupola and in the surrounding country rocks creates Li and other rare element granitic pegmatite dykes that may differentiate further into layers or zones distinguished by their mineral paragenesis and rare element enrichments. Granitic pegmatite dykes and bodies are intruded along fractures in their parent monzogranites or within the early metaluminous plutonic suite. In the metavolcanic and metasedimentary wall rocks, late to post-orogenic granitic pegmatites are emplaced in fractures, schistosity and shear zones. In the Preissac-Lacorne area, the granitic pegmatites located at the core and margins of the Lacorne and Lamotte plutons commonly contain beryl and tantalite, with those occurring inside the Preissac pluton being sterile. Spodumene-rich granitic pegmatites intrude exclusively the surrounding metavolcanic and metasedimentary rocks or the plutonic rocks of the early metaluminous magmatic suite.

The main conceptual guide for exploring granitic pegmatite was conceived by Cerny (1991a, b). It stipulates that the further their site of intrusion is from their peraluminous monzogranitic parent, the more LILE and rare-metal elements-enriched they become (i.e. Li, Cs, Be, Ta,). As a corollary guide specific to the Preissac-Lacorne Batholith complex, rare-metal-enriched granitic

pegmatites are enclosed in a 1 to 2 km aureole surrounding their monzogranite parents within the metavolcanic and metasedimentary assemblages or the early metaluminous plutonic suite. These two concepts were applied in choosing the three properties optioned by Mineral Hills Industries Ltd. The properties are located in the metavolcanic or metasedimentary wall rocks (International and Athona properties) or intrude the early metaluminous quartz monzodiorites to granodiorites (Chubb property) at a distance of less than 2 km from their parent monzogranites. Furthermore, granitic pegmatite dykes generally occurs in swarms, so that exposed bodies may hint at nearby buried pegmatites. We have used Resistivity/IP geophysical ground-based surveys to detect such hidden mineralized pegmatites. The granitic pegmatites being enriched in quartz and feldspar are more resistive and less conductive than the surrounding wall rocks and may be associated with anomalous signatures.

## **ITEM 11 MINERALIZATION**

Mineralization at the Chubb and International properties occurs in poorly zoned granitic pegmatite dykes in the form of spodumene ( $\text{LiAl}(\text{Si}_2\text{O}_6)$ ), a pyroxene. This buff white to green mineral (1 to 10 cm) usually forms elongated laths commonly oriented perpendicular to the wallrock/pegmatite contact. Spodumene constitutes between 5 to 25% of the mineralized granitic pegmatite dykes (Figure 12b). This mineral can form distinct zones in a pegmatite accompanied by all or some of the following minerals: albite (cleavelandite), quartz, K-feldspar and muscovite. Garnet, tantalite, beryl and molybdenite are accessory minerals but can reach 1-5% in some pegmatite dykes.

At the Chubb site, the spodumene-bearing granitic pegmatite dykes invade fractures and small faults within the metaluminous quartz monzodiorite to granodiorite rocks of the Preissac Lacorne Batholith. There are three important granitic pegmatite dykes containing spodumene mineralization (Dyke #1, 2 and Main Dyke; Figure 18). The dykes are 1 to 6 m thick, oriented  $345^\circ$ - $350^\circ$ ; and vary in length from 25 to 250 m. The International property exposes spodumene-bearing pegmatite dykes at two main sites, referred as the Bouvier and International showings (Figure 10). The dykes are intrusive into the metasediments of the lac Caste Formation and are oriented parallel to the strike of the Manneville Deformation Zone ( $\text{N}80^\circ\text{E}$ - $\text{N}90^\circ\text{E}$ ). At



the Bouvier site, the spodumene-bearing dyke was unearthed by six trenches. It is estimated that the dyke is 120 m long and at least 5 m wide. The International showing, located on the bank of the Harricana River, exposes a steeply-dipping zoned spodumene-rich granitic pegmatite dyke which extends in an EW direction for at least 60 m.

At the Athona property, the mineralization consists principally of molybdenite in poorly-exposed albitite dykes emplaced in mafic to ultramafic metavolcanic rocks of the Aurora Group. There is no mineralized zone per se since no previous trench or blasted zones were uncovered.

## **ITEM 12 EXPLORATION**

### *12.1-The Chubb Property*

A new grid was established on the Chubb property. The grid covers an area of 250 x 750 m, with EW-oriented lines separated by 50 m and having a length of 750 m (Figure 13). A team of line cutters under the supervision of Leigh Cassidy constructed the grid. The latter was first delimited by setting up the UTM coordinates. The EW baseline and subsequent NS lines were cut by GPS positioning and flags were set at each 50 m intervals to make a station. Each station was identified and the distance between each was measured by topofil to ensure reliability. The NS base line spans from UTM coordinates E: 280400; N: 5354900 to E: 280400; N: 5354550 (NAD83; Zone 18N) (Figure 13).

#### *12.1.1-Ground Based Magnetometer Survey*

##### *12.1.1.1- Instrumentation*

The magnetic survey was carried out by Abitibi Geophysics Inc. with a GEM Systems GSM-19W Proton precession magnetometer with Overhauser effect and built-in GPS. The magnetometer reads directly in nanoTeslas (nT) the Earth's total magnetic field to an accuracy of  $\pm 0.2$  nT/2-5 m with a gradient tolerance  $> 10\ 000$  nT/m. Magnetometers were successfully field-tested on Abitibi Geophysics private control line. The client's operator was informed of the usual QC procedures to be performed everyday in the field. At the base of operations, all profiles were inspected and only few non-coherent readings were discarded of the database.



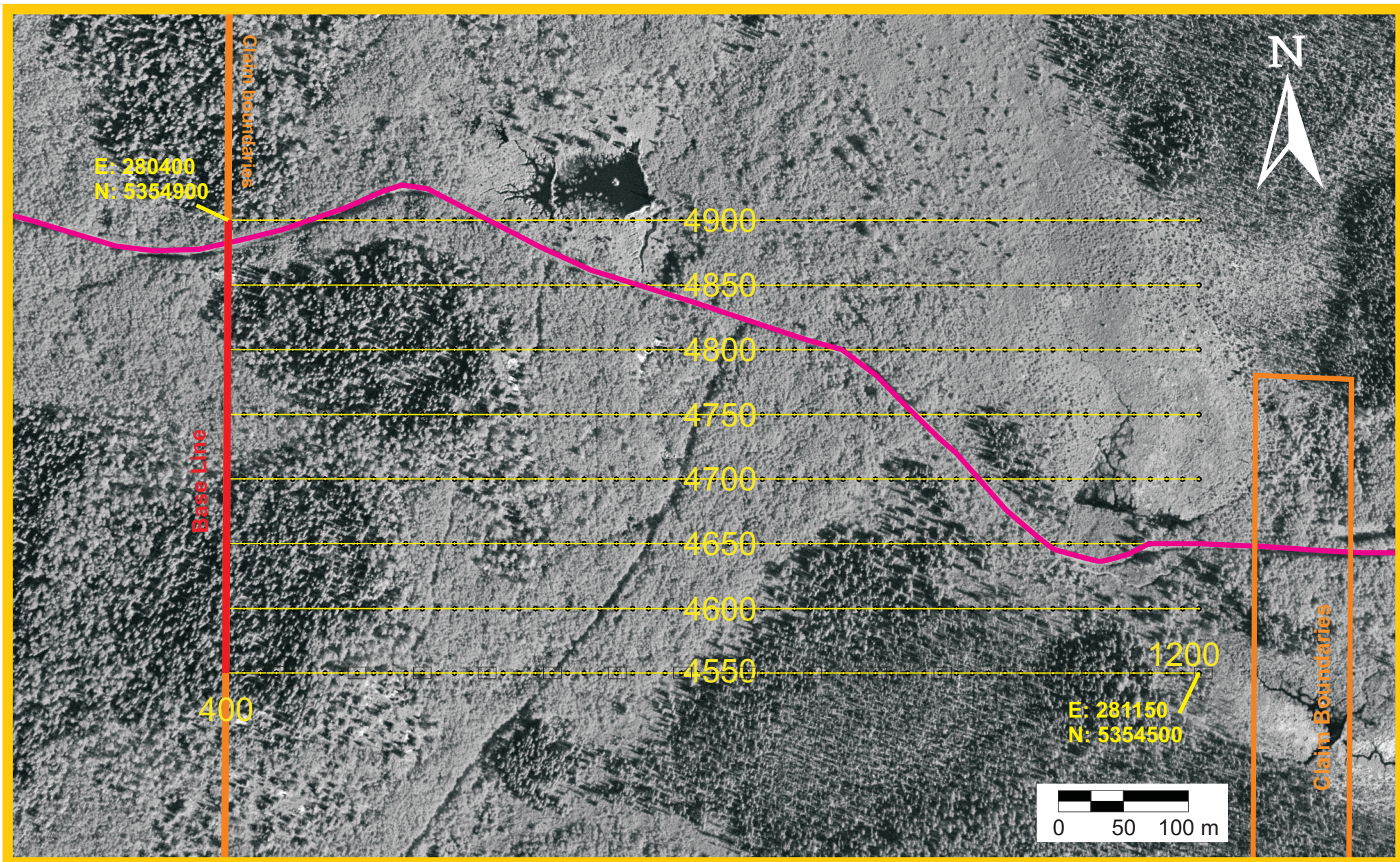


Figure 13. Localization of the grid lines, Chubb property. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



#### *12.1.1.2- Survey Procedure*

Observations of the Ground Total Magnetic Field were recorded every 12.5 m along the gridlines. The plotted values were corrected for diurnal variations using readings from a synchronized MAG base station.

#### *12.1.1.3- Data Reduction*

The total magnetic field was gridded using a bidirectional algorithm with grid cell size of 12.5 m. One pass of a 3x3 Hanning filter was then applied to improve the overall appearance of the final total magnetic field contour map. The Geosoft color table was used with linear intervals of 20 nT, from 56 060 nT to 57 340 nT.

#### *12.1.1.4-Results and Interpretation*

The analysis of the total magnetic field contours (Figure 14) from the Chubb Grid survey indicates a number of magnetic lineaments oriented NNW. In general, the magnetic anomalies amplitudes vary from 130 nT to 170 nT above the background of approximately 56200 nT. Some of the magnetic anomalies maybe related to a geophysical network of inferred faults, oriented NE and NW. The anomalies are outlined and reported on the geophysical interpretation map (Figure 17) as positive trends.

#### *12.1.2-Time Domain Resistivity / Spectral Induced Polarization (Dipole-Dipole Array, "a" = 25 m, "n" = 1 to 8)*

##### *12.1.2.1-Instrumentation*

The instruments consist of an IP TRANSMITTERS (TX) GDD Instruments TxII hooked to a Honda 2000 W power supply and giving a maximum output up to 1.8 kW or 10 A or 200 V. The electrodes are memory-shape alloy stakes. The instrument resolution is 1 mA on output current display with a bipolar square wave with 50% duty cycle waveform and a pulse duration of 2 seconds. The IP receiver is an IRIS Elrec-PRO with 10 input channels. The electrodes are made of memory-shape alloy stakes. On the VP Primary voltage measurement, the input impedance is

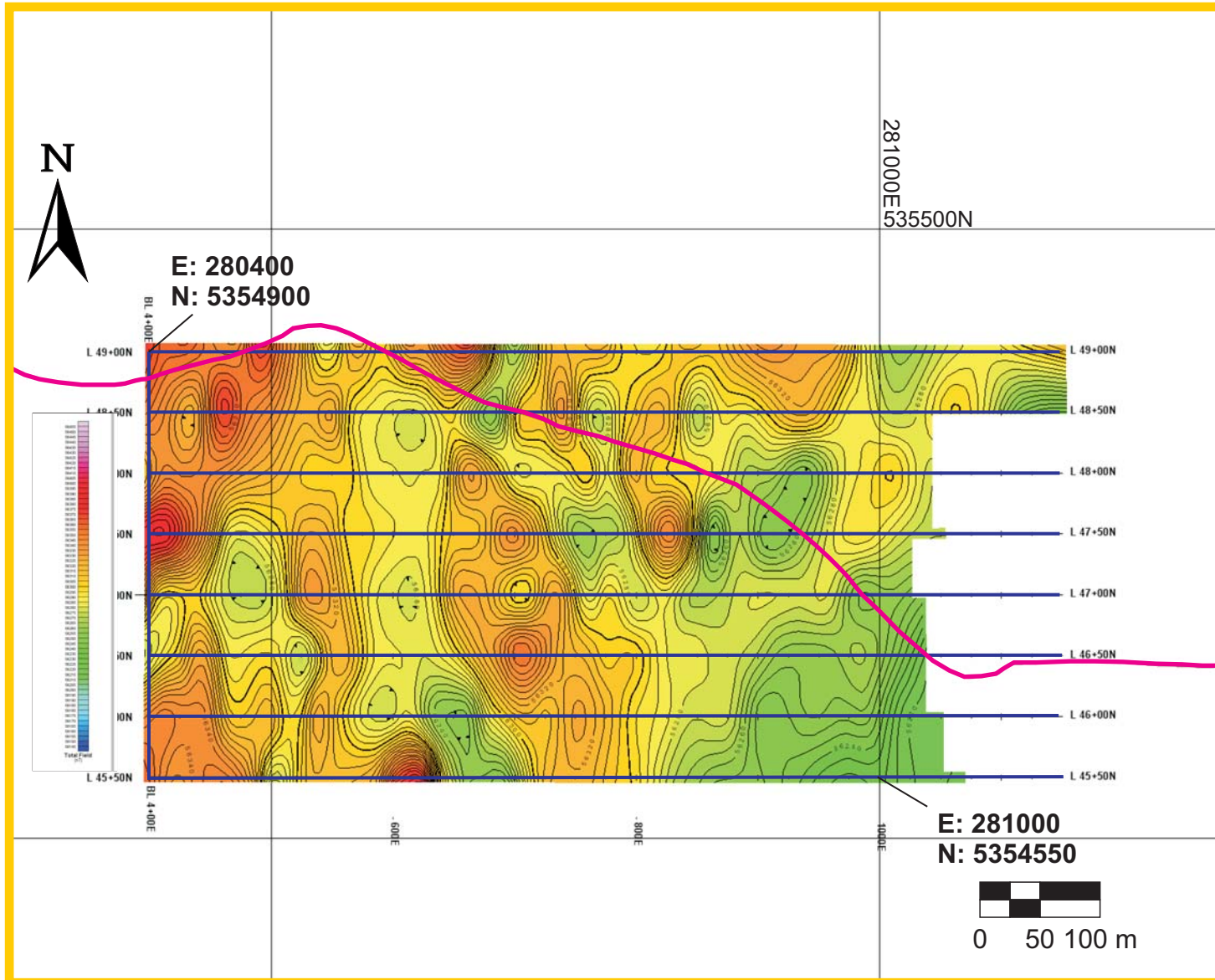


Figure 14. Total field magnetic contours (nT) of the Chubb property grid. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



100 M, the resolution is 1  $\mu\text{V}$  with a typical accuracy of 0.2% Ma. For the apparent chargeability measurement, the resolution is 0.1 mV/V with a typical accuracy of 0.4%. Arithmetic sampling mode is done with 20 time slices (M1 to M20). All gates are normalized with respect to a standard decay curve for QC in the field.

#### *12.1.2.2-Quality Control*

Before the survey, the transmitter and motor generator were checked for maximum output using calibrated loads. The receiver was checked using the Abitibi Geophysics SIMP™ certified and calibrated VP & Ma signal simulator. During data acquisition, the Rx & Tx cable insulation was verified every morning. The proprietary Software Refusilo® allowed a daily thorough monitoring of data quality and survey efficiency. 6 pulses for every reading were taken, so enough pulses were stacked. At the Base of Operations, the field QCs were inspected & validated. Each IP decay curve was analyzed with Refusilo®. The few gates that were rejected were not included in the calculation of the plotted Ma.

#### *12.1.2.3-True Depth IP Sections*

Apparent resistivity and chargeability pseudosections were inverted using Abitibi Geophysics image2D® package. The process is fully automated as there is no need to guess a starting model or to filter the pseudosection to generate one. The ground is divided in cells of a/4 side and a back-projection of the raw data is performed. The result is a smooth earth model showing all conductive, resistive and polarizable sources. The resulting true-depth sections integrate all possible solutions, highlighting the most probable ones.

#### *12.1.2.4-Results and Interpretation*

##### *12.1.2.4.1-Resistivity*

The image2D® Resistivity map (Figure 15) is much contrasted. The resistivity background (12 kOhm-m.) of the west part of the Chubb grid is typical of intrusive rock and/or of a sub-outcropping area. This resistive zone is outlined and showed in blue on the geophysical interpretation map (Figure 17). The majority of the IP anomalies are located in this resistive area.

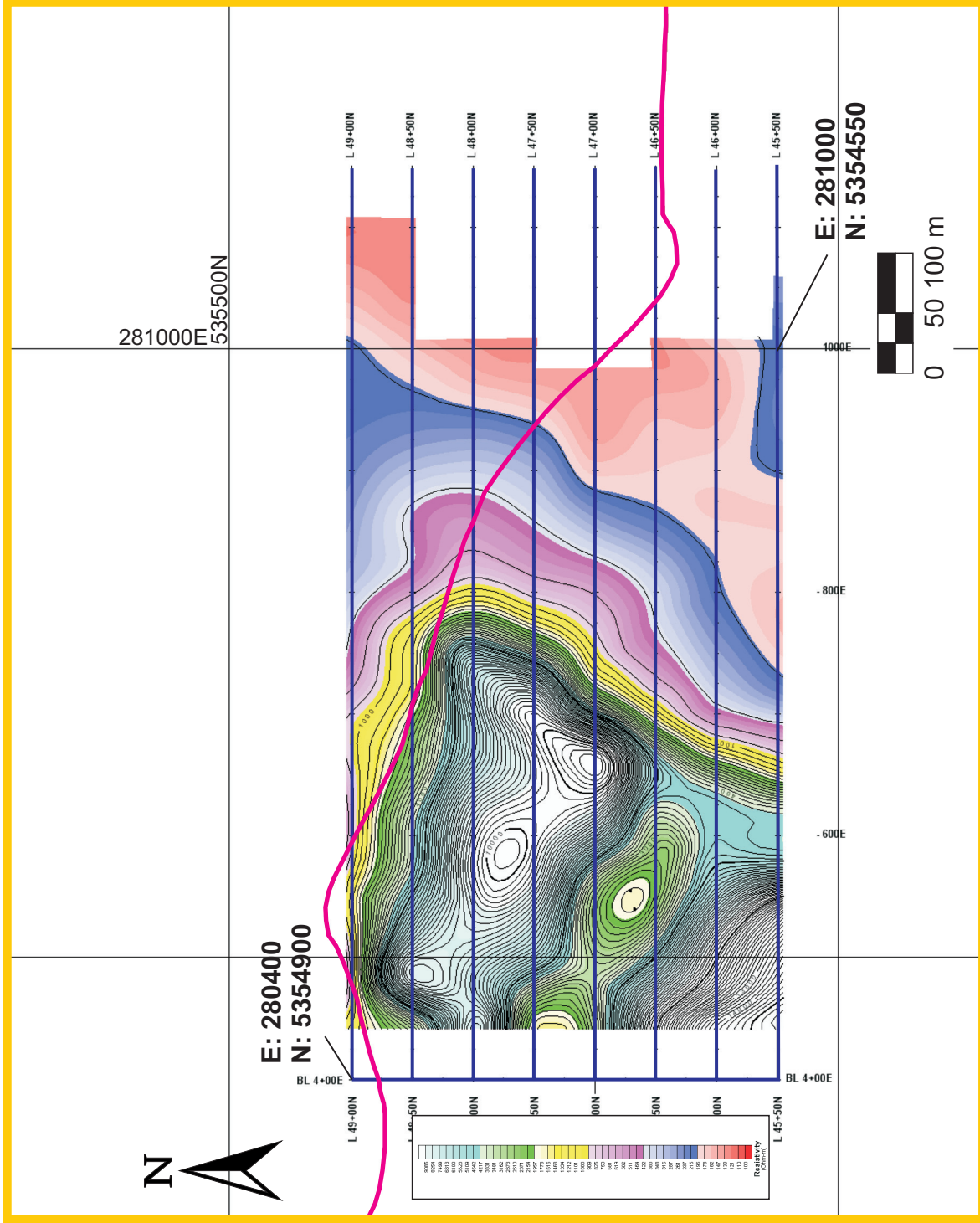


Figure 15. Resistivity map(Ohm-m) of the Chubb property. Note the high resistivity zone on the western side of the grid (in blue) which is typical of intrusive rock outcroppings. UTM Coord.; Nad83; Zone 18N; E=Easting; N=Northing

The blue zones correspond to outcropping areas where most of the channel samples were collected (Figure 17). The background of the east part of the Chubb grid is relatively low (conductive), within readings as low as 100 Ohm-m, typical of sedimentary rock (i.e. Lac Caste Formation) and/or a thick clay-rich overburden. The eastern part of the grid corresponds to low wooded lying terrains often interlocked with swampy grounds. Note that we can see very well the trace of one NW shear zone that passes through this resistive part of the grid. The two resistive zones have a sharp NW contact that probably highlights a geological contact.

#### *12.1.2.4.2-Chargeability*

The chargeability map (Figure 16) was interpreted by the image2D ® software and plotted at a depth of 40m. The surveyed zone is characterized by two distinct zones, much like the resistivity map for the same area. Areas that show relatively high resistivity (western part) have also an increased chargeability compared to the northern half of the grid that has a lower chargeability corresponding to a more conductive zone.

Overall, there were six chargeability anomalies (CH1 to CH6) identified from the interpretation of the pseudosections, with the help of the image2D® true-depth sections. Most of the anomalies are oriented NNW and located on the western resistive zone of the grid. Generally, they have a low and ill-defined chargeability response and are associated with an increased resistivity (sub-outcropping?). The inferred surface projection of the resistivity / IP sources is shown along the survey lines on the geophysical interpretation map (Figure 17) and the pseudosection plates (along with the associated magnetic profiles). The anomalies have been correlated from line-to-line as per selected features.

The position and orientation of anomalies CH1 to CH6 correspond well to the broad trend defined by the localization of channel samples which were gathered from outcrops of spodumene-bearing granitic pegmatites. The orientation of the connected anomalies is also roughly parallel to the strike of most granitic pegmatite dykes exposed south of Baillargé Lake (i.e. 345°-350°; Rennick, 1993; GM51853).

#### *12.1.3-Geochemisry of Granitic Pegmatites*

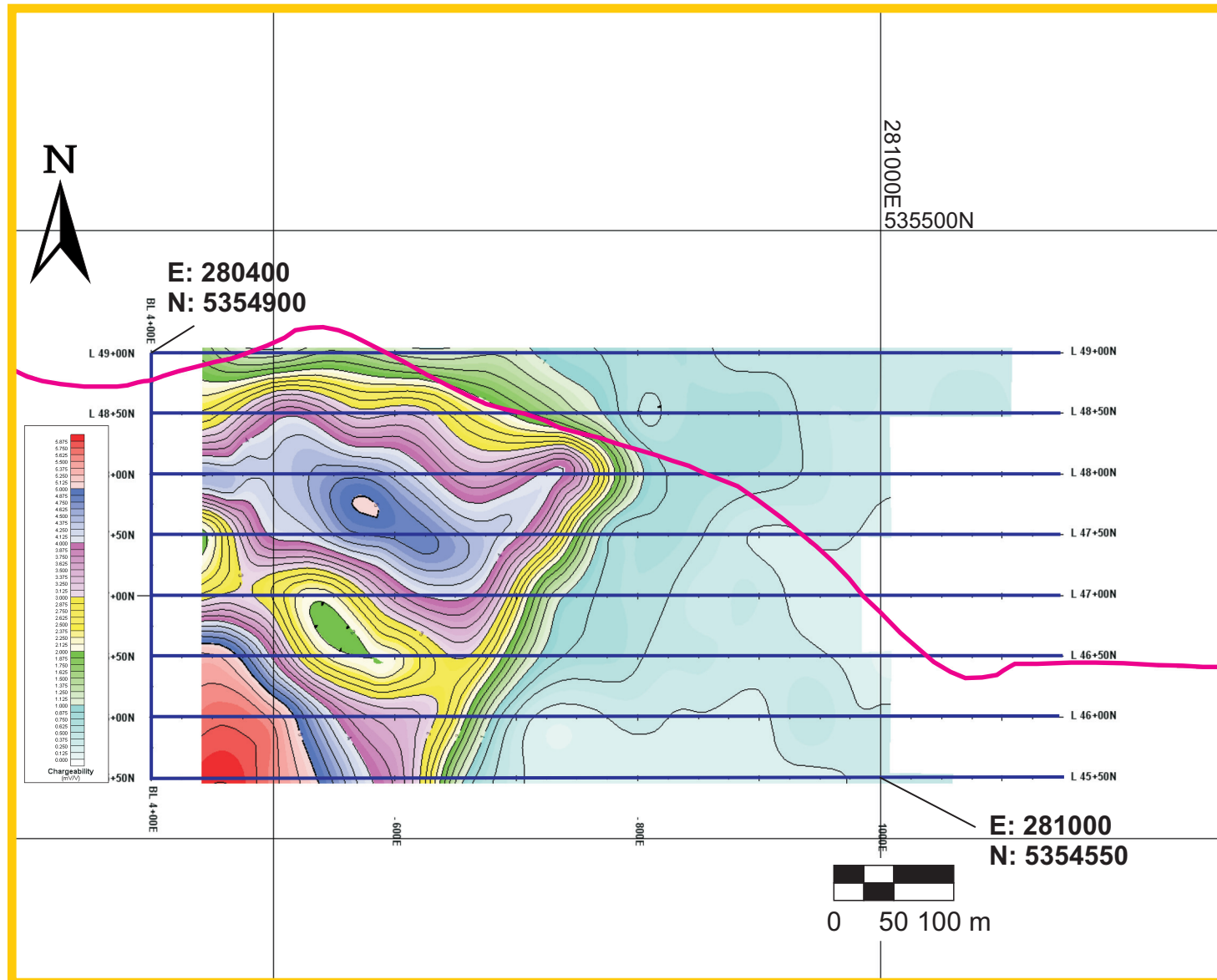


Figure 16. Chargeability map (mV/V) of the Chubb property grid. High chargeability zones (mauve to red) on the northwestern end of the grid correspond also to areas of high resistivity. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



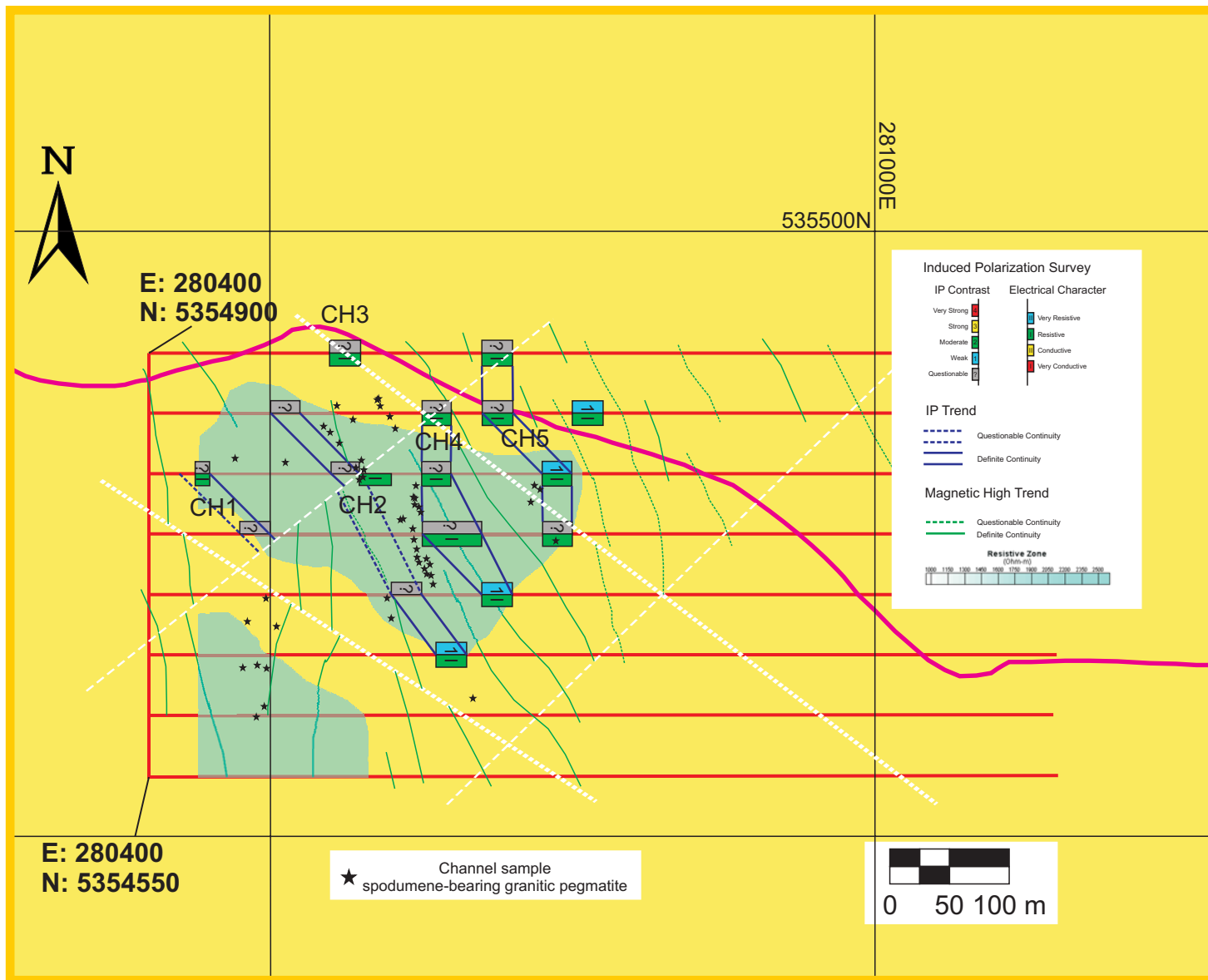


Figure 17. Interpretation of the ground-based IP and MAG surveys carried on the Chubb property. The IP results (high chargeability) identified four major NW-SE oriented structures that probably reflect masses or dykes of granitic pegmatite lying at a minimum depth of 40 m. Note that the trend of all IP anomalies follows the general orientation of exposed spodumene-bearing granitic pegmatite outcrops as testified by the localization of the channel samples. UTM Coord.; NAD83; Zone18N; E=Easting; N=Northing.

