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Direction de l'information géologique  
13 juillet 2017

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## **GEOLOGICAL INTERPRETATION**


**LAC LA DAME PROPERTY  
NTS SHEETS 31J14/31O03  
QUEBEC, CANADA**

**REPORT SUBMITTED TO  
ALAIN MOREAU & SYLVIE CHARBONNEAU**

**31 JANUARY 2017**



**Technologies Earthmetrix inc.  
6661, Rue Des Écores  
Montréal (Québec)  
H2G 2J8  
C A N A D A**

** Tél.: (514) 924-6840**

** E-Mail: [amoreau@earthmetrix.ca](mailto:amoreau@earthmetrix.ca)**

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## **SUMMARY**

The Lac La Dame property is made up of 77 claims (77 contiguous claims) totalling 4,518.52 ha located in NTS sheet 31J!4/31O03 north of town of Ste Anne Du Lac. 46 claims are registered under the name of Alain Moreau and 31 claims are registered under the name of Sylvie Charbonneau. They will expire between May 12, 2017 (40 claims), May 13, 2017 (31 claims), and September 22, 2017 (6 claims). Various amounts of exploration work will be required. \$121,000\$ in exploration work is accumulated on the claims. \$33,469.77 work has been carried on by Sylvie Charbonneau and Alain Moreau in 2015-2016.

To the knowledge of the author, there are no environmental liabilities pertaining to the Lac La Dame property. As the property is located on Government lands, Forest and drilling permits are necessary. Additional permitting is necessary for stripping/bulk sampling purposes. To the knowledge of the author, there are no significant factors or risks that could affect access, title, or the right or ability to perform work on the property.

The first work done on the property (GM 24830) was carried out in 1969 by Radex Minerals Limited who completed an airborne radiometric survey for Uranium; part of the survey was included in the present property (southeastern limit of the claims without any significant anomalies. In 1970, Vanessa Uranium Mines Limited (GM 25988) drilled two short holes without any significant results.

No exploration work was reported from 1971 to 1994. Sporadic exploration work is reported from 1995 to 2001, mainly consisting in prospecting (southern edge of the property).

In 2002, Michel Belisle (Ressources Maxima Inc.) sampled the Lac La Dame sillimanite zone and completed four short holes (20-25m) encountering significant sillimanite mineralization. Prospecting along the sillimanite mineralization (a dome structure with positive relief) unfolded a sillimanite zone being 2.5 km long with a true width averaging 200m with a minimum depth of 12m.

In 2003, Ressources Maxima Inc. (DAMREC, South-Africa) sent 7 sillimanite samples from the Lac La Dame zone for characterization and preliminary flowsheet of minerals separation. Results

indicate that sillimanite samples grades between 15 to 30% with easy separation of sillimanite, garnet and graphite.

No exploration work was reported from 2004 to 2012. In 2013, Alain Moreau and Sylvie Charbonneau did a reconnaissance geological mapping in the eastern part of the property. They were unable to extend the Faubert Copper showing due to overburden coverage.

In 2014, Alain Moreau and Sylvie Charbonneau did a precise field survey on the sillimanite deposit consisting in a geological survey, channel sampling and ground geophysical (magnetometer) survey.

From 2015 to 2016, Alain Moreau and Sylvie Charbonneau updated the property's database by performing additional field surveys and interpretation. Two new mineralized zones were discovered in 2016: A Porphyry Cu showing grading less than 1% Cu and a major graphite zone, the Cauchon showing, in marble grading more than 5% Graphite.

The Geology of the property has been defined by the work of MRNQ from limited available data at 1:50,000 (RG 2000-06 and RG 2001-16).

From west to east, the geology of the property consists in Gabbro and Amphibolite (Serpent intrusive Suite), Quartzite with interbedded layers of Gabbro (Serpent Intrusive Suite), Paragneiss, with graphite, garnet, tourmaline and corundum (Rabot metamorphic Suite), Dolomitic and Calcitic Marbles (Rabot Metamorphic Suite), Paragneiss and Quartzite (Rabot Metamorphic Suite), Gabbro, Gabbronorite, Leuconorite and Anorthosite (Serpent intrusive Suite) and Porphyroid and augen Quartz Monzonite (Serpent intrusive Suite) .

Most of the showings lie in the Rabot metamorphic Suite units. Property geology is showed on figure 6 ("Property Geological Map").

Over the years, two mineralized zones have been discovered on the property: The Lac La Dame Sillimanite West and Central zones, (see Figure 12 and Figure 13 for details).

The Lac La Dame West, Central and East zones are located within a sillimanite/muscovite/garnet and graphite migmatitic paragneiss from the metamorphic Rabot suite along a major NNE ductile structure in contact with enderbite and diorite (NNW) and tonalite/gneiss (SSE). The contact between the Cain and Baker domains interpreted as a thrust fault (inverse dextral movement) lies just east of the sillimanite zone. The sillimanite mineralization is associated with muscovite, garnet and graphite

The Lac La Dame West zone is a concentric Paragneiss zone having a diameter of 200m. The Lac La Dame Sillimanite Central zone is a continuous mineralized structure that has been traced for more than 2,500m with an average width of 200m and a minimum depth of 12m. However, information is not sufficient to establish the size and the 3D geometry of the mineralized zones.

Other mineralized showings, geological zones of interest and geochemical anomalies occur on or close to property and remain poorly explored.

Six types of mineral deposits can be considered for the exploration of the Lac La Dame Property. The first is a sillimanite/garnet/graphite deposit like the Lac La Dame West, Central and East zones. Evidence of a hydrothermal and metamorphic origin is supported by the presence of alteration and metamorphic minerals easily seen on outcrops and typical minerals assemblage such as: sillimanite, garnet, graphite, muscovite, limonite and occasionally pyrrhotite, rutile and cordierite.

The second type to explore for on the property is dolomite deposits. Prospective rocks such as dolomitic marbles have been mapped by the MERN (RG 2000-06).

The third type to explore for on the property is graphite deposits in calcitic marbles like the Cauchon graphite showing found in marble that was mapped (MERN (RG 2000-06)) on property.

The fourth type to explore for on the property is magmatic Cu-Ni-Co with PGE enrichment deposits like the Faubert Cu-Ni-Co and Ni Central showings in gabbroic rocks identified on the property. Other gabbro rock assemblages have been mapped by the MERN (RG 2000-06).

The fifth type to explore for on the property is Porphyry Copper or disseminated copper like the Porphyre Corners Cu and South Porphyre showings within intrusive rocks identified on the property. Other intrusive rock assemblages have been mapped by the MERN (RG 2000-06).

Finally, skarn type (Cu-Mo, Cu-W) mineralization is the sixth type of deposit to explore like the Mo South-West showing. The presence of skarnified rocks within the property support this possibility.

Reconnaissance and detailed field work has been realized between Mid-May 2015 to November 2016.

The work consisted to survey additional areas not previously covered on southern part of property. Geological mapping in the vicinity of the West Lac La Dame Sillimanite zone, channel sampling on the Central Sillimanite zone, survey of the Faubert showing, precise delineation of the Central Sillimanite zone and metallurgical testing. 46 measurements were taken in 2015-2016.

Main results of this survey are:

- A) Access is quite good in the property through secondary gravel forest roads and VTT trails.
- B) Showings and mineralized areas are strongly controlled by structures; main trend is 040 for the Faubert showing and the Lac La Dame Sillimanite zones. See Figure 9 and Figures 9b to 9d for details.
- C) Geology described in the MERN map is more or less accurate at scale 1: 20,000; we have provided a modified geological map based on recent geological mapping of the Property. Approximately 65% of Property has been mapped at scale 1: 20,000. Southern area has been updated. See Figure 7 for details.
- D) Available data combined with Structural information allowed us to generate additional exploration targets to be verified on the property. See Figure 12 for details.
- E) The extent of the Faubert showing is still unknown despite additional prospecting efforts done in 2015. See figure 5b, "Property Sampling Sites Map – Central Block" for more details.
- F) Detailed Mapping and Sampling (channel sampling) of the Lac La Dame Sillimanite Central zone. A comprehensive composite sample of 100kg has been used for a preliminary metallurgical testing. Results show that the Sillimanite is suitable for commercial applications; possible microcline feldspar has been detected in the composite sample. See Figure 13 for details.
- G) A Porphyry copper showing has been discovered in the South-West Block and is depicted as a monzonite granite with porphyry texture having visually between 0,1% Cu to 0,5% Cu. A major graphite showing has been unfolded in the Central Block of Property about 1,5 km

north-west of Lac Faubert. The graphite showing is located within marble and has a minimum width of 40m (See Figure 12b for details). Finally, weakly mineralized gabbro has been identified just south of the Central Sillimanite zone.

No significant mineral deposits are in the vicinity of the Lac La Dame property. Dolomite and Graphite occurrences are reported 3km north of the property. The Lachabel W-Cu skarn deposit (uneconomic at present) is located 10 km northeast of the claims and has been working intensively by Noranda/SOQUEM in the past (GM 59686).

Since 1969, several exploration activities were conducted on the property with geophysics, spectrometer, geological surveys, stripping and channel sampling and 6 holes totalling 124 m. Looking at the compilation map of historical exploration work, we can see that the geology and structure of the area is still poorly understood despite the reconnaissance work undertaken in late 1990's and early 2000's by the MERN, the presence of numerous mineralized outcrops and showings surrounded by major geological features such as a major structure (boundary between Caïn and Baker domains) typical of major mineralized systems.

We suggest completing stripping and drilling of the Lac La Dame Sillimanite Central zone with systematic sampling for resources assessment and complete the geophysics (airborne) over all parts of property.

We also suggest putting significant efforts in prospecting, sampling and possibly stripping along the Graphite and the Cu Porphyry showings.

Finally, we suggest completing prospecting and geological mapping of the remaining unexplored 35% property surface at scale 1: 20,000 for the update of the property geological map.

**TABLE 4: PROPOSED BUDGET****STRIPPING, DRILLING OF THE LAC LA DAME SILLIMANITE ZONES AND EXPLORATION OF THE PROPERTY****A) Airbone Geophysics**Magnetics Airborne geophysics (800km \* \$125/km).....**\$100,000****B) Lac La Dame Sillimanite zones stripping**1,000m<sup>3</sup> stripping and terrain preparation (road refurbishing) \* \$50/m<sup>3</sup> (all inclusive).....**\$50,000****C) Drilling including quality control programs and permitting**5,000m drilling \* \$200/m (all inclusive).....**\$1,000,000****D) Field Personnel for sampling and Geology**Team of a geologist and technician (125 days \* \$800/day).....**\$100,000****E) Assays (Stripping) and associated costs**750 assays \* 80\$/assay.....**\$60,000****F) GIS Integration and Maps of the Lac La Dame Zones**

Integration of additional geological data on the property into Arc/View.

Processing and map production and preliminary 3D modelling (50 days \* \$800/day).....**\$40,000****G) 43-101 with resources estimation (external consultant).....**\$60,000******H) Sillimanite characterization including mineralogical and metallurgical test**250,000\$/Test.....**\$250,000****I) Supervision and Management of the Exploration Program**Experienced geologist (125 days \* \$800/day).....**\$100,000****J) Preliminary Market Study**Applications and market segments, pricing, pricing model sensitivities and contracts.....**\$50,000****K) Contingencies.....**\$190,000******TOTAL:.....**\$2,000,000****

**COST RESUME FOR PHASE I**

A) AIRBORNE GEOPHYSICS.....	\$105,000
B) LAC LA DAME STRIPPING.....	\$50,000
C) DRILLING INCLUDING QUALITY CONTROL PROGRAMS/PERMITTING.....	\$1,000,000
D) FIELD PERSONNEL FOR GEOLOGY.....	\$100,000
E) ASSAYS AND ASSOCIATED COSTS.....	\$60,000
F) GIS INTEGRATION AND MAPS.....	\$40,000
G) 43-101 WITH RESOURCES ESTIMATION.....	\$60,000
H) SILLIMANITE CHARACTERIZATION.....	\$250,000
I) SUPERVISION AND MANAGEMENT.....	\$100,000
J) PRELIMINARY MARKET STUDY.....	\$50,000
K) CONTINGENCIES.....	\$90,000
<b>TOTAL PHASE 1:</b> .....	<b>\$2,000,000</b>

**LAC LA DAME PROPERTY**  
**NTS SHEETS 31J14/31O03**  
**QUÉBEC, CANADA**

## **1.0) INTRODUCTION**

On behalf of Alain Moreau & Sylvie Charbonneau, a technical report has been carried out by EarthMetrix Inc. in December 2016 on the Lac La Dame property delineated by the following rectangle box of coordinates (approx.): from 478000E to 488000E and from 5199000N to 5209000N (UTM ZONE 18N, NAD 83) at various scales (from 1: 20,000 to 1: 2,000). The Lac La Dame property is situated in the Laurentides region approximately 50 km North of Mont-Laurier, Quebec in NTS sheet Map 31J14/31O03.

The main objective sought for this study is to update geological information from surveys executed from 2015 to the end of 2016 and delineate most promising exploration targets elsewhere in the property from identified geological, geophysical and structural surveys. Interpretation has been realized at various scales from 1: 20,000 to 1: 2,000.

This report presents results obtained for this study: Main results are updated geology and identified exploration targets that should be investigated in the Lac La Dame property.

### **Outputs are:**

Geophysical, Structural and Geological maps at various scales 1: 250,000 to 1: 10,000 with exploration targets;

A short technical report in PDF;

Project's data files (Geophysics, Interpretation, Images and Technical Report (including figures)).

## **2.0) AREA OF INTEREST LOCALIZATION**

The Lac La Dame property is made up of 77 claims (77 contiguous claims) totalling 4,518.52 ha located in NTS sheet 31J14/31O03 north of town of Ste Anne Du Lac. 46 claims are registered under the name of Alain Moreau and 31 claims are registered under the name of Sylvie Charbonneau. They will expire between May 12, 2017 (40 claims), May 13, 2017 (31 claims), and September 22, 2017 (6 claims). Various amounts of exploration work will be required. \$121,000\$

in exploration work is accumulated on the claims. \$33,469.77 work has been carried on by Sylvie Charbonneau and Alain Moreau in 2015-2016. Figure 4 shows the Logistics Map of property.

### **3.0) DATA**

Data used for this study come from many sources: a multispectral LANDSAT-8 image at 30m resolution (October 2013), a SPOT image sampled at 10 m resolution (2002), IKONOS image (September 2012) with a 1 m resolution (4 m Multispectral) and a ground Magnetism survey on the Lac La Dame deposit (July 2014). The average localization precision of the SPOT image, both absolute and relative are respectively 15 m (CE90) and 5 m (CE90); bigger errors may occur in higher topographic gradients areas (that are likely to occur in the Lac La Dame property, a relatively steep hilly area). Relative error for the IKONOS data is around 4 m.

FIGURE 1: REGIONAL LOCATION MAP

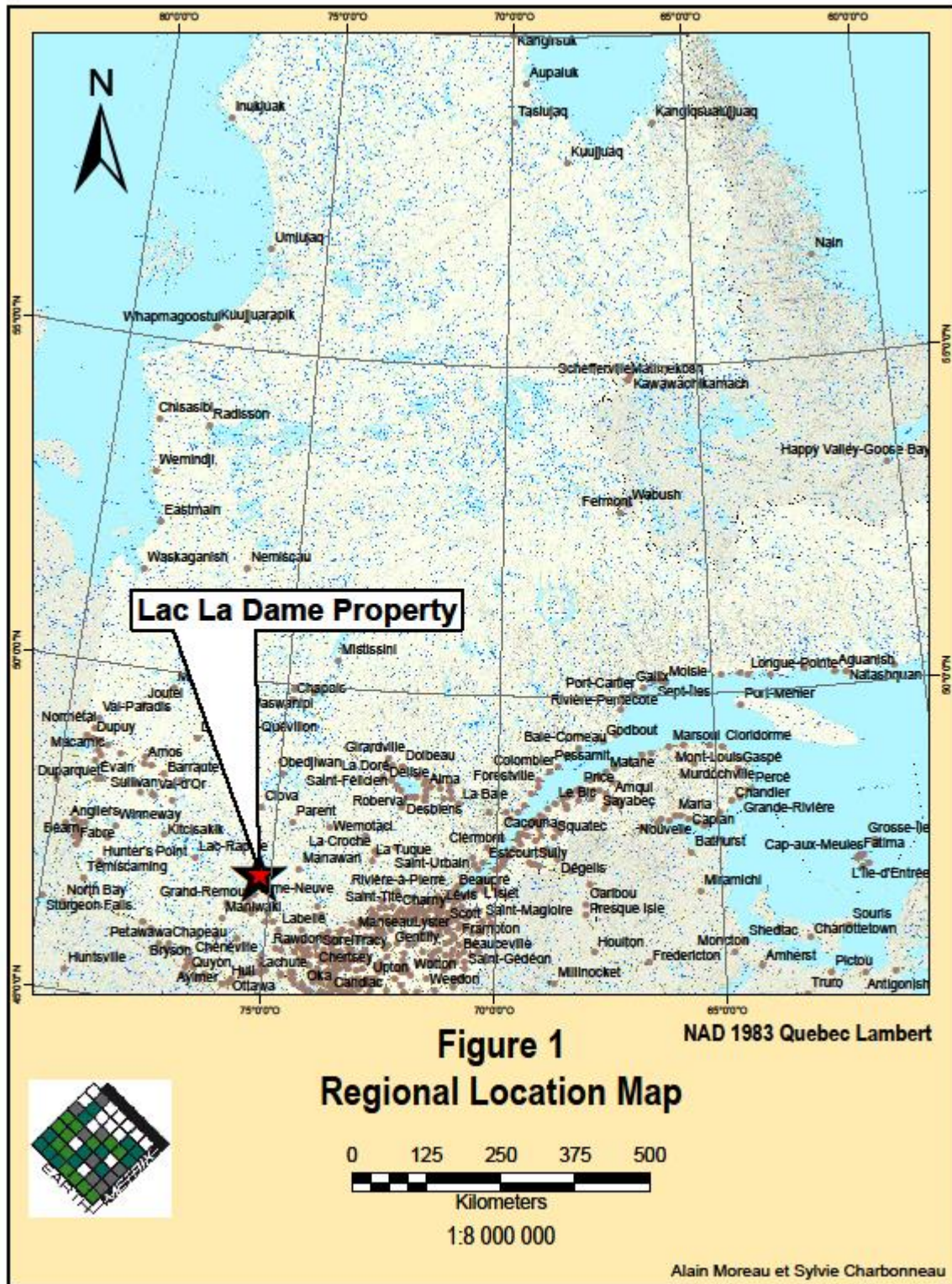


FIGURE 2: PROPERTY LOCATION MAP

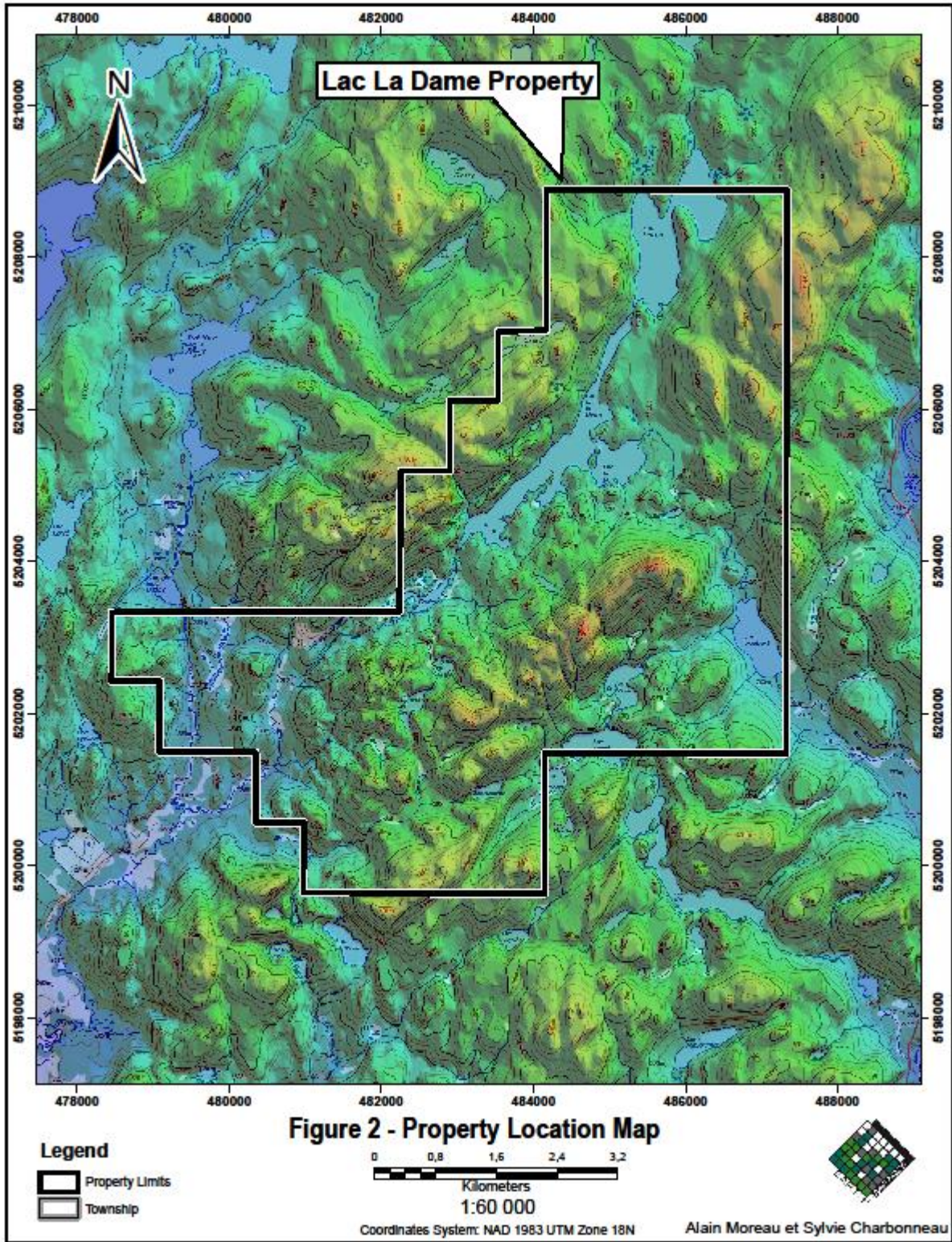
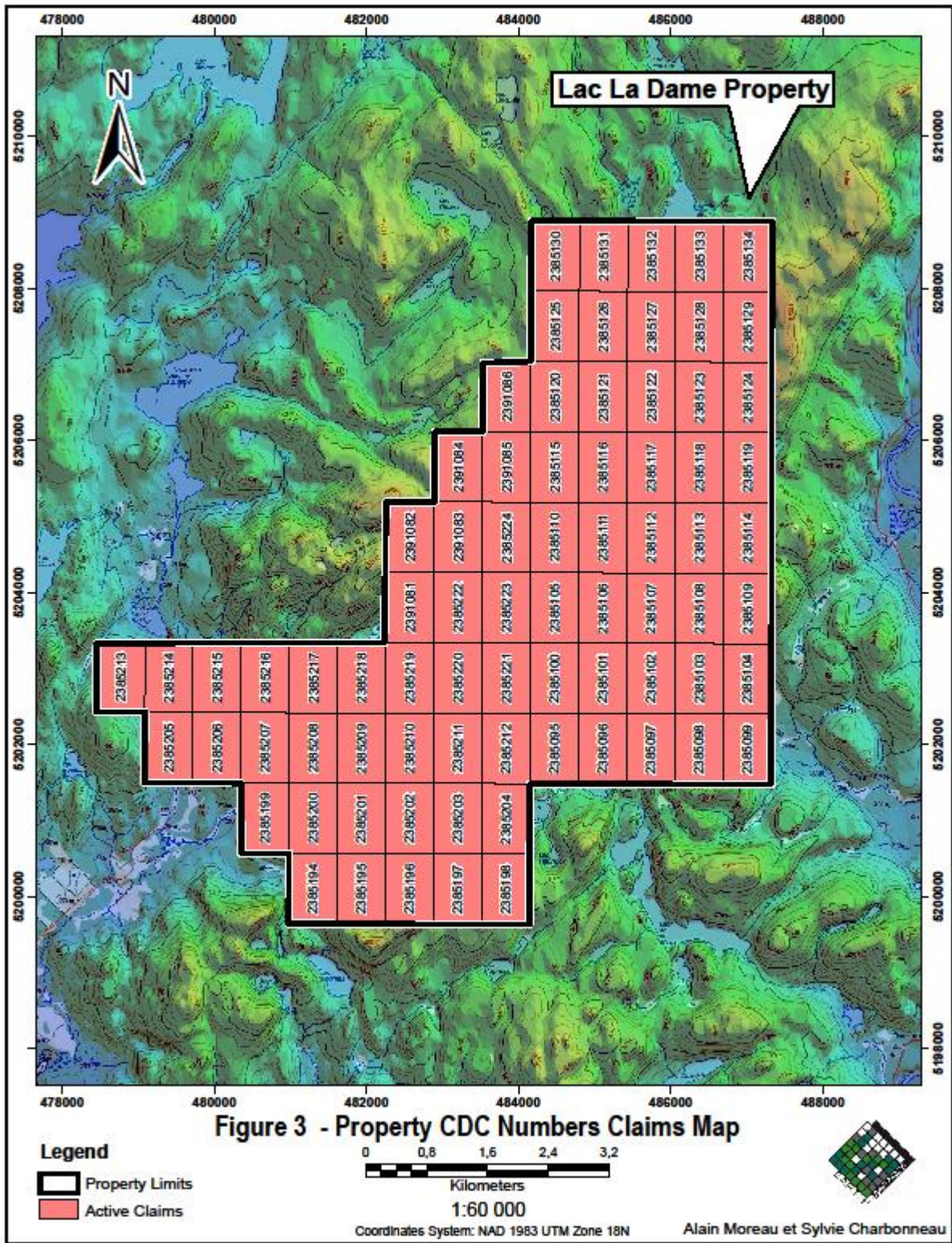


TABLE 1: CLAIMS DESCRIPTION

NTS Sheet	Title #		Expiry Date	Area (Ha)	Accumulated Work	Required Work	Mining duties
31O03	CDC	2385134	2017-05-12	58,64	\$72.73	\$780.00	\$64.09
31O03	CDC	2385133	2017-05-12	58,64	\$72.73	\$780.00	\$64.09
31O03	CDC	2385132	2017-05-12	58,64	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385131	2017-05-12	58,64	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385130	2017-05-12	58,64	\$72.73	\$780.00	\$64.09
31O03	CDC	2385129	2017-05-12	58,65	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385128	2017-05-12	58,65	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385127	2017-05-12	58,65	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385126	2017-05-12	58,65	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385125	2017-05-12	58,65	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385124	2017-05-12	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385123	2017-05-12	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385122	2017-05-12	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385121	2017-05-12	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385120	2017-05-12	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2391086	2017-09-22	58,66	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385119	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385118	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385117	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385116	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2385115	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31O03	CDC	2391085	2017-09-22	58,67	\$3,042.69	\$780.00	\$64.09
31O03	CDC	2391084	2017-09-22	58,67	\$3,042.69	\$780.00	\$64.09
31J14	CDC	2385114	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31J14	CDC	2385113	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31J14	CDC	2385112	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31J14	CDC	2385111	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31J14	CDC	2385110	2017-05-12	58,67	\$1,356.97	\$780.00	\$64.09
31J14	CDC	2385224	2017-05-13	58,67	\$3,042.69	\$780.00	\$64.09
31J14	CDC	2391083	2017-09-22	58,67	\$3,580.18	\$780.00	\$64.09
31J14	CDC	2391082	2017-09-22	58,67	\$3,042.67	\$780.00	\$64.09
31J14	CDC	2385109	2017-05-12	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385108	2017-05-12	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385107	2017-05-12	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385106	2017-05-12	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385105	2017-05-12	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385223	2017-05-13	58,68	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385222	2015-05-13	58,68	\$3,042.67	\$780.00	\$64.09
31J14	CDC	2391081	2017-09-22	58,68	\$3,042.87	\$780.00	\$64.09
31J14	CDC	2385104	2017-05-12	58,69	\$1,356.06	\$780.00	\$64.09
31J14	CDC	2385103	2017-05-12	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385102	2017-05-12	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385101	2017-05-12	58,69	\$1,356.96	\$780.00	\$64.09

NTS Sheet	Title #		Expiry Date	Area (Ha)	Accumulated Work	Required Work	Mining duties
31J14	CDC	2385100	2017-05-12	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385221	2017-05-13	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385220	2017-05-13	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385219	2017-05-13	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385218	2017-05-13	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385217	2017-05-13	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385216	2017-05-13	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385215	2017-05-13	58,69	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385214	2017-05-13	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385213	2017-05-13	58,69	\$72.73	\$780.00	\$64.09
31J14	CDC	2385099	2017-05-12	58,70	\$72.73	\$780.00	\$64.09
31J14	CDC	2385098	2017-05-12	58,70	\$72.73	\$780.00	\$64.09
31J14	CDC	2385097	2017-05-12	58,70	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385096	2017-05-12	58,70	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385095	2017-05-12	58,70	\$72.72	\$780.00	\$64.09
31J14	CDC	2385212	2017-05-13	58,70	\$1,356.96	\$780.00	\$64.09
31J14	CDC	2385211	2017-05-13	58,70	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385210	2017-05-13	58,70	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385209	2017-05-13	58,70	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385208	2017-05-13	58,70	\$72.72	\$780.00	\$64.09
31J14	CDC	2385207	2017-05-13	58,70	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385206	2017-05-13	58,70	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385205	2017-05-13	58,70	\$72.72	\$780.00	\$64.09
31J14	CDC	2385204	2017-05-13	58,71	\$72.72	\$780.00	\$64.09
31J14	CDC	2385203	2017-05-13	58,71	\$72.72	\$780.00	\$64.09
31J14	CDC	2385202	2017-05-13	58,71	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385201	2017-05-13	58,71	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385200	2017-05-13	58,71	\$1,356.95	\$780.00	\$64.09
31J14	CDC	2385199	2017-05-13	58,71	\$72.72	\$780.00	\$64.09
31J14	CDC	2385198	2017-05-13	58,72	\$72.72	\$780.00	\$64.09
31J14	CDC	2385197	2017-05-13	58,72	\$72.72	\$780.00	\$64.09
31J14	CDC	2385196	2017-05-13	58,72	\$72.72	\$780.00	\$64.09
31J14	CDC	2385195	2017-05-13	58,72	\$72.72	\$780.00	\$64.09
31J14	CDC	2385194	2017-05-13	58,72	\$72.72	\$780.00	\$64.09

FIGURE 3: PROPERTY CDC NUMBERS CLAIMS MAP



## **4.0) GEOLOGICAL SURVEYS**

A series of geological mapping surveys have been realized between Mid-May 2015 through November 2016. This reconnaissance mapping performed covers additional parts of property claims not explored before. Figure 5 shows new areas surveyed on the property (covered areas with sampled/measurement areas). Figures 5a to 5d show the surveyed points for the four divided areas of the Property. Figure 6 shows the Geological Map provided by the MERN (SIGEOM). Figure 7 shows the interpreted Geological Map from new surveyed points and MERN Geological Map. Figure 8 shows Historical Drilling Map.

Structural studies have also been updated on the entire property. Figure 9 shows the Regional Structural Map. Figures 9a to Figure 9d show the Property Structural Map for each divided areas. Figure 10 and Figure 11 show respectively Total Field Magnetics and Vertical Gradient Magnetics Maps of Property.

Finally, Figures 12a to Figure 12d show the Property Synthesis Map for each divided areas.

## **5.0) ACCESSIBILITY, CLIMATE, LOCAL RESOURCES INFRASTRUCTURE AND PHYSIOGRAPHY**

The project area occupies part of a region limited by latitudes 46° 57' 0.00" N and 47° 06' 30.00" N and longitudes -75° 17' 0.00" W and -75° 09' 30.00" W in southwestern Quebec. It is located approximately 300 kilometers north of Montreal and it situated around 5 km north of the village of Saint-Anne-du-Lac, itself located some 45 km to the north of the town of Mont-Laurier.

### ***5.1) TOPOGRAPHY, ELEVATION, VEGETATION AND DRAINAGE***

The topography of the area is dominated by gentle hills and relatively flat terrain, with elevations ranging from 270 m above sea level in the southwest part of the property to 500 m above sea level in the northeast part of the property. Few creeks and streams are seen on the property, suggesting till overburden. Approximately 80% of the claims are

covered by forest and the rest of the property is covered by lakes and streams. Overburden varies in depth from 0 to 40 m.

Hilltops and elevated areas are generally covered by Pleistocene and recent quaternary deposits that are characterized by a thin veneer of undifferentiated glacial till, generally less than 25 cm thick. Adjacent valleys generally include considerable accumulated organic matter, more or less decomposed and derived from sphagnum, mosses, and forest litter. Locally, however, thick deposits of till including large angular blocks and boulders can be locally observed close to bedrock hills.

## **5.2) ACCESSIBILITY**

The property is located in NTS sheet 31J14/31O03. It is easily accessible from town of Ste Anne Du Lac gravel road, for about 5 km leads to the property. Other trails provide access to other parts of the property. Old forest roads need to be refurbished in order to give access to heavy equipment, such as hydraulic excavators, drill rigs, haul trucks, etc. Access to the property is illustrated in Figure 4.

### **5.3) INFRASTRUCTURE**

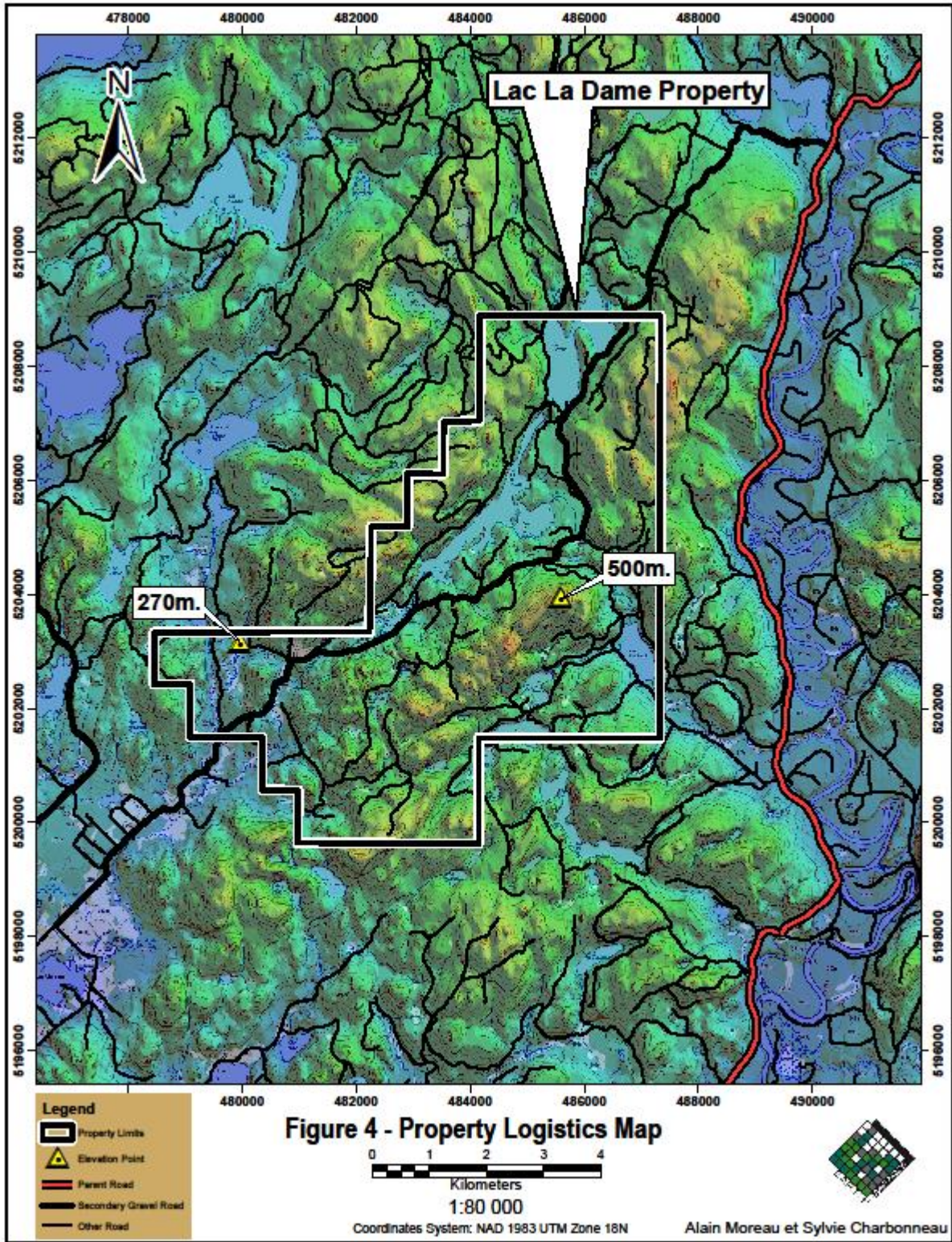
There is no mining infrastructure on the property. Services and equipment can be obtained from the town of Mont-Laurier, located approximately 45 km to the SW by gravel and paved roads. Mont-Laurier is a forestry and mining town with a long history in resources development, where all the services, manpower and equipment needed to carry out exploration programs or operate a mine are readily available.

An old sawmill is located just north of Ste-Anne-Du-Lac less than 5 km from property.

### **5.4) CLIMATE**

The property climate is humid continental. It is characterized by warm summers, mainly in July, cold winters and abundant rain. Daily average temperatures range from +20°C in July to -20°C in January. Annual precipitation totals 635 mm of rain and 300 cm of snow. These are normal conditions for north-western Quebec and do not hamper either exploration or mining work.

FIGURE 4: PROPERTY LOGISTICS MAP



## **6.0) HISTORY**

### **6.1) OWNERSHIP HISTORY**

There is no well-defined ownership history available. However, the current property claims were registered in 2013..

The following are the main ownership changes over the years as observed while verifying the historical work:

**1969:** GM 24830; Radex Minerals Limited completed an airborne radiometric survey for Uranium; part of the survey was included in the present property (southeastern limit of the claims). No significant anomalies are reported;

**1969:** GM 25148 and GM25785; Mont-Laurier Uranium Mines Limited completed an airborne radiometric survey south of the claims at the southeastern edge of claims boundary. One anomaly is reported just off the claims;

**1969:** GM 25307; Newbaska Gold and Copper Mines Limited completed spectrometer and geological mapping (including prospecting) surveys southeast of Lac Faubert (southeastern part of the property) for Uranium search. Some weak anomalies reported are outside of the claims;

**1969:** GM 25326; Consolidated Red Poplar Minerals Limited completed spectrometer and geological mapping surveys east of Lac Leman (eastern part of the property for Uranium search. Some weak anomalies reported in the claims;

**1969:** GM 25327; Green Point Minerals Limited completed spectrometer and geological mapping surveys south of Lac Leman (eastern part of the property) for Uranium search. 10 weak anomalies reported, 3 being in the claims;

**1969:** GM 25498; McRae Mining Corporation completed an airborne radiometric survey west of Lac Leman (eastern part of the property) for Uranium search. An anomaly is located northwest of the claims;

**1970:** GM 25988 and GM 26407; Vanessa Uranium Mines Limited completed a spectrometer survey south of Lac Godmer south of the claims; they drilled two short holes (30m approx.) without any significant results;

- 1974:** GM 36532; MERN completed a localization of Uranium deposits and prospects in Quebec as of 1961;
- 2002:** GM 61246; Michel Belisle completed a prospecting survey in the Lac Faubert area (southeastern part of the property) with the discovery of the Faubert showing (2,96%Cu, 1.18%Ni and 0.16%Co);
- 2002:** Not reported; Ressources Maxima Inc. completed four short holes (20-25m) on the sillimanite zone (close to Lac La Dame, south block). Visual inspection of core indicates more than 20% sillimanite. The core is stored at Ressources Maxima Inc. in Ste-Anne-Du-Lac;
- 2003:** Not Reported, see Appendix 3 for details; DAMREC completed a sillimanite characterization of 7 samples (3 core and 4 grab samples) coming from Lac La Dame sillimanite zone (south block). Results indicate that grade of sillimanite is estimated between 15 and 30%. Sillimanite occurs with very few inclusions and minor alteration; a preliminary flowsheet indicates that sillimanite, garnet and graphite could be easily separated.
- 2004:** GM 64092; CONSOREM completed a regional geophysical compilation of the Grenville front for the identification of Gold bearing structures;
- 2005:** GM 61520; MERN completed a general technical study on 6 sillimanite samples (unknown coordinates) from the Mont-Laurier area;
- 2009:** GM 65079; CONSOREM completed a stream sediment study (processing) for the generation of new exploration targets in the Grenville province;
- 2009:** GM 65080; CONSOREM completed a stream sediment study (processing) for the generation of new exploration targets in the Grenville province;
- 2013:** Not reported, Alain Moreau and Sylvie Charbonneau completed a geological survey in the Lac Faubert area (Faubert showing). Main results are that the Faubert Cu showing cannot be traced for a long distance due to overburden cover. The Dolomite zone (north block) has been partly prospected and the zone is open NNW;
- 2015:** GM 68988, Alain Moreau and Sylvie Charbonneau completed geological, sampling and geophysical surveys in the Lac La Dame area (Lac La Dame sillimanite deposit and the West Zone). Main results are the characterization of two high grade sillimanite zones (more than 20% Al<sub>2</sub>O<sub>3</sub>).

**2016:** From 2015 to 2016, Alain Moreau and Sylvie Charbonneau updated the property's database by performing additional field surveys and interpretation. Two new mineralized zones were discovered in 2016: A Porphyry Cu showing grading less than 1% Cu and a major graphite zone, the Cauchon showing, in marble grading more than 5% Graphite.

**PRESENT:** Alain Moreau and Sylvie Charbonneau

## **6.2) WORK DONE BY THE MERNQ**

The area has been previously examined on a reconnaissance scale (1:253,440) by J. A. Retty (1933; RASM 1933-D5(A)); who reported a brief description of the geology of the Grenville Province.

In, 1964, H. R. Wynne-Edwards completed the first geological map of the Grenville Province into a unified regional geological map at 1:250,000.

A radiometric survey, a compilation of radioactive occurrences and the list of mineral deposits were performed in 1972, 1975 and 1981 (DP 114, DP 310 and DPV 809).

A basic regional lineaments study was completed in 1989 by DIGIM (MB 89-27) and covered the Western Grenville Province at scale 1: 200,000.

In 1989, a series of overburden maps have been generated by the MRN for NTS sheets 31J14 and 31O03 (SIF 031J/14 and SIF 031O/03).

In, 1992, a stream sediment and heavy metals concentrates geochemistry survey was performed in the western Grenville Province (MB 92-18). No significant anomalies are reported.

In, 1992, a mineral resources Map of the area has been published covering the western part of the Grenville Province (PRO 90-05). No mineral occurrences are reported in property.

In, 1994, S. Nantel and J. Choiniere completed an interpretation of potential Cu-Co mineralization exploration targets from geochemical data in the western Grenville Province (MB 94-16).

In, 1994, a series of contour maps have been generated (MB 94-31). These maps cover only the southern limits of the property.

In, 1999, a survey for quarry occurrences was performed in the western Grenville Province (MB 99-02). No occurrences are reported in the property

In, 2000, a survey for new sillimanite, garnet, mica, quartz and graphite occurrences was performed in the western Grenville Province in the 90's (PRO 2000-02). No new occurrences are reported in the property

The work of S. Nantel (2000) generated the first complete geological map of the area at scale 1: 50,000 (RG 2000-06, Géologie de Ste-Anne-Du-Lac – 31J14). This geological map is also formalized in document SI-31J14-C3G-01A (2001).