### *12.1.3.1- Channel and Rock Sampling*

A series of 59 rock samples (56 channel and 3 grab) were collected from at least three spodumene-bearing granitic pegmatite dykes along and between the main grid lines. The average length of the cut channel was 1 m and on average each sample weighs around 6.1 kg. The UTM coordinates of the samples are given in Table 3 and their localization reported on a map in Figure 18.

### *12.1.3.2-Results and Discussions*

The N-NW-oriented spodumene-bearing dykes display the characteristic moderate  $\text{Al}_2\text{O}_3$  (Av:  $14.09 \pm 1.47$  wt. %) and  $\text{K}_2\text{O}$  (Av:  $2.28 \pm 1.60$  wt. %) values, low average  $\text{Fe}_2\text{O}_{3\text{T}}$  (Av:  $1.11 \pm 0.39$  wt. %) and  $\text{CaO}$  ( $0.42 \pm 0.32$ ) concentrations and depleted K/Rb (Av: 20) attributed to rare element granitic pegmatites (Table 3).  $\text{SiO}_2$  and  $\text{Na}_2\text{O}$  contents could not be obtained due to the sodium hydroxide fusion method used to analyze the samples.  $\text{Li}_2\text{O}$  (wt. %) which is incorporated in spodumene shows variable but generally elevated concentrations (0.01-2.84 wt. %; Av:  $0.89 \pm 0.77$  wt. % (n=59)) which are considered economic. Other rare metals such as Ta (Av:  $38.0 \pm 15.8$  ppm), Be ( $182 \pm 79$  ppm), Rb ( $1438 \pm 781$  ppm) and Cs ( $92.0 \pm 42.6$  ppm) display moderate to low sub-economic average concentrations (Table 3). If we examine the data relative to each dyke, we notice that the main dyke, which is 300 m long, has a somewhat higher  $\text{Li}_2\text{O}$  ( $1.00 \pm 0.79$  wt. %; n=41) values than the other two smaller dykes (see Table below). The latter show  $\text{Li}_2\text{O}$  values of  $0.70 \pm 0.66$  wt. % (n=8) and  $0.56 \pm 0.78$  wt. % (n=8) respectively (see Figure 19).

The table above also highlights important elemental variations expressed by the large standard deviations tied to the average concentrations. We attribute in part these deviations to the coarse - very coarse grained texture of the granitic pegmatite dykes which may prevent the correct analyses of the whole pegmatite dyke. At Chubb, some spodumene laths attain 15-20 cm in length while 15 x 15 cm K-feldspar megacrysts are common. Moreover, as observed by Boily et al. (1989), there is an ill-defined zonality in the main dyke exhibited by the mineral paragenesis. Aplite border zones are conspicuous in the main dyke as are K-feldspar, spodumene or



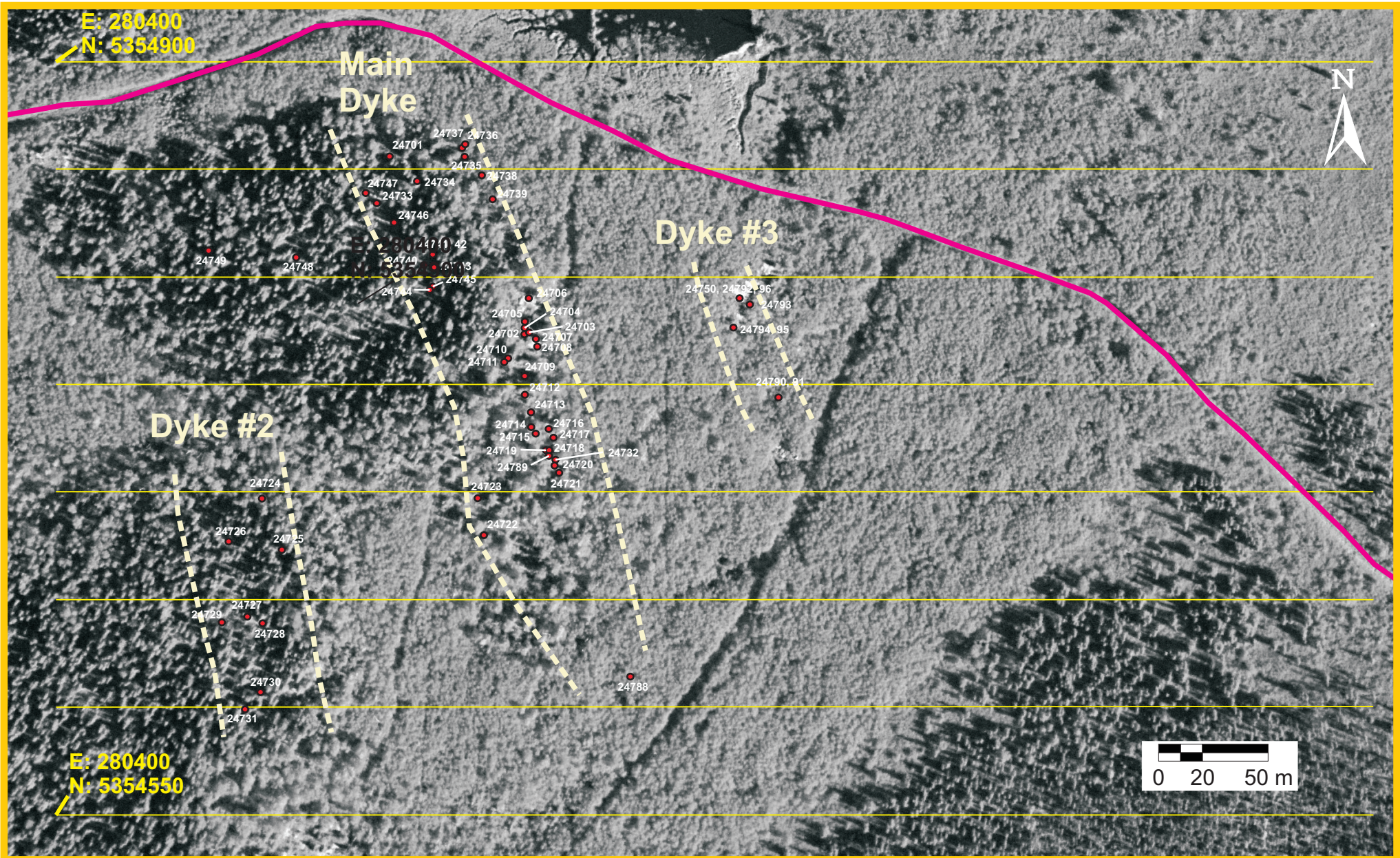


Figure 18. Localization of all channel samples collected from granitic pegmatites during the 2009 summer field exploration at the Chubb property. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



**Table 3.** Geochemistry of the granitic pegmatite rock samples collected during the 2009 summer field campaign at the Chubb property.

Sample no.	Easting*	Northing	Channel/Grab	Al <sub>2</sub> O <sub>3</sub> (wt.%)	Fe <sub>2</sub> O <sub>3T</sub> (wt.%)	K <sub>2</sub> O (wt.%)	CaO (wt.%)	Li (ppm)	Li <sub>2</sub> O (wt.%)	Ta (ppm)	Be (ppm)	Rb (ppm)	Cs (ppm)	K/Rb
24701	280555	5354856	C	14.98	0.51	0.61	0.63	30	0.01	18.2	11	1380	54.8	27
24702	280618	5354774	C	12.32	1.36	1.64	1.02	3810	0.82	16.9	243	981	62.2	18
24703	280620	5354774	C	12.94	1.07	1.29	0.39	4750	1.02	32.4	198	1390	82	17
24704	280618	5354776	C	14.79	1.14	1.37	0.41	7880	1.70	45.6	222	1440	76.3	18
24705	280618	5354779	C	13.96	1.47	1.77	0.43	5170	1.11	34.4	214	1280	81.5	19
24706	280620	5354790	C	11.49	0.89	1.07	0.43	80	0.02	58	121	2380	70.8	11
24707	280624	5354768	C	13.23	0.90	1.08	0.38	3780	0.88	24.3	187	1540	87.2	19
24708	280623	5354771	C	14.21	1.74	2.10	0.46	4080	0.88	29.6	163	1010	68.9	18
24709	280618	5354754	C	13.77	1.57	1.89	0.42	7660	1.65	25.3	201	594	55.4	19
24710	280610	5354762	C	12.13	0.73	0.88	0.43	160	0.03	48.2	131	1720	124	19
24711	280609	5354761	C	13.47	1.10	1.33	0.42	160	0.03	43.6	260	1600	150	19
24712	280618	5354745	C	14.89	1.14	1.37	0.39	8250	1.78	30.9	183	975	67.6	19
24713	280621	5354737	C	15.27	0.71	0.86	0.49	3560	0.77	38.6	124	2330	140	18
24714	280621	5354730	C	12.70	1.33	1.60	0.45	6550	1.41	36.9	327	633	84.8	18
24715	280623	5354727	C	15.00	1.14	1.37	0.41	6940	1.49	47.4	186	1260	86.7	21
24716	280629	5354729	C	14.98	0.99	1.19	0.53	4760	1.02	24.3	138	1420	83.1	19
24717	280631	5354725	C	14.25	1.37	1.65	0.42	7530	1.62	44.2	271	998	71.4	19
24718	280629	5354719	C	14.61	1.32	1.59	0.77	4590	0.99	25.7	220	1450	88.1	20
24719	280628	5354713	C	15.95	1.07	1.29	0.52	11100	2.39	58.7	173	960	65.2	17
24720	280632	5354713	C	14.13	1.60	1.93	0.38	6310	1.36	31.5	241	1040	73.5	17
24721	280634	5354709	C	14.76	1.07	1.29	0.50	1690	0.36	23.1	124	1910	114	17
24722	280599	5354680	C	14.78	0.89	1.07	0.43	3910	0.84	43.6	217	840	63	20
24723	280596	5354697	C	14.64	1.59	1.92	0.36	5770	1.24	29.8	195	1230	82.7	19
24724	280496	5354697	C	14.93	0.73	0.88	0.48	50	0.01	47.1	93	1520	67.9	19
24725	280505	5354673	C	15.55	2.06	2.48	2.48	460	0.10	9.5	11	605	68	27
24726	280480	5354677	C	13.34	0.53	0.64	0.55	50	0.01	27	6	2270	56.3	18
24727	280489	5354642	C	12.26	1.00	1.20	0.00	90	0.02	44.4	223	887	59.5	21
24728	280496	5354639	C	10.47	1.09	1.31	0.42	60	0.01	36.6	133	838	50.8	24
24729	280477	5354639	C	12.77	1.42	1.71	0.39	4710	1.01	33	224	1120	99.8	17
24730	280495	5354607	C	17.38	1.52	1.83	0.42	9130	1.97	28.9	205	1060	57.1	20
24731	280488	5354599	C	14.27	1.06	1.28	0.38	6250	1.35	48.3	231	1040	62.1	24
24732	280632	5354715	G	18.27	1.42	1.71	0.57	10600	2.28	80.1	193	845	77	21
24733	280549	5354834	C	12.38	0.71	0.86	0.49	40	0.01	51.7	65	1980	74.2	17
24734	280568	5354844	C	12.98	1.17	1.40	0.42	120	0.03	55.2	231	1650	118.0	24
24735	280590	5354856	C	14.78	0.89	3.66	0.24	110	0.02	28.4	224	1460	83.2	25
24736	280589	5354860	C	15.68	1.24	2.01	0.17	8750	1.88	33.4	231	926	57.0	22
24737	280590	5354861	C	15.51	1.60	1.61	0.21	7220	1.55	35.3	222	850	53.2	19
24738	280598	5354847	C	13.74	1.50	2.17	0.13	8270	1.78	19.9	140	1070	54.5	20
24739	280603	5354836	C	14.93	1.16	1.89	0.29	8710	1.87	33.5	282	868	84.9	22
24740	280571	5354805	C	11.30	0.83	6.99	0.21	60	0.01	11.8	103	2680	117.0	26
24741	280576	5354811	C	15.40	1.12	1.81	0.39	3650	0.79	36.9	232	753	54.4	24
24742	280576	5354810	C	15.02	0.34	3.64	0.56	50	0.01	74.0	78	1440	51.8	25
24743	280576	5354804	C	14.64	1.22	3.70	0.27	4230	0.91	31.1	316	1600	97.9	23
24744	280575	5354795	C	14.08	1.53	2.17	0.35	6490	1.40	25.9	259	1120	90.0	19
24745	280574	5354794	C	13.40	2.20	2.52	0.24	1660	0.36	42.2	323	1260	107.0	20
24746	280557	5354825	C	12.98	0.63	4.25	0.67	40	0.01	57.4	73	1990	52.3	21



**Table 3.** Geochemistry of the granitic pegmatite rock samples collected during the 2009 summer field campaign at the Chubb property.

Sample no.	Easting*	Northing	Channel/Grab	Al <sub>2</sub> O <sub>3</sub> (wt.%)	Fe <sub>2</sub> O <sub>3r</sub> (wt.%)	K <sub>2</sub> O (wt.%)	CaO (wt.%)	Li (ppm)	Li <sub>2</sub> O (wt.%)	Ta (ppm)	Be (ppm)	Rb (ppm)	Cs (ppm)	K/Rb
24747	280544	5354839	C	13.91	0.34	4.12	0.35	20	0.00	81.6	113	2030	87.2	20
24748	280512	5354809	C	10.64	0.63	4.97	0.32	40	0.01	22.5	209	1500	84.1	33
24749	280471	5354812	C	14.21	1.53	3.81	0.34	5070	1.09	32.5	283	1610	79.7	24
24750	280718	5354790	C	13.64	0.90	4.52	0.17	3810	0.82	23.9	148	2220	263.0	20
24788	280667	5354614	G	15.17	1.23	0.54	0.25	13200	2.84	41.4	117	236	35.5	23
24789	280629	5354717	G	14.98	1.44	3.20	0.17	9170	1.97	25.1	208	1580	106.0	20
24790	280736	5354744	C	15.32	0.96	2.69	0.20	7420	1.60	50.6	207	1380	161.0	19
24791	280736	5354744	C	16.36	0.69	5.51	0.17	6130	1.32	72.7	216	2860	304.0	19
24792	280723	5354787	C	14.45	1.19	0.98	0.25	1900	0.41	35.7	244	531	77.5	18
24793	280723	5354787	C	13.59	1.02	2.95	0.32	380	0.08	22.6	219	1560	176.0	19
24794	280715	5354776	C	12.58	0.37	8.09	0.20	100	0.02	42.3	36	4780	188.0	17
24795	280715	5354776	C	13.17	0.70	5.47	0.20	100	0.02	57.8	13	3920	158.0	14
24796	280718	5354790	C	14.00	1.06	0.94	0.43	6320	1.36	28.1	251	461	82.1	20

\*NAD83; Zone 18N

muscovite-rich zones. Only the collection of large bulk samples (> 50 kg) of each zone would alleviate the influence of these two characteristics on the data variations. Nonetheless, we can conclude that main granitic pegmatite dyke contains spodumene and high values of Li<sub>2</sub>O (wt. %) along the entire 300 m length of its exposure which bodes well for future exploration (Figure 19).

### *12.2-The International Property*

A new grid was established on the Bouvier showing of the International Property. The grid covers an area of 550 x 750 m, with NNW-SSE-oriented lines separated by 50 m and having a length of 750 m (Figure 20). A team of line cutters under the supervision of Leigh Cassidy constructed the grid. The latter was first delimited by setting up the UTM coordinates. The EW baseline and subsequent NNW-SSE lines were cut by GPS positioning and flags were set at each 50 m intervals to make a station. Since much of the property stands on a farmland, 60 cm pickets were sunk in the ground on most stations and flagged. Each station was identified and the distance between each was measured by topofil to ensure reliability. The EW base line spans from UTM coordinates E: 714350; N: 5370675 to E: 714850; N: 5370675 (NAD83; Zone 17N) (Figure 21). Since the Cyr granitic pegmatite dyke is only expressed by scattered flat outcrops in the field, Mineral Hills has set up to dig six NS-oriented trenches parallel to the dyke for a length of over 100 m (Figure 21a,b). The localization of the trenches is given in Figure 22 and the parameters of each trench given in Table 4.

#### *12.2.1-Ground Based Magnetometer Survey*

##### *12.2.1.1- Instrumentation*

See section 12.1.1.1

##### *12.2.1.2- Survey Procedure*

See section 12.1.1.2

##### *12.2.1.3- Data Reduction*

**Table 4.** Localization of the trenches on the International property, Bouvier showing.

<b>Number</b>	<b>Easting*</b>	<b>Northing</b>	<b>Azimuth (°)</b>	<b>Length (m)</b>
T1N	714505	5370635	360	6.33
T1S	714507	5370629		
T2N	714532	5370640	355	14,9
T2S	714527	5370626		
T3N	714549	5370638	355	17.2
T3S	714543	5370622		
T4N	714571	5370638	25	17.4
T4S	714568	5370621		
T5N	714583	5370638	5	16.1
T5S	714584	5370622		
T6N	714603	5370639	345	10.1
T6S	714603	5370629		

\* NAD83; Zone 17N



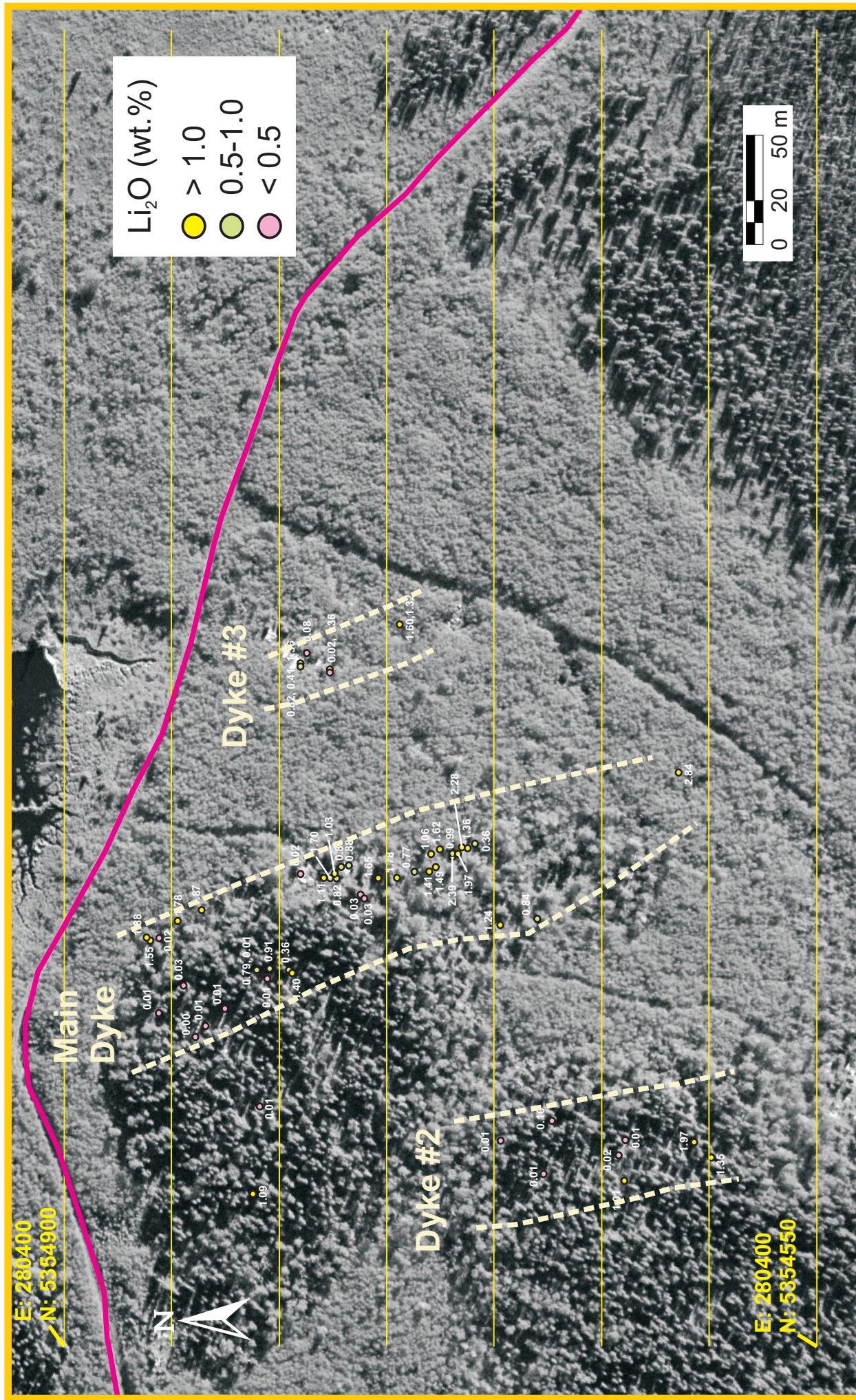


Figure 19. Spatial distribution of Li<sub>2</sub>O concentrations (wt.%) of granitic pegmatite rock samples collected on the Chubb property. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



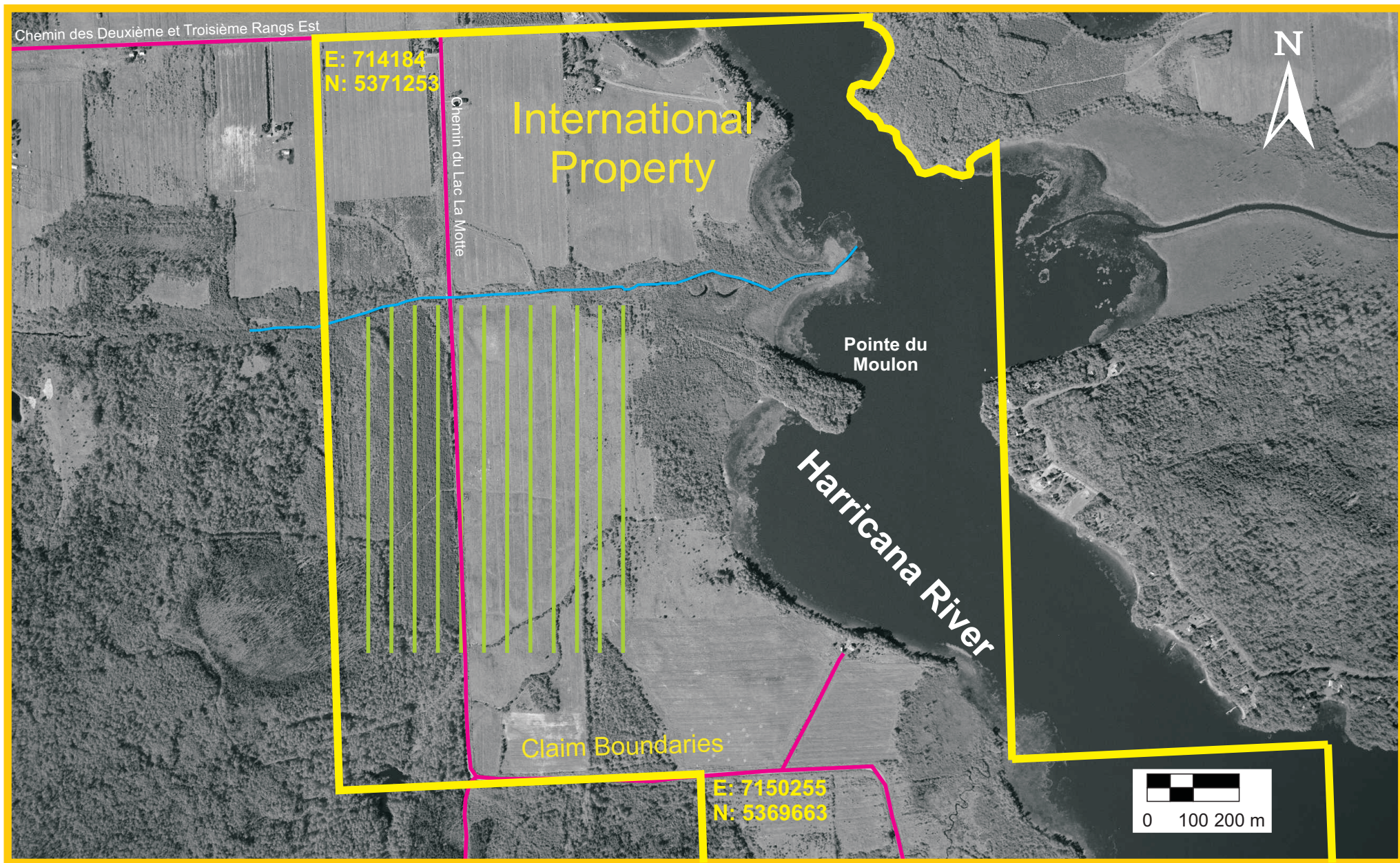


Figure 20. Localization of grid lines, International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.





Figure 21a. Trench T2; International property, Bouvier showing. UTM Coord.: Easting: 714565; Northing: 5370627; NAD83; Zone 17N.



Figure 21b. Trench T1; International property, Bouvier showing. UTM Coord.: Easting: 714566; Northing: 5370634; NAD83; Zone 17N.



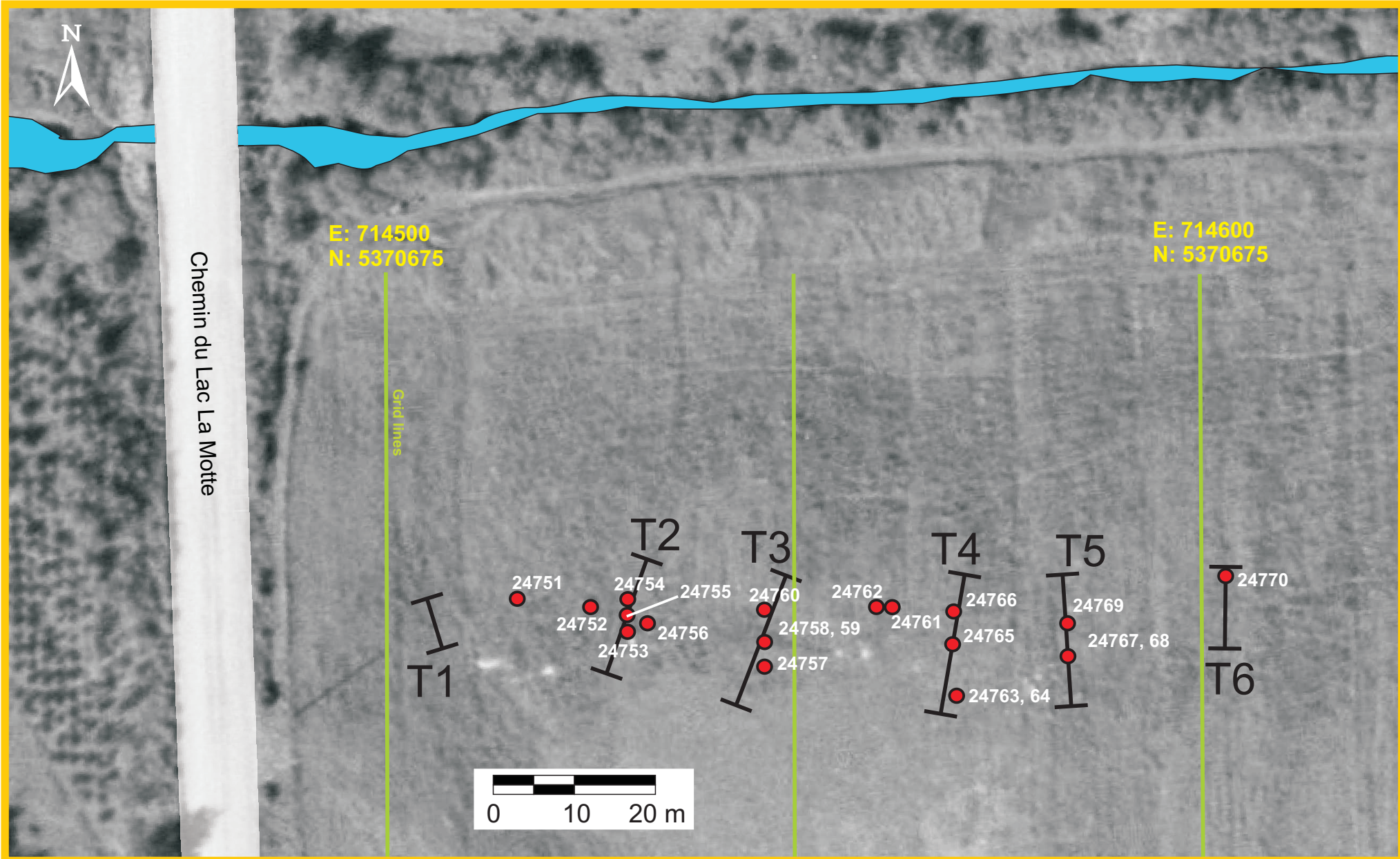


Figure 22. Localization of the trenches and channel samples on the International property, Bouvier showing. Summer of 2009. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

See section 12.1.1.3

#### *12.2.1.4-Results and Interpretation*

The analysis of the total magnetic contour maps (Figure 23) allowed the identification of several magnetic anomalies oriented approximately E-W. Some of these may be related to a geophysical network of inferred faults, oriented ENE and NW. The most prominent magnetic anomalies are located in the central and eastern areas of the survey grid, reaching amplitude of 108 nT above the background of 56300 nT. The highest amplitude value is an anomaly of 1170 nT, which is most likely a cultural feature (L45+00E, station 106+38N) such as a buried farmer's tool.

#### *12.2.2-Time Domain Resistivity / Spectral Induced Polarization (Dipole-Dipole Array, "a" = 25 m, "n" = 1 to 8)*

##### *12.2.2.1-Instrumentation*

See 12.1.2.1

##### *12.2.2.2-Quality Control*

See 12.1.2.2

##### *12.2.2.3-True Depth IP Sections*

See 12.1.2.3

##### *12.2.2.4-Results and Interpretation*

###### *12.2.2.4.1-Resistivity*

The image2D ® Resistivity map (Figure 24) is characterized by an overall conductive background (~ 280 ohm) attributed to the thick layer of clay-rich overburden covering the area. There is a zone of high conductivity in the north-western area of the survey grid, whilst a zone of relatively high resistive values occurs on the southwestern area. The conductive and resistive



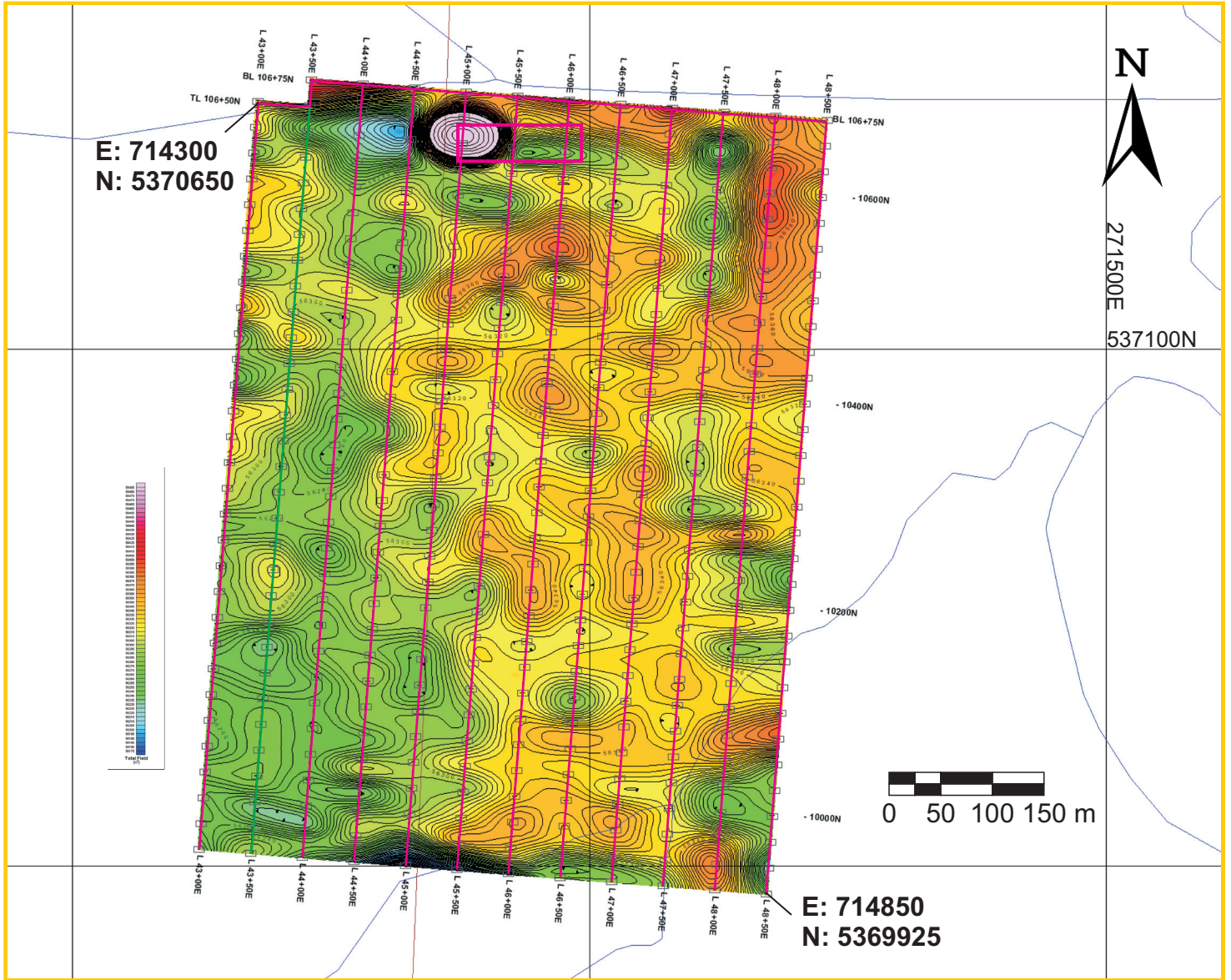


Figure 23. Total magnetic field contour (nT) for the Bouvier showing, International property. The high values to the north are related to cultural artifacts. UTM Coord.; NAD83; Zone17N; E=Easting; N=Northing.

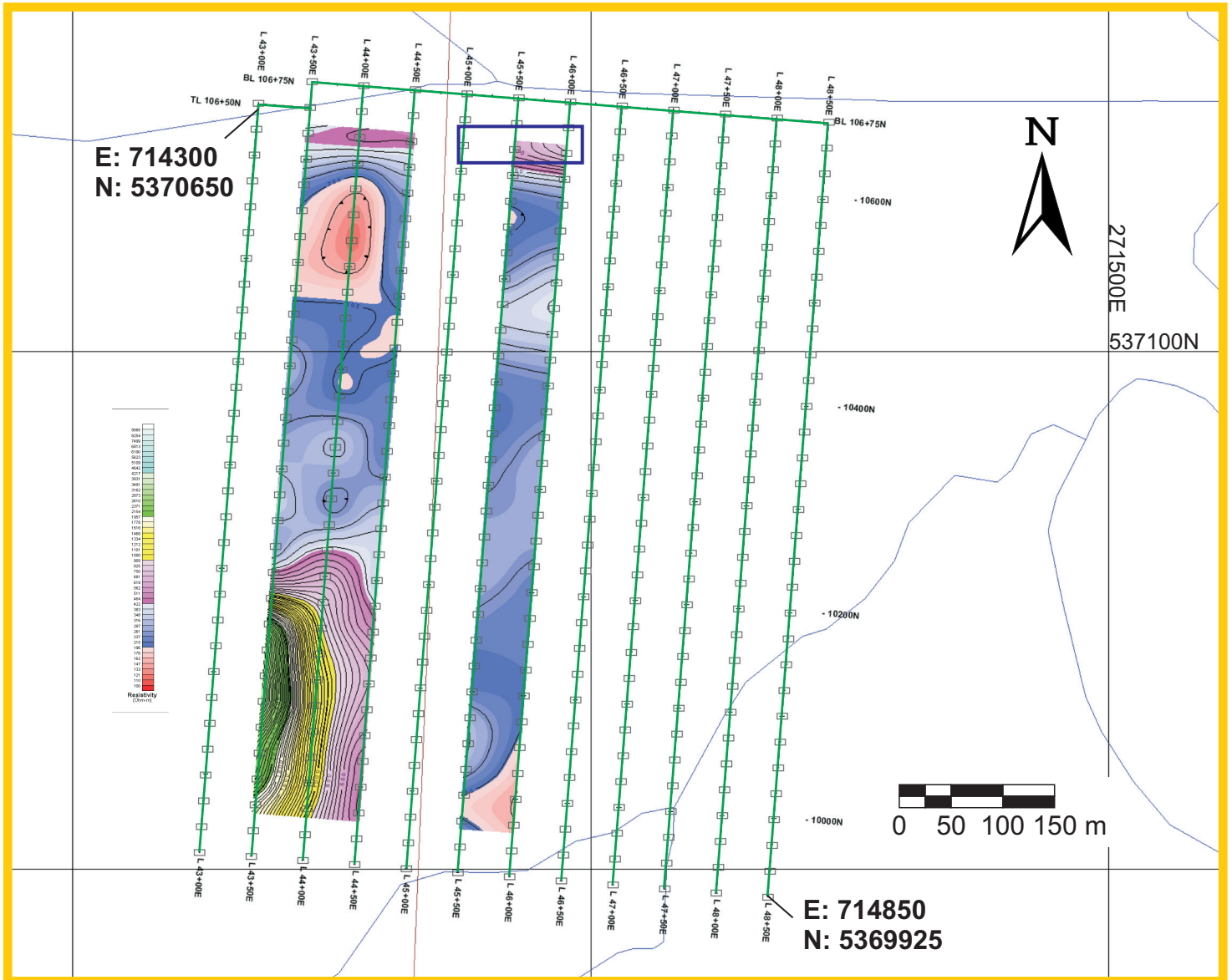


Figure 24. Resistivity contour map (ohm/m) of the Bouvier showing grid, International property. Note the high conductivity background. A high resistivity zone occurs in the southwestern end whilst the northwestern area reflects a zone of high conductivity. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

areas are outlined and showed in pink and blue on the geophysical interpretation map (Figure 26). The west part of the INT1 IP trend is associated to the resistive zone.

#### *12.2.2.4.2-Chargeability*

Following a meticulous interpretation of the pseudosections and with the help of the image2D ® true depth sections, a total of three chargeability anomalies (INT1 to INT3) were outlined on the International grid (Figure 25). The inferred surface projection of their resistivity / IP sources is also shown along the survey lines on the geophysical interpretation map (Figure 26) along with the associated magnetic profiles. These anomalies have been correlated from line-to-line and display a broad NE to EW orientation parallel to that of the Manneville fault, but more importantly to the general strike attributed to the exposed and buried granitic pegmatite dykes. There is a close spatial association between the location and orientation of anomaly INT1 with the trenching area that exposed previously investigated EW-oriented spodumene-bearing granitic pegmatite dykes. The association of chargeability with buried bodies/dykes of granitic pegmatites at depth of less than 40 m is a real possibility. Therefore the regions covered by anomalies INT2 and INT3 are considered prime targets for drilling.

#### *12.2.3-Geochemisry of Granitic Pegmatites*

A series of 37 channel samples were gathered from the two main granitic pegmatite dykes exposed on the International property. From the Bouvier showing, 20 samples were collected from 4 trenches and nearby rock exposures, whilst the granitic pegmatite dyke outcrops located on the bank of the Harricana River (International showing) yielded 16 channel and one grab samples (Figures 22 and 28).

##### *12.2.3.1- Results and Discussion*

The main EW-oriented spodumene-bearing dyke on the Bouvier showing displays the characteristic moderate  $\text{Al}_2\text{O}_3$  (Av:  $14.71 \pm 1.67$  wt. %) and  $\text{K}_2\text{O}$  (Av:  $2.69 \pm 1.63$  wt. %) values, low average  $\text{Fe}_2\text{O}_{3\text{T}}$  (Av:  $1.07 \pm 0.39$  wt. %) and  $\text{CaO}$  ( $0.47 \pm 0.64$ ) concentrations and depleted K/Rb (Av: 31) ascribed to rare element granitic pegmatites.  $\text{SiO}_2$  and  $\text{Na}_2\text{O}$  contents could not be obtained due to the sodium hydroxide fusion method used to analyze the samples (Table 5).

Table 5. Geochemistry of the rock samples collected from the International property during the 2009 summer field campaign.

Sample	Showing	Easting <sup>1</sup>	Northing	RockType	Trench/Channel/Outcrop	Al <sub>2</sub> O <sub>3</sub> (wt.%)	Fe <sub>2</sub> O <sub>3T</sub> (wt.%)	K <sub>2</sub> O (wt.%)	CaO (wt.%)	Li (ppm)	Li <sub>2</sub> O (wt.%)	Ta (ppm)	Ba (ppm)	Rb (ppm)	Cs (ppm)
24751	B	714516	5370635	Spodumene-bearing granitic pegmatite	outcrop	15.02	1.09	1.73	0.22	9230	1.99	46.1	190	537	65.1
24752	B	714525	5370634	Spodumene-bearing granitic pegmatite	outcrop	15.15	1.39	1.31	0.42	11000	2.37	55.9	196	473	49.2
24753	B	714530	5370631	Spodumene-bearing granitic pegmatite	2	10.83	1.26	2.90	0.18	6320	1.36	21.4	217	978	70.4
24754	B	714530	5370635	Spodumene-bearing granitic pegmatite	2	14.78	1.54	3.83	0.29	3100	0.67	58.0	45	1200	54.6
24755	B	714530	5370633	Spodumene-bearing granitic pegmatite	2	16.50	0.67	7.50	0.22	4790	1.03	23.2	69	2350	113.0
24756	B	714532	5370632	Spodumene-bearing granitic pegmatite	outcrop	10.01	1.32	1.35	0.34	8970	1.93	48.3	104	398	33.2
24757	B	714546	5370627	Spodumene-bearing granitic pegmatite	3	15.08	0.97	3.12	0.24	10900	2.35	22.7	84	1070	53.8
24758	B	714546	5370630	Spodumene-bearing granitic pegmatite	3	15.48	1.03	1.60	0.39	9730	2.09	96.5	265	568	41.1
24759	B	714546	5370630	Spodumene-bearing granitic pegmatite	3	15.10	1.27	1.12	0.42	8260	1.78	91.4	124	399	24.5
24760	B	714546	5370634	Spodumene-bearing granitic pegmatite	3	14.68	0.53	2.23	0.48	770	0.17	70.3	104	759	61.8
24761	B	714560	5370634	Spodumene-bearing granitic pegmatite	outcrop	16.25	1.13	1.39	0.48	12400	2.67	45.4	11	545	29.2
24762	B	714562	5370634	Spodumene-bearing granitic pegmatite	outcrop	13.77	0.61	3.82	0.36	6510	1.40	14.7	12	1240	54.3
24763	B	714570	5370624	Spodumene-bearing granitic pegmatite	4	14.38	0.84	3.49	0.27	6060	1.30	51.8	131	1240	66.7
24764	B	714570	5370624	Spodumene-bearing granitic pegmatite	4	15.29	0.86	3.20	0.22	9310	2.00	50.6	189	1120	64.0
24765	B	714570	5370630	Spodumene-bearing granitic pegmatite	4	16.63	0.81	2.52	0.46	190	0.04	62.0	86	772	31.5
24766	B	714570	5370634	Spodumene-bearing granitic pegmatite	4	15.17	2.16	1.73	3.15	1040	0.22	6.9	<5	90	19.1
24767	B	714584	5370628	Spodumene-bearing granitic pegmatite	outcrop	15.23	1.13	1.65	0.18	13500	2.91	31.4	52	625	34.1
24768	B	714584	5370628	Spodumene-bearing granitic pegmatite	outcrop	15.89	1.37	2.01	0.28	11800	2.54	43.1	59	741	35.9
24769	B	714584	5370632	Spodumene-bearing granitic pegmatite	outcrop	15.38	0.87	1.52	0.35	6290	1.35	70.2	66	543	31.6
24770	B	714603	5370638	Spodumene-bearing granitic pegmatite	5	13.49	0.57	5.75	0.50	220	0.05	45.7	<5	1630	101.0
24771	I	715336	5370512	Spodumene-bearing granitic pegmatite	Channel Sample	16.02	0.93	1.04	0.42	1380	0.30	97.9	139	269	19.3
24772	I	715336	5370512	Spodumene-bearing granitic pegmatite	Channel Sample	14.23	0.49	0.18	0.42	30	0.01	83.3	195	44	9.7
24773	I	715336	5370512	Spodumene-bearing granitic pegmatite	Channel Sample	7.29	0.59	0.22	0.28	30	0.01	80.5	149	59	4.8
24774	I	715344	5370507	Spodumene-bearing granitic pegmatite	Channel Sample	17.59	1.20	0.88	0.46	12300	2.65	103.0	81	320	37.2
24775	I	715344	5370507	Spodumene-bearing granitic pegmatite	Channel Sample	16.40	0.76	0.87	0.20	5610	1.21	72.5	179	257	31.6
24776	I	715344	5370507	Spodumene-bearing granitic pegmatite	Channel Sample	15.51	0.69	0.48	0.29	3870	0.83	83.4	195	120	20.5
24777	I	715344	5370507	Spodumene-bearing granitic pegmatite	Channel Sample	12.85	0.47	0.27	0.25	80	0.02	80.6	239	66	21.6
24778	I	715344	5370507	Spodumene-bearing granitic pegmatite	Channel Sample	6.37	0.53	0.23	0.18	110	0.02	72.1	65	62	8.5
24779	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	14.53	0.87	0.70	0.27	2530	0.54	84.8	180	153	20.4
24780	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	15.49	0.63	0.63	0.29	1050	0.23	81.6	174	116	13.4
24781	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	18.35	0.36	0.18	0.49	30	0.01	129.0	256	41	11.8
24782	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	18.52	0.43	0.40	0.50	670	0.14	156.0	217	113	18.4
24783	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	17.57	0.77	0.53	0.35	1960	0.42	109.0	506	141	17.5
24784	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	19.08	0.40	0.65	0.67	140	0.03	93.0	489	236	29.4
24785	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	18.76	0.49	0.60	0.45	140	0.03	108.0	808	183	34.6
24786	I	715346	5370506	Spodumene-bearing granitic pegmatite	Channel Sample	17.25	0.57	0.42	0.31	70	0.02	105.0	227	105	9.3
24787	I	715243	5370534	Spodumene-bearing granitic pegmatite	Chip sample	12.62	0.50	0.02	0.28	10	0.00	99.1	185	4	2.9

<sup>1</sup>NAD83; Zone 17N

B=Bouvier showing, I=International showing



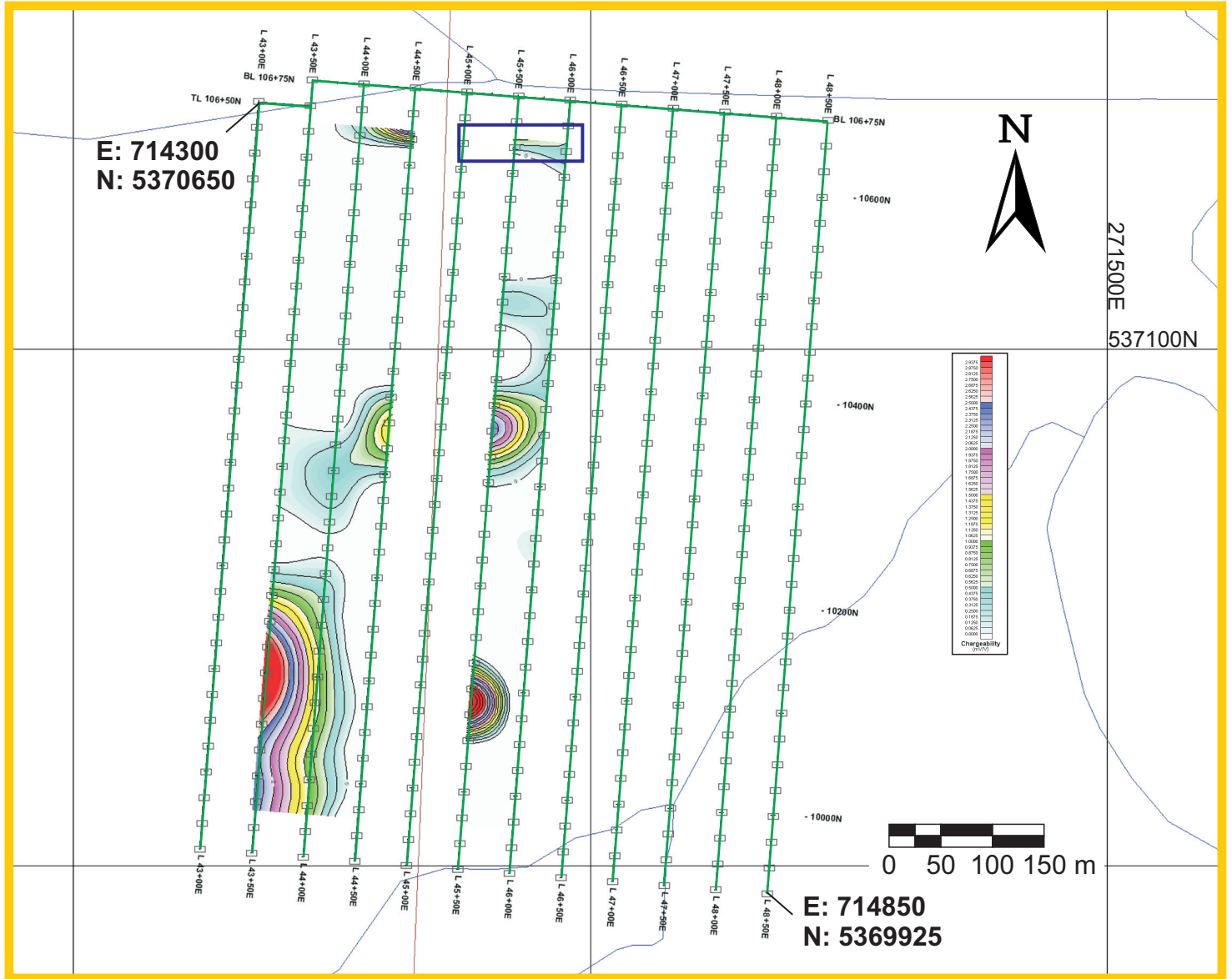


Figure 25. Chargeability contour map (mV/V) of the Bouvier showing grid, International property. Note the areas of high chargeability values, with the northernmost end corresponding to the zones of trenches revealing spodumene-mineralized granitic pegmatite dykes. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

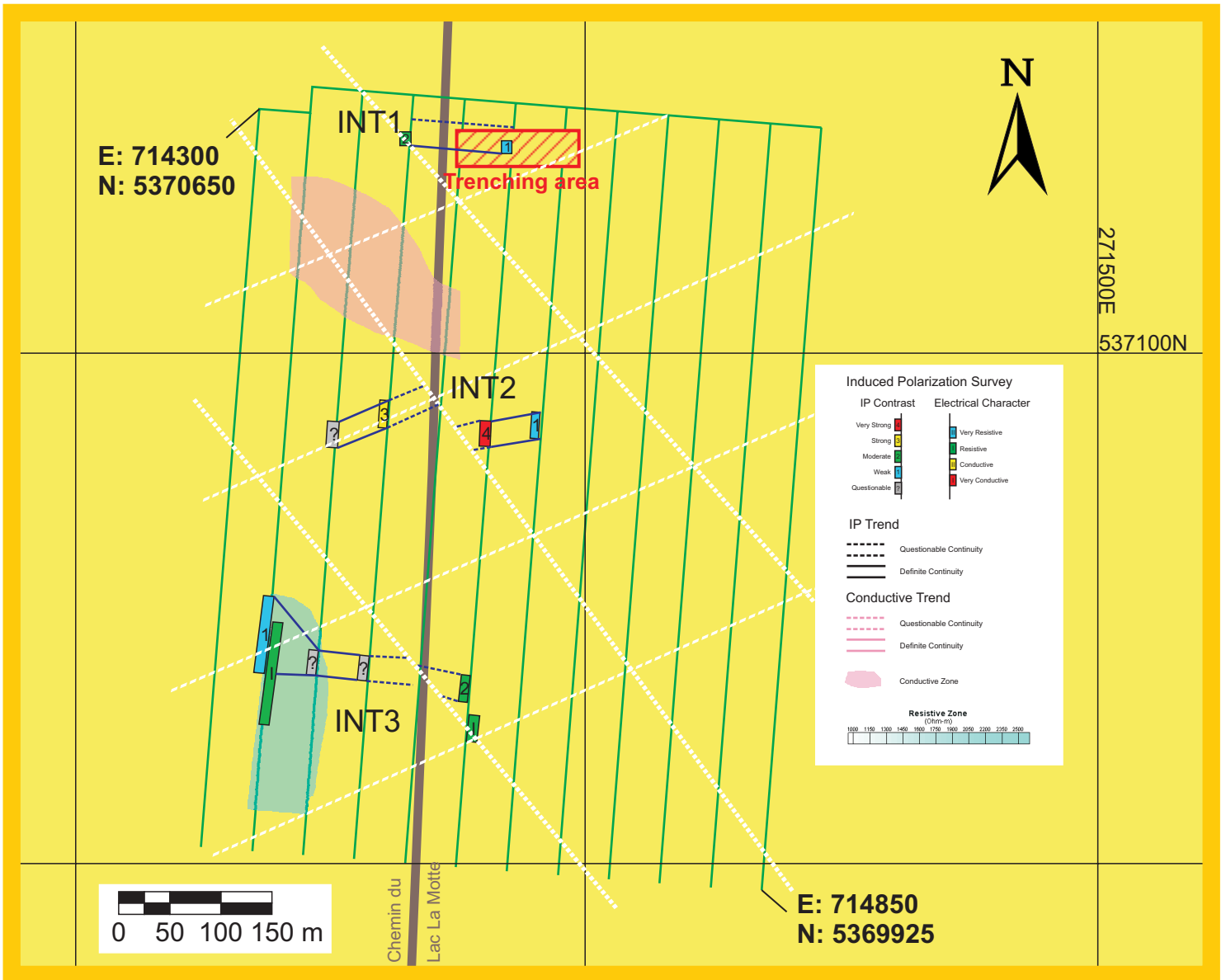


Figure 26. Interpretation of the ground-based IP and MAG surveys carried on the International property. The IP results identified three major EW to NE-SW-oriented structures that probably reflect masses or dykes of granitic pegmatite lying at a minimum depth of 40 m. Note that the anomaly INT1 is spatially associated with the area of trenches that unearthed a spodumene-rich granitic pegmatite. UTM Coord.; NAD83; Zone 17N; E=Eastings; N=Northing.