The work of S. Nantel and H. Pintson (2001) generated the first complete geological map of the area at scale 1: 50,000 (RG 2001-16, Géologie du Lac Dieppe – 31O03). This geological map is also formalized in document SI-31O03-C3G-02C (2002).

In, 2005, N. Togola and K. Sharma (2005) completed a compilation of all major sillimanite mineralization occurring in the Mont-Laurier area. The Lac La Dame sillimanite mineralization is described as a deposit with good potential with thin sections containing between 10 and 25% sillimanite. The sillimanite fibers seem to be of good quality and their link with other materials usually simple.

In, 2008, S. Nantel completed a compilation of existing mineral showings and interpreted new areas for exploration. Indice Faubert (Cu) is mentioned in the report (DV 2008-04).

In, 2009, J. David, A. Moukhsil, et. al. Completed a series of U-Pb age dating in the Province of Grenville in order to precise the geology (RP 2009-03(A)).

In, 2010, an evaluation of the potential for U and Cu-Au-U mineralizations and the prediction of mafic and ultramafic intrusives in the Grenville Province was outlined by S. Trepanier (CONSOREM) (EP 2009-03).

Finally, D. Lamothe (2011, EP 2010-02) used a new statistical technique for the generation of enhanced stream sediment anomalies in the Grenville area.

### **6.3) WORK DONE BY MINING COMPANIES**

The first work done on the property (GM 24830) was carried out in 1969 by Radex Minerals Limited who completed an airborne radiometric survey for Uranium; part of the survey was included in the present property (southeastern limit of the claims without any significant anomalies. In 1970, Vanessa Uranium Mines Limited (GM 25988) drilled two short holes without any significant results.

No exploration work was reported from 1971 to 1994. Sporadic exploration work is reported from 1995 to 2001, mainly consisting in prospecting (southern edge of the property).

In 2002, Michel Belisle (Ressources Maxima Inc.) sampled the Lac La Dame sillimanite zone and completed four short holes (20-25m) encountering significant sillimanite mineralization. Prospecting along the sillimanite mineralization (a dome structure with positive relief) unfolded a sillimanite zone being 2.5 km long with a true width averaging 200m with a minimum depth of 12m. Collar coordinates of hole 1-1 has been precisely located in the field; other hole collar coordinates are approximate.

In 2003, Ressources Maxima Inc. (DAMREC, South-Africa) sent 7 sillimanite samples from the Lac La Dame zone for characterization and preliminary flowsheet of minerals separation. Results indicate that sillimanite samples grades between 15 to 30% with easy separation of sillimanite, garnet and graphite.

No exploration work was reported from 2004 to 2012. In 2013, Alain Moreau and Sylvie Charbonneau did a reconnaissance geological mapping in the eastern part of the property. They were unable to extend the Faubert Copper showing due to overburden coverage.

In 2014, Alain Moreau and Sylvie Charbonneau did a precise field survey on the sillimanite deposit (West, Central and East zones) consisting in a geological survey, channel sampling and ground geophysical (magnetometer) survey.

From 2015 to 2016, Alain Moreau and Sylvie Charbonneau updated the property's database by performing additional field surveys and interpretation. Two new mineralized zones were discovered in 2016: A Porphyry Cu showing grading less than 1% Cu and a major graphite zone, the Cauchon showing, in marble grading more than 5% Graphite.

Historical drilling is illustrated in table 2 and figure 8 "Property Historical Drilling Map".

**TABLE 2: HISTORICAL DRILLING**

GM #	Company	Year	UTM E	UTM N	Hole #	Az	Dip	Depth (m)	Remarks
26407	Vanessa Uranium Mines Limited	1970	483524	5201840	70-1	360	-90	30	Gneiss
26407	Vanessa Uranium Mines Limited	1970	483320	5201770	70-2	360	-90	30	Gneiss
Not Reported	Ressources Maxima Inc.	2002	482928	5204439	1-1	000	-90	16	Sillimanite Mineralization
Not Reported	Ressources Maxima Inc.	2002	482920	5204430	2-2	000	-90	16	Sillimanite Mineralization
Not Reported	Ressources Maxima Inc.	2002	483042	5204505	3-3	000	-90	16	Sillimanite Mineralization
Not Reported	Ressources Maxima Inc.	2002	483241	5204660	4-4	000	-90	16	Sillimanite Mineralization

Table 3, "History", summarizes all the exploration work reported on the property over the years.

**TABLE 3: HISTORY**

Year	Company	Exploration	Results
1970	Vanessa Uranium Mines Limited	Ground radiometric and geological surveys with two short holes drilled	Two short holes drilled without U mineralization
2002	Ressources Maxima Inc.	Prospecting survey and drilling of four holes on the Lac La Dame sillimanite zone	Discovery of a 2.5 km long by 200m wide with a minimum depth of 12m of a sillimanite zone grading locally between 10 to 30%. 4 holes drilled.
2002	Ressources Maxima Inc.	Prospecting in the northeastern and northwestern parts of the property.	Discovery of two Copper showings: Faubert grading 2.96% Cu, 1.17% Ni and 0.16% Co and Porphyre Corners grading 0,45% Cu.
2003	Ressources Maxima Inc.	Characterization of 7 samples for sillimanite and other minerals	Sillimanite of good quality grading between 15 to 30%. A basic flowsheet shows that sillimanite, garnet and graphite are easily separated.
2013	Alain Moreau and Sylvie Charbonneau	Prospecting and Geological Mapping on the eastern part of property	Weak Copper mineralization identified close to the Faubert showing
2014	Alain Moreau and Sylvie Charbonneau	Prospecting and geological mapping along the Lac La Dame sillimanite deposit	Confirmation of two high grade sillimanite zones
2016	Alain Moreau and Sylvie Charbonneau	Prospecting and geological mapping along the Lac La Dame property	Porphyry Cu and Cauchon Graphite showings identified

#### **6.4) MINERAL RESOURCES AND MINERAL PRODUCTION FROM THE PROPERTY**

Mineral resources have never been estimated, and no production has ever occurred on the Lac La Dame property.

FIGURE 5: PROPERTY SAMPLING SITES MAP

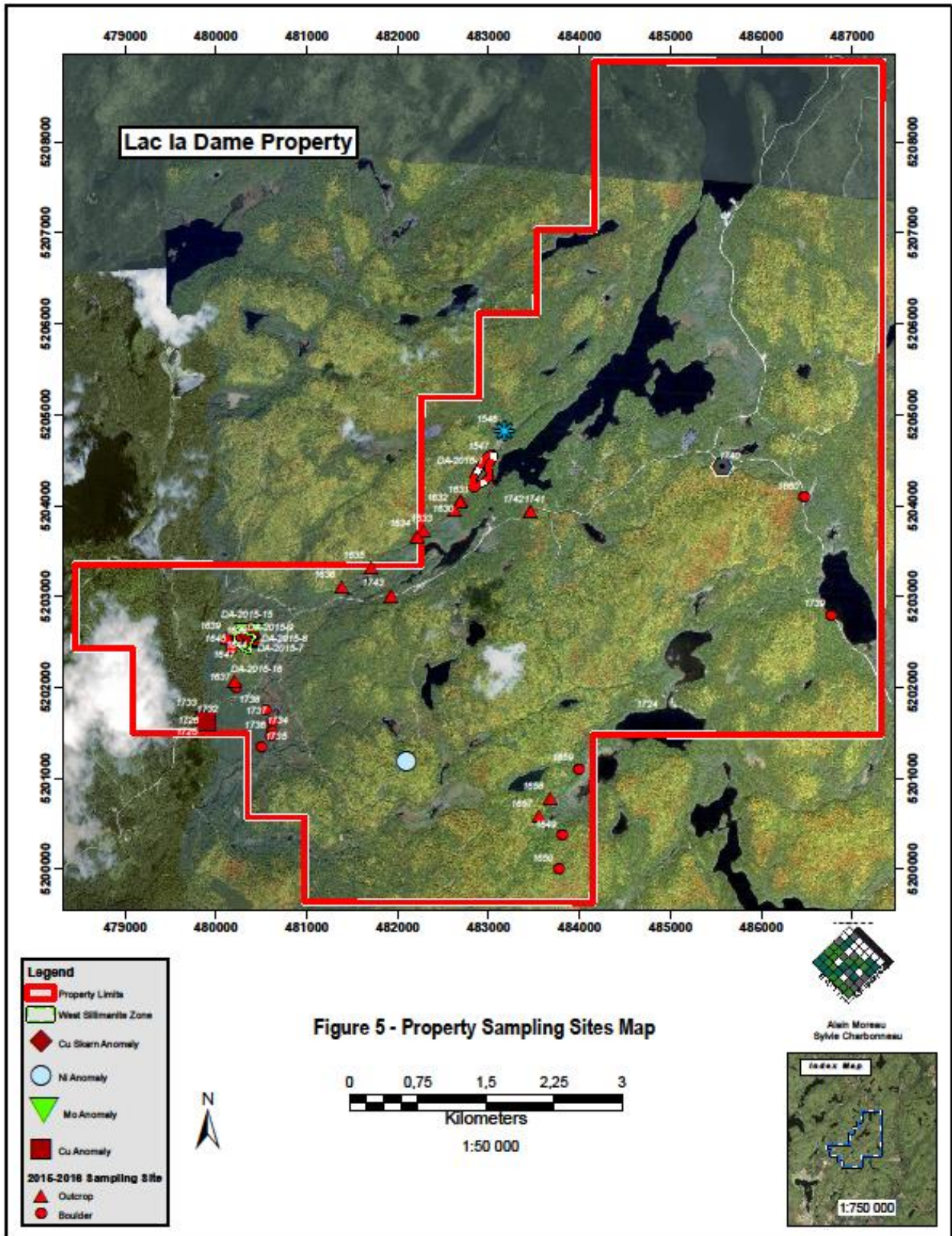


FIGURE 5A: PROPERTY SAMPLING SITES MAP (NORTH BLOC)

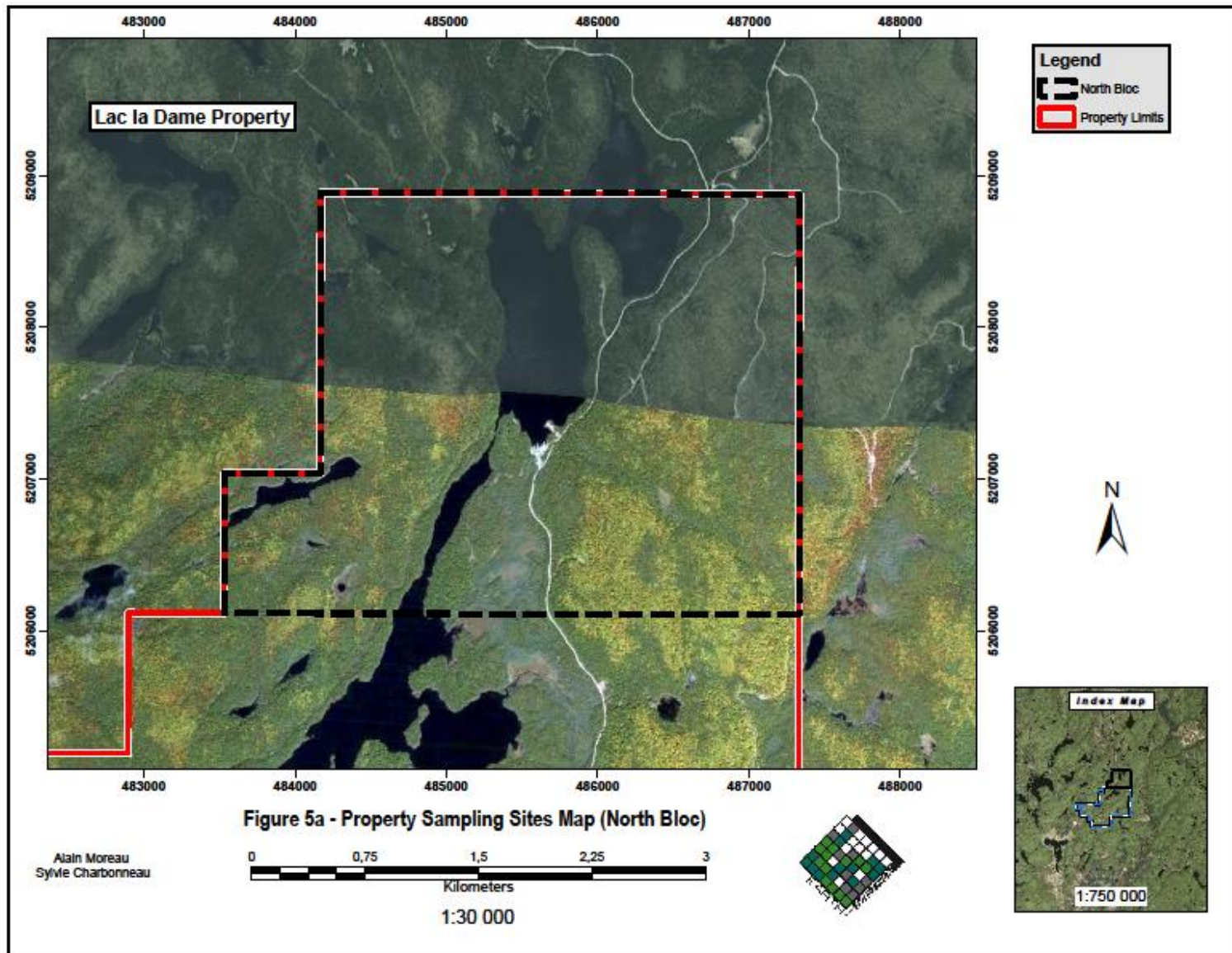


FIGURE 5B: PROPERTY SAMPLING SITES MAP (CENTRAL BLOCK)

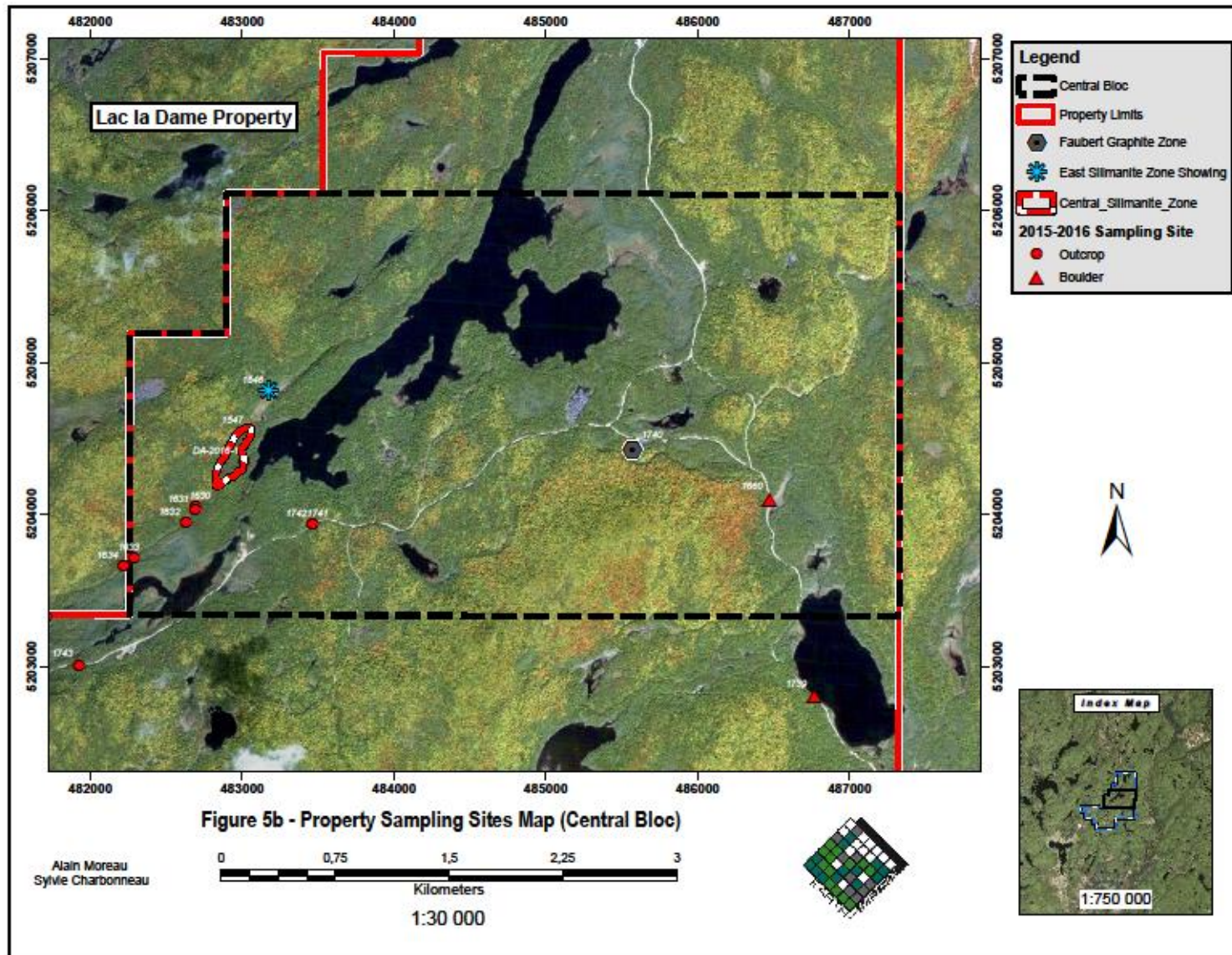


FIGURE 5C: PROPERTY SAMPLING SITES MAP (SOUTH-EAST BLOC)

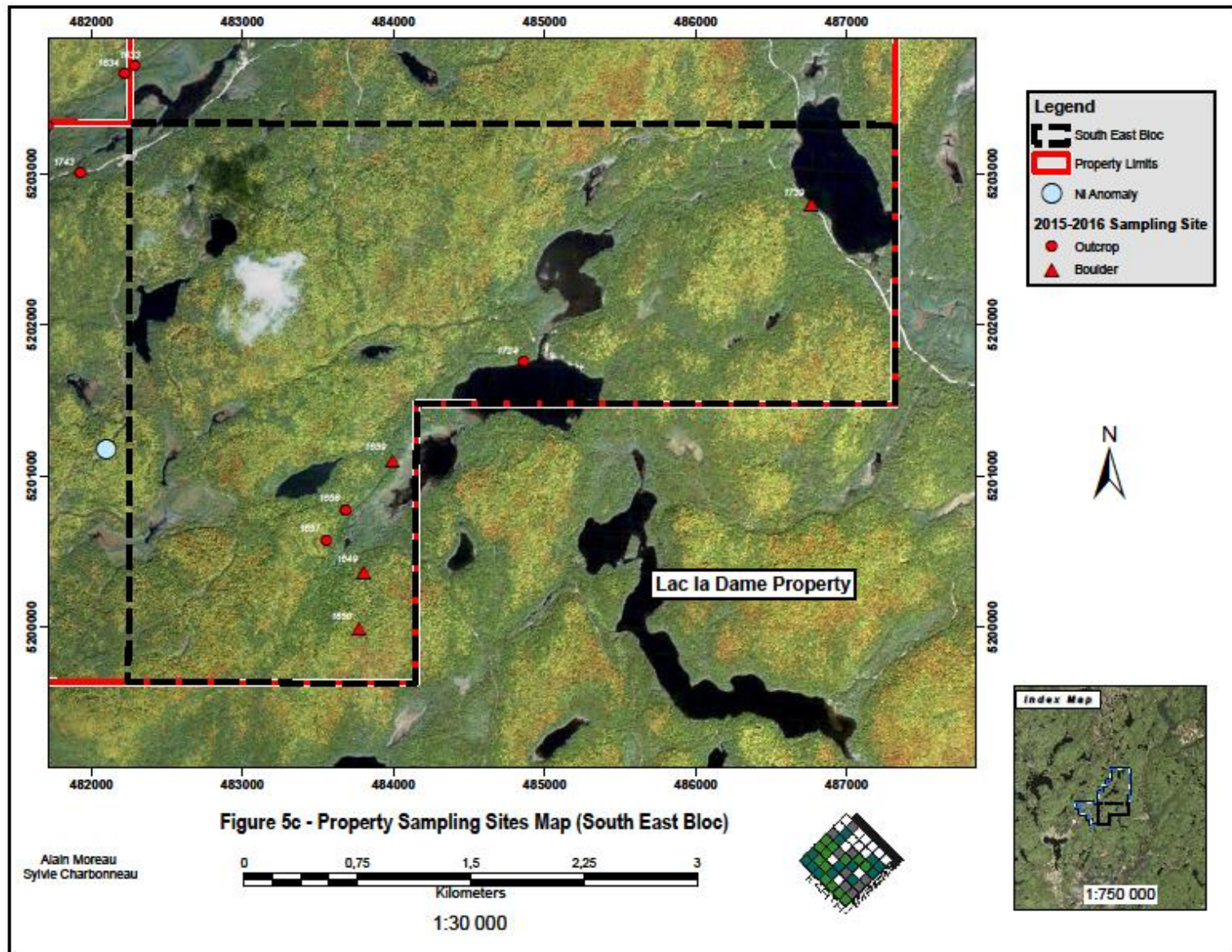
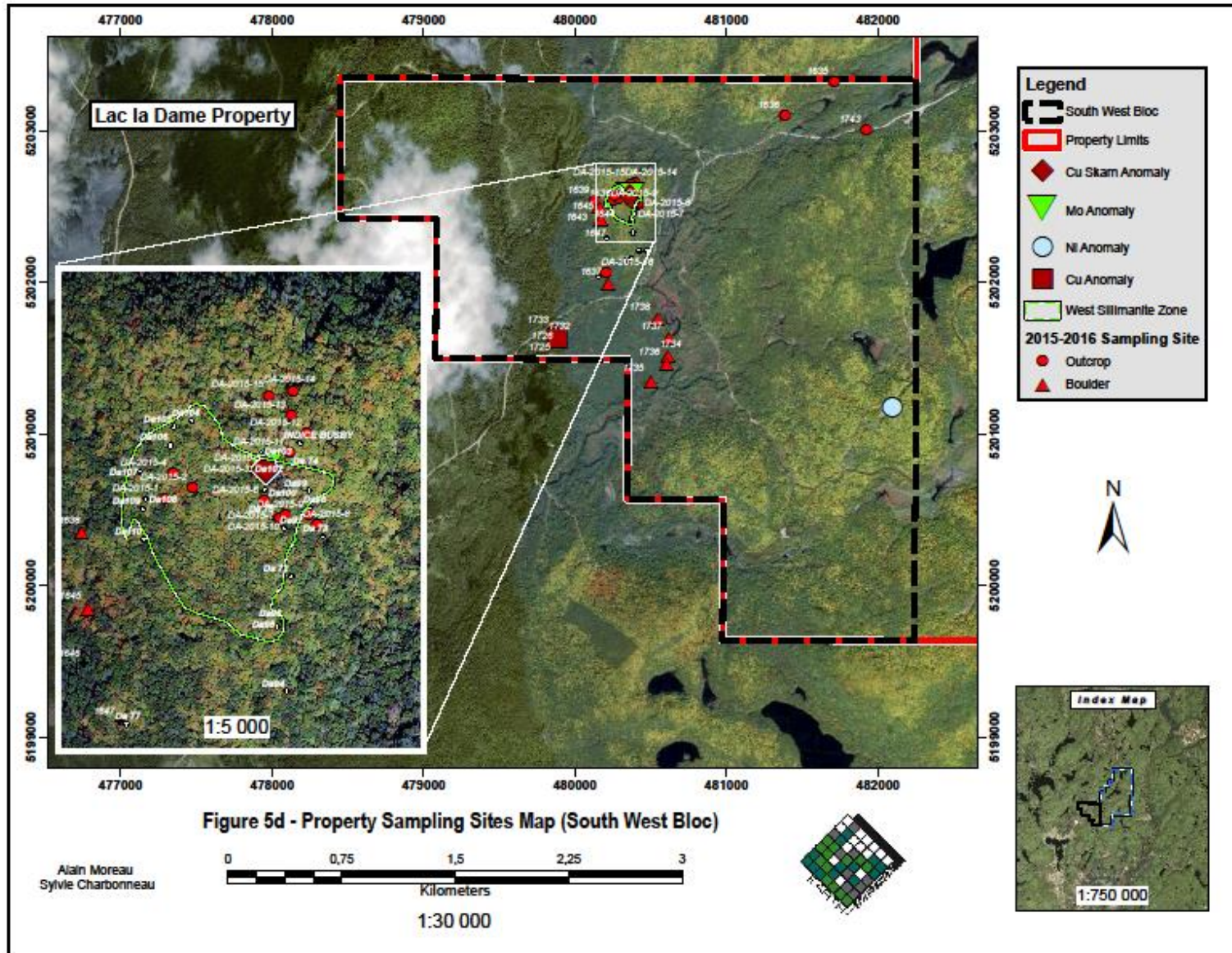