Li<sub>2</sub>O (wt. %) which is incorporated in spodumene shows variable but generally elevated concentrations (0.04-2.91 wt. %; Av: 1.51±0.91 wt. % (n=20) which are considered economic. Other rare metals such as Ta (Av: 47.8±23.7 ppm), Be (105.8±75.0 ppm), Rb (853±512 ppm) and Cs (51.7±24.5 ppm) display moderate to low sub-economic average concentrations (Table 5).

There are some important elemental variations within the Bouvier as expressed by the large standard deviations tied to the average concentrations. We attribute these deviations to the coarse-very coarse grained texture of the granitic pegmatite dykes; some spodumene having 15 cm in length, and to the mineral zonality occurring within the pegmatite dyke. Some zones are enriched in K-feldspar, spodumene or muscovite. Only the collection of large bulk samples (> 50 kg) would attenuate the importance of these two characteristics which are common to granitic pegmatites dykes. Nonetheless, we can conclude that the Bouvier granitic pegmatite contains spodumene and high values of Li<sub>2</sub>O (wt. %) along the entire 100 m length of its exposure which bodes well for future exploration (Figure 27).

Results from the exposed pegmatite dykes on the International showing are moderately interesting in term of rare metal mineralization. The dyke has similar low Fe<sub>2</sub>O<sub>3T</sub> (0.63±0.22 wt. %) and CaO (0.36±0.13) and moderate Al<sub>2</sub>O<sub>3</sub> (15.20±3.71 wt. %) relative to its Bouvier counterpart. However the granitic pegmatite is depleted in K<sub>2</sub>O (Av: 0.49±0.29 wt. %) which is accompanied by low Rb (Av: 135±91 ppm) and Cs (Av: 18.3±10.3 ppm) average concentrations (Table 5). Values of Ta (Av: 96.4±21.5) and Be (Av: 252.0±184.9 ppm) are significantly higher relative to the Bouvier pegmatite, but are still sub-economic. The element K, Cs and Rb are commonly incorporated in K-feldspar which remains a major mineral constituent of rare element pegmatites. Their lower contents relative to those observed at Bouvier may indicate a higher proportion of plagioclase (albite) to K-feldspar in the former, although we don't have the Na<sub>2</sub>O concentrations to confirm this hypothesis. The lithium concentrations are variable and moderate (0.01-2.65 Li<sub>2</sub>O wt. %; Av: 0.38±0.68 (n=17)). A close examination of the pegmatite outcrops along the Harricana River reveals several spodumene crystals, some as long as 20 cm, in a quartz-feldspar-muscovite matrix. However, the exposures are not of very good quality, many outcrops being polished by the river ice and sometime covered with water. We know from this

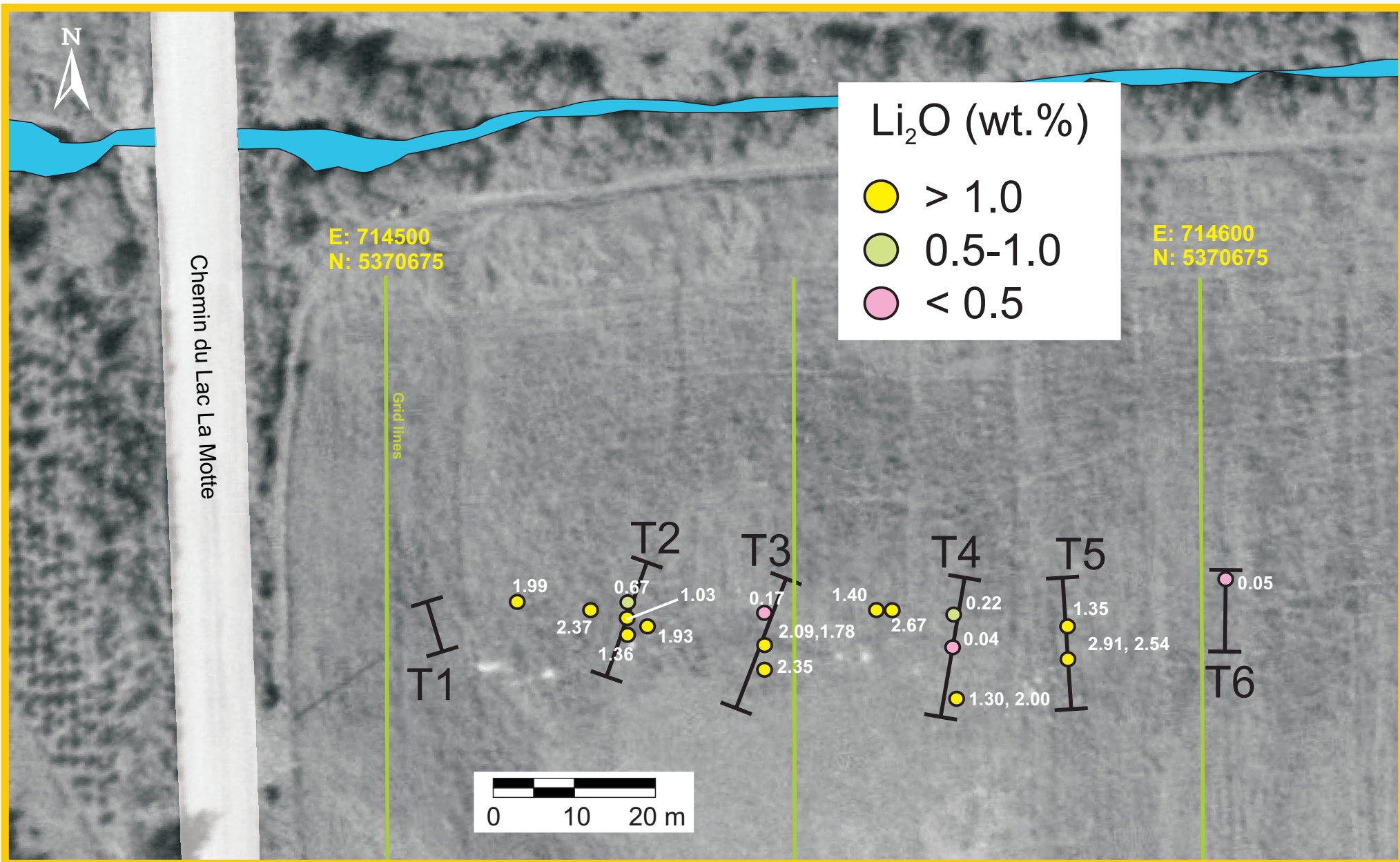


Figure 27. Spatial distribution of Li<sub>2</sub>O concentrations of grantic pegmatite rocks collected from the Bouvier showing, International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.



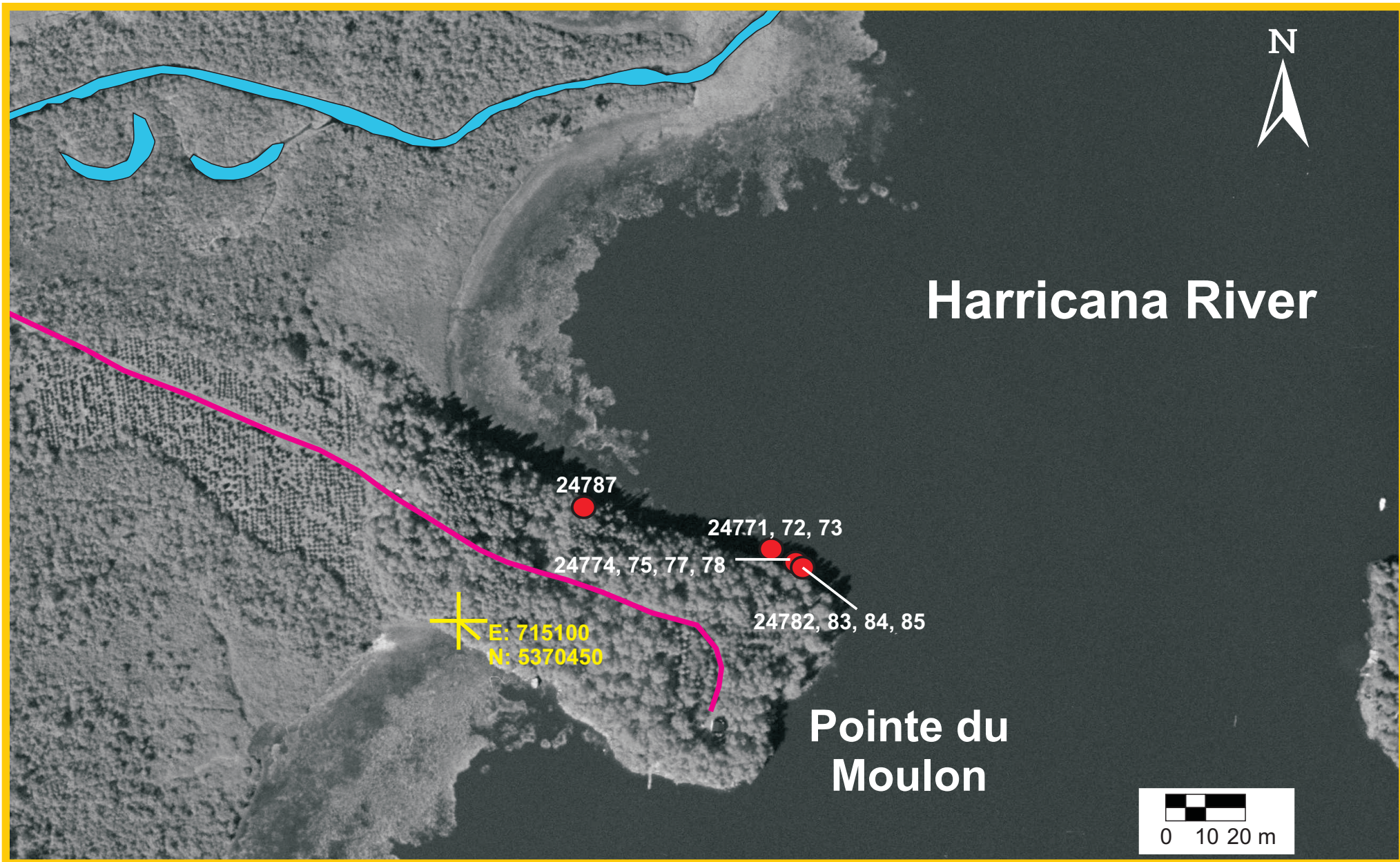


Figure 28. Localization of channel samples collected from the International showing, International property. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.

study and that of Boily et al. (1989) that this spodumene-bearing pegmatite dyke is also zoned. It is possible that the samples containing low Li, K, Rb and Cs assays but higher Ta and Be concentrations were collected from a more sodic-rich part of the dyke which is devoid of spodumene.  $\text{Li}_2\text{O}$  assay results higher than 0.4 wt. % in five samples do indeed confirm the important Li potential of this dyke.

### *12.3-The Athona Property*

A new grid was established in the northeastern corner of the Athona property. The grid covers an area of 525 x 500 m, with NS-oriented lines separated by 50 m and having a length of 525 m (Figure 8). A team of line cutters under the supervision of Leigh Cassidy constructed the grid. The latter was first delimited by setting up the UTM coordinates. The EW baseline and subsequent NS lines were cut by GPS positioning and flags were set at each 50 m intervals to make a station. Each station was identified and the distance between each was measured by topofil to ensure reliability. The EW base line spans from UTM coordinates E: 279400; N: 5369159 to E: 279900; N: 5369150 (NAD83; Zone 18N) (Figure 8).

#### *12.3.1-Ground based magnetometer survey*

##### *12.3.1.1- Instrumentation*

See section 12.1.1.1

##### *12.3.1.2- Survey Procedure*

See section 12.1.1.2

##### *12.3.1.3- Data Reduction*

See section 12.1.1.3

##### *12.3.1.4-Results and Interpretation*

The analysis of the total magnetic field profiles and contours maps (Figure 29) allowed the

identification of two magnetic domains (MD1 and MD2). The limit between these two domains is oriented N100°, seems relatively sharp and represents a geological contact between a granitic intrusion and the volcanic rocks of the Landrienne Formation. The Archean rocks are apparently disturbed by a network of inferred faults oriented NE-SW. In the northern half of the grid, MD1 has a very variable background (from 56080 nT to 58000 nT) typical of volcanic rock units. It contains the majority of the magnetic anomalies oriented N100°. Most of the anomalies have a short wavelength, specific to sub-outcropping sources. The projection of the lithological boundaries on the magnetic map indicates a close spatial correspondence between regions of high magnetic readings and bands of ultramafic intrusive rocks or komatiitic volcanic rocks (Figure 29). Moderate magnetic readings correlate with intermediate to felsic volcanic rock outcroppings. All volcanic rocks appear to be disturbed and segmented by the network of inferred faults mentioned above. The magnetic background of MD2 is relatively stable (56 200 nT) and is typical of the magnetic response of an intrusive (granitoid stock) that is exposed on southern segment of the property grid. Only a few magnetic anomalies oriented N090° are located in this domain. The magnetic map does not reveal any specific signature related to the location of Mo-mineralized albitite or granitic pegmatite dykes sampled during the 2009 field campaign.

### *12.3.2-Geochemisry of Albitites and Granitic Pegmatites*

#### *12.3.2.1- Channel and Rock Sampling*

A series of 16 channel rock samples were collected along and between the main grid lines. These samples represent albitite and granitic pegmatite dykes mineralized in molybdenite. The UTM coordinates for each sample are given in Table 6.

#### *12.3.2.2-Results and Discussion*

Table 6 reveals that most rocks are albitic in character, although no data for Na<sub>2</sub>O and SiO<sub>2</sub> is available due to nature analytical method that employed the sodium peroxide fusion.

Nonetheless, these are dykes and veins characterized by high Al<sub>2</sub>O<sub>3</sub> (16.14-20.78 wt. %), and low K<sub>2</sub>O (0-0.27 wt. %) and Fe<sub>2</sub>O<sub>3T</sub> (0.27-0.96 wt. %) concentrations. An albitite is a sodic-rich, coarse-grained or porphyritic igneous rock containing albite and very little quartz with



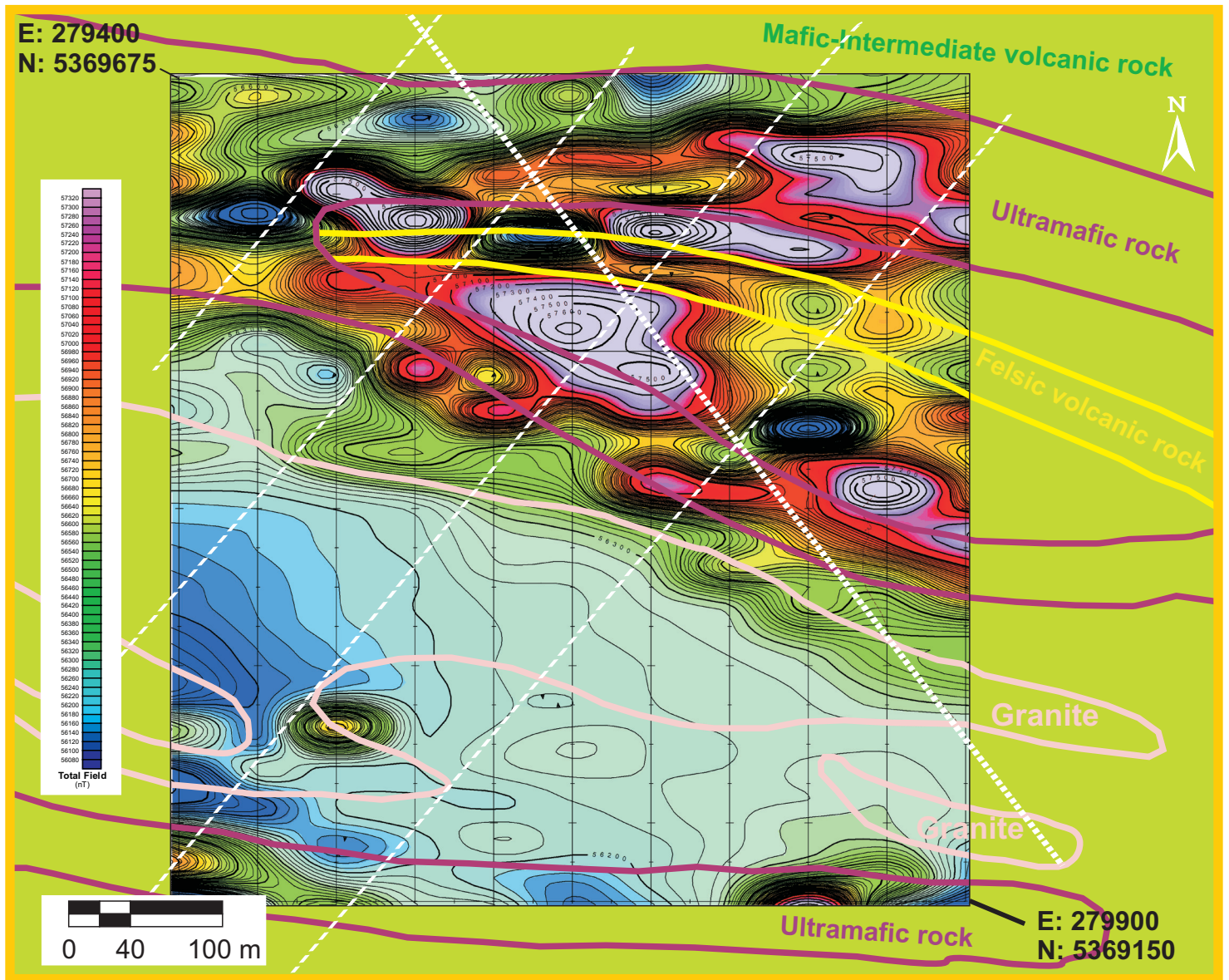


Figure 29. Magnetic map contours of the Total Magnetic Field (nT) obtained during the ground based survey conducted along the grid lines on the Athona property. Note that the high magnetic values correspond to layers of ultramafic rocks, whilst the uniform magnetic low signatures are related to the presence of a granitic intrusive. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.



**Table 6.** Geochemistry of the rock samples collected from the Athona property during the 2009 summer field campaign.

Sample no.	Easting*	Northing	Rock Type	Al <sub>2</sub> O <sub>3</sub> (wt.%)	Fe <sub>2</sub> O <sub>3T</sub> (wt.%)	K <sub>2</sub> O (wt.%)	CaO (wt.%)	Li (ppm)	Li <sub>2</sub> O (wt.%)	Ta (ppm)	Be (ppm)	Cs (ppm)	Mo (ppm)	MoS <sub>2</sub> (wt. %)
25301	279700	5369453	Albitite	20,41	0,37	0,19	0,64	40	0,009	60,1	16	3,4	>10000	>1,69
25302	279700	5369453	Albitite	20,41	0,39	0,13	0,52	20	0,004	11,1	13	1,5	>10000	>1,69
25303	279700	5369453	Metasomatized Li-granitic pegmatite (?)	8,22	9,09	4,26	6,72	1320	0,284	6,5	43	480,0	31	0,01
25304	279651	5369448	Albitite	20,41	0,29	0,10	0,46	10	0,002	170,0	10	2,0	9	0,00
25305	279627	5369450	Albitite	20,22	0,46	0,11	0,41	<10	----	152,0	10	0,3	7	0,00
25306	279821	5369413	Albitite	20,78	0,27	0,00	0,35	<10	----	138,0	10	0,5	8	0,00
25307	279723	5369495	Albitite	20,41	0,44	0,07	0,62	<10	----	68,9	17	0,6	7800	1,32
25308	279726	5369489	Albitite	20,02	0,81	0,10	0,83	20	0,004	152,0	14	4,3	4850	0,82
25309	279794	5369269	Albitite	16,14	0,23	0,37	0,63	20	0,004	30,2	19	5,2	83	0,01
25310	279903	5369450	Albitite	20,97	0,23	0,07	0,57	<10	----	127,0	20	0,6	8	0,00
25311	279783	5369397	Albitite	21,54	0,51	0,06	0,45	30	0,006	39,2	14	0,3	5	0,00
25312	279847	5369430	Albitite	20,59	0,30	0,06	0,42	<10	----	191,0	12	0,5	1470	0,25
25313	279809	5369410	Albitite	20,78	0,27	0,04	0,35	<10	----	54,8	8	0,6	91	0,02
25314	279765	5369336	Albitite-granitic pegmatite	17,23	0,57	2,60	0,50	10	0,002	24,6	13	12,1	2	0,00
25315	279916	5369454	Albitite	19,65	0,96	0,08	0,99	<10	----	146,0	22	0,9	61	0,01
25316	279775	5369340	Albitite-granitic pegmatite	16,74	0,39	2,04	0,55	<10	----	80,3	18	10,7	2	0,00
25317	279771	5369248	Albitite-granitic pegmatite	15,81	0,47	1,79	0,52	10	0,002	66,6	14	12,6	<2	----
25318	279925	5369454	Albitite	20,41	0,37	0,10	1,15	<10	----	65,4	22	1,2	6	0,00
25319	279595	5369617	Albitite	20,60	0,71	0,16	0,85	170	0,037	1,1	32	0,9	<2	----

\* NAD83; Zone 18N

muscovite, garnet and apatite as common accessory phase. Albitite dykes are common in the area of investigation located north of the Lacorne pluton. They are emplaced in metasedimentary and metavolcanic rocks and were recognized and sampled by Boily et al. (1989) and Mulja et al. (1995). The latter produced major and trace element data for albitites that are similar to that presented in Table 6. Other rocks sampled on the Athona grid may consist of a mix of granitic pegmatite and albitic dykes, whilst one sample (25303) may represent a strongly metasomatized spodumene-bearing pegmatite dyke, with relatively moderate  $\text{Li}_2\text{O}$  concentrations (0.284 wt.%).

The Lacorne albitite dykes were earlier recognized for their Mo economic potential expressed as molybdenite mineralization (Forgrave et al., 1960; Boily et al., 1989). This is confirmed by the new geochemical analyses which indicate that five samples carry  $\text{MoS}_2$  values  $> 0.25$  wt. %, with two samples having higher than 1.69 wt. % (the detection limit). These samples are located near the sites of the historical MolyCorp drillhole collars (Figure 8). The albitite dykes and veins also contain relatively high concentrations of Ta (i.e. 1.1-191.0 ppm; average of 93.4 ppm (n=16)) and thus remain interesting for their Ta economic potential.

Mulja et al. (1995) believe that the monomineralic nature of the Lacorne albitite dykes and veins (i.e. 97 % albite  $\pm$  molybdenite  $\pm$  tantalite) rules out their formation by equilibrium or fractional crystallization from a felsic magma. Rather, they proposed that the albitites were the product of a complete replacement of highly differentiated granitic rocks by residual aqueous fluids which evolved during the late stage crystallization of the magma. The original protolith may have been a spodumene-rich aplite.

### **ITEM 13 DRILLING**

No drilling was conducted over the course of this study

### **ITEM 14 SAMPLING METHOD AND APPROACH**

Each channel sample was carefully collected by a technical crew, bagged and sealed in a clean plastic bag. The samples were securely handled at each stage from the field to the laboratory and their integrity is unquestioned. The author and technicians who collected the rock samples were

careful to extract specimen representative of the exposed rock and/or mineralization types. A gasoline-powered saw equipped with a diamond edged blade was used to cut all channels (Figure 30). These were cut to a depth of 10 cm perpendicularly, as much as possible, to the strike of the granitic pegmatite dyke. The position and extent of each channel was determined and delineated by Luc Lepage. Only the lower half of the channel was collected for analysis. The length, location, and orientation of the channels were recorded and averaged 1 m. The GPS coordinates were acquired with a Garmin Map60CX.

The author is satisfied by the quality of all rock samples collected from the three properties and is fully confident that the specimen are representative of the exposed mineralization. The density of samples is also acceptable because all current spodumene-bearing pegmatite dykes of importance are represented by an adequate number of analyses. The quality of the geochemical data is excellent in view of sodium peroxide fusion ICP-AES analytical method that allowed the determination of high concentrations of rare metals (i.e. Li, Cs, Be, Ta).

#### **ITEM 15 SAMPLE PREPARATION, ANALYSES AND SECURITY**

The samples were transported by truck from Val d'Or, Quebec to the SGS Canada Inc. Mineral Services and Geochemistry Laboratory in Toronto, On, Canada. The samples were dried <3 kg, crushed to 75% passing 2mm sieve, split to 250g and pulverized to 85% passing 75µm sieve. For all samples, the rock powder was mixed with sodium peroxide and fused to be analyzed by the ICP-AES method for the following elements: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Nb, Nd, Ni, P, Pb, Pr, Rb, Sc, Sb, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn and Zr. The full results and the certificates of analyses (TO107718, TO107719, TO107720 and TO107476) are provided in Appendix 1. Laboratory personnel who were wholly unrelated to the client company and who were unaware of the source and content of the samples prepared the samples for analysis.

No in house reference sample or blank was submitted to the SGS laboratories.

The SGS Canada Inc. Mineral Services and Geochemistry Laboratory conform to ISO/IEC





Figure 30. Channel cutting with a gas-powered diamond blade portable saw; Chubb property.