FIGURE 5D: PROPERTY SAMPLING SITES MAP (SOUTH-WEST BLOC)



## **7.0) GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1) REGIONAL GEOLOGY**

The geology of the Grenville Province is summarized by S. Nantel and A. Moukhsil (2008; DV-2008-1).

The Grenville Province is the youngest tectonic province of the Canadian Shield; it extends along a northeast trending axis for more than 2,000 km and averages 350 km in width. It is bounded to the northwest by the Grenville Front and to the southeast by the St. Lawrence River and the Paleozoic Appalachian Orogen.

Southeast of the Front, Archean (Pontiac, Abitibi, Opatoca, and Ashuanipi subprovinces) and Paleoproterozoic (Otish Basin and Gagnon Terrane) rocks form the Parautochthon. The latter consists of crust that initially formed the southeast margin of Laurentia that was reworked, for the most part, during the Mesoproterozoic. The Allochthon, consisting of magmatic or accreted terrains, was later assembled onto the Parautochthon. The earliest terrains, recognized in the northeastern half of the Grenville Province, are Labradorian in age (1710-1600 Ma) followed by Pinwarian (1520-1460 Ma) rocks, extending over most of the province. The most recent terrains are represented by an episode of crustal formation restricted to the southwest part of the province. They correspond to a juvenile tonalite and diorite assemblage assigned to the Lacoste, Mekinac, and the La Bostonnais magmatic suites (ca. 1.38 Ga). Between accretionary episodes, extensional phases led to the formation of back-arc basins in the Mont-Laurier and Morin terranes, as well as the intra-arc basin filled by rocks of the Wakeham Group. Extensional phases are also associated with the emplacement of anorthositic and charnockitic complexes (AMCG). After the Shawinigan metamorphic event (1190 - 1140 Ma), during which the Mont-Laurier and Morin terranes were metamorphosed to amphibolite-granulite facies, the main collision of the Grenvillian phase took place during the Ottawa orogeny (1080-1020 Ma). A final phase of compression, at *circa* 1.0 Ga, appears to be essentially restricted to the area near the Grenville Front, whereas inside the orogen, this episode is marked by the emplacement of late anorthosites and discrete granitic intrusions.

## 7.2) Local Geology

The geology of the property's area is consistent with the Central Metasedimentary Belt of the Grenville Province (MERNQ, DV-2008-01). The property lies in the Mont-Laurier terrane, a monocyclic allochthon domain where the major elements are: marbles, quartzites, platform pelites, mesoproterozoic amphibolites which are intruded by gabbro sheets and felsic to mafic intrusions. See Figure 6 for details.

The work of S. Nantel (2000), Nantel and H. Pintson (2001) summarizes the local geology of the area (RG 2000-06 and RG 2001-16):

“The region is divided into two lithotectonic domains: Caïn Domain and Baker Domain. The Caïn Domain occupies the center and the south-western region. It is characterized by a magnetic signature high to very high with a general orientation to the NE. It is part downgraded to the amphibolite facies grade and has only local evidence of granulite facies metamorphism. The area contains biotite paragneiss and biotite with garnet paragneiss and alternating especially with quartzite (Rabot metamorphic Suite). These rocks are intruded by metagabbros (1155 My) and monzogranites with porphyritic augen texture (Serpent Intrusive Suite), both lithologies are probably cogenetic. The monzogranites seem to have been put in place after the gabbros that form the Notawissi Pluton.

“The Baker domain, metamorphosed to the upper amphibolite facies occupies the south-east and north-west region. Its magnetic signature is very low, with no particular orientation. It differs from the Caïn Domain by its great masses of late pink fine grained monzogranite, equigranular and massive (Brockaby monzogranite), and its feldspathic and biotite quartzofeldspathic paragneisses, tapered and poor in feldspar (Ascension Metamorphic Suite).

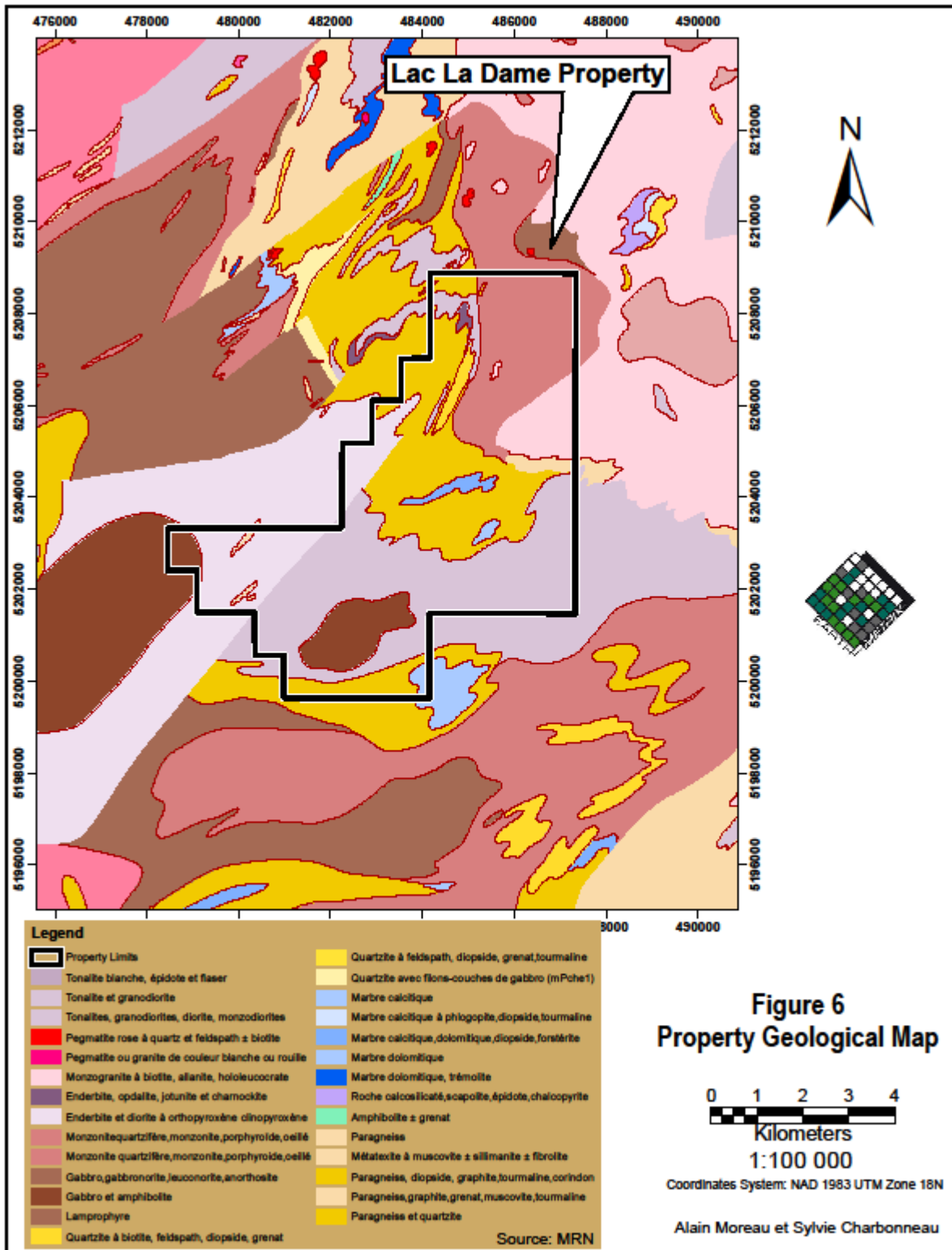
“The Caïn Domain represents a tectonic block that has straddled the Baker Domain from a double vergence movement, one to the NE from the Lièvre thrust zone, and the other to the NW, from the Reymont thrust zone”.

“Metasediments from Caïn and Baker Domains were deposited on a continental magmatic arc represented by metatonalites and metadiorites of the Lacoste intrusive Suite (1386 My), and perhaps also by the monzogranitic orthogneiss of the Betune intrusive Suite. The Lacoste intrusive

Suite, whose crystallization age is 1386 My represents a juvenile material. Its metamorphic age (1152 my) reflects a thermal event related to the implementation of the Serpent Intrusive Suite. The rocks of the Lacoste intrusive Suite are intruded by younger rocks of the region, e.g., the Brockaby monzogranite and, the Kensington-Skootamatta alkaline, potassium rich Suite comprising lamprophyre dykes.

The area lies in the sub-tectonic domain IV as established by Nantel (RG-2000-06). Planar elements are oriented 257/41, linears 243/43 and fold axis 247/37.

FIGURE 6: PROPERTY GEOLOGICAL MAP



### **7.3) INTERPRETED PROPERTY GEOLOGY**

Part of property (65%) has been mapped at scale 1:20,000 (orientation lines with 200m spacing). There is not sufficient information to allow major modifications of the MERN geological map. Figure 7 shows the interpreted Geological Map modified from MERN's Geological Map from the geological survey performed in 2015 and 2016. However, the main geological units seem to correlate the Vertical gradient (Magnetics) Map.

The Geology of the property has been defined by the work of MERNQ from limited available data at 1:50,000 (RG 2000-06 and RG 2001-16).

Figure 7 ("Interpreted Property Geological Map") shows the property geology. From west to east, the geology of the property consists in Gabbro and Amphibolite (Serpent intrusive Suite), Quartzite with interbedded layers of Gabbro (Serpent Intrusive Suite), Paragneiss, with graphite, garnet, tourmaline and corundum (Rabot metamorphic Suite), Dolomitic and Calcitic Marbles (Rabot Metamorphic Suite), Paragneiss and Quartzite (Rabot Metamorphic Suite), Gabbro, Gabbronorite, Leuconorite and Anorthosite (Serpent intrusive Suite) and Porphyroid and augen Quartz Monzonite (Serpent intrusive Suite) .

Most of the showings are within the Rabot metamorphic Suite unit. .Property geology is showed on figure 6 ("Property Geological Map").

Figure 9 and Figures 9a to 9d show respectively the Property Structural Map for the entire property and all divided blocks. The Regional Structural Map has been obtained by the processing of the LANDSAT-8 image acquired in October 2013. The processing involved a proprietary algorithm designed to unfold major structures. The Property Structural Map has been generated by STRUCT 3.1 software using a combination of SPOT and IKONOS images. Figure 10 and Figure 11 show respectively the 'Property Total Field Magnetics Map and 'Property Magnetics Vertical Gradient Property Map'. Figures 12, 12a to 12d summarize the information on the entire property and the divided blocks of Property and exploration targets interpreted from available data.

The general stratigraphy in the vicinity of the Lac La Dame Central Sillimanite Zone as established by the MERN from Northwest to Southeast is as follows: Amphibolite/Gabbro (observed in boulders coming from NNW to NW direction), Enderbite, a contact zone between Enderbite and

Paragneiss (not easily observed), Paragneiss, Basement rocks (Monzogranite/Diorite beds and Quartz Porphyry to Pegmatite) and Tonalite/Quartzite.

Amphibolite/Gabbro is a black rock more or less deformed with an intrusive texture. Enderbite is a migmatized rock consisting of diorite mixed with tonalite and pyroxene tonalite; surface texture is massive, deformed and appears as grey colour. Paragneiss is typically brownish to ocre colour due to surface weathering and is typically composed of quartz, sillimanite, graphite and other metamorphic minerals. Paragneiss units appear as N040 trending units as dome structures. Basement rocks categorized as monzogranite is a complex geological unit varying from Monzonite to a sequence of migmatized units of diorite beds with or without Quartz Porphyry to Pegmatite units and Monzonite; rock is intensively deformed and appears as greyish black colour at surface. Finally, tonalite and possibly quartzite appears as massive rock hard to break with colour varying from pale brown (tonalite) to pale grey (quartzite).

An unmapped sequence is located between the gabbro unit mapped in the south central part and the Faubert showing where gabbro units are suspected.

FIGURE 7: PROPERTY INTERPRETED GEOLOGICAL MAP

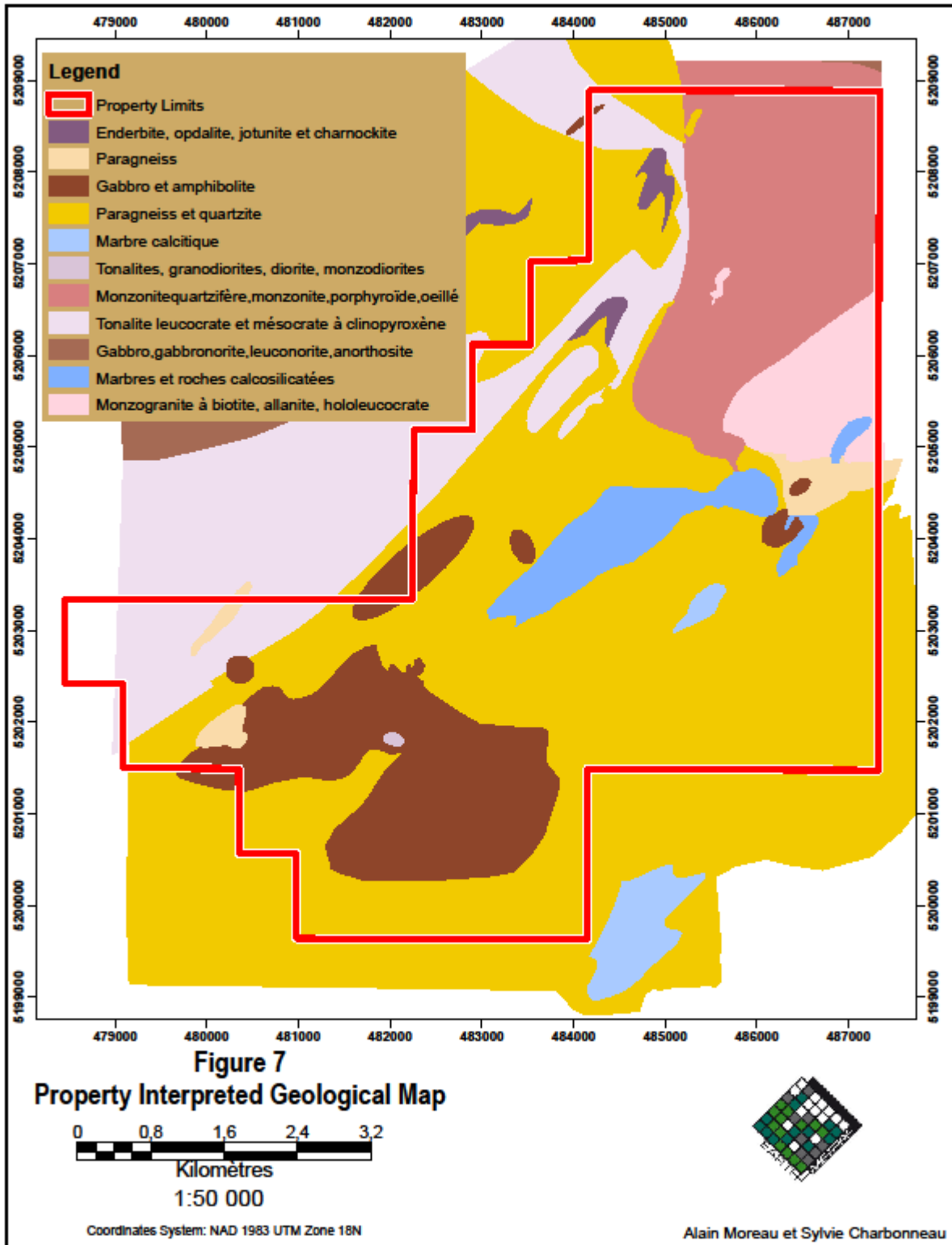


FIGURE 8: HISTORICAL DRILLING MAP

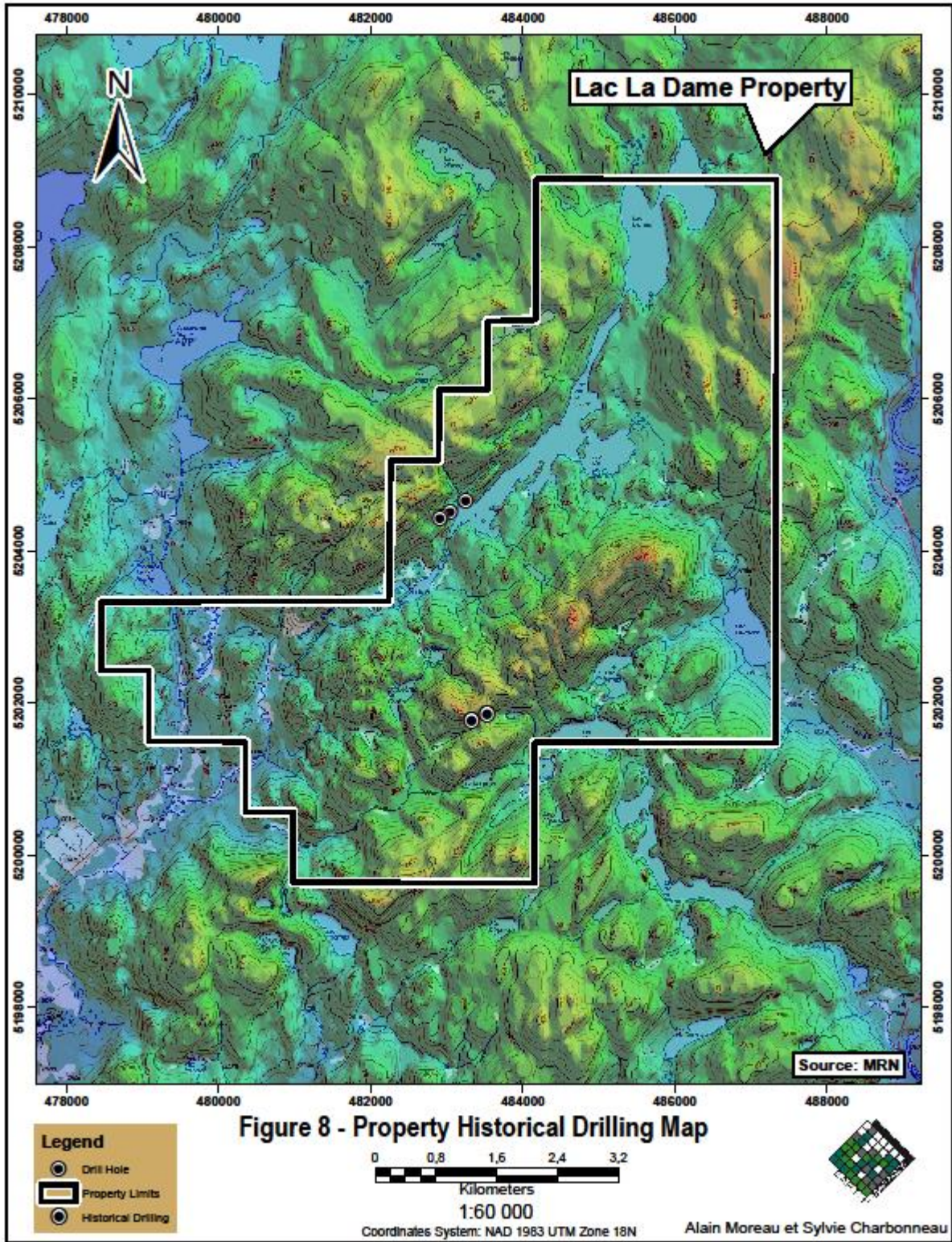


FIGURE 9: REGIONAL STRUCTURAL MAP

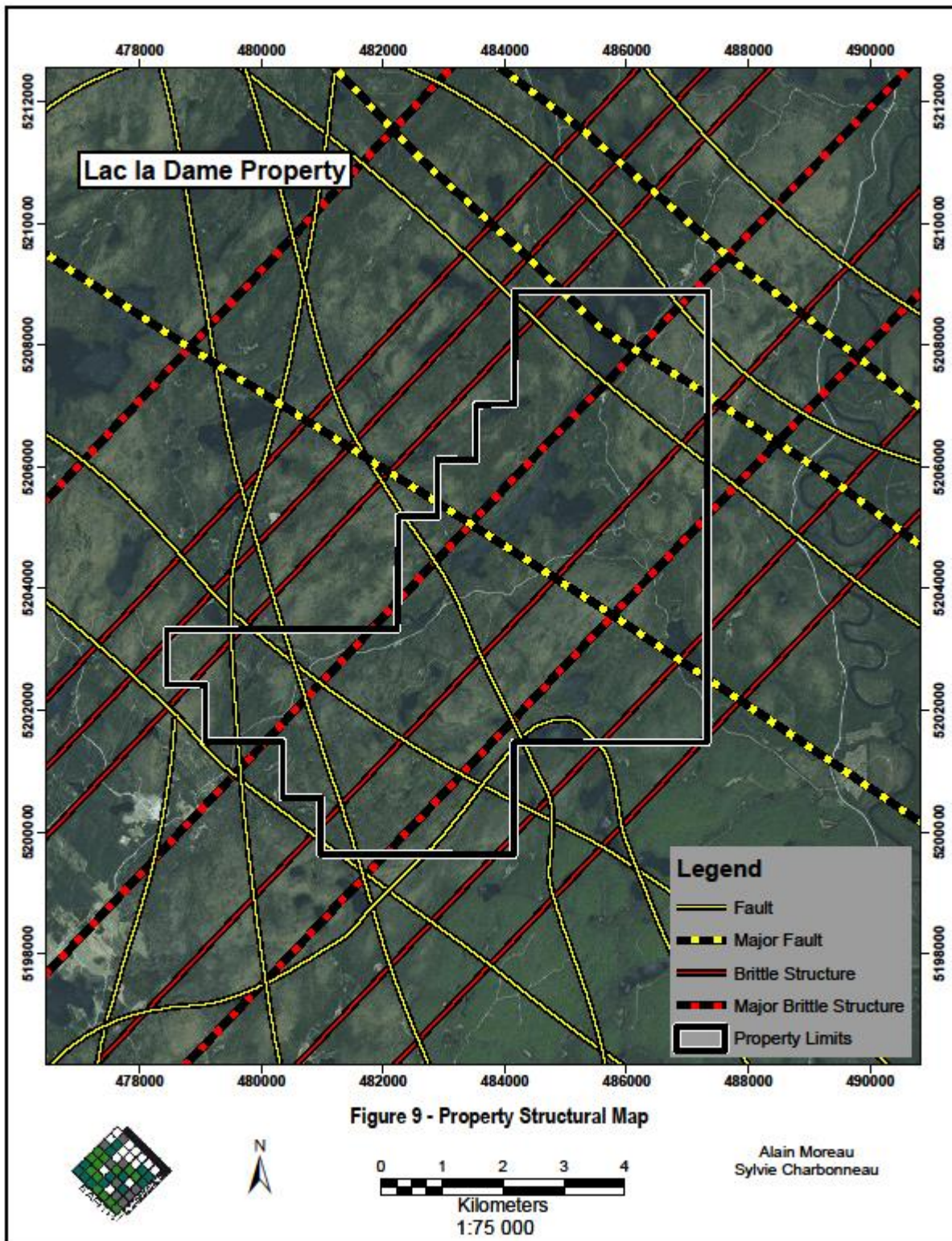


FIGURE 9A: PROPERTY STRUCTURAL MAP (NORTH BLOC)

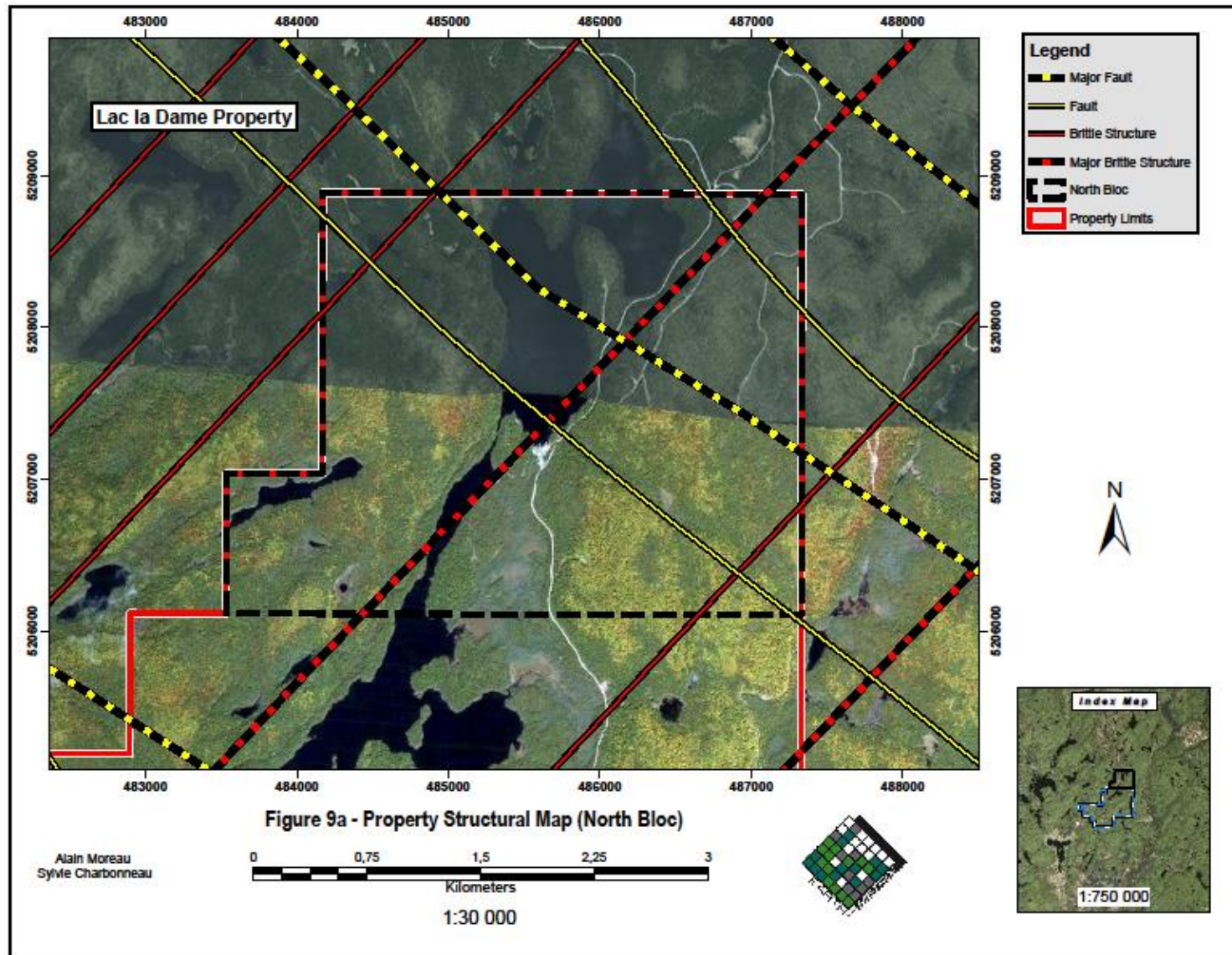


FIGURE 9B: PROPERTY STRUCTURAL MAP (CENTRAL BLOC)

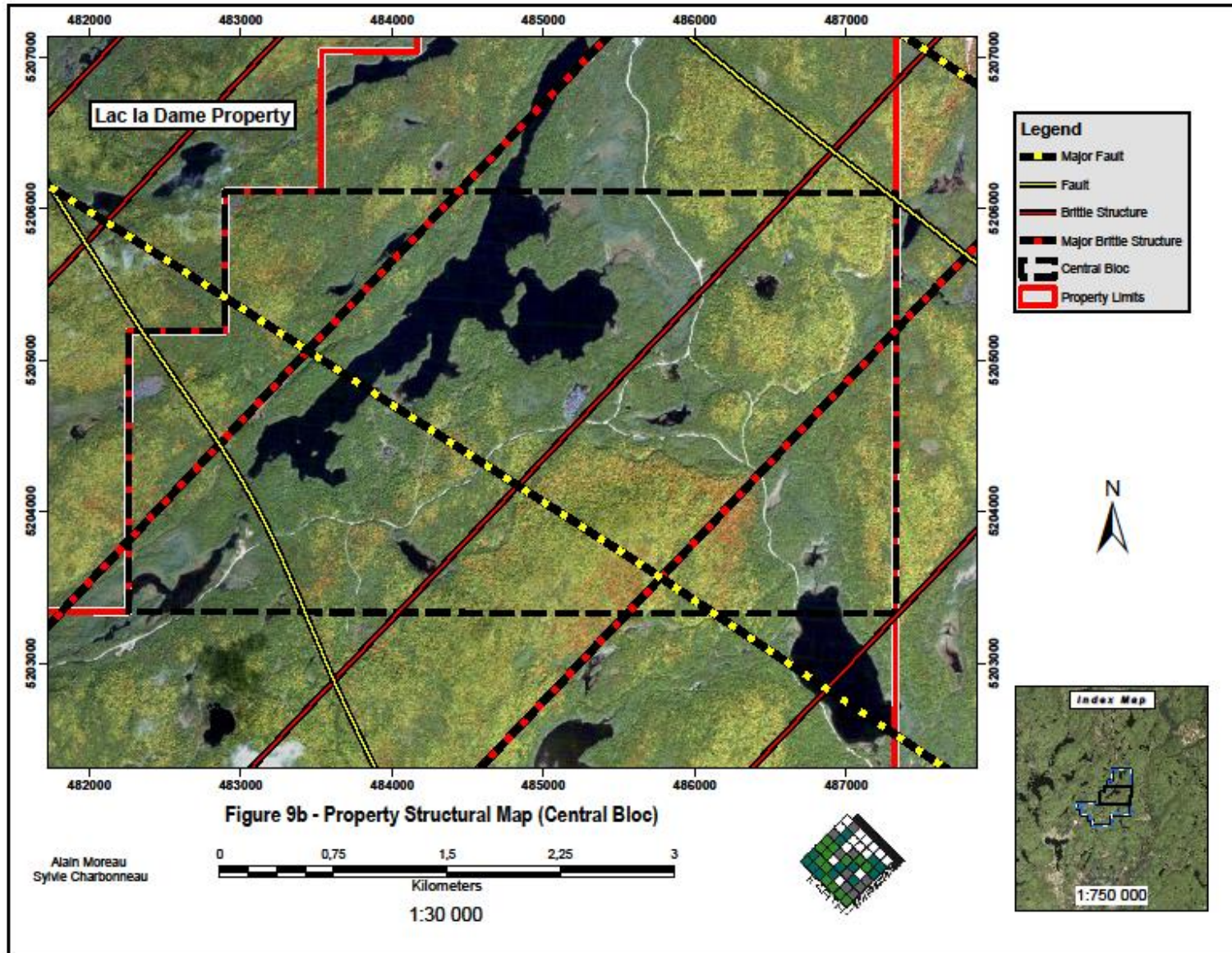


FIGURE 9C: PROPERTY STRUCTURAL MAP (SOUTH-EAST BLOCK)

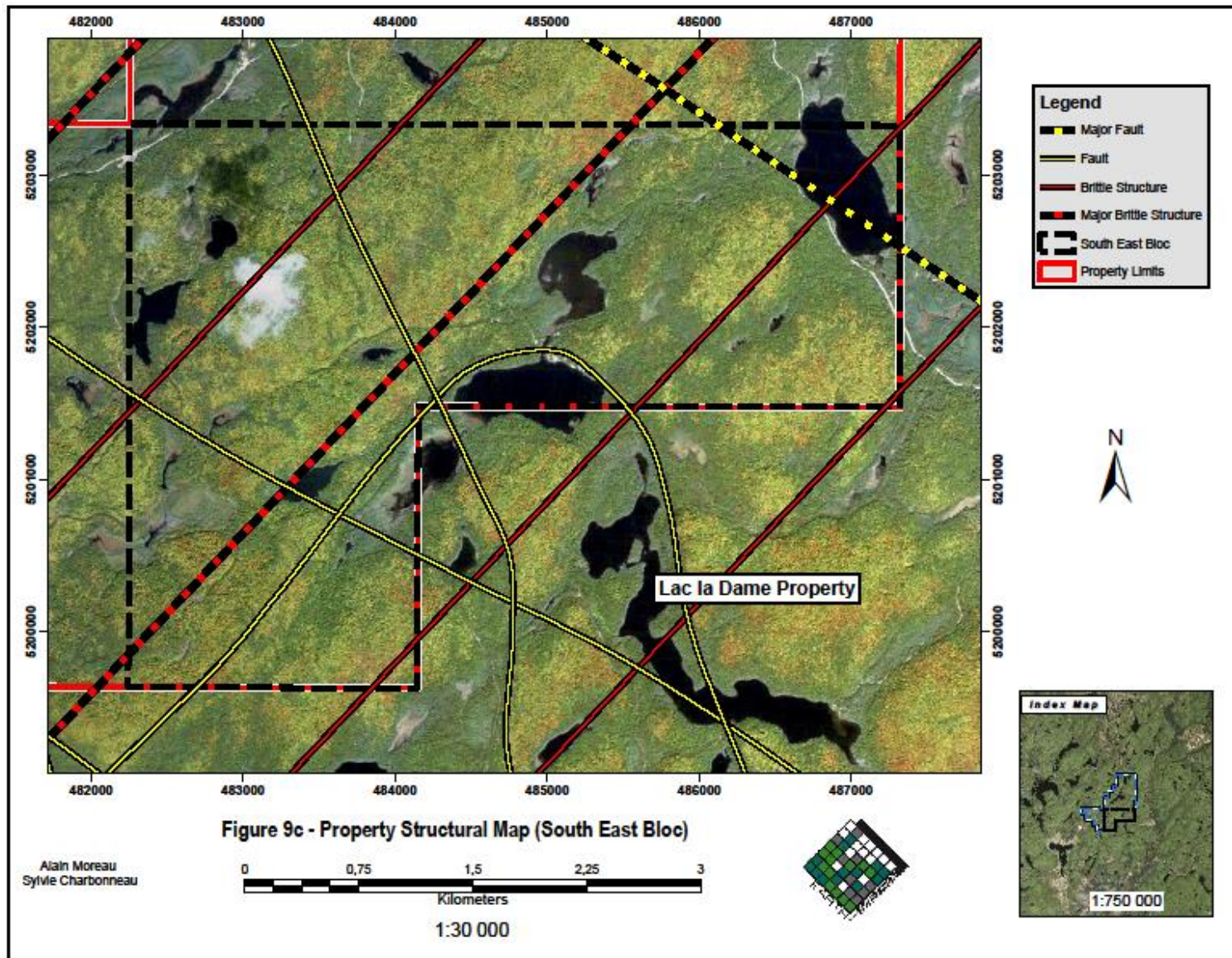


FIGURE 9D: PROPERTY STRUCTURAL MAP (SOUTH-WEST BLOCK)