17025 standards. It was evaluated for the quality of system and of technical documentation and protocols, sample analysis, proficiency testing, overview of training procedures, laboratory space and traceability of reagents and equipment. As part of the assessment of every data set, results from the control samples are evaluated to ensure they meet set standards determined by the precision and accuracy requirements of the method. SGS Canada Inc. uses barren wash material between sample preparation batches. This cleaning material is tested before use to ensure no contaminants are present and results are retained for reference. The data from the quality control checks did not indicate any significant bias or quality control issues. The author has not visited the SGS Canada Inc. Mineral Services and Geochemistry Laboratory to see the operation firsthand, nor is he familiar with the general historical performance of the facility.

The author has verified the results of the geochemical analyses provided by SGS Canada Inc. Mineral Services and Geochemistry Laboratory and is satisfied by their precision and accuracy. The author is familiar with the quality control measures and data verification procedures (including the use of reference materials, duplicates and blanks) employed at the SGS Canada Inc. Mineral Services and Geochemistry Laboratory. The author is in the opinion that SGS Canada Inc. Mineral Services and Geochemistry Laboratory followed adequate procedures during the sample preparation, that the security of the samples was unquestionable throughout the manipulation and that the analytical procedures and the analytical methods used are conform to the standard practices of the industry.

#### **ITEM 16 DATA VERIFICATION, DATA CONTROL AND QUALITY ASSURANCE POLICIES AND PROCEDURES**

The author has not verified the historical Li assay values provided from old core sections (see ITEM 8) since they have long disappeared nor has he verified the previously published assays from grab rock samples. The old assessment reports did not describe the method of analyses nor any analyses of duplicate or standard. Luc Lepage has supervised the technical crew who cut the channel rock samples. Luc Lepage was present in the field when the technical crew conducted the sampling and has verified the location, handling and bagging of the samples. All samples

were then assembled under the care of the Luc Lepage who expedited them to the analytical laboratory (see ITEM 15).

#### **ITEM 17 ADJACENT PROPERTIES**

There are no lithium properties adjacent to the Chubb, International or Athona properties

#### **ITEM 18 MINERAL PROCESSING AND METALLURGICAL TESTING**

No mineral processing or metallurgical testing was conducted during the completion of this report.

#### **ITEM 19 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATE**

There are no mineral resource and mineral estimate produced during the course of this study.

#### **ITEM 20 OTHER RELEVANT DATA AND INFORMATION**

There are no other relevant data and information.

#### **ITEM 21 INTERPRETATIONS AND CONCLUSIONS**

Having thoroughly evaluated the Chubb, International and Athona properties for their Li and Mo potential, the author is convinced that all three warrant more exploration work in the coming years. The International property presents the best outlook for it is located in an EW-oriented corridor limited to the north by the Manneville Fault and to the south by monzogranitic plutonic rocks of the Preissac-Lacorne Batholith which constitute the parent rocks of the spodumene-mineralized granitic pegmatites. The assay results taken from channel and grab samples at the International and Bouvier sites indicate economic  $\text{Li}_2\text{O}$  (wt. %) concentrations for the exposed dykes. Furthermore, the Resistivity/IP ground-based geophysical survey has revealed two anomalous zones which strike parallel to the Manneville Fault and could represent the signature

of buried granitic pegmatite dykes. The Chubb property also revealed economic  $\text{Li}_2\text{O}$  (wt. %) content for the Main Dyke over a length of 200 m. The Resistivity/IP survey has confirmed the anomalous signatures attributed the presence of the granitic pegmatite dykes within the quartz monzodiorite to granodioritic wall rocks. Both the International and Chubb properties justify a drilling campaign. The Athona property is more of a grass root nature. It is my opinion that the southern half of the property is the area more susceptible to contain swarms of spodumene-bearing pegmatites, since it exposes peraluminous monzogranitic rocks of the Lacorne pluton intruding the Lac Caste metasediments. The property is also favorably located in the known “Li corridor” delimited by the Manneville Fault and the Lacorne monzogranite pluton. The Quebec Lithium mine is located within this corridor just 13 km east of the Athona property.

The principal objectives of the exploration work undertaken by Mineral Hills Industries Ltd. were : 1) to provide a geological overview and an evaluation of past exploration history of the Chubb, International and Athona properties, 2) carry out ground based magnetic and IP surveys to unearth or redefine new Li-mineralized granitic pegmatite bodies, 3) explore, describe the geology and collect samples from the mineralized zones on each property and 4), proposed targets for incoming drilling campaigns. It is the opinion of the author that all these objectives were met.

Three Li-Mo properties located in the Preissac-Lacorne Batholith of the Abitibi subprovince were evaluated by this Technical Report. The Chubb Property is located in Lot 11, Range II, Lacorne Township. The Property is located 2 km due south of Baillargé lake approximately 32 km north from the town of Val d’Or and 6.5 km south of the village of La Corne. A grid was constructed to cover the principal spodumene-bearing pegmatite dykes partially exposed on the property. Ground based magnetic and IP surveys were carried out on the grid lines. The IP results lead to the identification of six chargeability anomalies oriented NNW and located on the western resistive zone of the grid. The inferred surface projections of the resistivity/ IP sources correspond well to the broad trend defined by the localization of channel samples which were gathered from outcrops of spodumene-bearing granitic pegmatites.

The three N-NW-oriented spodumene-bearing dykes display variable but generally elevated  $\text{Li}_2\text{O}$

concentrations (0.01-2.84 wt. %; Av:  $0.89 \pm 0.77$  wt. % (n=59)) which are considered economic. The main dyke, which is 300 m long, has a somewhat higher average  $\text{Li}_2\text{O}$  concentrations ( $1.00 \pm 0.79$  wt. %; n=41) than the other two smaller dykes ( $0.70 \pm 0.66$  wt. % (n=8) and  $0.56 \pm 0.78$  wt. % (n=8)).

The International property consists of two main lithium showings: Bouvier and International. It is located in Saint-Mathieu municipality, Figury Township, and extends from 1 km westward from the western bank of the Harricana River, 3 km SE of the village of St-Mathieu d'Harricana. The principal Bouvier EW-oriented spodumene-bearing granitic pegmatite was unearthed by digging 6 roughly NS-oriented trenches and the exposed granitic pegmatites were sampled through channel cutting for a total of 16 samples. The International showing was also submitted to channel sampling which yielded 12 samples of spodumene-bearing granitic pegmatite. A 750 x 550 m grid was constructed on farmland containing the Bouvier showing. Magnetic and IP surveys were carried out on the grid lines. Following the interpretation of pseudosections, a total of three chargeability anomalies are apparent and display a broad NE to EW orientation parallel to that of the Manneville fault, but more importantly to the general strike attributed to the exposed and buried granitic pegmatite dykes. There is a close spatial association between the location and orientation of one anomaly (INT1) with the trenching area that exposed previously investigated EW-oriented spodumene-bearing granitic pegmatite dykes.

The main EW-oriented spodumene-bearing dyke of the Bouvier showing displays variable but generally elevated  $\text{Li}_2\text{O}$  concentrations (0.04-2.91 wt. %; Av:  $1.51 \pm 0.91$  wt. % (n=20)) which are considered economic. Other rare metals such as Ta (Av:  $47.8 \pm 23.7$  ppm), Be ( $105.8 \pm 75.0$  ppm), Rb ( $853 \pm 512$  ppm), Cs ( $51.7 \pm 24.5$  ppm) display moderate to low sub-economic average concentrations. Results from the International showing define variable and moderate Li concentrations (0.01-2.65  $\text{Li}_2\text{O}$  wt. %; Av:  $0.38 \pm 0.68$  (n=17)), with Ta (Av:  $96.4 \pm 21.5$ ) and Be (Av:  $252.0 \pm 184.9$  ppm) values significantly higher to that of the Bouvier pegmatite, but still remaining sub-economic.

The Athona property situated in the Landrienne Township, contains molybdenite mineralization related to the albitite and granitic pegmatite dykes. A new grid was established in the



northeastern corner of the Athona property. A ground based magnetic survey conducted along the grid lines revealed two distinct magnetic domains. The limit between these two, oriented N100°, represents a geological contact between a granitic intrusion and a volcanic assemblage of the Landrienne Formation. The northern half of the grid is characterized by high magnetic readings attributed to bands of ultramafic intrusive or komatiitic volcanic rocks while the lower and stable magnetic background of to the south is related to an exposed granitic stock.

A total of 16 samples representing albitite dykes and veins were collected along the grid lines. The potential for molybdenum mineralization was confirmed by the new assays showing five samples carrying MoS<sub>2</sub> values > 0.25 wt.%, with two samples having higher than 1.69 wt. % MoS<sub>2</sub>.

## **ITEM 22 RECOMMENDATIONS**

### *22.1-Athona Property*

Being explored at the grass-root stage, the Athona property would benefit from a mapping campaign conducted at a scale of 1:20,000 or less. The focus of the exploration should be given to the southern region of the property which exposes monzogranitic plutonic rocks of the Preissac-Lacorne Batholith and the metasediments of the Lac Caste Formation. These rocks are susceptible to contain Li and/or Be-mineralized granitic pegmatites (see Boily, 1991, 1993). The property is prime ground for the discovery of rare metal granitic pegmatites being comprised in a broadly EW-oriented corridor limited to the north by the Manneville fault and to the south by the PLB (Boily, 1991). The past producing Quebec Lithium mine is located within this corridor just 13 km to the east of the Athona property. Upon the discovery of a sufficient density of rare metal-mineralized pegmatites, it is suggested that an IP survey along an established grid could help find hidden pegmatite bodies. This type of survey is best suited for homogeneous low-resistivity bedrock such as the Lac Caste metasediments which highlight the contrast with higher-resistivity granitic pegmatites.

The Athona property also extends, principally to the west, to areas underlain by the metavolcanic rocks of the Landrienne Formation. Any sound exploration strategy should examine the

possibility of discovering Cu-Zn massive sulphide (felsic rocks), quartz-vein gold (mafic volcanic rocks) and Ni, Cu±PGE mineralization (ultramafic rocks).

## *22.2-International Property*

After evaluating the results of the comprehensive geophysical (IP and MAG) and geochemical surveys, the author recommends a drilling campaign to: a) confirm and expand the previous results obtained during the campaigns conducted in the 1950's (the sites of geophysical anomaly INT1 and the International showing on the western bank of the Harricana River (INT4) are targeted) and b), explore the two new targets (INT2 and INT3) detected through the IP geophysical survey (Figure 31).

Eight holes, each separated by 100 m, are proposed to investigate target INT1 which correlates with the old Cyr discovery. The DDH will have plunges of 45°, azimuths of 360° and depths of 100 m (see Table below). For the International showing (INT4), the collars will have to be located on the ice when the Harricana River is frozen. The topography of the region where the granitic pegmatite dykes are exposed renders the drilling operation less difficult if the drilling apparatus is on the river ice. A total of 5 holes, each separated by 50 m, are considered with azimuths of 201° and 45° plunges (see Table below).

Targets INT2 and INT3 are new promising zones in which we suspect granitic pegmatites may be hidden at less than 40 m depth. Five DDH, separated by 50 m, are allocated to target INT2, with 45° plunges and 340-360° azimuths (see Table below). Target INT3 will be subjected to 6 drill holes, each separated by 50 m, with 45° plunges and 360° azimuths (see Table below).

<b>DDH #</b>	<b>Easting</b>	<b>Northing</b>	<b>Azimuth (°)</b>	<b>Plunge (°)</b>	<b>Depth (m)</b>
INT1-09-1	714717	5370602	360	45	100
INT1-09-2	714617	5370602	360	45	100
INT1-09-3	714517	5370602	360	45	100
INT1-09-4	714417	5370602	360	45	100
INT1-09-5	714317	5370602	360	45	100
INT1-09-6	714217	5370602	360	45	100
INT4-09-1	715215	5370580	201	45	100
INT4-09-2	715261	5370562	201	45	100
INT4-09-3	715308	5370545	201	45	100
INT4-09-4	715355	5370527	201	45	100
INT4-09-5	715402	5370509	201	45	100
INT2-09-1	270752	5370899	340	45	100
INT2-09-2	270803	5370914	340	45	100
INT2-09-3	270855	5370937	360	45	100
INT2-09-4	270903	5370896	360	45	100
INT2-09-5	270953	5370896	360	45	100
INT3-09-1	270684	5370664	360	45	100
INT3-09-2	270734	5370664	360	45	100
INT3-09-3	270784	5370664	360	45	100
INT3-09-4	270834	5370664	360	45	100
INT3-09-5	270884	5370664	360	45	100

\*UTM coord.; NAD83

Finally, I recommend that the established grid be prolonged at least 200 m to the east and that the entirety of grid be subjected to a ground-based IP survey.

### *22.3-Chubb Property*

The signatures and orientations of the MAG and IP ground-based surveys closely correspond to those of exposed spodumene-bearing granitic pegmatite dykes cropping out on the property. These dykes were previously, but haphazardly investigated by several drilling campaigns initiated throughout the 1950's until the early 1990's. It is imperative that a more systematic drilling campaign be conducted to: a) verify if the encouraging Li assays from surface dyke samples are projected at depth and b), identify the shape and extent of the spodumene-bearing

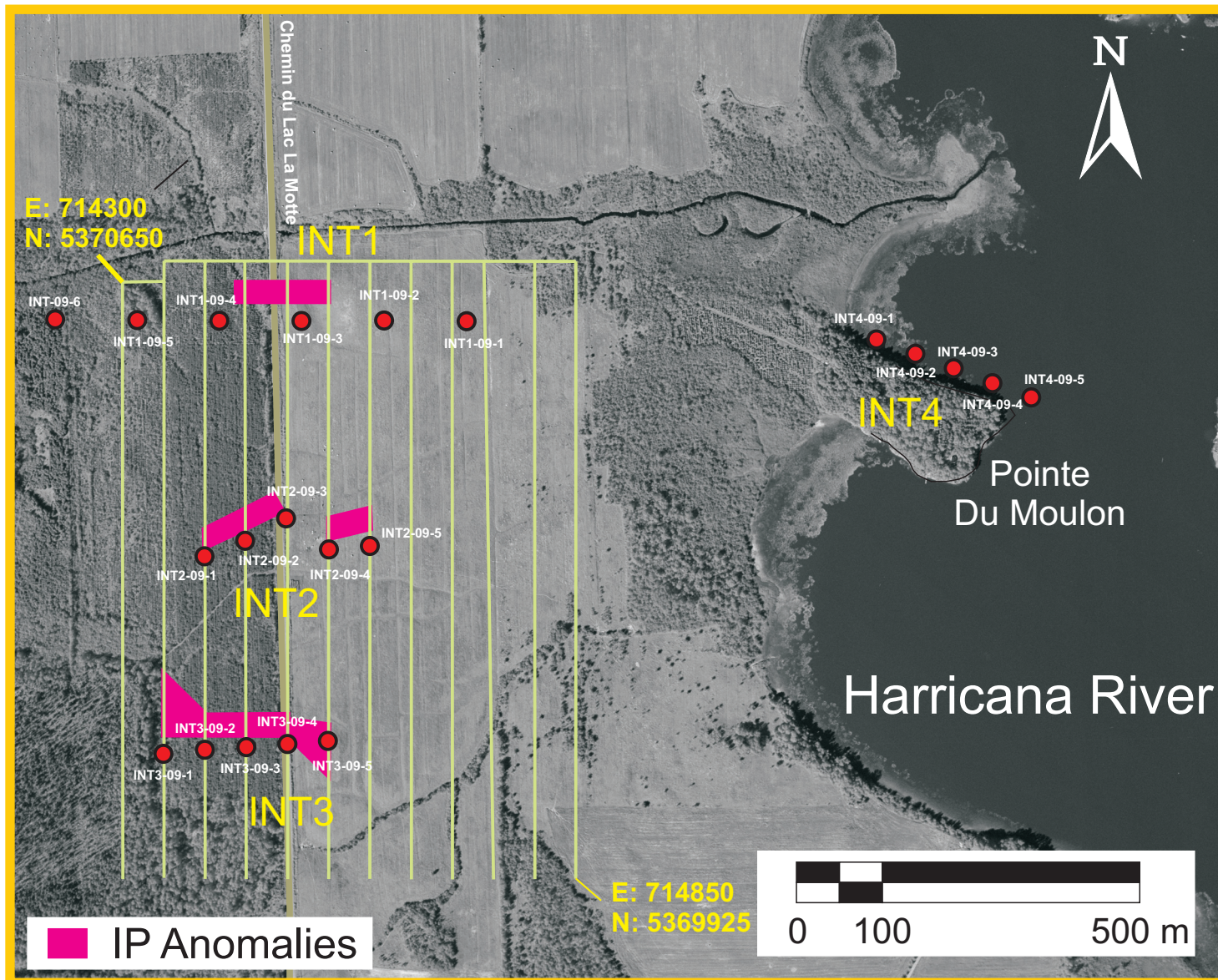


Figure 31. Proposed location of drillhole collars for the 2009-2010 International campaign. UTM Coord.; NAD83; Zone 17N; E=Easting; N=Northing.



dykes.

We envisage devoting a total of 12 DDH to the Chubb property, with provisions of more holes if the results obtained during this campaign are satisfactory (Figure 32). The localization of the collars will be set to drill the principal zone of dyke outcropping which corresponds to IP anomalies CH2, 4 and 5. An additional two drillholes will explore anomaly CH1 where little outcropping is present. The DDH will have azimuths varying from 247° to 290°, with 45° plunges and 100 m depths (see Table below).

<b>DDH #</b>	<b>Easting *</b>	<b>Northing</b>	<b>Azimuth (°)</b>	<b>Plunge (°)</b>	<b>Depth (m)</b>
CH-09-1	280601	5354884	247	45	100
CH-09-2	280620	5354838	247	45	100
CH-09-3	280640	5354792	247	45	100
CH-09-4	280659	5354745	247	45	100
CH-09-5	280678	5354700	247	45	100
CH-09-6	280512	5354705	290	45	100
CH-09-7	280512	5354655	290	45	100
CH-09-8	280512	5354605	290	45	100
CH-09-9	280738	5354801	247	45	100
CH-09-10	280756	5354755	247	45	100
CH-09-11	280459	5354801	222	45	100
CH-09-12	280496	5354768	222	45	100

\*UTM coord.; NAD83; Zone 18N

The author also recommends that the property lying outside the established grid be roamed by prospectors to identify granitic pegmatite outcrops. The investigation should be followed by small scale mapping and sampling of targeted areas by a geologist. The results of this mapping campaign will be evaluated and, if needed, new grids established to carried out IP ground-based surveys.

In conclusion, a total of \$921,375 is to be devoted to the coming exploration programs pertaining to the three properties. The amount is allocated as follows: \$339,117 for the Chubb property, \$493,664 for the International property and \$88,594 for the Athona property.

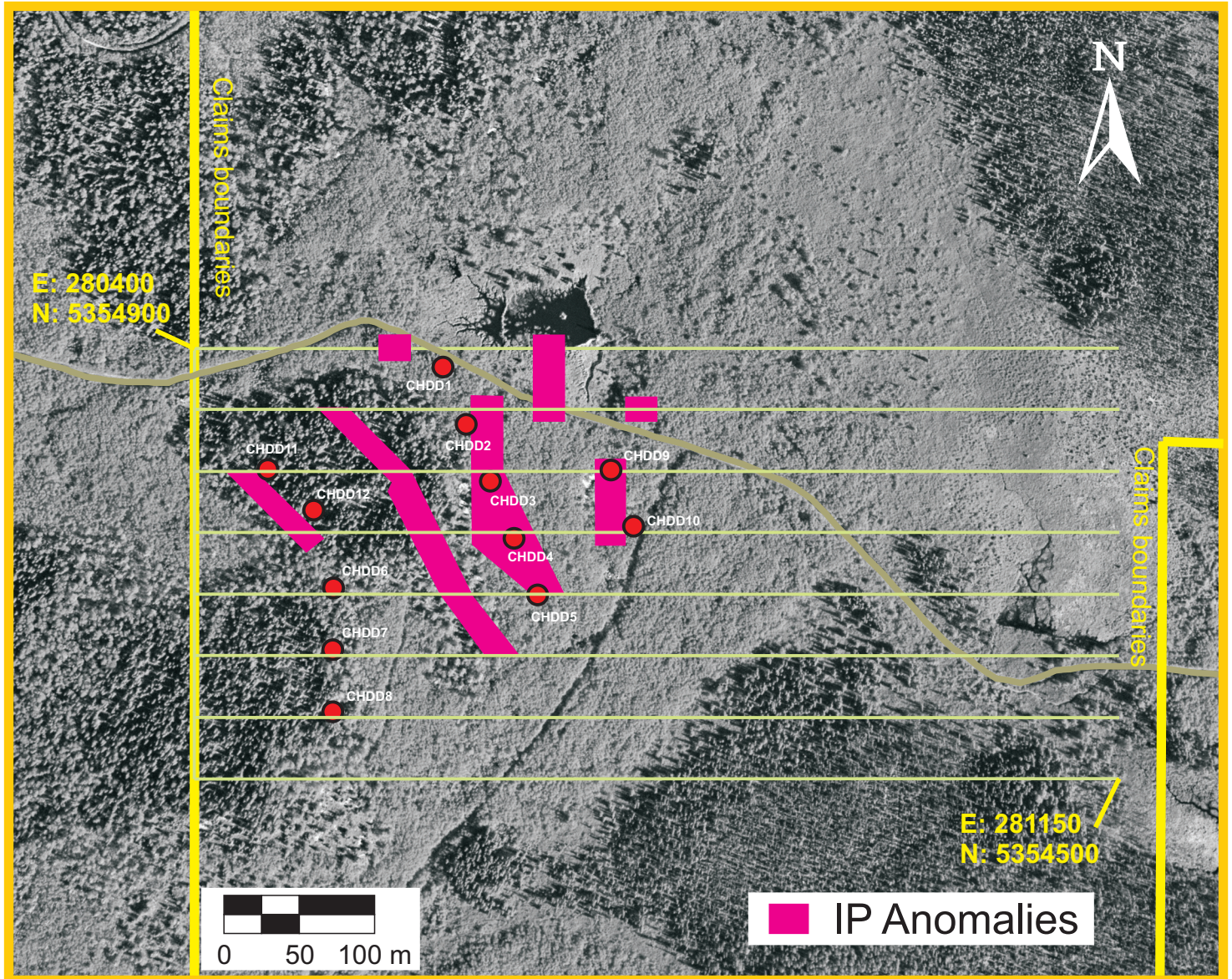


Figure 32. Proposed location of drillhole collars for the 2009-2010 Chubb campaign. UTM Coord.; NAD83; Zone 18N; E=Easting; N=Northing.

## 22.4-Budget Breakdown

<b>CHUBB PROPERTY</b>	
<b>DRILLING</b>	
1200 m (NQ) X \$100/m	\$120 000
Mobilisation-demobilisation	\$10 000
Core racks	\$5 000
Core shack (12'x 16')	\$3 000
Analyses: 1200 samples X \$35/sample	\$48 000
Supervision: 1 geologist :\$550/day X 20 days	\$11 000
2 technicians: \$275/day X 20 days	\$11 000
Core splitter, survey instrument, sample bags, etc..	\$6 000
Administration/supervision	\$10 000
<b>GEOLOGICAL MAPPING/SAMPLING</b>	
1 geologist :\$550/day X 8 days	\$4 400
2 technicians: \$275/day X 8 days	\$4 400
1 prospector: \$225/day X 5 days	\$1 125
Analyses: 50 samples X \$35/sample	\$1 750
Equipment: saw, blade, oil etc..	\$3 000
<b>IP GROUND-BASED SURVEY</b>	
Grid: 20 km of lines @ 600/km	\$12 000
IP survey: 20 km at \$1000/km	\$20 000
<b>GOLOGICAL REPORTS</b>	\$25 000
<b>LODGING AND MEALS</b>	\$14 700
<b>EQUIPMENT</b>	
Truck location, ATV	\$7 000
Maps, stationary, etc..	\$3 000
<b>Subtotal</b>	\$258 375
Contingency (10%)	\$25 838

22.4-Budget Breakdown (ctnd.)

<b>CHUBB PROPERTY (Ctnd.)</b>	
<b>Total before taxes</b>	\$284 213
GST (5%)	\$14 211
TVQ (7.5%)	\$40 694
<b>Grand Total</b>	\$339 117

<b>INTERNATIONAL PROPERTY</b>	
<b>DRILLING</b>	
2100 m (NQ) X \$100/m	\$210 000
Mobilisation-demobilisation	\$10 000
Core racks	\$5 000
Core shack (12'x 16')	\$3 000
Analyses: 2100 samples X \$35/sample	\$73 500
Supervision: 1 geologist :\$550/day X 35 days	\$19 250
2 technicians: \$275/day X 35 days	\$19 250
Core splitter, survey instrument, sample bags, etc..	\$6 000
Administration/supervision	\$10 000
<b>IP GROUND-BASED SURVEY</b>	
Grid: 4 km of lines @ 600/km	\$2 400
IP survey: 16 km at \$1000/km	\$16 000
<b>GOLOGICAL REPORTS</b>	\$20000
<b>LODGING AND MEALS</b>	\$25 725
<b>EQUIPMENT</b>	
Truck location, ATV	\$10 000
Maps, stationary, etc..	\$3 000



22.4-Budget Breakdown (Ctnd.)

<b>INTERNATIONAL PROPERTY (Ctnd.)</b>	
<b>Subtotal</b>	\$376 125
Contingency (10%)	\$37 613
<b>Total before taxes</b>	\$413 738
GST (5%)	\$20 687
TVQ (7.5%)	\$59 240
<b>Grand Total</b>	\$493 664

<b>ATHONA PROPERTY</b>	
<b>GEOLOGICAL MAPPING/SAMPLING</b>	
1 geologist :\$550/day X 10 days	\$5 500
2 technicians: \$275/day X 10 days	\$5 500
1 prospector: \$225/day X 5 days	\$1 125
Analyses: 50 samples X \$35/sample	\$1 750
Equipment: saw, blade, oil etc..	\$3 000
<b>IP GROUND-BASED SURVEY</b>	
Grid: 20 km of lines @ 600/km	\$12 000
IP survey: 20 km at \$1000/km	\$20 000
<b>GOLOGICAL REPORTS</b>	\$10 000
<b>LODGING AND MEALS</b>	\$5 625
<b>EQUIPMENT</b>	
Truck location, ATV	\$3 000
Maps, stationary, etc..	\$1 000

22.4-Budget Breakdown (Ctnd.)

<b>ATHONA PROPERTY (Ctnd.)</b>	
<b>Subtotal</b>	\$67 500
Contingency (10%)	\$6 750
<b>Total before taxes</b>	\$74 250
GST (5%)	\$3 713
TVQ (7.5%)	\$10 631
<b>Grand Total</b>	\$88 594

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## ITEM 24 DATE AND SIGNATURE

### CERTIFICATE OF QUALIFICATIONS

I, Michel Boily, Ph.D., P. Geo. HEREBY CERTIFY THAT:

I am a Canadian citizen residing at 2121 de Romagne, Laval, Québec, Canada, H7M 5P8.

I obtained a PhD. in geology from the Université de Montréal in 1988.

I am a consultant geologist for the company **GÉON Ltée**.

I am a registered Professional Geologist in good standing with l'Ordre des Géologues du Québec (OGQ; permit # 1097).

I had the following work experience:

From 1986 to 1987: Research Associate in Cosmochemistry at the **University of Chicago**, Chicago, Illinois, USA.

From 1988 to 1992: Researcher at **IREM-MERI/McGill University**, Montréal, Québec as a coordinator and scientific investigator in the high technology metals project undertaken in the Abitibi greenstone belt and Labrador.

From 1992 to present: Geology consultant with **Geon Ltée**, Montréal, Québec. Consultant for several mining companies. I participated, as a geochemist, in two of the most important geological and metallogenic studies accomplished by the Ministère des Richesses naturelles du Québec (MRNQ) in the James Bay area and the Far North of Québec (1998-2005). I am a specialist of granitoid-hosted precious and rare metal deposits and of the stratigraphy and geochemistry of Archean greenstone belts.