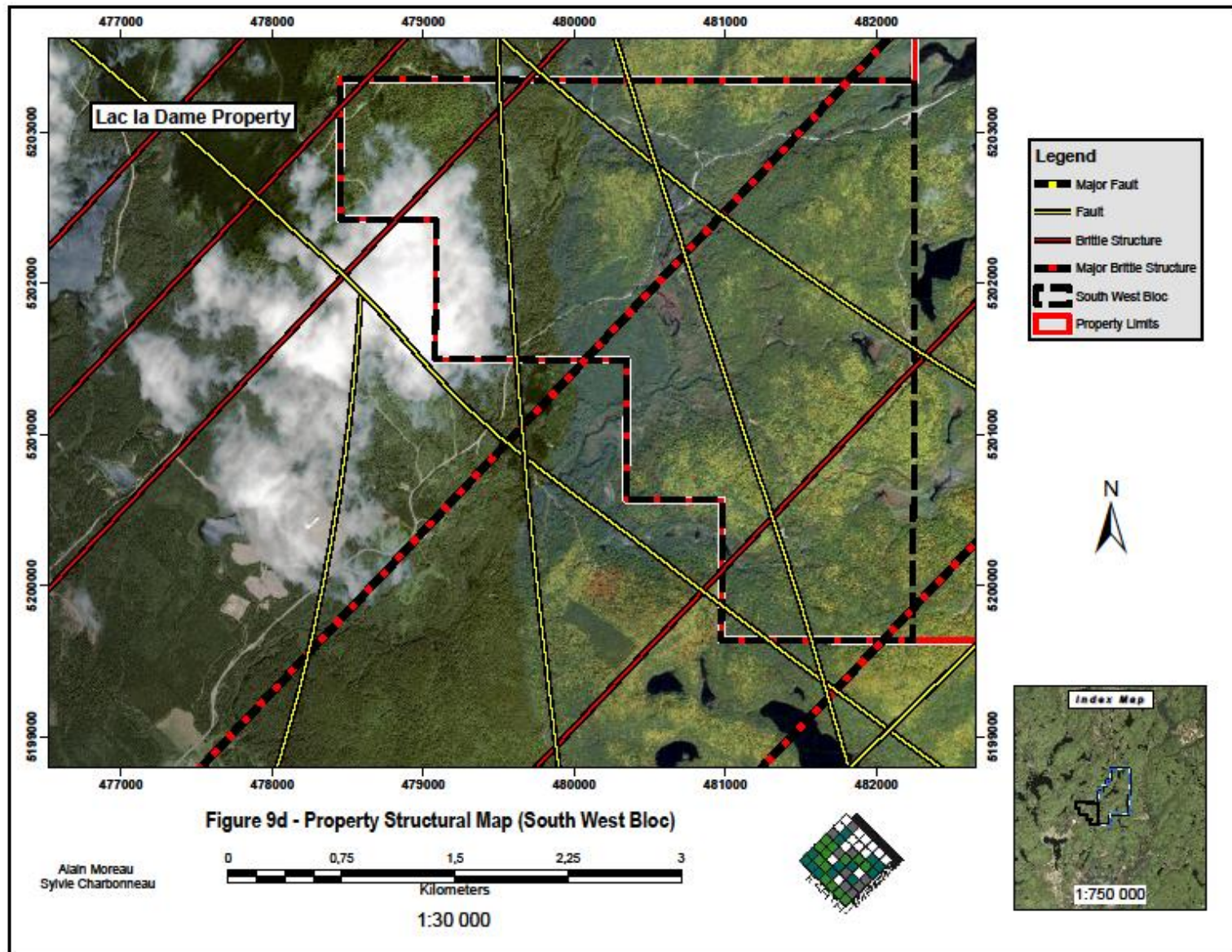


FIGURE 10: PROPERTY TOTAL FIELD MAGNETICS MAP

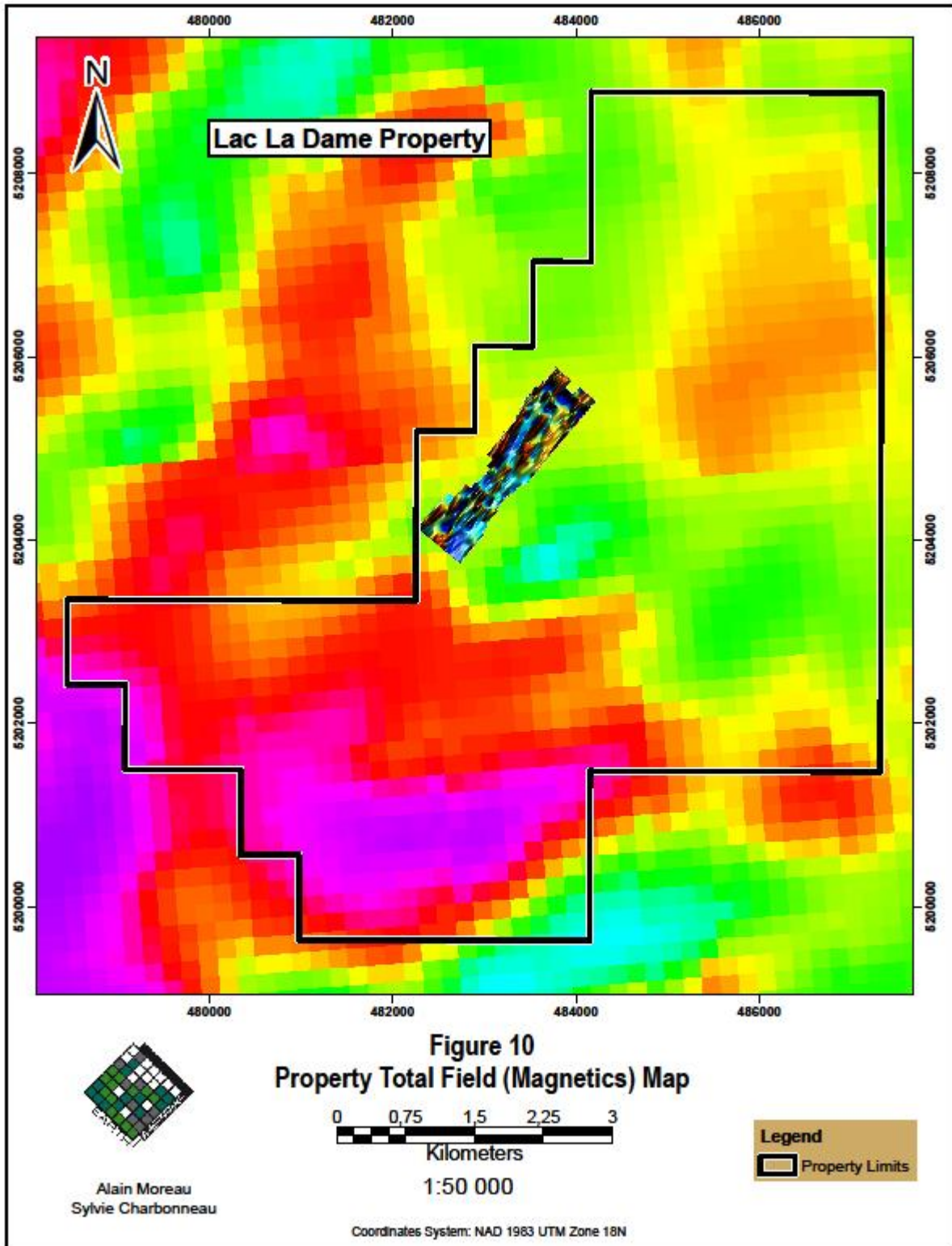


FIGURE 11: PROPERTY MAGNETICS VERTICAL GRADIENT MAP

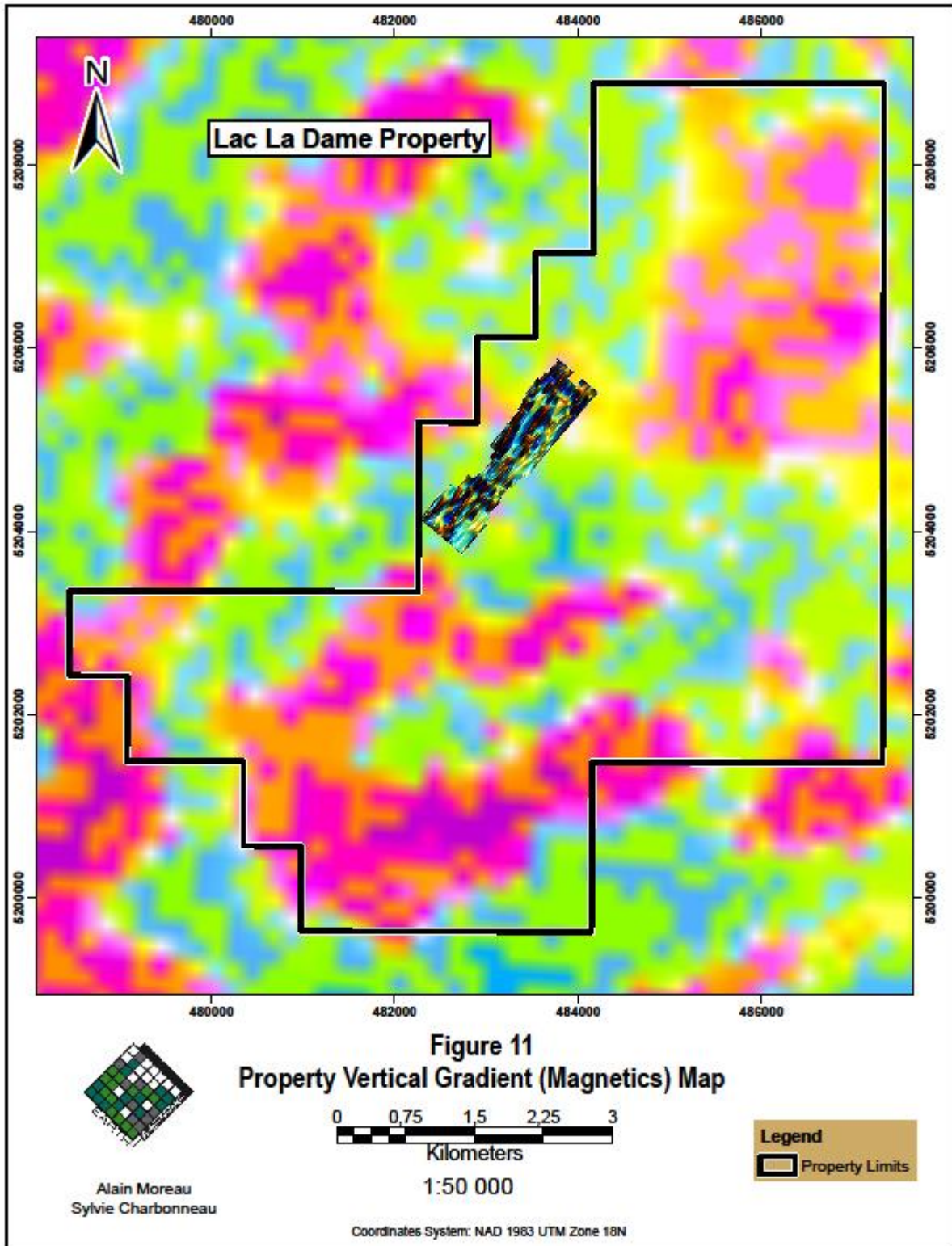


FIGURE 12 PROPERTY SYNTHESIS MAP

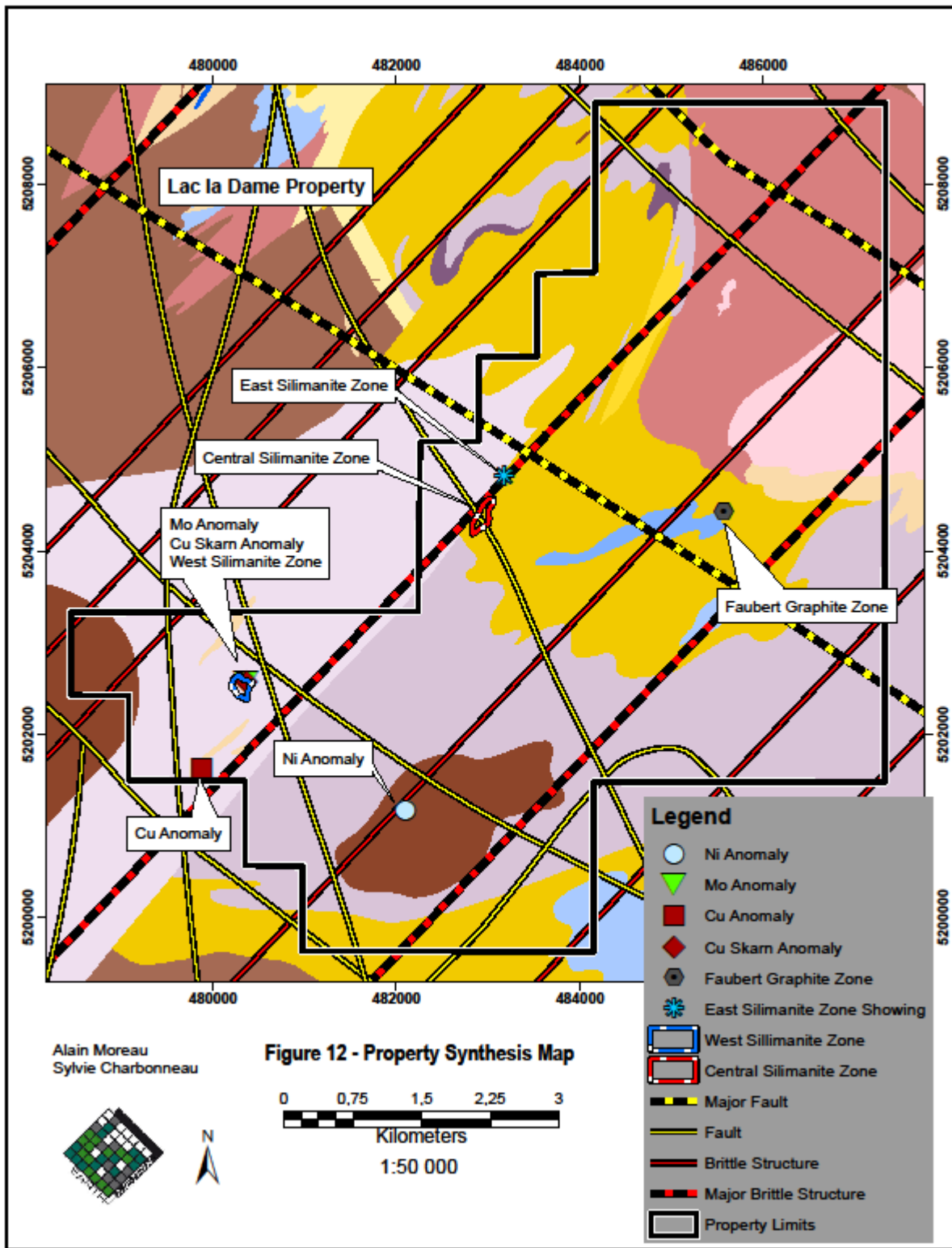


FIGURE 12A PROPERTY SYNTHESIS MAP (NORTH BLOC)

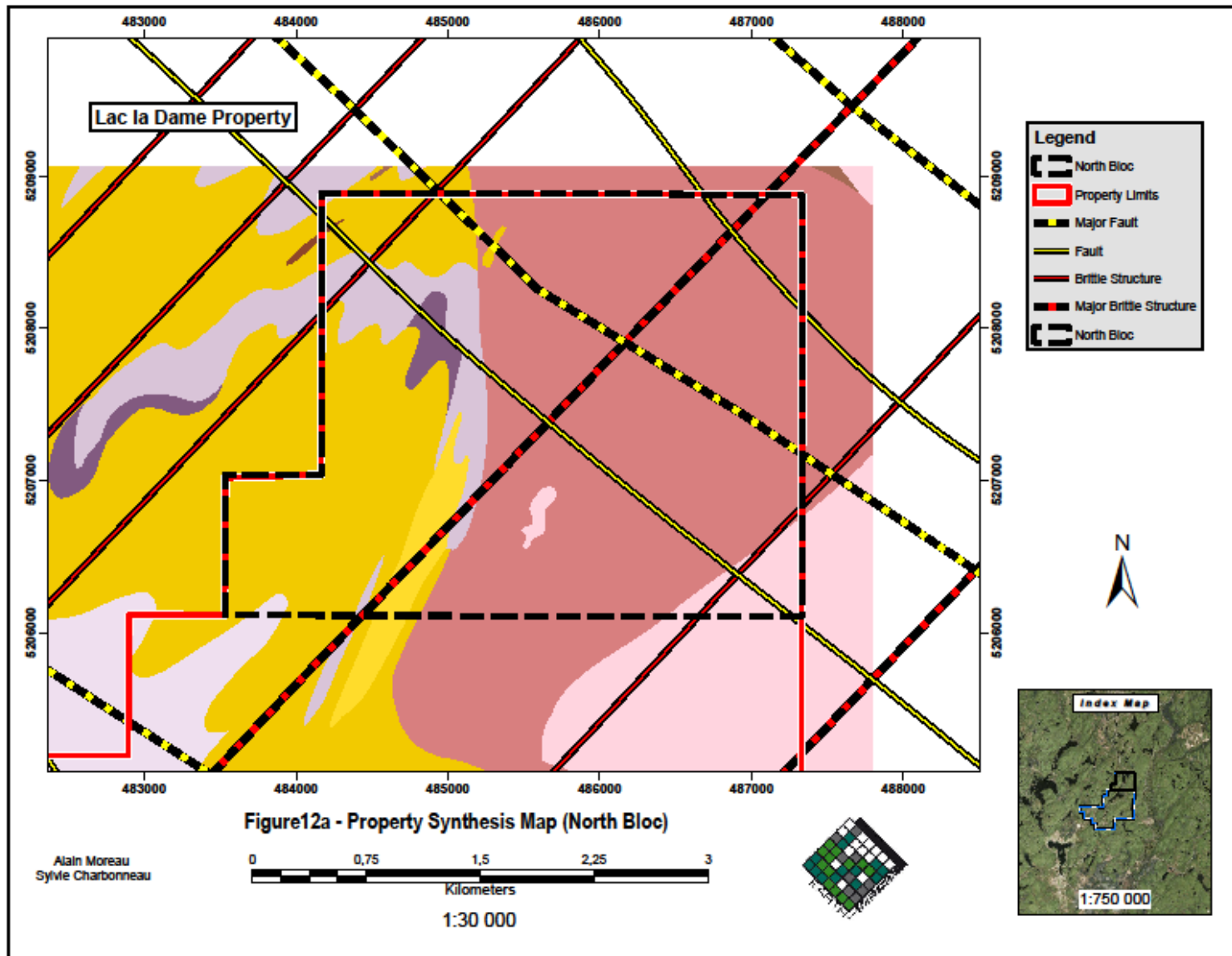


FIGURE 12B: PROPERTY SYNTHESIS MAP (CENTRAL BLOCK)

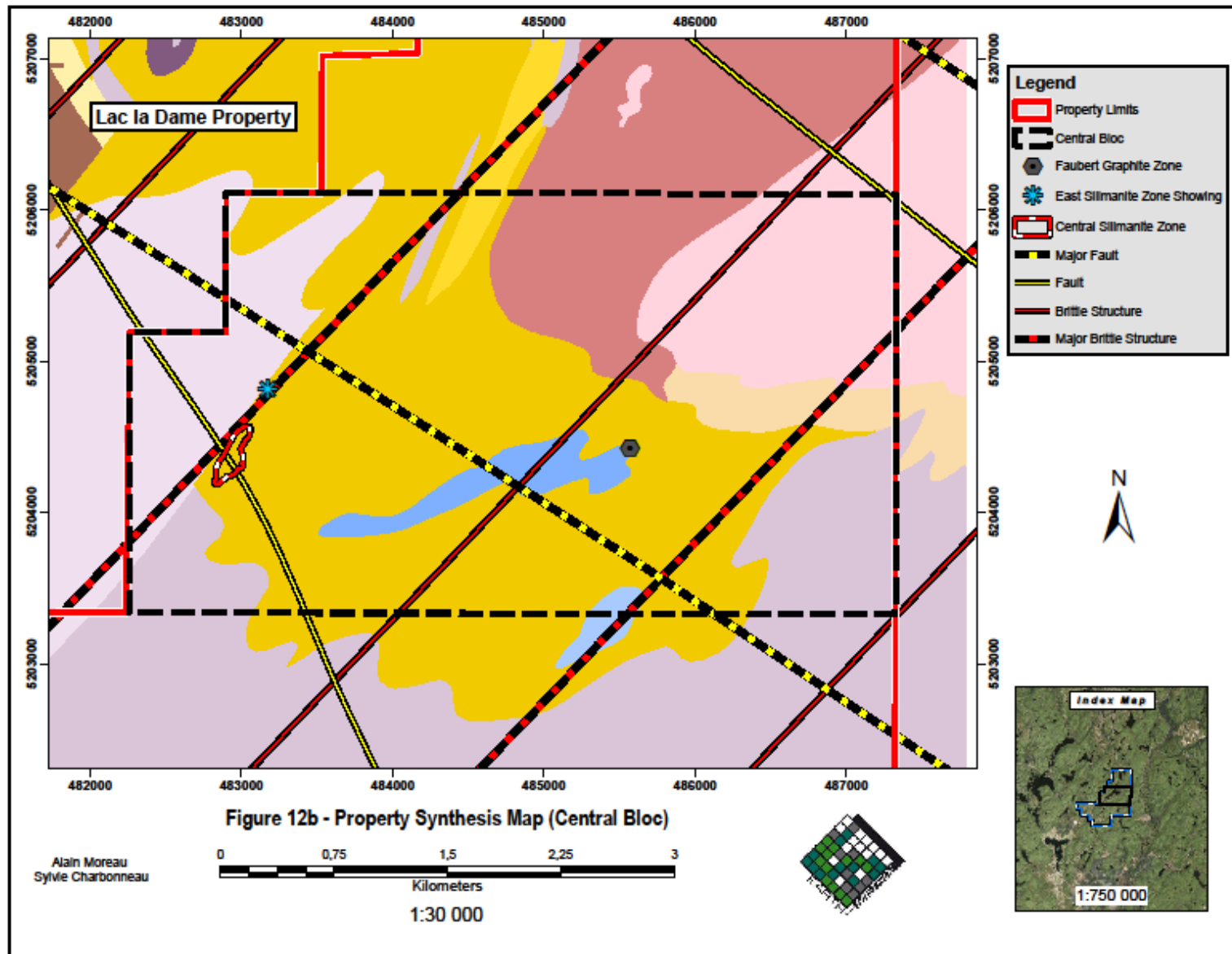


FIGURE 12C: PROPERTY SYNTHESIS MAP (SOUTH-EAST BLOCK)

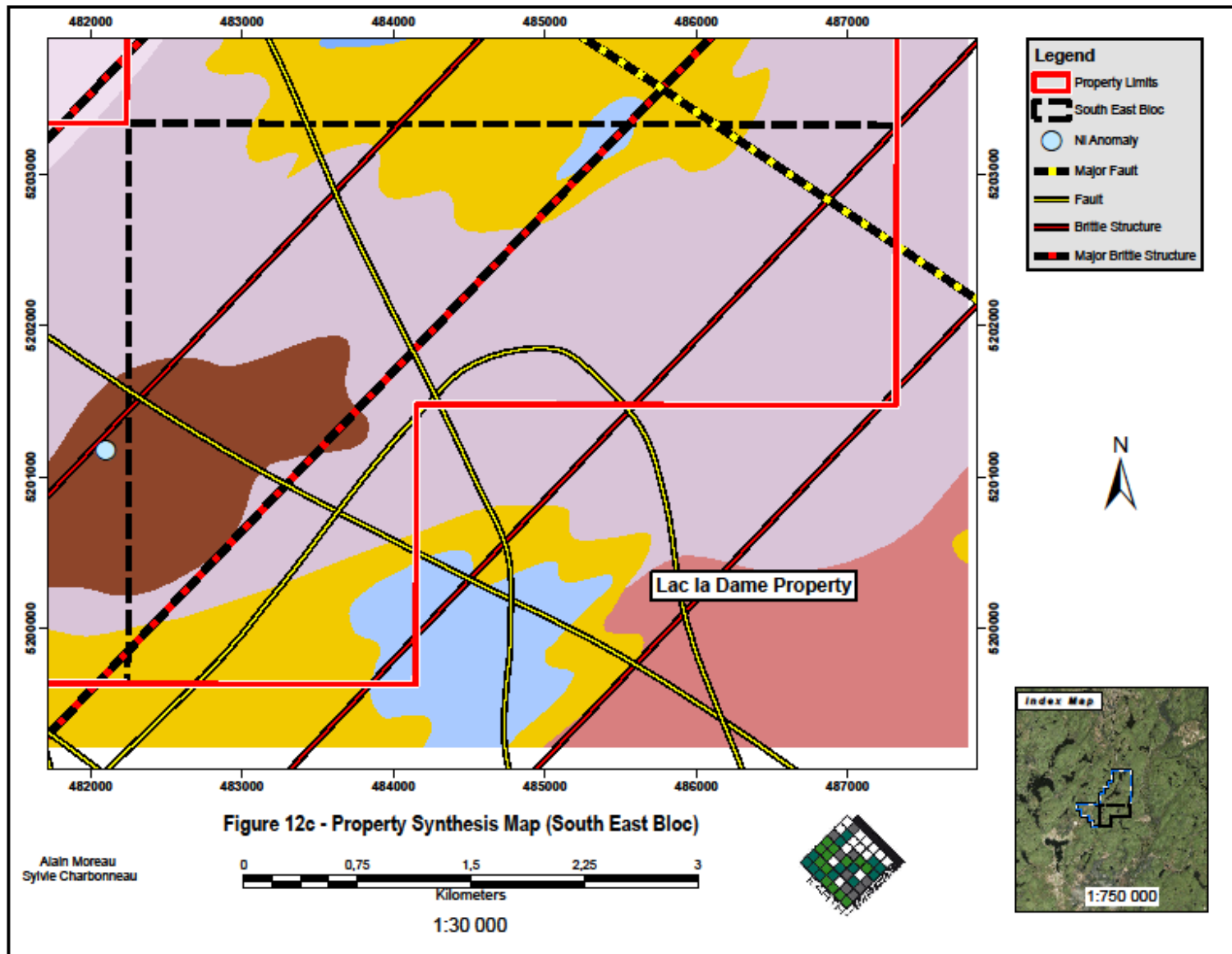
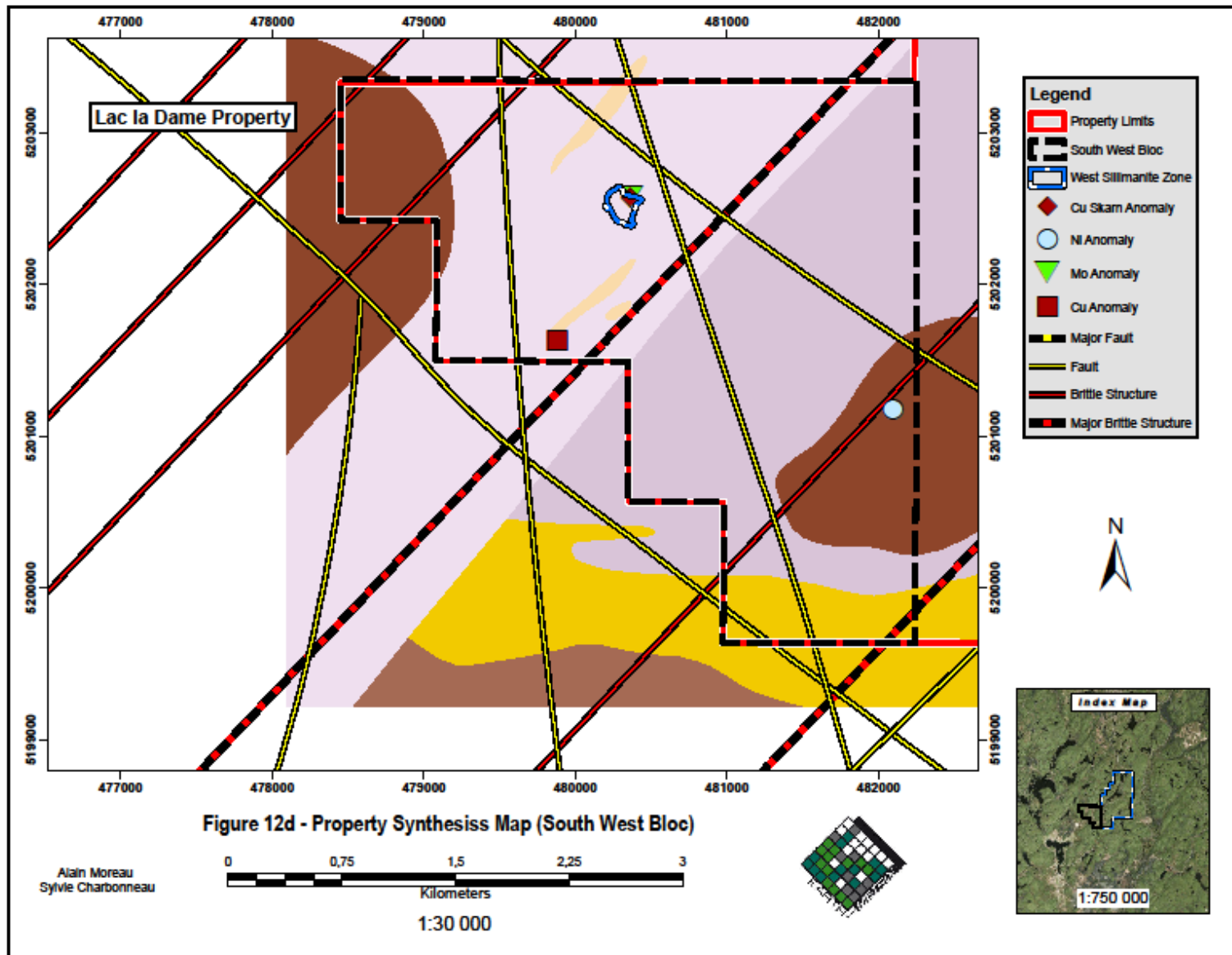


FIGURE 12D: PROPERTY SYNTHESIS MAP (SOUTH-WEST BLOCK)



#### **7.4) MINERALIZED ZONES**

Over the years, two mineralized zones have been discovered on the property: The Lac La Dame Sillimanite West and Central zones, (see Figure 12 and Figure 13 for details).

The Lac La Dame West, Central and East zones are located within a sillimanite/muscovite/garnet and graphite migmatitic paragneiss from the metamorphic Rabot suite along a major NNE ductile structure in contact with enderbite and diorite (NNW) and tonalite/gneiss (SSE). The contact between the Cain and Baker domains interpreted as a thrust fault (inverse dextral movement) lies just east of the sillimanite zone. The sillimanite mineralization is associated with muscovite, garnet and graphite.

Other mineralized showings, geological zones of interest and geochemical anomalies occur on or close to property and remain poorly explored. They are:

- Faubert showing (2.96% Cu)
- Porphyre Corners Showing, (0.45% Cu) localized close to the Lac La Dame West Sillimanite Zone
- Mo South-West Showing (85 ppm Mo close to the Lac La Dame West Sillimanite Zone)
- Central Ni (400 ppm Ni)
- Cauchon graphite showing (> 5% Graphite in marble)
- South Porphyre Cu showing (0,1 to 0,5 % Cu in Monzonite)
- U showing

## **8.0) DEPOSIT TYPES**

Six types of mineral deposits can be considered for the exploration of the Lac La Dame Property. The first is a sillimanite/garnet/graphite deposit like the Lac La Dame West, Central and East zones. Evidence of a hydrothermal and metamorphic origin is supported by the presence of alteration and metamorphic minerals easily seen on outcrops and typical minerals assemblage such as: sillimanite, garnet, graphite, muscovite, limonite and occasionally pyrrhotite, rutile and cordierite.

The second type to explore for on the property is dolomite deposits. Prospective rocks such as dolomitic marbles have been mapped by the MERN (RG 2000-06).

The third type to explore for on the property is graphite deposits in calcitic marbles like the Cauchon graphite showing found in marble that was mapped (MERN (RG 2000-06)) on property.

The fourth type to explore for on the property is magmatic Cu-Ni-Co with PGE enrichment deposits like the Faubert Cu-Ni-Co and Ni Central showings in gabbroic rocks identified on the property. Other gabbro rock assemblages have been mapped by the MERN (RG 2000-06).

The fifth type to explore for on the property is Porphyry Copper or disseminated copper like the Porphyre Corners Cu and South Porphyre showings within intrusive rocks identified on the property. Other intrusive rock assemblages have been mapped by the MERN (RG 2000-06).

Finally, skarn type (Cu-Mo, Cu-W) mineralization is the sixth type of deposit to explore like the Mo South-West showing. The presence of skarnified rocks within the property support this possibility.

## **9.0) EXPLORATION**

Reconnaissance and detailed field work has been realized between Mid-May 2015 to November 2016.

The work consisted to survey additional areas not previously covered on southern part of property. Geological mapping in the vicinity of the West Lac La Dame Sillimanite zone, channel sampling on

the Central Sillimanite zone, survey of the Faubert showing, precise delineation of the Central Sillimanite zone and metallurgical testing. 46 measurements were taken in 2015-2016.

Main results of this survey are:

- H) Access is quite good in the property through secondary gravel forest roads and VTT trails.
- I) Showings and mineralized areas are strongly controlled by structures; main trend is 040 for the Faubert showing and the Lac La Dame Sillimanite zones. See Figure 9 and Figures 9b to 9d for details.
- J) Geology described in the MERN map is more or less accurate at scale 1: 20,000; we have provided a modified geological map based on recent geological mapping of the Property. Approximately 65% of Property has been mapped at scale 1: 20,000. Southern area has been updated. See Figure 7 for details.
- K) Available data combined with Structural information allowed us to generate additional exploration targets to be verified on the property. See Figure 12 for details.
- L) The extent of the Faubert showing is still unknown despite additional prospecting efforts done in 2015. See figure 5b, "Property Sampling Sites Map – Central Block" for more details.
- M) Detailed Mapping and Sampling (channel sampling) of the Lac La Dame Sillimanite Central zone. A comprehensive composite sample of 100kg has been used for a preliminary metallurgical testing. Results show that the Sillimanite is suitable for commercial applications; possible microcline feldspar has been detected in the composite sample. See Figure 13 for details.
- N) A Porphyry copper showing has been discovered in the South-West Block and is depicted as a monzonite granite with porphyry texture having visually between 0,1% Cu to 0,5% Cu. A major graphite showing has been unfolded in the Central Block of Property about 1,5 km north-west of Lac Faubert. The graphite showing is located within marble and has a minimum width of 40m (See Figure 12b for details). Finally, weakly mineralized gabbro has been identified just south of the Central Sillimanite zone.

The Lac La Dame West zone is a concentric Paragneiss zone having a diameter of 200m. The Lac La Dame Sillimanite Central zone is a continuous mineralized structure that has been traced for more than 2,500m with an average width of 200m and a minimum depth of 12m. However, information is not sufficient to establish the size and the 3D geometry of the mineralized zones.

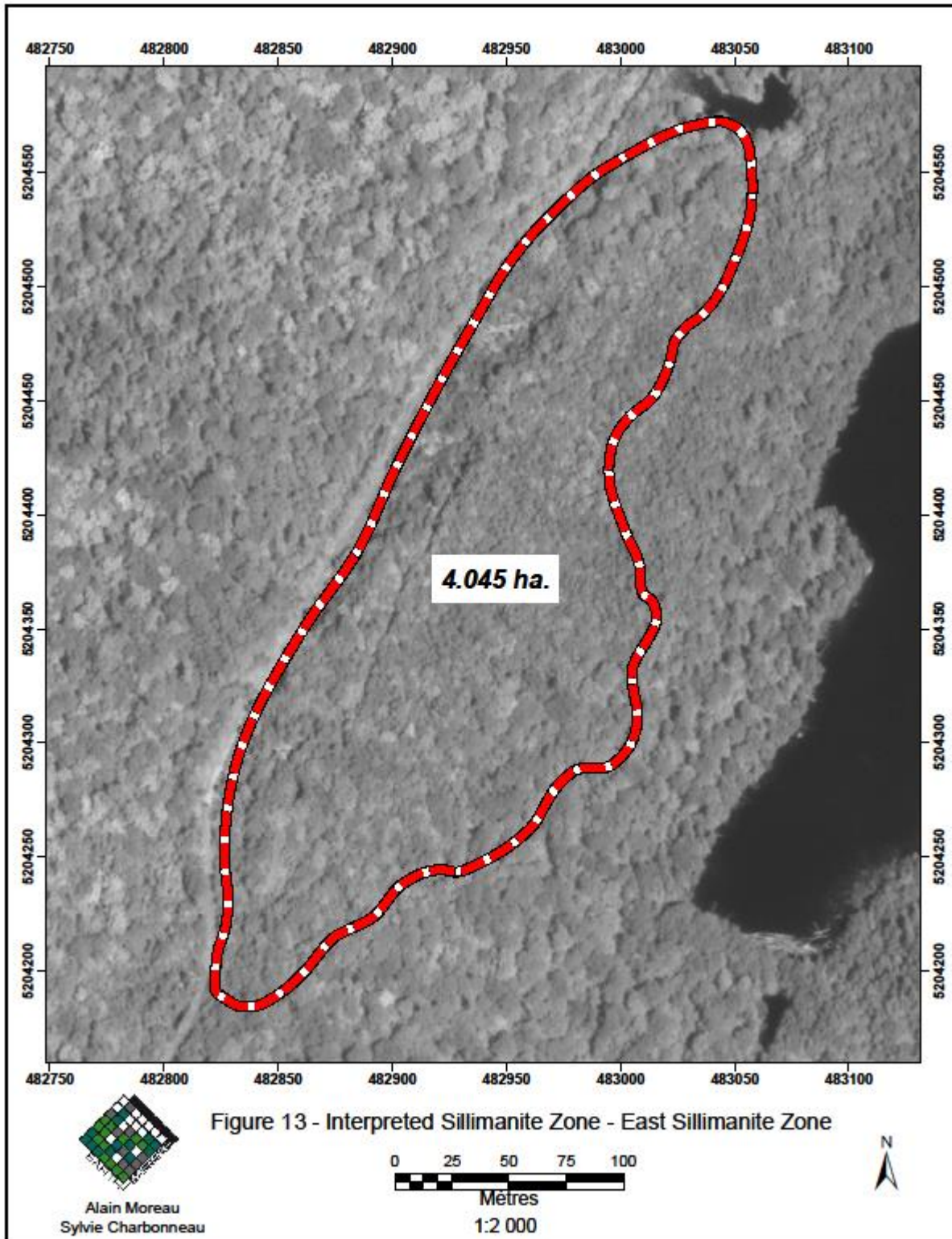
Finally, Figure 12a to 12d show Synthesis Map for all Property Blocks.

*Additional work is needed to precise the potential of the property that is largely underexplored.*

*Recommendations are:*

- 1) Complete a Total Field Magnetism and EM survey with proper inversion on all over the property. The EM survey (and modelled data) should characterize N040 graphitic faults that are correlated with Sillimanite bodies, possible Cu-Ni mineralization within gabbroic rocks, the extent of the identified graphite showing and inversion models could possibly unfold buried porphyry deposits in the West Sillimanite and South areas.*
- 2) Complete Mapping and prospecting the property especially along the mineralized occurrences (Porphyry Cu, Graphite and Cu-Ni).*
- 3) Detailed geological mapping of the Sillimanite West, Central and East zones with appropriate stripping.*
- 4) As the mineralization is controlled by structures. A more detailed and refined structural map should be performed.*
- 5) Drilling of the Lac la Dame Central zone (sillimanite/microcline/graphite) for resources estimation.*

FIGURE 13: INTERPRETED CENTRAL SILLIMANITE ZONE CONTOURS



## **10.0) DRILLING**

No drilling has been done by the current owners. Previous drilling is summarized in Item 6,0 “Historical Drilling”.

## **11.0) SAMPLE PREPARATION, ANALYSES AND SECURITY**

Sampling has been carried out by the author and a composite sample has been sent to a lab for a more detailed metallurgical work (Lac La Dame Central Sillimanite (See Appendix 1)). This preliminary testing has been realized for Sillimanite content and other minerals of interest. Security of samples followed normal procedures and the author do not suspect any inadequate practices.

## **12.0) DATA VERIFICATION**

The author was able to verify part of the historical work. During the site visits, trails, stripped zones and old drilling sites were observed, attesting the exploration work done in the past. The author currently has no reason to suspect that the work reported on the property was in fact not done

## **13.0) MINERAL PROCESSING AND METALLURGICAL TESTING**

A preliminary mineral processing and metallurgical testing has been realized from a composite sample of 115 kg coming from the Lac La Dame Central zone (a series of channel samples from the main mineralized area). The objective of this testing was to characterize sillimanite mineralization and basic parameters (flowsheet) for the separation of sillimanite and other minerals of interest. Results indicate that Sillimanite can be concentrated easily. Microcline feldspar is a new potential economic mineral that could be possibly extracted through a specific process. This preliminary testing has been realized in 2016 by ANZAPLAN (Germany). See Appendix 1 for details.

## **14.0) MINERAL RESOURCE ESTIMATES**

Mineral resources have never been estimated on the Lac La Dame property.

## **15.0) ADJACENT PROPERTIES**

No significant mineral deposits are in the vicinity of the Lac La Dame property. Dolomite and Graphite occurrences are reported 3km north of the property. The Lachabel W-Cu skarn deposit (uneconomic at present) is located 10 km northeast of the claims and has been working intensively by Noranda/SOQUEM in the past (GM 59686).

Please note that the author was able to verify the information and confirm the existence of these mineralized zones although their significance still remained to be verified by additional exploration work.

## **16.0) OTHER RELEVANT DATA AND INFORMATION**

An old sawmill close to Ste-Anne-Du-Lac (2km from village center) could be a possible site of interest for the implementation of a sillimanite and industrial minerals processing plant

## **17.0) INTERPRETATION AND CONCLUSION**

Since 1969, several exploration activities were conducted on the property with geophysics, spectrometer, geological surveys, stripping and channel sampling and 6 holes totalling 124 m. Looking at the compilation map of historical exploration work, we can see that the geology and structure of the area is still poorly understood despite the reconnaissance work undertaken in late 1990's and early 2000's by the MERN, the presence of numerous mineralized outcrops and showings surrounded by major geological features such as a major structure (boundary between Caïn and Baker domains) typical of major mineralized systems.

We suggest completing stripping and drilling of the Lac La Dame Sillimanite Central zone with systematic sampling for resources assessment and complete the geophysics (airborne) over all parts of property.

We also suggest putting significant efforts in prospecting, sampling and possibly stripping along the Graphite and the Cu Porphyry showings.

Finally, we suggest completing prospecting and geological mapping of the remaining unexplored 35% property surface at scale 1: 20,000 for the update of the property geological map.

## **18.0) RECOMMENDATIONS**

To evaluate the property's full potential, assess the mineralization of the Lac La Dame, an exploration program is suggested, for a total of \$2,000,000. Preparation work for the stripping and drilling programs (line cutting) with a 5,000m of diamond drilling is recommended to precisely evaluate Sillimanite mineralization.

If Phase I is successful at outlining new and/or extending known mineralized sillimanite zones a comprehensive drilling program imbedded in a feasibility study will allow assessment of the economic value of the Sillimanite zones within this property. Phase II, with an appropriate budget, will be consisting to complete all studies up to pre-production including public hearings on the project.

**TABLE 4: PROPOSED BUDGET****STRIPPING, DRILLING OF THE LAC LA DAME SILLIMANITE ZONES AND EXPLORATION OF THE PROPERTY****L) Airbone Geophysics**Magnetics Airborne geophysics (800km \* \$125/km).....**\$100,000****M) Lac La Dame Sillimanite zones stripping**1,000m<sup>3</sup> stripping and terrain preparation (road refurbishing) \* \$50/m<sup>3</sup> (all inclusive).....**\$50,000****N) Drilling including quality control programs and permitting**5,000m drilling \* \$200/m (all inclusive).....**\$1,000,000****O) Field Personnel for sampling and Geology**Team of a geologist and technician (125 days \* \$800/day).....**\$100,000****P) Assays (Stripping) and associated costs**750 assays \* 80\$/assay.....**\$60,000****Q) GIS Integration and Maps of the Lac La Dame Zones**

Integration of additional geological data on the property into Arc/View.

Processing and map production and preliminary 3D modelling (50 days \* \$800/day).....**\$40,000****R) 43-101 with resources estimation (external consultant).....**\$60,000******S) Sillimanite characterization including mineralogical and metallurgical test**250,000\$/Test.....**\$250,000****T) Supervision and Management of the Exploration Program**Experienced geologist (125 days \* \$800/day).....**\$100,000****U) Preliminary Market Study**Applications and market segments, pricing, pricing model sensitivities and contracts.....**\$50,000****V) Contingencies.....**\$190,000******TOTAL:.....**\$2,000,000****

**COST RESUME FOR PHASE I**

L) AIRBORNE GEOPHYSICS.....	\$105,000
M) LAC LA DAME STRIPPING.....	\$50,000
N) DRILLING INCLUDING QUALITY CONTROL PROGRAMS/PERMITTING.....	\$1,000,000
O) FIELD PERSONNEL FOR GEOLOGY.....	\$100,000
P) ASSAYS AND ASSOCIATED COSTS.....	\$60,000
Q) GIS INTEGRATION AND MAPS.....	\$40,000
R) 43-101 WITH RESOURCES ESTIMATION.....	\$60,000
S) SILLIMANITE CHARACTERIZATION.....	\$250,000
T) SUPERVISION AND MANAGEMENT.....	\$100,000
U) PRELIMINARY MARKET STUDY.....	\$50,000
V) CONTINGENCIES.....	\$90,000
<b>TOTAL PHASE 1:</b> .....	<b>\$2,000,000</b>

**19.0) REFERENCES****19.1) MERNQ / ASSESSMENT REPORTS**

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
	M R N	1963	PLANS DE LOCALISATION DES PRODUCTEURS, DES DEPOTS ET DES PROSPECTS DES MINERAUX INDUSTRIELS	ANALYSE DE ROCHE		GM 36532
SCHUUR, W	CANADIAN AERO MINERAL SVYS LTD, CANADIAN AERO SERVICE LTD	1969	REPORT ON AIRBORNE GAMMA RAY SPECTROMETER SURVEY	LEVE RADIOMETRIQUE AERIEN	NEW DAVIES PETROLEUMS LTD, NEW DAVIES SYND	GM 23055
CONN, H K	CANADIAN AERO SERVICE LTD	1969	PROGRESS REPORT - CONNOR FALLS AREA	LEVE RADIOMETRIQUE AERIEN	CANADIAN JOHNS-MANVILLE CO LTD	GM 23483
SCHUUR, W	CANADIAN AERO SERVICE LTD	1969	REPORT ON AIRBORNE GAMMA RAY SPECTROMETER SURVEY IN THE MONT-LAURIER AREA	LEVE RADIOMETRIQUE AERIEN	CLAIMS BEAUCHEMIN, RADEX MINERALS LTD	GM 24830
SCHUUR, W	CANADIAN AERO SERVICE LTD	1969	REPORT ON AIRBORNE GAMMA RAY SPECTROMETER SURVEY IN THE MONT-LAURIER AREA	LEVE RADIOMETRIQUE AERIEN	CLAIMS PROVENCHER, NORATOM URANIUM RESOURCES LTD	GM 25044
SCHUUR, W	CANADIAN AERO SERVICE LTD	1969	REPORT ON AIRBORNE GAMMA RAY SPECTROMETER SURVEY IN LEMAN TOWNSHIP	LEVE RADIOMETRIQUE AERIEN	CLAIMS TOKARSKY, MONT-LAURIER URANIUM MINES INC	GM 25148
VEILLEUX, C A	CAVEX ENGRNG & GEOPHYSICS REGD	1969	STE ANNE DU LAC AREA	LEVE GEOLOGIQUE, LEVE RADIOMETRIQUE AU SOL	NEWBASKA GOLD & COPPER MS LTD	GM 25307

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
HONSBERGER, J C	CANA EXPL CONSULTANTS LTD	1969	SCINTILLOMETER SURVEY AND GEOLOGICAL MAPPING	LEVE GEOLOGIQUE, LEVE RADIOMETRIQUE AU SOL	CONSOLID RED POPLAR MINERALS L	GM 25326
HONSBERGER, J C	CANA EXPL CONSULTANTS LTD	1969	REPORT ON SCINTILLOMETER SURVEY, DETAILED SURVEY, GEOLOGICAL MAPPING AND PROSPECTING, 60-CLAIM GROUP	LEVE GEOLOGIQUE, LEVE RADIOMETRIQUE AU SOL	GREEN POINT MINES LTD	GM 25327
GLEDHILL, T R, SCHUUR, W	CANADIAN AERO SERVICE LTD	1969	REPORT ON AIRBORNE GAMMA RAY SPECTROMETER SURVEY IN THE MONT-LAURIER AREA	LEVE RADIOMETRIQUE AERIEN	CLAIMS KENT, MCRAE MINING CORP LTD	GM 25498
MCCANNELL, J D		1969	SUMMARY REPORT, MONT LAURIER URANIUM MINES	LEVE RADIOMETRIQUE AERIEN, LEVE RADIOMETRIQUE AU SOL	MONT-LAURIER URANIUM MINES INC	GM 25785
KIRWAN, G L	GEO-SURVEYS CONSULTANTS LTD	1970	SCINTILLOMETER SURVEY	LEVE RADIOMETRIQUE AU SOL	VANESSA URANIUM MINES LTD	GM 25988
		1970	CROQUIS DE LOCALISATION DES TRAVAUX DE SURFACE	TRAVAUX DE SURFACE	CLAIMS BEAUCHEMIN, CLAIMS BRADLEY	GM 26245
GLEDHILL, T		1970	REPORT ON GEOPHYSICAL AND GEOCHEMICAL SURVEYS	LEVE RADIOMETRIQUE AU SOL, SOL, GEOCHIMIE	NEW DAVIES PETROLEUMS LTD	GM 26682
GLEDHILL, T		1970	REPORT ON GROUND EXAMINATION OF AIRBORNE GAMMA-RAY ANOMALIES	LEVE RADIOMETRIQUE AU SOL, SOL, GEOCHIMIE	NEW DAVIES PETROLEUMS LTD	GM 26683
	COMMISSION GEOLOGIQUE DU CAN, M R N	1972	LEVE RADIOMETRIQUE AERIEN - REGION DE MONT-LAURIER	LEVE RADIOMETRIQUE AERIEN		DP 114