I have gathered field experience in the following regions : James Bay, Quebec; Strange Lake, Labrador/Quebec; Val d'Or and Rouyn-Noranda, Quebec; Grenville (Saguenay and Gatineau area); Cadillac, Quebec; Otish Mountains, Quebec, Lower North Shore, Quebec and Sinaloa Province, Mexico. Over the last two years I have carried exploration work on two major Fe-Ti-deposit located in the Grenville Province of Quebec.

I am the author of the Technical Report entitled : "Technical Report and Recommendations on three Li-Mo properties associated with the Preissac-Lacorne Batholith in the Abitibi Subprovince, Quebec, Canada: The Chubb, International and Athona properties " written on February 5, 2010 for MINERAL HILLS INDUSTRIES LTD

As of the date of the certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

The Qualified Person, Michel Boily, has written this report in its entirety and is responsible for its content.

I read the National Instrument 43-101 Standards of Disclosure for Mineral Projects (the "Instrument") and the report fully complies with the Instrument.

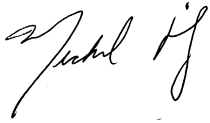
I am an independent qualified person, QP, according to NI 43-101. I have extensive experience related to the exploration and metallogeny of rare-metal deposits (Li, Be, Ta, REE, Y, Zr) having worked in several key areas (i.e. Preissac-Lacorne, Strange Lake) and written numerous scientific articles and technical reports. I have no relation to Mineral Hills Industries Ltd. according to section 1.4 of NI 43-101. I am not aware of any relevant fact which would interfere with my judgment regarding the preparation of this technical report.

I have visited the Chubb, International and Athona properties on two occasions during the year 2009 and 2009. The last visit occurred in September 2009 and lasted two days.



I have not had prior involvement with the Chubb, International and Athona properties that are the subject of this report

I consent to the filing of this technical Report with any stock exchange and any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.



Michel Boily, PhD., P. Geo.  
Dated at Montréal, Qc  
February 5, 2010



## **Appendix 1**



## Certificate of Analysis

Work Order: TO107718

To: **Fayz Yacoub**  
**COD SGS Minerals**  
On Track Exploration  
6498-128 B Street  
Surrey  
BC V3W 9P4

Date: Nov 30, 2009

P.O. No. : Project: Athona-Lithium  
Project No. : -  
No. Of Samples : 19  
Date Submitted : Sep 23, 2009  
Report Comprises : Pages 1 to 7  
(Inclusive of Cover Sheet)

**Distribution of unused material:**  
STORE:

Certified By :

Gavin McGill  
Operations Manager

**SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at <http://www.scc.ca/en/programs/lab/mineral.shtml>**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
*M* after a result denotes ppb to ppm conversion, % denotes ppm to % conversion  
Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted  
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Element	WtKg	Al	Ba	Be	Ca	Cr	Cu	Fe	K	Li
Method	WGH79	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.001	0.01	0.5	5	0.01	10	5	0.01	0.01	10
Units	kg	%	ppm	ppm	%	ppm	ppm	%	%	ppm
25301	10.076	10.8	183	16	0.46	40	17	0.26	0.16	40
25302	8.974	10.8	272	13	0.37	30	11	0.27	0.11	20
25303	2.656	4.35	739	43	4.80	1770	<5	6.36	3.54	1320
25304	3.342	10.8	46.6	10	0.33	20	<5	0.20	0.08	10
25305	7.224	10.7	69.4	10	0.29	10	<5	0.32	0.09	<10
25306	3.066	11.0	19.6	10	0.25	20	<5	0.19	0.06	<10
25307	2.456	10.8	53.2	17	0.44	20	8	0.31	0.06	<10
25308	4.480	10.6	98.1	14	0.59	180	7	0.57	0.08	20
25309	7.896	8.54	205	19	0.45	10	<5	0.16	0.31	20
25310	3.526	11.1	26.9	20	0.41	10	<5	0.16	0.06	<10
25311	8.070	11.4	71.1	14	0.32	10	<5	0.36	0.05	30
25312	2.838	10.9	28.6	12	0.30	10	10	0.21	0.05	<10
25313	3.410	11.0	28.5	8	0.25	20	<5	0.19	0.03	<10
25314	5.636	9.12	173	13	0.36	20	5	0.40	2.16	10
25315	3.080	10.4	33.0	22	0.71	30	<5	0.67	0.07	<10
25316	5.020	8.86	140	18	0.39	20	<5	0.27	1.69	<10
25317	4.754	8.37	266	14	0.37	30	<5	0.33	1.49	10
25318	2.282	10.8	23.3	22	0.82	10	6	0.26	0.08	<10
25319	2.208	10.9	1470	32	0.61	20	<5	0.50	0.13	170
*Rep 25312		10.9	24.7	12	0.31	10	6	0.21	0.06	<10
*Rep 25319		11.1	1490	32	0.64	20	<5	0.50	0.14	180

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Element Method Det.Lim. Units	Mg @ICM90A 0.01 %	Mn @ICM90A 10 ppm	Ni @ICM90A 5 ppm	P @ICM90A 0.01 %	Sc @ICM90A 5 ppm	Sr @ICM90A 0.1 ppm	Ti @ICM90A 0.01 %	V @ICM90A 5 ppm	Zn @ICM90A 5 ppm	Ag @ICM90A 1 ppm
25301	0.13	90	18	0.04	<5	1400	<0.01	<5	16	<1
25302	0.03	50	12	<0.01	<5	1330	<0.01	<5	6	<1
25303	11.0	2180	957	0.01	18	202	0.18	131	179	<1
25304	0.08	150	15	0.03	<5	574	<0.01	<5	9	<1
25305	<0.01	460	6	0.02	<5	582	<0.01	<5	30	<1
25306	0.01	190	8	<0.01	<5	206	<0.01	<5	<5	<1
25307	0.13	300	15	0.04	<5	527	<0.01	<5	6	<1
25308	0.35	210	512	0.08	<5	755	<0.01	<5	15	<1
25309	0.05	930	7	0.02	<5	214	<0.01	<5	7	<1
25310	<0.01	20	14	0.02	<5	291	<0.01	<5	<5	<1
25311	0.02	60	9	0.02	<5	1290	<0.01	<5	65	<1
25312	<0.01	60	6	0.01	<5	111	<0.01	<5	8	<1
25313	0.01	250	7	0.01	<5	254	<0.01	<5	<5	<1
25314	0.01	1010	<5	0.01	<5	191	<0.01	<5	7	<1
25315	0.15	340	12	0.05	<5	296	0.14	14	16	<1
25316	0.01	830	<5	0.02	<5	162	<0.01	<5	7	<1
25317	0.02	70	8	0.01	<5	229	<0.01	<5	5	<1
25318	0.01	50	8	0.19	<5	301	<0.01	<5	8	<1
25319	0.34	90	40	<0.01	<5	3300	<0.01	<5	9	<1
*Rep 25312	<0.01	60	11	0.01	<5	109	<0.01	<5	10	<1
*Rep 25319	0.34	90	38	<0.01	<5	3390	<0.01	<5	9	<1

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Element	As	Bi	Cd	Ce	Co	Cs	Dy	Er	Eu	Ga
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	5	0.1	0.2	0.1	0.5	0.1	0.05	0.05	0.05	1
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25301	<5	2.7	INF	2.6	1.0	3.4	0.09	0.06	0.06	53
25302	<5	2.0	INF	0.9	0.8	1.5	0.05	<0.05	<0.05	54
25303	<5	2.2	0.3	11.3	74.9	480	1.68	1.07	0.59	35
25304	<5	0.4	<0.2	1.9	0.7	2.0	0.12	<0.05	0.06	64
25305	<5	1.5	<0.2	2.4	<0.5	0.3	0.42	<0.05	<0.05	64
25306	<5	0.2	<0.2	1.3	0.5	0.5	0.19	0.05	<0.05	72
25307	<5	13.5	INF	1.5	1.0	0.6	0.18	<0.05	<0.05	66
25308	<5	29.7	INF	0.9	2.7	4.3	0.11	<0.05	0.08	71
25309	<5	3.0	<0.2	1.7	0.6	5.2	0.13	0.08	<0.05	51
25310	<5	7.8	<0.2	1.4	<0.5	0.6	0.08	<0.05	<0.05	54
25311	<5	0.3	0.5	0.9	<0.5	0.3	0.05	0.07	0.08	64
25312	<5	1.6	<0.2	0.9	<0.5	0.5	0.11	<0.05	<0.05	61
25313	<5	0.2	<0.2	1.2	<0.5	0.6	0.18	<0.05	<0.05	65
25314	<5	0.3	<0.2	1.1	<0.5	12.1	0.17	0.07	<0.05	47
25315	<5	7.0	<0.2	3.3	3.2	0.9	0.71	0.33	0.24	53
25316	<5	140	<0.2	8.5	<0.5	10.7	0.19	0.05	0.07	50
25317	<5	0.7	<0.2	1.2	<0.5	12.6	<0.05	<0.05	<0.05	48
25318	<5	52.1	<0.2	1.4	<0.5	1.2	0.18	0.08	0.07	57
25319	<5	0.7	<0.2	1.5	2.6	0.9	<0.05	<0.05	<0.05	37
*Rep 25312	<5	1.6	0.3	0.9	<0.5	0.6	0.10	<0.05	<0.05	63
*Rep 25319	<5	0.8	<0.2	1.6	2.6	0.9	<0.05	<0.05	<0.05	37

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Element Method Det.Lim. Units	Gd @ICM90A 0.05 ppm	Ge @ICM90A 1 ppm	Hf @ICM90A 1 ppm	Ho @ICM90A 0.05 ppm	In @ICM90A 0.2 ppm	La @ICM90A 0.1 ppm	Lu @ICM90A 0.05 ppm	Mo @ICM90A 2 ppm	Nb @ICM90A 1 ppm	Nd @ICM90A 0.1 ppm
25301	0.32	3	3	<0.05	<0.2	1.1	<0.05	>10000	10	1.3
25302	0.11	3	4	0.05	<0.2	0.6	<0.05	>10000	3	0.5
25303	2.06	5	<1	0.35	<0.2	3.5	0.16	31	23	7.9
25304	0.43	4	5	<0.05	<0.2	1.0	<0.05	9	35	0.8
25305	0.67	3	7	<0.05	<0.2	1.3	0.09	7	60	1.1
25306	0.40	3	5	<0.05	<0.2	0.6	0.11	8	31	0.5
25307	0.32	5	5	<0.05	<0.2	0.8	<0.05	7800	28	0.6
25308	0.23	4	5	<0.05	<0.2	0.5	<0.05	4850	18	0.5
25309	0.28	5	2	<0.05	<0.2	0.5	<0.05	83	26	0.6
25310	0.17	4	9	<0.05	<0.2	0.6	<0.05	8	25	0.6
25311	0.15	4	4	<0.05	<0.2	0.4	<0.05	5	10	0.6
25312	0.26	3	5	<0.05	<0.2	0.4	<0.05	1470	41	0.5
25313	0.28	3	5	<0.05	<0.2	0.5	<0.05	91	25	0.5
25314	0.34	4	5	<0.05	<0.2	0.6	<0.05	2	19	0.6
25315	1.11	4	7	0.13	<0.2	1.2	0.07	61	47	2.5
25316	0.51	5	4	<0.05	<0.2	1.7	0.06	2	72	1.7
25317	0.09	4	3	<0.05	<0.2	0.7	0.07	<2	26	0.5
25318	0.55	5	7	<0.05	<0.2	0.7	<0.05	6	13	0.9
25319	0.09	2	<1	<0.05	<0.2	1.0	<0.05	<2	<1	0.6
*Rep 25312	0.28	3	5	<0.05	<0.2	0.5	<0.05	1660	40	0.5
*Rep 25319	0.09	2	<1	<0.05	<0.2	1.1	<0.05	<2	<1	0.7

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Element	Pb	Pr	Rb	Sb	Sm	Sn	Ta	Tb	Th	Ti
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	5	0.05	0.2	0.1	0.1	1	0.5	0.05	0.1	0.5
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25301	<5	0.32	18.0	0.2	0.4	2	60.1	<0.05	1.2	<0.5
25302	<5	0.13	9.2	0.2	0.2	1	11.1	<0.05	0.9	<0.5
25303	<5	1.82	1050	0.2	2.0	7	6.5	0.32	0.6	7.1
25304	8	0.27	6.3	0.2	0.4	2	170	0.06	3.5	<0.5
25305	12	0.32	1.7	0.4	0.6	2	152	0.15	4.5	<0.5
25306	<5	0.19	2.3	0.2	0.4	1	138	0.05	3.6	<0.5
25307	8	0.17	1.8	0.2	0.4	2	68.9	0.06	3.2	<0.5
25308	15	0.14	11.2	0.2	0.3	2	152	<0.05	1.6	<0.5
25309	9	0.15	37.3	0.2	0.3	5	30.2	0.07	2.5	<0.5
25310	5	0.18	2.4	0.2	0.2	1	127	<0.05	4.0	<0.5
25311	7	0.16	1.6	0.3	0.2	1	39.2	<0.05	1.3	<0.5
25312	5	0.14	1.1	0.2	0.3	4	191	<0.05	2.6	<0.5
25313	<5	0.16	2.5	0.2	0.3	1	54.8	0.05	2.8	<0.5
25314	10	0.14	448	0.2	0.1	1	24.6	0.05	2.6	3.2
25315	6	0.51	6.3	0.2	1.0	3	146	0.18	3.0	<0.5
25316	11	0.52	538	0.2	0.5	2	80.3	0.10	3.3	3.8
25317	6	0.16	386	0.2	0.2	2	66.6	<0.05	1.3	2.5
25318	6	0.20	6.3	0.2	0.5	3	65.4	0.08	2.5	<0.5
25319	6	0.19	6.8	0.2	<0.1	<1	1.1	<0.05	<0.1	<0.5
*Rep 25312	5	0.15	1.4	0.2	0.4	2	193	<0.05	2.8	<0.5
*Rep 25319	6	0.22	6.3	0.2	0.1	1	<0.5	<0.05	<0.1	<0.5

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Final : TO107718 Order: Project: Athona-Lithium

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Element	Tm	U	W	Y	Yb	Zr
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.05	0.05	1	0.5	0.1	0.5
Units	ppm	ppm	ppm	ppm	ppm	ppm
25301	<0.05	4.34	<1	<0.5	<0.1	9.5
25302	<0.05	2.07	<1	<0.5	<0.1	11.5
25303	0.14	0.18	<1	8.8	1.0	16.7
25304	<0.05	7.41	<1	0.7	<0.1	15.5
25305	<0.05	9.69	<1	1.8	0.1	29.1
25306	<0.05	4.64	<1	0.9	<0.1	19.4
25307	<0.05	5.49	<1	0.9	<0.1	20.6
25308	<0.05	9.32	<1	0.6	<0.1	14.9
25309	<0.05	3.15	<1	0.8	<0.1	11.7
25310	<0.05	12.2	<1	<0.5	<0.1	32.0
25311	<0.05	6.04	<1	<0.5	<0.1	20.2
25312	<0.05	9.36	<1	0.6	<0.1	16.1
25313	<0.05	3.49	<1	0.9	<0.1	18.0
25314	<0.05	2.00	<1	1.0	<0.1	21.2
25315	<0.05	7.52	<1	3.5	0.3	39.5
25316	<0.05	3.41	<1	0.9	<0.1	17.8
25317	<0.05	8.46	<1	<0.5	<0.1	11.7
25318	<0.05	5.49	<1	1.1	<0.1	23.5
25319	<0.05	0.15	<1	<0.5	<0.1	<0.5
*Rep 25312	<0.05	8.86	<1	0.5	<0.1	15.5
*Rep 25319	<0.05	0.11	<1	<0.5	<0.1	0.6

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## Certificate of Analysis

Work Order: TO107719

To: **Fayz Yacoub**  
**COD SGS Minerals**  
On Track Exploration  
6498-128 B Street  
Surrey  
BC V3W 9P4

Date: Nov 27, 2009

P.O. No. : Project: Lithium-Chubb  
Project No. : -  
No. Of Samples : 26  
Date Submitted : Sep 23, 2009  
Report Comprises : Pages 1 to 7  
(Inclusive of Cover Sheet)

**Distribution of unused material:**  
STORE:

Certified By :

Gavin McGill  
Operations Manager

**SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at <http://www.scc.ca/en/programs/lab/mineral.shtml>**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion  
Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted  
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Element	WtKg	Al	Ba	Be	Ca	Cr	Cu	Fe	K	Li
Method	WGH79	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.001	0.01	0.5	5	0.01	10	5	0.01	0.01	10
Units	kg	%	ppm	ppm	%	ppm	ppm	%	%	ppm
24734	7.032	6.87	53.8	231	0.30	10	9	0.82	3.33	120
24735	2.730	7.82	20.1	224	0.17	40	11	0.62	3.04	110
24736	3.416	8.30	17.1	231	0.12	60	29	0.87	1.67	8750
24737	5.518	7.68	8.8	222	0.15	30	10	1.12	1.34	7220
24738	4.526	7.27	4.0	140	0.09	10	10	1.05	1.80	8270
24739	1.922	7.90	33.3	282	0.21	10	7	0.81	1.57	8710
24740	5.054	5.98	38.4	103	0.15	20	9	0.58	5.80	60
24741	8.000	7.96	68.6	232	0.28	20	7	0.78	1.50	3650
24742	6.068	7.95	78.8	78	0.40	10	8	0.24	3.02	50
24743	8.078	7.75	16.6	316	0.19	20	9	0.85	3.07	4230
24744	6.856	7.45	3.2	259	0.25	20	8	1.07	1.80	6490
24745	9.684	7.09	13.2	323	0.17	10	10	1.54	2.09	1660
24746	3.050	6.87	52.8	73	0.48	10	7	0.44	3.53	40
24747	6.026	7.36	41.7	113	0.25	20	8	0.24	3.42	20
24748	5.278	5.63	44.8	209	0.23	30	9	0.44	4.13	40
24749	8.634	7.52	19.8	283	0.24	30	13	1.07	3.16	5070
24750	3.458	7.22	19.5	148	0.12	40	9	0.63	3.75	3810
24788	3.340	8.03	<0.5	117	0.18	60	<5	0.86	0.45	13200
24789	7.604	7.93	13.4	208	0.12	50	<5	1.01	2.66	9170
24790	7.490	8.11	14.8	207	0.14	20	7	0.67	2.23	7420
24791	5.140	8.66	29.9	216	0.12	60	6	0.48	4.57	6130
24792	6.872	7.65	24.0	244	0.18	10	9	0.83	0.81	1900
24793	5.786	7.19	105	219	0.23	10	<5	0.71	2.45	380
24794	4.914	6.66	86.0	36	0.14	20	<5	0.26	6.72	100
24795	4.440	6.97	24.4	13	0.14	20	<5	0.49	4.54	100
24796	6.576	7.41	7.5	251	0.31	20	6	0.74	0.78	6320
*Rep 24745		7.18	11.3	314	0.14	20	6	1.37	2.12	1670
*Rep 24795		7.12	25.1	13	0.14	20	10	0.49	4.74	100
*Rep 24796		7.47	4.3	272	0.19	30	9	0.72	0.78	6310

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Element Method Det.Lim. Units	Mg @ICM90A 0.01 %	Mn @ICM90A 10 ppm	Ni @ICM90A 5 ppm	P @ICM90A 0.01 %	Sc @ICM90A 5 ppm	Sr @ICM90A 0.1 ppm	Ti @ICM90A 0.01 %	V @ICM90A 5 ppm	Zn @ICM90A 5 ppm	Ag @ICM90A 1 ppm
24734	0.05	710	<5	0.01	<5	39.1	<0.01	11	66	<1
24735	0.02	520	<5	0.02	<5	26.5	<0.01	6	100	<1
24736	0.03	670	28	<0.01	<5	18.3	<0.01	10	117	<1
24737	0.03	660	<5	0.01	<5	21.3	<0.01	9	116	<1
24738	0.02	650	<5	<0.01	<5	14.7	<0.01	8	97	<1
24739	0.03	740	<5	0.01	<5	33.8	<0.01	10	61	<1
24740	0.01	150	<5	0.02	<5	45.9	<0.01	<5	20	<1
24741	0.03	600	<5	0.02	<5	47.3	<0.01	10	140	<1
24742	0.02	250	<5	0.01	<5	64.3	<0.01	<5	32	<1
24743	0.02	430	<5	0.02	<5	36.5	<0.01	8	109	<1
24744	0.02	720	<5	<0.01	<5	19.7	<0.01	14	134	<1
24745	0.02	600	<5	0.02	<5	26.0	<0.01	15	121	<1
24746	0.02	230	<5	<0.01	<5	71.2	<0.01	<5	27	<1
24747	0.01	550	<5	0.01	<5	64.3	<0.01	<5	18	<1
24748	0.02	380	<5	0.01	<5	53.5	<0.01	<5	16	<1
24749	0.02	570	<5	0.01	<5	30.6	<0.01	13	48	<1
24750	0.03	470	<5	0.02	<5	35.4	<0.01	<5	66	<1
24788	0.02	810	<5	0.01	<5	11.3	<0.01	8	82	<1
24789	0.01	660	<5	0.02	<5	30.7	<0.01	17	45	<1
24790	0.02	720	<5	0.01	<5	29.5	<0.01	5	70	<1
24791	0.01	610	<5	0.02	<5	62.9	<0.01	6	45	<1
24792	0.02	1470	<5	0.02	<5	31.5	<0.01	6	74	<1
24793	0.06	1200	<5	0.04	<5	86.0	0.02	10	109	<1
24794	0.01	690	<5	0.01	<5	101	<0.01	<5	39	<1
24795	0.02	1970	<5	<0.01	<5	66.5	<0.01	<5	101	<1
24796	0.03	510	<5	0.02	<5	19.6	<0.01	5	49	<1
*Rep 24745	0.02	610	<5	0.02	<5	28.1	<0.01	14	124	<1
*Rep 24795	0.01	1950	<5	<0.01	<5	69.3	<0.01	<5	100	<1
*Rep 24796	0.03	490	<5	0.02	<5	18.0	<0.01	6	47	<1

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Element	As	Bi	Cd	Ce	Co	Cs	Dy	Er	Eu	Ga
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	5	0.1	0.2	0.1	0.5	0.1	0.05	0.05	0.05	1
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
24734	<5	148	0.2	0.9	0.9	118	<0.05	<0.05	<0.05	45
24735	<5	262	<0.2	1.0	0.6	83.2	<0.05	<0.05	<0.05	45
24736	11	24.5	0.8	0.7	2.6	57.0	<0.05	<0.05	<0.05	55
24737	<5	339	<0.2	3.3	2.3	53.2	0.05	<0.05	0.05	54
24738	<5	>1000	0.3	0.8	4.9	54.5	<0.05	<0.05	<0.05	58
24739	<5	635	<0.2	0.6	3.8	84.9	<0.05	<0.05	<0.05	55
24740	<5	10.2	<0.2	0.3	3.4	117	<0.05	<0.05	<0.05	23
24741	<5	29.8	<0.2	1.8	2.4	54.4	0.07	<0.05	<0.05	52
24742	<5	52.0	0.2	5.1	2.2	51.8	0.47	0.05	0.10	63
24743	<5	34.3	<0.2	0.8	8.2	97.9	<0.05	<0.05	<0.05	42
24744	<5	42.0	<0.2	1.1	9.7	90.0	<0.05	<0.05	<0.05	56
24745	<5	65.5	<0.2	1.2	7.4	107	<0.05	<0.05	<0.05	47
24746	<5	11.8	<0.2	1.2	5.2	52.3	0.29	0.06	<0.05	52
24747	<5	15.3	<0.2	1.5	4.1	87.2	0.55	0.06	0.05	55
24748	<5	149	<0.2	0.3	2.8	84.1	<0.05	<0.05	<0.05	21
24749	<5	322	<0.2	0.5	1.4	79.7	<0.05	<0.05	<0.05	43
24750	<5	145	<0.2	0.5	4.2	263	<0.05	<0.05	<0.05	44
24788	<5	129	0.2	3.4	0.6	35.5	0.08	<0.05	<0.05	63
24789	<5	91.1	<0.2	0.4	0.5	106	<0.05	<0.05	<0.05	52
24790	<5	11.8	<0.2	0.6	5.1	161	<0.05	<0.05	<0.05	53
24791	<5	75.4	<0.2	0.4	4.5	304	<0.05	<0.05	<0.05	50
24792	<5	44.8	<0.2	1.5	6.4	77.5	0.07	<0.05	<0.05	48
24793	<5	50.7	<0.2	2.2	2.4	176	0.12	<0.05	0.07	47
24794	<5	6.7	0.2	1.8	3.2	188	0.53	0.07	<0.05	43
24795	<5	23.3	0.4	4.6	1.9	158	1.23	0.18	<0.05	58
24796	<5	292	<0.2	0.5	3.8	82.1	<0.05	<0.05	<0.05	50
*Rep 24745	<5	64.4	<0.2	1.1	5.6	105	<0.05	<0.05	<0.05	47
*Rep 24795	<5	23.5	0.4	4.4	1.5	159	1.27	0.18	<0.05	58
*Rep 24796	<5	260	<0.2	0.5	3.8	82.3	<0.05	<0.05	<0.05	49

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Element	Gd	Ge	Hf	Ho	In	La	Lu	Mo	Nb	Nd
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.05	1	1	0.05	0.2	0.1	0.05	2	1	0.1
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
24734	0.15	3	3	<0.05	<0.2	0.3	<0.05	<2	78	0.4
24735	0.22	3	2	<0.05	<0.2	0.5	<0.05	<2	49	0.9
24736	0.15	3	1	<0.05	<0.2	0.3	0.05	<2	60	0.4
24737	0.22	3	3	<0.05	<0.2	1.9	<0.05	<2	88	1.5
24738	0.16	3	<1	<0.05	<0.2	0.4	<0.05	<2	55	0.5
24739	0.15	3	1	<0.05	<0.2	0.3	<0.05	<2	62	0.4
24740	<0.05	3	<1	<0.05	<0.2	0.2	0.06	<2	30	0.2
24741	0.31	3	5	<0.05	<0.2	0.7	<0.05	<2	95	0.9
24742	1.85	5	4	<0.05	<0.2	2.0	<0.05	<2	75	3.2
24743	0.15	3	3	<0.05	<0.2	0.4	<0.05	<2	75	0.5
24744	0.18	3	<1	<0.05	<0.2	0.7	<0.05	<2	55	0.8
24745	0.16	3	1	<0.05	<0.2	0.7	<0.05	<2	108	0.8
24746	0.70	4	3	<0.05	<0.2	0.6	0.09	<2	66	0.8
24747	1.70	4	7	<0.05	<0.2	0.6	<0.05	<2	84	0.9
24748	0.11	3	<1	<0.05	<0.2	0.2	<0.05	<2	39	0.2
24749	0.05	3	<1	<0.05	<0.2	0.3	0.05	<2	77	0.3
24750	0.12	3	<1	<0.05	<0.2	0.4	<0.05	<2	47	0.3
24788	1.13	3	<1	<0.05	<0.2	1.3	<0.05	<2	48	2.0
24789	0.08	3	<1	<0.05	<0.2	0.4	<0.05	<2	43	0.3
24790	0.17	3	3	<0.05	<0.2	0.3	<0.05	<2	55	0.4
24791	0.11	3	3	<0.05	<0.2	0.2	<0.05	<2	57	0.3
24792	0.25	3	3	<0.05	<0.2	0.8	<0.05	<2	80	0.9
24793	0.33	3	3	<0.05	<0.2	1.0	<0.05	<2	56	1.5
24794	1.34	4	7	<0.05	<0.2	0.6	<0.05	<2	32	1.3
24795	2.60	5	9	0.10	<0.2	1.6	<0.05	<2	53	3.1
24796	0.14	3	<1	<0.05	<0.2	0.6	<0.05	<2	57	0.4
*Rep 24745	0.16	3	1	<0.05	<0.2	0.7	<0.05	<2	112	0.8
*Rep 24795	2.60	4	7	0.10	<0.2	1.6	0.07	<2	53	3.1
*Rep 24796	0.10	3	<1	<0.05	<0.2	0.6	0.05	<2	39	0.4

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Element Method Det.Lim. Units	Pb @ICM90A 5 ppm	Pt @ICM90A 0.05 ppm	Rb @ICM90A 0.2 ppm	Sb @ICM90A 0.1 ppm	Sm @ICM90A 0.1 ppm	Sn @ICM90A 1 ppm	Ta @ICM90A 0.5 ppm	Tb @ICM90A 0.05 ppm	Th @ICM90A 0.1 ppm	Tl @ICM90A 0.5 ppm
24734	20	0.11	1650	0.2	0.2	6	55.2	<0.05	1.5	12.4
24735	10	0.19	1460	0.3	0.4	3	28.4	<0.05	1.2	11.3
24736	7	0.14	926	0.7	0.3	5	33.4	<0.05	1.1	7.1
24737	<5	0.40	850	0.4	0.5	6	35.3	<0.05	1.7	6.1
24738	6	0.15	1070	0.2	0.5	5	19.9	<0.05	1.3	8.1
24739	6	0.11	868	0.2	0.4	5	33.5	<0.05	2.2	6.9
24740	8	<0.05	2680	0.2	<0.1	<1	11.8	<0.05	0.2	22.8
24741	7	0.27	753	0.5	0.5	3	36.9	<0.05	3.1	5.8
24742	14	0.80	1440	0.2	2.2	1	74.0	0.20	3.7	12.2
24743	<5	0.14	1600	0.2	0.3	2	31.1	<0.05	2.0	12.7
24744	<5	0.20	1120	0.2	0.5	4	25.9	<0.05	1.5	8.2
24745	<5	0.22	1260	0.4	0.4	5	42.2	<0.05	2.9	9.1
24746	12	0.20	1990	0.2	0.4	1	57.4	0.12	1.4	17.8
24747	24	0.21	2030	0.3	1.1	3	81.6	0.23	2.6	18.8
24748	6	<0.05	1500	0.2	0.1	<1	22.5	<0.05	0.7	11.9
24749	7	0.08	1610	0.3	0.1	3	32.5	<0.05	0.6	13.0
24750	8	0.09	2220	0.2	0.2	4	23.9	<0.05	0.6	20.4
24788	<5	0.56	236	0.2	2.3	3	41.4	0.08	1.6	1.6
24789	<5	0.07	1580	0.2	0.2	4	25.1	<0.05	0.5	13.5
24790	<5	0.11	1380	0.2	0.3	2	50.6	<0.05	1.1	12.4
24791	10	0.08	2860	0.2	0.1	2	72.7	<0.05	0.8	27.6
24792	<5	0.26	531	0.2	0.5	3	35.7	<0.05	1.7	3.3
24793	6	0.37	1560	0.2	0.5	4	22.6	<0.05	1.7	11.1
24794	37	0.31	4780	0.2	1.3	4	42.3	0.20	2.0	48.4
24795	25	0.80	3920	0.3	2.4	9	57.8	0.41	3.5	39.2
24796	<5	0.12	461	0.2	0.2	3	28.1	<0.05	0.5	3.6
*Rep 24745	<5	0.22	1240	0.4	0.4	5	44.0	<0.05	2.7	8.9
*Rep 24795	24	0.73	3990	0.2	2.4	10	55.9	0.41	3.6	38.8
*Rep 24796	<5	0.12	460	0.2	0.2	3	26.6	<0.05	0.5	3.7

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Final : TO107719 Order: Project: Lithium-Chubb

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Element	Tm	U	W	Y	Yb	Zr
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.05	0.05	1	0.5	0.1	0.5
Units	ppm	ppm	ppm	ppm	ppm	ppm
24734	<0.05	5.28	<1	<0.5	<0.1	14.5
24735	<0.05	1.78	<1	<0.5	<0.1	9.2
24736	<0.05	2.13	<1	<0.5	<0.1	7.1
24737	<0.05	3.35	<1	<0.5	<0.1	9.8
24738	<0.05	6.07	<1	<0.5	<0.1	3.9
24739	<0.05	4.22	<1	<0.5	<0.1	4.3
24740	<0.05	0.53	<1	<0.5	<0.1	1.3
24741	<0.05	7.89	<1	<0.5	<0.1	27.1
24742	<0.05	7.55	<1	3.4	<0.1	11.3
24743	<0.05	3.06	<1	<0.5	<0.1	16.8
24744	<0.05	1.94	<1	<0.5	<0.1	5.8
24745	<0.05	5.02	1	<0.5	<0.1	6.8
24746	<0.05	3.44	<1	2.6	<0.1	8.4
24747	<0.05	8.34	<1	4.8	<0.1	14.9
24748	<0.05	2.28	<1	<0.5	<0.1	6.2
24749	<0.05	1.65	<1	<0.5	<0.1	4.4
24750	<0.05	1.54	<1	<0.5	<0.1	3.0
24788	<0.05	2.36	<1	<0.5	<0.1	2.5
24789	<0.05	0.80	<1	<0.5	<0.1	1.3
24790	<0.05	2.97	<1	<0.5	<0.1	13.7
24791	<0.05	3.89	<1	<0.5	<0.1	12.4
24792	<0.05	3.45	<1	<0.5	<0.1	20.7
24793	<0.05	4.10	<1	<0.5	<0.1	25.7
24794	<0.05	10.3	<1	5.1	<0.1	24.2
24795	<0.05	18.8	<1	11.6	0.3	32.0
24796	<0.05	2.51	<1	<0.5	<0.1	3.7
*Rep 24745	<0.05	5.53	<1	<0.5	<0.1	7.0
*Rep 24795	<0.05	18.8	<1	11.5	0.3	28.2
*Rep 24796	<0.05	2.45	<1	<0.5	<0.1	4.0

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## Certificate of Analysis

Work Order: TO107720

To: **Fayz Yacoub**  
**COD SGS Minerals**  
On Track Exploration  
6498-128 B Street  
Surrey  
BC V3W 9P4

Date: Dec 03, 2009

P.O. No. : Project: International-Lithium  
Project No. : -  
No. Of Samples : 37  
Date Submitted : Sep 23, 2009  
Report Comprises : Pages 1 to 7  
(Inclusive of Cover Sheet)

**Distribution of unused material:**  
STORE:

Certified By :

Gavin McGill  
Operations Manager

**SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at <http://www.scc.ca/en/programs/lab/mineral.shtml>**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result

\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion  
Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted  
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Element	WtKg	Al	Ba	Be	Ca	Cr	Cu	Fe	K	Li
Method	WGHT9	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.001	0.01	0.5	5	0.01	10	5	0.01	0.01	10
Units	kg	%	ppm	ppm	%	ppm	ppm	%	%	ppm
24751	9.890	7.95	13.6	190	0.16	10	11	0.76	1.44	9230
24752	6.112	8.02	10.3	196	0.30	20	<5	0.97	1.09	11000
24753	5.128	5.73	16.3	217	0.13	<10	<5	0.88	2.41	6320
24754	6.804	7.82	13.6	45	0.21	30	9	1.08	3.18	3100
24755	5.282	8.73	30.9	69	0.16	30	<5	0.47	6.23	4790
24756	5.318	5.30	6.6	104	0.24	20	11	0.92	1.12	8970
24757	4.416	7.98	13.0	84	0.17	<10	<5	0.68	2.59	10900
24758	8.680	8.19	6.3	265	0.28	30	9	0.72	1.33	9730
24759	5.398	7.99	3.9	124	0.30	30	<5	0.89	0.93	8260
24760	11.536	7.77	18.8	104	0.34	20	6	0.37	1.85	770
24761	3.006	8.60	10.2	11	0.34	<10	6	0.79	1.15	12400
24762	2.682	7.29	106	12	0.26	<10	16	0.43	3.17	6510
24763	8.184	7.61	13.6	131	0.19	30	10	0.59	2.90	6060
24764	11.576	8.09	9.1	189	0.16	40	31	0.60	2.66	9310
24765	8.440	8.80	35.6	86	0.33	40	10	0.57	2.09	190
24766	4.412	8.03	914	<5	2.25	50	10	1.51	1.44	1040
24767	7.356	8.06	12.2	52	0.13	20	10	0.79	1.37	13500
24768	6.346	8.41	14.5	59	0.20	30	6	0.96	1.67	11800
24769	5.242	8.14	8.9	66	0.25	10	10	0.61	1.26	6290
24770	5.190	7.14	144	<5	0.36	20	<5	0.40	4.77	220
24771	6.774	8.48	100	139	0.30	30	10	0.65	0.86	1380
24772	5.010	7.53	17.1	195	0.30	10	<5	0.34	0.15	30
24773	10.684	3.86	13.7	149	0.20	10	6	0.41	0.18	30
24774	2.634	9.31	26.0	81	0.33	20	7	0.84	0.73	12300
24775	6.682	8.68	25.2	179	0.14	20	12	0.53	0.72	5610
24776	8.318	8.21	17.5	195	0.21	<10	<5	0.48	0.40	3870
24777	9.804	6.80	5.6	239	0.18	20	7	0.33	0.22	80
24778	8.636	3.37	3.5	65	0.13	10	<5	0.37	0.19	110
24779	10.342	7.69	68.7	180	0.19	40	15	0.61	0.58	2530
24780	8.606	8.20	57.0	174	0.21	20	12	0.44	0.52	1050
24781	8.002	9.71	14.7	256	0.35	<10	14	0.25	0.15	30
24782	10.258	9.80	19.4	217	0.36	<10	8	0.30	0.33	670
24783	5.668	9.30	61.7	506	0.25	10	10	0.54	0.44	1960
24784	5.372	10.1	37.9	489	0.48	<10	9	0.28	0.54	140
24785	10.328	9.93	23.2	808	0.32	<10	14	0.34	0.50	140
24786	9.380	9.13	24.3	227	0.22	<10	<5	0.40	0.35	70
24787	2.262	6.68	10.2	185	0.20	10	<5	0.35	0.02	10
*Rep 24762		7.10	107	15	0.25	10	6	0.41	3.11	6090
*Rep 24775		8.50	25.2	169	0.15	30	10	0.50	0.71	5530
*Rep 24787		6.93	8.5	200	0.16	10	<5	0.35	<0.01	10

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Element Method Det.Lim. Units	Mg @ICM90A 0.01 %	Mn @ICM90A 10 ppm	Ni @ICM90A 5 ppm	P @ICM90A 0.01 %	Sc @ICM90A 5 ppm	Sr @ICM90A 0.1 ppm	Ti @ICM90A 0.01 %	V @ICM90A 5 ppm	Zn @ICM90A 5 ppm	Ag @ICM90A 1 ppm
24751	0.03	1210	<5	0.02	<5	21.3	0.05	<5	45	<1
24752	0.04	1060	<5	0.03	<5	16.1	0.05	<5	97	<1
24753	0.04	440	<5	0.01	<5	29.7	0.05	<5	71	<1
24754	0.04	900	7	0.04	<5	24.5	0.05	<5	60	<1
24755	0.03	330	<5	0.02	<5	57.1	0.05	<5	14	<1
24756	0.03	630	<5	0.01	<5	13.3	0.05	<5	131	<1
24757	0.02	840	<5	0.01	<5	30.7	<0.01	<5	40	<1
24758	0.02	810	<5	0.03	<5	26.4	<0.01	<5	37	<1
24759	0.02	770	<5	0.02	<5	18.2	<0.01	<5	50	<1
24760	0.03	520	<5	0.04	<5	25.0	<0.01	<5	44	<1
24761	0.02	1220	<5	0.06	<5	29.3	<0.01	<5	70	<1
24762	0.02	440	<5	0.05	<5	116	<0.01	<5	50	<1
24763	0.03	820	<5	0.03	<5	31.1	<0.01	<5	43	<1
24764	0.02	740	5	0.03	<5	33.0	<0.01	<5	129	<1
24765	0.02	540	<5	0.02	<5	42.1	<0.01	<5	24	<1
24766	0.57	180	20	0.06	<5	1110	0.23	33	61	<1
24767	0.03	1000	<5	0.01	<5	24.9	<0.01	<5	131	<1
24768	0.03	1270	<5	0.02	<5	33.6	<0.01	<5	73	<1
24769	0.03	1030	<5	0.04	<5	25.4	<0.01	<5	50	<1
24770	0.05	240	100	0.03	<5	91.8	0.01	<5	38	<1
24771	0.06	1100	12	0.02	<5	60.0	<0.01	<5	46	<1
24772	0.03	820	<5	0.01	<5	31.4	<0.01	<5	30	<1
24773	0.02	240	<5	<0.01	<5	22.5	<0.01	<5	14	<1
24774	0.03	1030	<5	0.01	<5	33.7	<0.01	8	43	<1
24775	0.02	2960	<5	0.01	<5	30.3	<0.01	<5	99	<1
24776	0.04	1130	<5	0.02	<5	24.4	0.01	6	109	<1
24777	0.02	1490	<5	0.02	<5	22.8	<0.01	<5	33	<1
24778	0.01	490	15	0.01	<5	15.9	<0.01	<5	28	<1
24779	0.04	2620	11	0.02	<5	37.6	<0.01	9	105	<1
24780	0.04	1530	<5	0.02	<5	31.0	<0.01	<5	49	<1
24781	0.03	620	5	0.02	<5	51.5	<0.01	<5	22	<1
24782	0.04	1150	<5	0.02	<5	48.3	<0.01	<5	20	<1
24783	0.04	1240	<5	0.02	<5	74.9	<0.01	<5	55	<1
24784	0.04	810	<5	0.02	<5	70.2	<0.01	<5	20	<1
24785	0.04	1090	<5	0.01	<5	96.9	<0.01	<5	27	<1
24786	0.03	650	<5	0.02	<5	38.3	<0.01	<5	37	<1
24787	0.02	1180	<5	0.02	<5	21.3	<0.01	<5	21	<1
*Rep 24762	0.02	430	<5	0.05	<5	119	<0.01	<5	46	<1
*Rep 24775	0.02	2910	5	0.01	<5	29.5	<0.01	<5	101	<1
*Rep 24787	0.03	1280	<5	0.02	<5	20.0	<0.01	<5	25	<1

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Element	As	Bi	Cd	Ce	Co	Cs	Dy	Er	Eu	Ga
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	5	0.1	0.2	0.1	0.5	0.1	0.05	0.05	0.05	1
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
24751	<5	0.4	<0.2	1.3	5.6	65.1	0.58	0.11	<0.05	52
24752	<5	0.3	0.3	2.1	3.0	49.2	0.69	0.11	<0.05	56
24753	<5	8.6	0.3	0.7	5.1	70.4	0.06	<0.05	<0.05	33
24754	<5	5.4	<0.2	1.9	4.0	54.6	0.54	0.07	0.05	40
24755	<5	1.8	<0.2	0.6	4.5	113	0.10	<0.05	<0.05	36
24756	<5	1.2	0.5	1.2	8.9	33.2	0.15	<0.05	<0.05	32
24757	<5	3.3	<0.2	0.5	1.9	53.8	0.14	<0.05	<0.05	44
24758	<5	0.7	<0.2	1.9	7.5	41.1	0.34	<0.05	<0.05	44
24759	<5	4.7	<0.2	1.2	1.5	24.5	0.23	<0.05	<0.05	44
24760	<5	4.2	<0.2	1.6	2.5	61.8	0.41	0.08	<0.05	38
24761	<5	0.8	0.2	2.5	5.0	29.2	0.68	0.08	<0.05	51
24762	<5	1.0	<0.2	2.2	3.7	54.3	0.18	<0.05	0.07	35
24763	<5	9.7	<0.2	1.5	11.0	66.7	0.41	0.06	<0.05	39
24764	<5	2.5	0.4	1.2	8.9	64.0	0.23	<0.05	<0.05	42
24765	<5	10.1	0.2	1.5	1.5	31.5	0.32	<0.05	<0.05	44
24766	<5	0.2	<0.2	51.2	5.1	19.1	0.97	0.36	1.02	20
24767	<5	6.7	0.3	0.7	21.0	34.1	0.19	<0.05	<0.05	50
24768	<5	4.7	<0.2	1.3	3.8	35.9	0.28	<0.05	<0.05	53
24769	<5	2.1	<0.2	2.0	8.0	31.6	0.58	0.07	<0.05	46
24770	<5	7.6	<0.2	1.6	3.5	101	0.06	<0.05	0.06	29
24771	<5	1.0	<0.2	1.5	8.2	19.3	0.15	<0.05	0.10	44
24772	<5	0.3	<0.2	0.9	8.0	9.7	0.13	<0.05	0.07	35
24773	<5	0.3	<0.2	1.0	4.0	4.8	0.06	<0.05	0.07	20
24774	<5	0.3	<0.2	0.5	3.8	37.2	<0.05	<0.05	<0.05	60
24775	<5	4.4	<0.2	1.0	13.2	31.6	0.13	<0.05	<0.05	50
24776	<5	2.7	<0.2	0.9	7.2	20.5	0.10	<0.05	<0.05	42
24777	<5	1.5	<0.2	1.0	2.0	21.6	0.10	<0.05	<0.05	31
24778	<5	11.3	<0.2	0.5	7.3	8.5	0.05	<0.05	<0.05	16
24779	6	4.5	0.3	0.7	0.7	20.4	0.14	<0.05	<0.05	38
24780	<5	8.3	<0.2	0.9	0.7	13.4	0.17	<0.05	0.05	38
24781	<5	0.7	<0.2	0.9	3.1	11.8	0.12	<0.05	<0.05	40
24782	<5	0.7	<0.2	0.9	6.2	18.4	0.13	<0.05	<0.05	45
24783	<5	1.2	<0.2	1.0	4.1	17.5	0.08	<0.05	<0.05	43
24784	<5	1.2	<0.2	0.6	1.2	29.4	<0.05	<0.05	<0.05	48
24785	<5	1.4	<0.2	0.9	1.4	34.6	0.10	<0.05	<0.05	49
24786	<5	2.7	0.2	0.9	1.7	9.3	0.16	<0.05	0.07	40
24787	<5	0.9	<0.2	0.8	0.6	2.9	0.20	<0.05	0.05	28
*Rep 24762	<5	1.2	<0.2	2.1	4.0	50.6	0.18	<0.05	0.07	32
*Rep 24775	<5	4.9	0.2	0.8	13.8	31.0	0.11	<0.05	<0.05	49
*Rep 24787	<5	1.0	<0.2	0.9	0.6	2.8	0.18	0.05	0.05	29

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Element Method Det.Lim. Units	Gd @ICM90A ppm	Ge @ICM90A ppm	Hf @ICM90A ppm	Ho @ICM90A ppm	In @ICM90A ppm	La @ICM90A ppm	Lu @ICM90A ppm	Mo @ICM90A ppm	Nb @ICM90A ppm	Nd @ICM90A ppm
24751	0.56	4	2	0.05	<0.2	0.6	0.06	3	60	0.6
24752	0.83	4	3	0.06	<0.2	0.9	0.05	<2	72	0.9
24753	0.17	4	3	<0.05	<0.2	0.3	<0.05	5	15	0.3
24754	0.71	4	2	<0.05	<0.2	0.9	<0.05	5	66	1.0
24755	0.16	4	4	<0.05	<0.2	0.4	<0.05	<2	19	0.3
24756	0.31	3	7	<0.05	<0.2	1.0	<0.05	<2	38	0.7
24757	0.17	4	2	<0.05	<0.2	0.2	<0.05	10	27	0.2
24758	0.96	4	5	<0.05	<0.2	0.7	<0.05	<2	120	0.8
24759	0.43	3	7	<0.05	<0.2	0.5	0.06	<2	137	0.5
24760	0.56	4	3	<0.05	<0.2	0.6	0.05	<2	99	0.8
24761	1.38	4	4	<0.05	<0.2	0.9	0.05	<2	71	1.2
24762	0.40	3	<1	<0.05	<0.2	1.1	0.07	<2	13	0.8
24763	0.97	4	3	<0.05	<0.2	0.6	<0.05	<2	63	0.7
24764	0.54	4	<1	<0.05	<0.2	0.5	<0.05	4	54	0.5
24765	0.32	3	3	<0.05	<0.2	0.8	0.06	8	69	0.9
24766	2.43	<1	4	0.16	<0.2	24.3	0.08	<2	5	23.7
24767	0.28	4	1	<0.05	<0.2	0.4	<0.05	3	58	0.3
24768	0.49	4	2	<0.05	<0.2	0.6	<0.05	<2	67	0.6
24769	0.70	4	3	<0.05	<0.2	1.0	<0.05	<2	76	1.0
24770	0.10	3	<1	<0.05	<0.2	1.0	<0.05	<2	58	1.0
24771	0.23	3	3	<0.05	<0.2	0.6	0.15	<2	60	0.8
24772	0.18	3	2	<0.05	<0.2	0.4	<0.05	<2	54	0.5
24773	0.18	3	2	<0.05	<0.2	0.5	<0.05	<2	43	0.7
24774	0.06	4	2	<0.05	<0.2	0.3	0.07	<2	46	0.2
24775	0.15	5	5	<0.05	<0.2	0.5	<0.05	<2	64	0.3
24776	0.14	4	2	<0.05	<0.2	0.4	<0.05	<2	71	0.4
24777	0.14	4	3	<0.05	<0.2	0.5	<0.05	<2	49	0.3
24778	0.06	2	2	<0.05	<0.2	0.3	<0.05	<2	24	0.2
24779	0.20	5	3	<0.05	<0.2	0.3	0.09	<2	53	0.4
24780	0.25	4	5	<0.05	<0.2	0.3	<0.05	<2	51	0.4
24781	0.14	4	4	<0.05	<0.2	0.5	0.06	<2	84	0.4
24782	0.15	4	5	<0.05	<0.2	0.5	<0.05	<2	82	0.4
24783	0.18	4	2	<0.05	<0.2	0.5	<0.05	27	61	0.5
24784	0.06	4	4	<0.05	<0.2	0.4	<0.05	<2	48	0.2
24785	0.16	4	3	<0.05	<0.2	0.4	<0.05	<2	79	0.3
24786	0.20	3	4	<0.05	<0.2	0.4	<0.05	<2	62	0.6
24787	0.30	4	4	<0.05	<0.2	0.3	<0.05	3	68	0.6
*Rep 24762	0.38	3	<1	<0.05	<0.2	1.0	0.07	<2	13	0.9
*Rep 24775	0.14	4	5	<0.05	<0.2	0.5	<0.05	<2	65	0.3
*Rep 24787	0.30	4	4	<0.05	<0.2	0.3	<0.05	3	63	0.6

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Element Method Det.Lim. Units	Pb @ICM90A 5 ppm	Pr @ICM90A 0.05 ppm	Rb @ICM90A 0.2 ppm	Sb @ICM90A 0.1 ppm	Sm @ICM90A 0.1 ppm	Sn @ICM90A 1 ppm	Ta @ICM90A 0.5 ppm	Tb @ICM90A 0.05 ppm	Th @ICM90A 0.1 ppm	Tl @ICM90A 0.5 ppm
24751	<5	0.17	537	0.2	0.5	8	46.1	0.14	1.6	4.3
24752	<5	0.27	473	0.2	0.9	9	55.9	0.20	1.6	3.3
24753	5	0.09	978	0.4	0.2	5	21.4	<0.05	1.3	8.7
24754	7	0.30	1200	0.2	0.8	4	58.0	0.17	1.3	10.3
24755	18	0.08	2350	0.2	0.1	2	23.2	<0.05	1.5	23.0
24756	<5	0.21	398	0.2	0.4	6	48.3	0.05	6.0	3.7
24757	6	0.06	1070	0.2	0.2	16	22.7	<0.05	0.5	9.9
24758	<5	0.25	568	0.2	0.9	11	96.5	0.13	3.2	5.0
24759	<5	0.14	399	0.2	0.5	7	91.4	0.08	2.3	3.3
24760	6	0.22	759	1.1	0.6	3	70.3	0.12	1.9	6.6
24761	10	0.35	545	0.2	1.4	7	45.4	0.25	1.0	4.7
24762	11	0.24	1240	0.2	0.4	5	14.7	0.07	0.7	12.2
24763	7	0.21	1240	0.2	0.8	6	51.8	0.15	1.2	11.3
24764	10	0.15	1120	0.3	0.4	7	50.6	0.08	0.4	10.6
24765	6	0.24	772	0.3	0.4	6	62.0	0.07	3.2	6.5
24766	12	6.26	90.1	0.2	4.2	<1	6.9	0.27	3.6	0.8
24767	<5	0.09	625	0.2	0.2	13	31.4	0.05	0.3	5.4
24768	<5	0.17	741	0.2	0.5	11	43.1	0.08	0.7	6.3
24769	<5	0.29	543	0.1	0.6	5	70.2	0.14	1.4	4.2
24770	13	0.24	1630	0.2	0.2	2	45.7	<0.05	1.1	16.2
24771	<5	0.20	269	0.2	0.3	8	97.9	<0.05	4.4	1.7
24772	<5	0.12	44.4	0.2	0.2	<1	83.3	<0.05	1.7	<0.5
24773	<5	0.14	58.6	0.2	0.2	2	80.5	<0.05	3.1	0.6
24774	<5	0.05	320	0.2	<0.1	15	103	<0.05	3.2	2.2
24775	6	0.11	257	0.2	0.2	9	72.5	<0.05	3.1	1.6
24776	<5	0.12	120	0.2	0.2	7	83.4	<0.05	2.5	0.9
24777	<5	0.11	65.7	0.5	0.1	1	80.6	<0.05	2.4	<0.5
24778	<5	0.06	61.8	0.3	<0.1	7	72.1	<0.05	1.3	0.7
24779	<5	0.10	153	0.3	0.2	5	84.8	<0.05	2.0	1.0
24780	<5	0.13	116	0.2	0.2	3	81.6	0.05	3.1	0.8
24781	11	0.11	40.8	0.2	0.1	2	129	<0.05	3.5	<0.5
24782	6	0.11	113	0.2	0.1	3	156	<0.05	3.2	0.8
24783	7	0.13	141	0.8	0.2	4	109	<0.05	3.0	1.0
24784	8	0.08	236	0.2	<0.1	6	93.0	<0.05	3.1	1.6
24785	7	0.12	183	0.3	0.1	8	108	<0.05	4.0	1.2
24786	8	0.13	105	0.2	0.2	3	105	<0.05	2.9	0.8
24787	10	0.14	4.1	0.2	0.2	<1	99.1	0.06	2.2	<0.5
*Rep 24762	9	0.23	1210	0.2	0.4	3	13.3	0.07	0.5	11.4
*Rep 24775	<5	0.09	256	0.2	0.1	9	71.3	<0.05	3.2	1.6
*Rep 24787	11	0.14	9.3	0.2	0.2	<1	96.5	0.06	1.8	<0.5

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Element Method Det.Lim. Units	Tm @ICM90A 0.05 ppm	U @ICM90A 0.05 ppm	V @ICM90A 1 ppm	Y @ICM90A 0.5 ppm	Yb @ICM90A 0.1 ppm	Zr @ICM90A 0.5 ppm
24751	<0.05	2.80	<1	2.5	0.2	15.4
24752	<0.05	6.35	<1	2.7	0.1	18.1
24753	<0.05	1.43	<1	<0.5	<0.1	10.6
24754	<0.05	1.74	<1	2.2	0.1	13.0
24755	<0.05	1.85	<1	<0.5	<0.1	16.8
24756	<0.05	2.52	<1	0.6	<0.1	27.8
24757	<0.05	1.19	<1	<0.5	<0.1	9.1
24758	<0.05	2.67	<1	1.2	<0.1	27.2
24759	<0.05	3.06	<1	0.9	<0.1	42.6
24760	<0.05	2.67	<1	1.7	<0.1	21.5
24761	<0.05	1.78	<1	2.5	<0.1	24.1
24762	<0.05	0.93	<1	0.7	<0.1	1.7
24763	<0.05	2.04	<1	1.4	<0.1	15.6
24764	<0.05	0.51	<1	0.7	<0.1	2.7
24765	<0.05	1.93	<1	1.1	<0.1	15.1
24766	0.05	1.64	<1	4.0	0.3	128
24767	<0.05	1.07	<1	0.6	<0.1	9.0
24768	<0.05	1.46	<1	1.1	<0.1	14.8
24769	<0.05	1.97	<1	2.0	0.1	17.1
24770	<0.05	0.65	<1	<0.5	<0.1	1.2
24771	<0.05	2.00	<1	0.8	<0.1	16.0
24772	<0.05	1.16	<1	0.6	<0.1	7.1
24773	<0.05	1.28	<1	<0.5	<0.1	6.7
24774	<0.05	1.34	<1	<0.5	<0.1	4.5
24775	<0.05	2.27	<1	0.5	<0.1	26.5
24776	<0.05	1.81	<1	<0.5	<0.1	10.7
24777	<0.05	1.64	<1	0.6	<0.1	17.2
24778	<0.05	1.19	<1	<0.5	<0.1	6.5
24779	<0.05	2.83	<1	0.8	<0.1	16.7
24780	<0.05	3.54	<1	1.1	<0.1	25.8
24781	<0.05	2.68	<1	0.6	<0.1	20.1
24782	<0.05	2.67	<1	0.6	<0.1	25.0
24783	<0.05	3.34	<1	<0.5	<0.1	9.1
24784	<0.05	1.98	<1	<0.5	<0.1	14.9
24785	<0.05	2.16	<1	<0.5	<0.1	12.6
24786	<0.05	2.55	<1	0.9	<0.1	18.9
24787	<0.05	3.19	<1	0.9	<0.1	18.2
*Rep 24762	<0.05	0.94	<1	0.8	<0.1	2.3
*Rep 24775	<0.05	2.50	<1	0.6	<0.1	24.4
*Rep 24787	<0.05	3.04	<1	0.9	<0.1	16.9

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## Certificate of Analysis

Work Order: TO107476

To: **COD SGS Minerals**  
COD SGS Minerals  
1885 Leslie St  
Toronto  
ON M3B 2M3

Date: Dec 04, 2009

P.O. No. : Project: Lithium; GEON  
Project No. : -  
No. Of Samples : 33  
Date Submitted : Sep 17, 2009  
Report Comprises : Pages 1 to 7  
(Inclusive of Cover Sheet)

**Distribution of unused material:**  
STORE:

Certified By :

Gavin McGill  
Operations Manager

*SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at <http://www.scc.ca/en/programs/lab/mineral.shtml>*

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion  
Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted  
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Element Method	WtKg	Al	Ba	Be	Ca	Cr	Cu	Fe	K	Li
Det.Lim.	WG79	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Units	kg	%	ppm	ppm	%	ppm	ppm	%	%	ppm
24701	8.770	7.93	156	11	0.45	20	9	0.36	3.78	30
24702	7.648	6.52	72.2	243	0.73	30	<5	0.95	1.80	3810
24703	7.924	6.85	9.3	198	0.28	30	5	0.75	2.30	4750
24704	5.982	7.83	14.1	222	0.29	20	6	0.80	2.52	7880
24705	5.680	7.39	45.2	214	0.31	20	8	1.03	2.49	5170
24706	4.270	6.08	26.7	121	0.31	20	14	0.62	2.72	80
24707	11.116	7.00	10.8	187	0.27	50	6	0.63	2.86	3780
24708	5.952	7.52	29.9	163	0.33	20	10	1.22	1.81	4080
24709	3.652	7.29	5.2	201	0.30	30	6	1.10	1.12	7660
24710	3.844	6.42	21.6	131	0.31	10	<5	0.51	3.23	160
24711	8.478	7.13	21.9	260	0.30	10	<5	0.77	2.99	160
24712	4.546	7.88	11.9	183	0.28	20	<5	1.01	1.89	8250
24713	7.254	8.08	42.4	124	0.35	20	5	0.50	4.18	3560
24714	4.816	6.72	4.2	327	0.32	10	8	0.93	1.15	6550
24715	4.414	7.94	17.3	186	0.29	20	6	0.80	2.63	6940
24716	4.296	7.93	68.8	138	0.38	10	13	0.69	2.64	4760
24717	9.508	7.54	7.5	271	0.30	40	8	0.96	1.85	7530
24718	10.404	7.73	237	220	0.55	20	<5	0.92	2.87	4590
24719	6.058	8.44	9.0	173	0.37	30	25	0.75	1.61	11100
24720	5.898	7.48	2.4	241	0.27	10	7	1.12	1.79	6310
24721	6.674	7.81	76.0	124	0.36	10	22	0.75	3.28	1690
24722	7.110	7.82	13.4	217	0.31	20	18	0.62	1.66	3910
24723	4.716	7.75	27.2	195	0.26	10	10	1.11	2.30	5770
24724	6.670	7.90	33.9	93	0.34	10	7	0.51	2.84	50
24725	8.004	8.23	616	11	1.77	30	14	1.44	1.64	460
24726	1.640	7.06	85.7	6	0.39	10	<5	0.37	4.00	50
24727	5.232	6.49	13.9	223	<0.01	30	6	0.70	1.88	90
24728	9.394	5.54	22.8	133	0.30	10	21	0.76	1.97	60
24729	8.052	6.76	9.8	224	0.28	10	6	0.99	1.88	4710
24730	6.584	9.20	20.0	205	0.30	40	6	1.06	2.16	9130
24731	5.640	7.55	12.2	231	0.27	20	<5	0.74	2.48	6250
24732	4.310	9.67	17.4	193	0.41	10	<5	0.99	1.74	10600
24733	7.684	6.55	26.0	65	0.35	20	6	0.50	3.36	40
*Rep 24711		7.31	22.1	277	0.32	<10	<5	0.74	3.07	170
*Rep 24723		8.01	27.1	200	0.29	20	10	1.23	2.45	6110
*Rep 24733		6.68	27.0	57	0.37	20	<5	0.50	3.52	40

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Element	Mg	Mn	Ni	P	Sc	Sr	Ti	V	Zn	Ag
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.01	10	5	0.01	5	0.1	0.01	5	5	1
Units	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
24701	0.04	130	<5	<0.01	<5	126	<0.01	<5	36	<1
24702	0.07	410	<5	0.02	<5	78.5	<0.01	6	68	<1
24703	0.02	520	<5	0.01	<5	38.6	<0.01	6	46	<1
24704	0.02	610	<5	0.01	<5	40.8	<0.01	<5	71	<1
24705	0.03	550	<5	0.02	<5	57.7	<0.01	6	54	<1
24706	<0.01	750	<5	<0.01	<5	57.0	<0.01	<5	51	<1
24707	0.02	400	<5	0.02	<5	39.0	<0.01	8	42	<1
24708	0.02	590	<5	0.01	<5	45.6	<0.01	<5	69	<1
24709	0.02	600	<5	0.01	<5	30.3	<0.01	7	44	<1
24710	0.02	250	<5	<0.01	<5	51.5	<0.01	9	23	<1
24711	0.02	370	<5	0.01	<5	55.1	<0.01	10	27	<1
24712	0.02	580	<5	0.02	<5	35.2	<0.01	6	73	<1
24713	0.02	430	<5	0.02	<5	76.1	<0.01	5	29	<1
24714	0.02	450	6	0.02	<5	33.6	<0.01	9	52	<1
24715	0.01	520	<5	0.01	<5	40.6	<0.01	7	45	<1
24716	0.04	440	<5	0.02	<5	93.4	0.01	6	49	<1
24717	<0.01	540	<5	<0.01	<5	36.3	<0.01	5	65	<1
24718	0.07	410	<5	0.02	<5	168	0.03	6	49	<1
24719	0.03	870	7	0.01	<5	28.9	<0.01	9	64	<1
24720	0.01	550	<5	<0.01	<5	31.3	<0.01	<5	68	<1
24721	0.04	320	<5	0.02	<5	91.6	<0.01	6	48	<1
24722	0.01	650	<5	0.01	<5	41.0	<0.01	5	61	<1
24723	0.01	610	<5	0.01	<5	42.2	<0.01	6	68	<1
24724	<0.01	2410	13	<0.01	<5	68.6	<0.01	<5	24	<1
24725	0.53	650	9	0.06	<5	591	0.18	36	91	<1
24726	0.03	660	<5	0.01	<5	97.6	<0.01	<5	13	<1
24727	0.02	760	<5	0.02	<5	24.7	<0.01	7	37	<1
24728	0.02	810	7	0.01	<5	44.5	<0.01	<5	30	<1
24729	0.01	550	<5	0.01	<5	31.4	<0.01	10	79	<1
24730	0.03	740	<5	0.02	<5	28.2	<0.01	8	76	<1
24731	0.01	780	<5	0.02	<5	27.2	<0.01	8	66	<1
24732	0.02	890	8	0.01	<5	53.9	<0.01	11	116	<1
24733	<0.01	350	<5	0.01	<5	65.1	<0.01	<5	17	<1
*Rep 24711	0.02	370	<5	<0.01	<5	58.4	<0.01	11	27	<1
*Rep 24723	0.02	640	<5	0.01	<5	42.3	<0.01	7	59	<1
*Rep 24733	<0.01	340	<5	0.01	<5	70.5	<0.01	<5	22	<1

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Element Method Det.Lim. Units	As @ICM90A 5 ppm	Bi @ICM90A 0.1 ppm	Cd @ICM90A 0.2 ppm	Ce @ICM90A 0.1 ppm	Co @ICM90A 0.5 ppm	Cs @ICM90A 0.1 ppm	Dy @ICM90A 0.05 ppm	Er @ICM90A 0.05 ppm	Eu @ICM90A 0.05 ppm	Ga @ICM90A 1 ppm
24701	<5	4.1	<0.2	1.8	0.9	54.8	0.08	<0.05	0.05	43
24702	<5	118	<0.2	2.7	2.5	62.2	0.08	<0.05	<0.05	39
24703	<5	92.6	<0.2	1.2	3.4	82.0	0.06	<0.05	<0.05	44
24704	<5	323	<0.2	1.1	5.8	76.3	<0.05	<0.05	<0.05	48
24705	<5	177	<0.2	1.5	6.9	81.5	0.06	<0.05	<0.05	44
24706	<5	34.4	<0.2	6.6	8.7	70.8	0.54	0.05	0.08	59
24707	<5	490	<0.2	0.9	3.1	87.2	<0.05	<0.05	<0.05	42
24708	<5	250	<0.2	1.2	7.7	68.9	<0.05	<0.05	<0.05	52
24709	<5	269	0.2	0.9	11.0	55.4	<0.05	<0.05	<0.05	54
24710	<5	144	<0.2	1.4	2.0	124	0.05	0.06	<0.05	37
24711	<5	94.3	<0.2	0.9	2.6	150	0.05	<0.05	<0.05	46
24712	<5	533	<0.2	1.7	2.3	67.6	<0.05	<0.05	<0.05	49
24713	<5	108	<0.2	1.2	1.3	140	0.07	<0.05	<0.05	42
24714	<5	93.0	<0.2	0.4	5.6	84.8	<0.05	<0.05	<0.05	46
24715	<5	224	<0.2	0.5	7.4	86.7	<0.05	<0.05	<0.05	44
24716	<5	138	<0.2	3.8	9.2	83.1	0.07	<0.05	0.06	49
24717	<5	159	<0.2	0.7	14.2	71.4	<0.05	<0.05	<0.05	48
24718	<5	65.4	<0.2	7.7	3.3	88.1	0.24	0.06	0.13	42
24719	<5	218	<0.2	1.1	30.5	65.2	0.07	<0.05	<0.05	60
24720	<5	63.5	<0.2	1.7	4.5	73.5	<0.05	<0.05	<0.05	43
24721	<5	48.5	<0.2	2.5	23.1	114	0.09	<0.05	0.05	43
24722	<5	243	<0.2	1.1	7.6	63.0	<0.05	<0.05	<0.05	45
24723	<5	884	<0.2	1.0	8.8	82.7	<0.05	<0.05	<0.05	49
24724	<5	55.5	0.6	6.1	0.7	67.9	1.97	0.21	0.16	58
24725	<5	3.2	<0.2	43.2	5.8	68.0	1.15	0.36	0.72	33
24726	<5	46.1	<0.2	4.2	1.7	56.3	0.45	0.07	0.06	45
24727	<5	13.9	<0.2	2.5	7.1	59.5	0.06	<0.05	<0.05	40
24728	<5	11.1	<0.2	2.4	13.4	50.8	0.07	<0.05	<0.05	29
24729	<5	43.3	<0.2	0.7	5.2	99.8	<0.05	<0.05	<0.05	49
24730	<5	116	<0.2	0.6	4.3	57.1	<0.05	<0.05	<0.05	50
24731	<5	54.1	<0.2	0.8	9.8	62.1	<0.05	<0.05	<0.05	41
24732	<5	63.9	<0.2	1.1	0.6	77.0	0.07	<0.05	<0.05	61
24733	<5	440	<0.2	1.7	2.0	74.2	0.34	0.05	0.05	48
*Rep 24711	<5	85.2	<0.2	1.1	3.3	153	0.05	<0.05	<0.05	48
*Rep 24723	<5	843	<0.2	1.0	7.4	80.6	<0.05	<0.05	<0.05	50
*Rep 24733	<5	422	<0.2	1.5	2.3	72.9	0.36	<0.05	<0.05	48

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Element Method Det.Lim. Units	Gd @ICM90A 0.05 ppm	Ge @ICM90A 1 ppm	Hf @ICM90A 1 ppm	Ho @ICM90A 0.05 ppm	In @ICM90A 0.2 ppm	La @ICM90A 0.1 ppm	Lu @ICM90A 0.05 ppm	Mo @ICM90A 2 ppm	Nb @ICM90A 1 ppm	Nd @ICM90A 0.1 ppm
24701	0.26	4	4	<0.05	<0.2	1.1	<0.05	<2	13	1.1
24702	0.21	3	<1	<0.05	<0.2	1.3	<0.05	<2	40	1.3
24703	0.15	3	2	<0.05	<0.2	0.6	<0.05	<2	58	0.7
24704	0.19	3	<1	<0.05	<0.2	0.6	<0.05	<2	120	0.7
24705	0.21	3	1	<0.05	<0.2	1.1	<0.05	<2	63	1.1
24706	1.69	4	6	<0.05	<0.2	2.6	<0.05	<2	68	3.7
24707	0.11	3	<1	<0.05	<0.2	0.5	<0.05	<2	66	0.6
24708	0.18	3	1	<0.05	<0.2	0.7	<0.05	<2	74	0.7
24709	0.19	4	<1	<0.05	<0.2	0.8	0.10	<2	58	0.7
24710	0.10	3	<1	<0.05	<0.2	0.8	<0.05	<2	80	0.7
24711	0.21	3	1	<0.05	<0.2	0.7	<0.05	<2	87	0.6
24712	0.21	3	<1	<0.05	<0.2	1.2	<0.05	<2	61	1.3
24713	0.20	3	1	<0.05	<0.2	0.8	<0.05	<2	51	0.8
24714	0.07	3	<1	<0.05	<0.2	0.2	<0.05	<2	52	0.2
24715	0.06	3	<1	<0.05	<0.2	0.3	<0.05	<2	92	0.3
24716	0.27	3	<1	<0.05	<0.2	1.8	<0.05	<2	57	1.7
24717	0.14	4	1	<0.05	<0.2	0.4	<0.05	<2	117	0.4
24718	0.53	3	2	<0.05	<0.2	4.1	0.06	<2	50	4.2
24719	0.15	3	1	<0.05	<0.2	0.6	<0.05	<2	137	0.7
24720	0.17	3	<1	<0.05	<0.2	0.7	<0.05	<2	68	0.9
24721	0.18	3	<1	<0.05	<0.2	1.6	<0.05	<2	54	1.6
24722	0.21	3	1	<0.05	<0.2	0.5	0.18	<2	72	0.7
24723	0.19	3	<1	<0.05	<0.2	0.6	0.07	<2	64	0.6
24724	3.48	5	15	0.14	<0.2	2.6	0.06	3	59	4.8
24725	2.40	2	4	0.17	<0.2	18.0	0.11	<2	21	18.6
24726	1.16	4	3	<0.05	<0.2	2.0	<0.05	<2	22	2.4
24727	0.28	3	4	<0.05	<0.2	1.3	<0.05	<2	99	1.4
24728	0.26	3	3	<0.05	<0.2	1.1	<0.05	<2	65	1.2
24729	0.09	3	2	<0.05	<0.2	0.8	<0.05	<2	64	0.3
24730	0.09	3	2	<0.05	<0.2	0.3	<0.05	<2	72	0.4
24731	0.08	3	2	<0.05	<0.2	1.1	<0.05	<2	98	0.8
24732	0.21	4	2	<0.05	<0.2	0.4	<0.05	<2	110	0.5
24733	0.73	4	3	<0.05	<0.2	0.7	0.05	4	62	0.9
*Rep 24711	0.20	4	<1	<0.05	<0.2	0.7	<0.05	<2	93	0.7
*Rep 24723	0.17	4	<1	<0.05	<0.2	0.5	<0.05	<2	60	0.7
*Rep 24733	0.63	4	3	<0.05	<0.2	0.7	0.05	4	68	0.8

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Element Method Det.Lim. Units	Pb @ICM90A ppm	Pt @ICM90A ppm	Rb @ICM90A ppm	Sb @ICM90A ppm	Sm @ICM90A ppm	Sn @ICM90A ppm	Ta @ICM90A ppm	Tb @ICM90A ppm	Th @ICM90A ppm	Ti @ICM90A ppm
24701	12	0.27	1380	<0.1	0.4	<1	18.2	<0.05	0.9	10.6
24702	<5	0.33	981	<0.1	0.4	3	16.9	<0.05	0.8	6.9
24703	6	0.17	1390	0.1	0.4	4	32.4	<0.05	1.2	10.6
24704	<5	0.20	1440	<0.1	0.5	4	45.6	<0.05	1.7	10.7
24705	7	0.29	1280	<0.1	0.4	4	34.4	<0.05	1.1	9.3
24706	21	1.02	2380	0.2	2.0	9	58.0	0.20	3.4	20.7
24707	7	0.15	1540	<0.1	0.5	5	24.3	<0.05	3.2	11.6
24708	6	0.22	1010	0.2	0.3	6	29.6	<0.05	1.7	6.9
24709	11	0.20	594	0.3	0.3	7	25.3	<0.05	1.8	4.2
24710	10	0.17	1720	<0.1	<0.1	5	48.2	<0.05	1.0	13.3
24711	10	0.20	1600	0.1	0.3	5	43.6	<0.05	1.4	11.0
24712	6	0.36	975	0.5	0.7	5	30.9	<0.05	3.3	7.5
24713	9	0.21	2330	0.2	0.3	4	38.6	<0.05	0.9	18.3
24714	22	0.06	633	0.1	<0.1	5	36.9	<0.05	0.5	4.5
24715	5	0.06	1260	<0.1	0.2	5	47.4	<0.05	1.0	9.8
24716	8	0.46	1420	0.2	0.5	4	24.3	<0.05	1.7	10.5
24717	<5	0.09	998	<0.1	0.3	4	44.2	<0.05	1.4	7.6
24718	9	1.07	1450	0.2	1.1	2	25.7	0.06	2.1	12.1
24719	<5	0.24	960	<0.1	0.5	7	58.7	<0.05	1.8	7.1
24720	<5	0.28	1040	<0.1	0.6	3	31.5	<0.05	2.3	7.9
24721	9	0.44	1910	0.1	0.5	4	23.1	<0.05	1.2	14.7
24722	<5	0.16	840	<0.1	0.5	3	43.6	<0.05	1.8	6.1
24723	11	0.18	1230	0.6	0.3	4	29.8	<0.05	1.4	9.1
24724	23	1.12	1520	0.2	2.4	3	47.1	0.62	4.7	12.4
24725	15	4.98	605	0.3	3.7	4	9.5	0.31	4.3	5.2
24726	18	0.56	2270	0.4	1.0	2	27.0	0.15	1.2	17.8
24727	6	0.35	887	<0.1	0.5	4	44.4	<0.05	2.1	6.0
24728	6	0.34	838	<0.1	0.5	3	36.6	<0.05	2.4	6.3
24729	8	0.06	1120	<0.1	0.2	6	33.0	<0.05	1.9	8.0
24730	5	0.10	1060	0.1	0.4	4	28.9	<0.05	1.1	8.0
24731	6	0.20	1040	1.1	0.2	3	48.3	<0.05	1.5	7.6
24732	9	0.14	845	<0.1	0.4	5	80.1	<0.05	1.9	6.8
24733	36	0.24	1980	0.3	0.6	3	51.7	0.12	1.4	16.6
*Rep 24711	10	0.20	1680	0.1	0.3	7	44.6	<0.05	1.8	11.7
*Rep 24723	12	0.17	1190	0.3	0.4	4	26.7	<0.05	1.9	8.7
*Rep 24733	36	0.25	1970	0.3	0.5	2	53.5	0.11	1.2	16.5

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Final : TO107476 Order: Project: Lithium; GEON

Element	Tm	U	W	Y	Yb	Zr
Method	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A	@ICM90A
Det.Lim.	0.05	0.05	1	0.5	0.1	0.5
Units	ppm	ppm	ppm	ppm	ppm	ppm
24701	<0.05	2.94	<1	0.8	<0.1	25.2
24702	<0.05	1.44	<1	<0.5	<0.1	7.7
24703	<0.05	2.41	<1	<0.5	<0.1	11.1
24704	<0.05	2.34	<1	<0.5	<0.1	6.1
24705	<0.05	2.61	<1	<0.5	<0.1	8.9
24706	<0.05	2.47	<1	4.1	<0.1	17.6
24707	<0.05	5.01	<1	<0.5	<0.1	4.4
24708	<0.05	3.92	<1	<0.5	<0.1	11.0
24709	<0.05	2.53	<1	<0.5	<0.1	2.8
24710	<0.05	2.69	<1	<0.5	<0.1	7.8
24711	<0.05	2.99	<1	<0.5	<0.1	4.3
24712	<0.05	3.64	2	<0.5	<0.1	4.6
24713	<0.05	1.49	<1	<0.5	<0.1	8.8
24714	<0.05	1.10	<1	<0.5	<0.1	5.9
24715	<0.05	1.81	<1	<0.5	<0.1	3.1
24716	<0.05	2.21	<1	<0.5	<0.1	9.4
24717	<0.05	2.67	<1	<0.5	<0.1	5.1
24718	<0.05	2.04	<1	1.1	<0.1	19.1
24719	<0.05	3.91	<1	<0.5	<0.1	5.6
24720	<0.05	1.77	<1	<0.5	<0.1	5.1
24721	<0.05	1.42	<1	<0.5	<0.1	9.5
24722	<0.05	2.60	<1	<0.5	<0.1	7.5
24723	<0.05	5.03	<1	<0.5	<0.1	3.5
24724	<0.05	10.3	<1	17.7	0.2	62.8
24725	0.06	2.31	<1	6.7	0.3	96.1
24726	<0.05	3.26	<1	4.0	<0.1	17.9
24727	<0.05	10.2	<1	<0.5	<0.1	24.4
24728	<0.05	4.14	<1	<0.5	<0.1	16.1
24729	<0.05	4.12	<1	<0.5	<0.1	9.1
24730	<0.05	2.00	<1	<0.5	<0.1	8.2
24731	<0.05	3.37	<1	<0.5	<0.1	12.6
24732	<0.05	3.51	<1	<0.5	<0.1	10.9
24733	<0.05	4.77	<1	3.0	<0.1	8.0
*Rep 24711	<0.05	2.80	<1	<0.5	<0.1	4.0
*Rep 24723	<0.05	4.89	<1	<0.5	<0.1	2.4
*Rep 24733	<0.05	4.47	1	3.1	<0.1	8.3

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## **Appendix 2**

**Appendix 2.** List of designated claims composing the Athona property

<b>Title #</b>	<b>Surface Area (Ha)</b>	<b>Expiry Date</b>
CDC2190007	57,2	2011-09-24
CDC2183878	57,19	2011-06-24
CDC2183879	57,19	2011-06-24
CDC2183876	57,2	2011-06-24
CDC2183880	57,18	2011-06-24
CDC2183881	57,18	2011-06-24
CDC2183882	57,18	2011-06-24
CDC2183883	47,12	2011-06-24
CDC2186272	19,94	2011-07-29
CDC2183926	57,16	2011-06-24
CDC2183927	57,16	2011-06-24
CDC2186273	52,58	2011-07-29
CDC2184466	5,95	2011-07-02
CDC2184465	41,37	2011-07-02
CDC2184191	41,32	2011-06-25
CDC2184458	35,26	2011-07-02
CDC2163884	38,86	2010-07-03
CDC2163885	38,89	2010-07-03
CDC2183885	33,85	2011-06-24
CDC2184459	41,86	2011-07-02
CDC2184460	41,81	2011-07-02
CDC2184461	41,76	2011-07-02
CDC2184462	41,71	2011-07-02
CDC2184463	41,66	2011-07-02
CDC2184464	41,61	2011-07-02
CDC2192738	41,56	2011-10-25
CDC2192739	41,52	2011-10-25
CDC2192740	41,57	2011-10-25
CDC2193584	41,42	2011-11-04



**Appendix 2.** List of designated claim for the International property

<b>TITLE #</b>	<b>SURFACE AREA (Hec)</b>	<b>Expiry date</b>
CDC 2086594	20,39	2011/05/25
CDC 2086595	26,71	2011/05/25
CDC 2086596	42,70	2011/05/25
CDC 2086597	42,65	2011/05/25
CDC 2086598	7,14	2011/05/25
CDC 2114510	42,60	2011/08/01
CDC 2114511	43,53	2011/08/01
CDC 2187555	1,53	2011/08/31
CDC 2192205	50,47	2011/10/18
CDC 2192206	59,88	2011/10/18
CDC 2192203	38,60	2011/10/18
CDC 2192521	39,44	2011/10/21
CDC 2192522	39,52	2011/10/21
CDC 2192523	39,54	2011/10/21
CDC 2192204	39,68	2011/10/18

**Appendix 2.** List of designated claims of the Chubb property.

<b>TITLE #</b>	<b>SURFACE AREA (Hec)</b>	<b>Expiry date</b>
CDC 2071157	42,5	2011/03/25
CDC 2086593	42,5	2011/05/25
CDC 2160892	33,2	2010/06/12
CDC 2160894	42,7	2010/06/12
CDC 2160893	42,7	2010/06/12
CDC 2180979	21,0	2011/03/15
CDC 2180980	42,5	2011/03/15
CDC 2181010	50,7	2011/03/16
CDC 2181011	41,0	2011/03/16
CDC 2181012	44,3	2011/03/16
CDC 2181013	38,2	2011/03/16
CDC 2181014	27,7	2011/03/16
CDC 2181313	57,3	2011/03/22
CDC 2181314	57,3	2011/03/22
CDC 2181315	57,2	2011/03/22
CDC 2181316	57,3	2011/03/22
CDC 2182322	32,9	2011/04/14
CDC 2183253	7,0	2011/05/12
CDC 2186498	35,4	-----
CDC 2186499	38,2	-----