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
OLENOCIN, E, TREMBLAY, M	MOUSSEAU TREMBLAY INC	1974	URANIUM PROPERTY, CHOPIN, LEMAN, JOLIETTE 40, JOLIETTE 50 TWPS: LINECUTTING MAP	TRAVAUX DE SURFACE	COMMANDER NICKEL COPPER MS LTD	GM 29554
MASSE, J P	MRN	1974	L'URANIUM AU QUEBEC	COMPILATION, LEVE GEOLOGIQUE		GM 51690
KISH, L	MRN	1975	RADIOACTIVE OCCURRENCES IN THE GRENVILLE OF QUEBEC: MONT-LAURIER - CABONGA DISTRICT	LEVE GEOLOGIQUE		DP 310
BROWN, P A R		1976	AIRBORNE RADIOMETRIC SURVEY	LEVE RADIOMETRIQUE AERIEN	CLAIMS AUBIN, CLAIMS COTE	GM 32756
GLEDHILL, T		1977	REPORT OF GAMMA RAY SPECTROMETER SURVEY, BRESSANI LAKE, MOUNT LAURIER URANIUM AREA	LEVE RADIOMETRIQUE AU SOL	CLAIMS BROWN, Q C EXPLS LTD	GM 33047
BROWN, P A R, DARKE, K H	KENNETH H DARKE CONSULTANTS L, PROJEX LTD	1978	SUMMARY EXPLORATION REPORT ON THE BRESSANI LAKE URANIUM PROPERTY	LEVE GEOLOGIQUE, LEVE RADIOMETRIQUE AERIEN, LEVE RADIOMETRIQUE AU SOL	INGAMAR EXPLS LTD	GM 34681
	MRN	1981	CARTE DE LOCALISATION DES TRAVAUX GEOSCIENTIFIQUES 031J	COMPILATION		CL 031J
	MRN	1981	CARTE DE LOCALISATION DES TRAVAUX GEOSCIENTIFIQUES 031O	COMPILATION		CL 031O
AVRAMTCHEV, L, PICHE, G	MRN	1981	CATALOGUE DES GITES MINERAUX DU QUEBEC: REGION DE LAURENTIE- SAGUENAY			DPV 809

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BUTEAU, P	MRN	1989	ATLAS DES TOURBIERES DU QUEBEC MERIDIONAL	EVALUATION DES RESERVES, TOURBIERE		DV 89-02
	DIGIM INC	1989	INTERPRETATION STRUCTURALE (A PARTIR D'IMAGES SATELLITE) - GRENVILLE DE LA REGION GATINEAU-AURICIE	TELEDETECTION		MB 89-27
	SERVICE DE L'INVENTAIRE FORESTIER	1989	CARTE DES DEPOTS DE SURFACE 031J/14 - DOCUMENT DE TRAVAIL	GEOLOGIE DES DEPOTS MEUBLES		SIF 031J/14
	SERVICE DE L'INVENTAIRE FORESTIER	1989	CARTE DES DEPOTS DE SURFACE 031O/03 - DOCUMENT DE TRAVAIL -	GEOLOGIE DES DEPOTS MEUBLES		SIF 031O/03
	M E R	1990	CARTE DE LOCALISATION DES GITES MINERAUX - 031J	COMPILATION		FG 031J - CL
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CHOINIÈRE, J	MRN	1990	GEOCHIMIE DES MINERAUX LOURDS ET DES SEDIMENTS DE RUISSEAU - REGION DE PAPINEAU - LABELLE	MINERAUX LOURDS, GEOCHIMIE, SEDIMENTS DE RUISSEAUX, GEOCH		MB 89-32
CHOINIÈRE, J	C R M	1992	GEOCHIMIE DES MINERAUX LOURDS ET DES SEDIMENTS DE RUISSEAU - REGION DE MAURICIE - PORTNEUF	MINERAUX LOURDS, GEOCHIMIE, SEDIMENTS DE RUISSEAUX, GEOCH		MB 92-18
AVRAMTCHEV, L	MRN	1992	CARTE MINERALE DE LA REGION DE MONTREAL - MONT-LAURIER, QUEBEC	COMPILATION		PRO 90-05

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NANTEL, S, CHOINIÈRE, J	MRN	1994	SIGNAUX INDICATEURS GEOCHIMIQUES POUR LA RECHERCHE DE GITES DE CU-CO DANS LA PARTIE SUD DE LA PROVINCE DE GRENVILLE	SEDIMENTS DE RUISSEAUX, GEOCH		MB 94-16
BEAUMIER, M, KIROUAC, F	MRN	1994	SÉRIE DE CARTES GEOCHIMIQUES COULEUR, ÉCHANTILLONNAGE DES SEDIMENTS DE RUISSEAU, RÉGION DE MONT-LAURIER	SEDIMENTS DE RUISSEAUX, GEOCH		MB 94-31
VIGER, J, FOURNIER-VIGER, D	C R M, LABORATOIRES CHEMEX LTEE	1995	RAPPORT DE PROSPECTION, PROJET DECARIE	TRAVAUX DE SURFACE, ANALYSE DE ROCHE	CLAIMS VIGER	GM 55343
BARRETTE, J P	LABORATOIRES CHEMEX LTEE	1996	RAPPORT GEOLOGIQUE ET DE PROSPECTION MINÉRALE, PROJET DECARIE	LEVÉ GEOLOGIQUE, COMPILATION, ÉVALUATION TECHNIQUE, ANALYSE DE ROCHE, BLOC ERRATIQUE	CLAIMS FOURNIER-VIGER, CLAIMS VIGER	GM 55344
BELISLE, M		1999	RAPPORT DE CHEMINEMENT DE PROSPECTION POUR PROJET GRANITE 2000	LEVÉ GEOLOGIQUE, TRAVAUX DE SURFACE, PIERRES ARCHITECTURALES	N/D	GM 59280
BELLEMARE, Y	MRN	1999	INVENTAIRE DES CARRIÈRES DE PIERRE, RÉGION DES HAUTES-LAURENTIDES (031J)	LEVÉ GEOLOGIQUE, ANALYSE DE ROCHE, PIERRES ARCHITECTURALES		MB 99-02
NANTEL, S, JACOB, H L	MRN	2000	RESSOURCES POTENTIELLES EN GRANITE ARCHITECTURAL ET EN MINÉRAUX INDUSTRIELS DANS LES RÉGIONS DE SAINTE-ANNE-DU-LAC ET DE L'ASCENSION (31J)	COMPILATION, PIERRES ARCHITECTURALES		PRO 2000-01

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
NANTEL, S, JACOB, H L	MRN	2000	POTENTIAL RESOURCES OF ARCHITECTURAL GRANITE AND INDUSTRIAL MINERALS IN THE SAINTE-ANNE-DU-LAC AND L'ASCENSION AREAS (31J)	COMPILATION		PRO 2000-02
NANTEL, S	MRN	2001	GEOLOGIE DE LA REGION DE SAINTE-ANNE-DU-LAC (SNRC 31J/14)	LEVE GEOLOGIQUE		RG 2000-06
BERCLAZ, A, MAURICE, C	MRN	2002	CARTES PRELIMINAIRES EN COULEUR DES TRAVAUX DE CARTOGRAPHIE ET DES ETUDES 2002-2003	LEVE GEOLOGIQUE, COMPILATION		DV 2002-11
TURCOTTE, B	CHIMITEC LTEE, CONSORMINEX INC	2002	RAPPORT SUR LES TRAVAUX D'EXPLORATION EFFECTUES EN 2001, PROJET LACHABEL 1510	ANALYSE DE ROCHE, LEVE GEOLOGIQUE, SEDIMENTS DE RUISSEAUX, GEOCH, SONDAGE AU DIAMANT, BLOC ERRATIQUE, SOL, GEOCHIMIE, LEVE E M AU SOL, LEVE MAGNETIQUE AU SOL	NORANDA INC, SOQUEM INC	GM 59686
ORTEGA, J	CHIMITEC LTEE	2002	RAPPORT SUR LES TRAVAUX D'EXPLORATION 2002, PROJET GATINEAU JV (1510)	ANALYSE DE ROCHE, SONDAGE AU DIAMANT, SOL, GEOCHIMIE, LEVE MAGNETIQUE AERIEN, LEVE DIGHEM, LEVE DE P P, LEVE GEOLOGIQUE	CLAIMS BELISLE, NORANDA INC	GM 59949
BELISLE, M, ROBIDAS, M	CHIMITEC LTEE	2002	PROJET CAIN-BAKER 2002	ANALYSE DE ROCHE, TRAVAUX DE SURFACE	CLAIMS BELISLE	GM 61246

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NANTEL, S, PINTSON, H	MRN	2002	GEOLOGIE DE LA REGION DU LAC DIEPPE (31O/03)	LEVE GEOLOGIQUE, PIERRES ARCHITECTURALES		RG 2001-16
NANTEL, S	MRN	2002	COMPILATION GEOSCIENTIFIQUE - GEOLOGIE 1/50 000, 31O03 - LAC DIEPPE	LEVE GEOLOGIQUE		SI-31O03-C3G-02C
FAURE, S	CONSOREM	2004	FRONT DE GRENVILLE: APPROCHE GEOPHYSIQUE	COMPILATION		GM 64092
GIRARD, R	IOS SERVICES GEOSCIENTIFIQUES INC	2005	SEPARATION ET EVALUATION DE LA SILLIMANITE D'UNE SERIE D'ECHANTILLONS DE PARAGNEISS, PROJET MONT-LAURIER	ANALYSES, MINERAUX INDUSTRIELS, ESSAI DE TRAITEMENT	MRNFP	GM 61520
TOGOLA, N G, SHARMA, K N M	MRNF	2005	EVALUATION DU POTENTIEL EN SILLIMANITE ET MUSCOVITE AU NORD-EST DE MONT-LAURIER	MINERAUX INDUSTRIELS		RP 2005-06
TOGOLA, N G, SHARMA, K N M	MRNF	2005	ASSESSMENT OF SILLIMANITE AND MUSCOVITE POTENTIAL NORTHEAST OF MONT-LAURIER	MINERAUX INDUSTRIELS		RP 2005-06(A)
DION, D J	MRNF	2006	DONNEES NUMERIQUES DES LEVES GEOPHYSIQUES AEROPORTES VERSES AUX TRAVAUX STATUTAIRES, REGION DU GRENVILLE ET DES BASSES TERRES DU SAINT-LAURENT (A L'OUEST DE LA LONGITUDE 68°)	COMPILATION		DP-2006-01

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
NANTEL, S	MRNF	2008	GEOLOGIE ET APERCU DE LA GEOCHRONOLOGIE ET DES INDICES METALLIQUES DECOUVERTS ENTRE 1996 ET 2007 DANS LA PARTIE NORD DE LA CEINTURE CENTRALE DES METASEDIMENTS, PROVINCE DE GRENVILLE, REGION DE MONT-LAURIER	COMPILATION, GEOCHRONOLOGIE, LEVE GEOLOGIQUE		DV 2008-04
BILODEAU, C, BEAUDIN, J	OMEGALPHA INC, ACME ANALYTICAL LABORATORIES LTD	2008	EVALUATION PRELIMINAIRE DU POTENTIEL URANIFERE, PROJET 114025, PROPRIETE MENJO	LEVE GEOLOGIQUE, LEVE SCINTILLOMETRIQUE AU SOL, ANALYSE DE ROCHE, ANALYSES	URANOR INC	GM 63529
TREPANIER, S	CONSOREM	2009	EVALUATION DU POTENTIEL EN URANIUM ET EN CU-AU-U ET CARTOGRAPHIE PREVISIONNELLE D'INTRUSIONS MAFIQUES-ULTRAMAFIQUES DANS LE GRENVILLE	COMPILATION		EP 2009-03
TREPANIER, S	CONSOREM	2009	OPTIMISATION DES LEVES DE SEDIMENTS DE RUISSEAUX POUR L'EXPLORATION, PARTIE A: MODELISATION DES RESEAUX HYDROGRAPHIQUES A PARTIR DE MODELES NUMERIQUES DE TERRAIN, PROJET 2008-09	SEDIMENTS DE RUISSEAUX, GEOCH, COMPILATION		GM 65079
TREPANIER, S	CONSOREM	2009	OPTIMISATION DES LEVES DE SEDIMENTS DE RUISSEAUX POUR L'EXPLORATION, PARTIE B: GEOCHIMIE DES SEDIMENTS DE RUISSEAUX, ETUDE DES DONNEES DU SUD-OUEST DU GRENVILLE, PROJET 2008-09	SEDIMENTS DE RUISSEAUX, GEOCH, COMPILATION		GM 65080

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
DAVID, MOUKHSIL, A J,	GEOTOP UQAM-MCGILL, MRNF	2009	DATATIONS U-PB EFFECTUEES DANS LES PROVINCES DE GRENVILLE ET DE CHURCHILL EN 2006-2007	GEOCHRONOLOGIE, COMPILATION		RP 2009-03
DAVID, MOUKHSIL, A J,	MRNF	2009	U-PB AGE DATING IN THE GRENVILLE AND CHURCHILL PROVINCES IN 2006-2007	COMPILATION, GEOCHRONOLOGIE		RP 2009-03(A)
	MRNF	2010	CARTE(S) GÉOLOGIQUE(S) DU SIGEOM - feuillet 31j	LEVE GEOLOGIQUE		CG SIGEOM31J
	MRNF	2010	CARTE(S) GÉOLOGIQUE(S) DU SIGEOM - feuillet 31o	LEVE GEOLOGIQUE		CG SIGEOM31O
LAMOTHE, D	MRNF	2010	MODELISATION DE CIBLES DE L'ENVIRONNEMENT SECONDAIRE PAR DES TECHNIQUES DE SEUILS NATURELS ET DE REGRESSION SPATIALE MULTIPLE	COMPILATION		EP 2010-01
BERGERON, K, BERNATCHEZ, M	MRNF	2011	RAPPORT SUR LES ACTIVITES MINIERES AU QUEBEC - 2010	COMPILATION		DV 2011-01
BERNATCHEZ, M, BERGERON, K	MRNF	2011	REPORT ON MINERAL ACTIVITIES IN QUEBEC - 2010	COMPILATION		DV 2011-02
	MRNF	2011	RESUMES DES CONFERENCES ET DES PHOTOPRESENTATIONS, QUEBEC EXPLORATION 2011	COMPILATION		DV 2011-03

Author (individual)	Author (company)	Year of publ.	Title	Nature of work	Owner of titles	Report #
	MRNF	2011	ABSTRACTS OF ORAL PRESENTATIONS AND POSTERS, QUEBEC EXPLORATION 2011	COMPILATION		DV 2011-04
LAMOTHE, D	MRNF	2011	MODELLING TARGETS IN THE SECONDARY ENVIRONMENT BY THE NATURAL BREAK AND MULTIVARIATE SPATIAL REGRESSION TECHNIQUES	COMPILATION		EP 2010-02

**19.2) GEOSCIENTIFIC PAPERS**

**EarthMetrix Inc., 2013**: Geological and structural study, Lac La Dame Property, Grenville Province, Québec, Canada.

**Wynne-Edwards, H.R., 1966**: The Grenville Province. In: Variations in Tectonic Styles in Canada (R.A. Price & R.J.W. Douglas, Editors). Geological Association of Canada; Special Paper 11, pages 263-334.

## **APPENDIX 1**

---

### Sillimanite Characterization (Central Zone)

Other minerals present in the samples included quartz, garnet, biotite, muscovite, feldspar, chlorite, and a number of opaque minerals including pyrite, pyrrhotite, rutile, graphite and limonite.

#### **ANZAPLAN preliminary analyses of sample material**

ANZAPLAN has received fresh sample material (4 buckets; total weight 115 kg) coming from the drilling site and two other sites nearby (50 m) from Earth Metrix Inc. in July 2016. The initially 4 received buckets containing the sample material were analyzed chemically (XRF) and mineralogically (XRD).

The chemical composition is exhibited in Table 1.

Table 1: Chemical composition of the 4 received samples (D1 to D4)

		<b>16-11833</b>	<b>16-11834</b>	<b>16-11835</b>	<b>16-11836</b>
		<b>D1 Earth</b>	<b>D2 Earth</b>	<b>D3 Earth</b>	<b>D4 Earth</b>
		<b>Metrix</b>	<b>Metrix</b>	<b>Metrix</b>	<b>Metrix</b>
SiO <sub>2</sub>	[wt.-%]	63.5	61.7	57.9	60.5
Al <sub>2</sub> O <sub>3</sub>	[wt.-%]	20.9	22.1	24.6	22.8
Fe <sub>2</sub> O <sub>3</sub>	[wt.-%]	6.79	7.58	7.93	7.10
TiO <sub>2</sub>	[wt.-%]	1.22	1.18	1.37	1.28
K <sub>2</sub> O	[wt.-%]	3.38	3.31	3.53	3.38
Na <sub>2</sub> O	[wt.-%]	0.37	0.35	0.33	0.42
CaO	[wt.-%]	0.09	0.06	0.07	0.08
MgO	[wt.-%]	1.23	1.26	1.33	1.33
PbO	[wt.-%]	<0.01	<0.01	<0.01	<0.01
BaO	[wt.-%]	0.08	0.09	0.09	0.08
SO <sub>3</sub>	[wt.-%]	<0.01	<0.01	<0.01	<0.01
MnO	[wt.-%]	0.04	0.03	0.03	0.04
P <sub>2</sub> O <sub>5</sub>	[wt.-%]	0.03	0.03	0.03	0.03
ZrO <sub>2</sub>	[wt.-%]	0.05	0.05	0.06	0.06
LOI	[wt.-%]	2.3	2.2	2.7	2.8

All samples (D1 to D4) were found to exhibit Al<sub>2</sub>O<sub>3</sub> levels between 20.9 and 24.6 wt.-% and SiO<sub>2</sub> levels ranging from 57.9 to 63.5 wt.-%.

X-ray diffraction analysis clearly evidences the presence of sillimanite, quartz, muscovite, microcline and clinocllore in all four samples D1 to D4 (Figure 1, Figure 2, Figure 3, Figure 4).

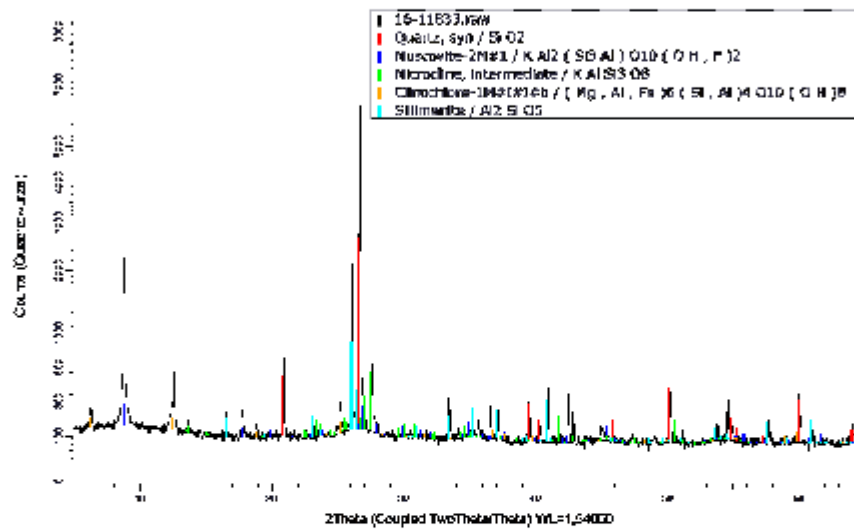


Figure 1: X-ray diffraction pattern of sample D1

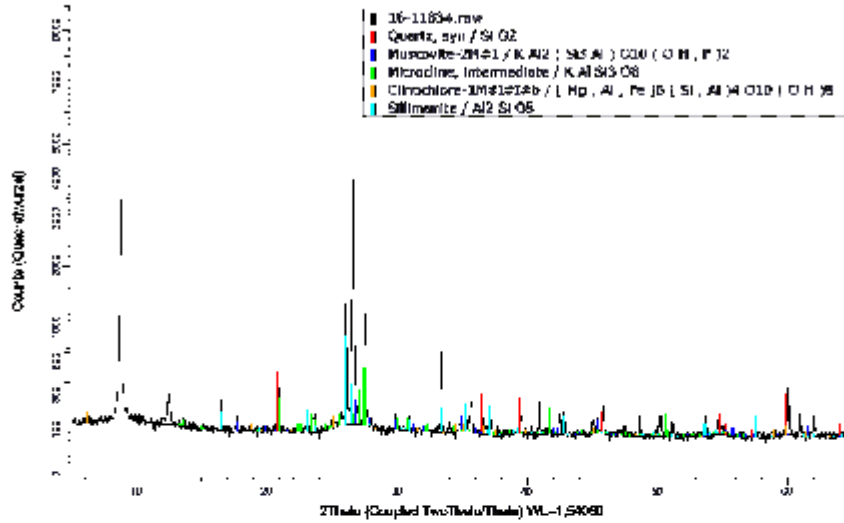


Figure 2: X-ray diffraction pattern of sample D2

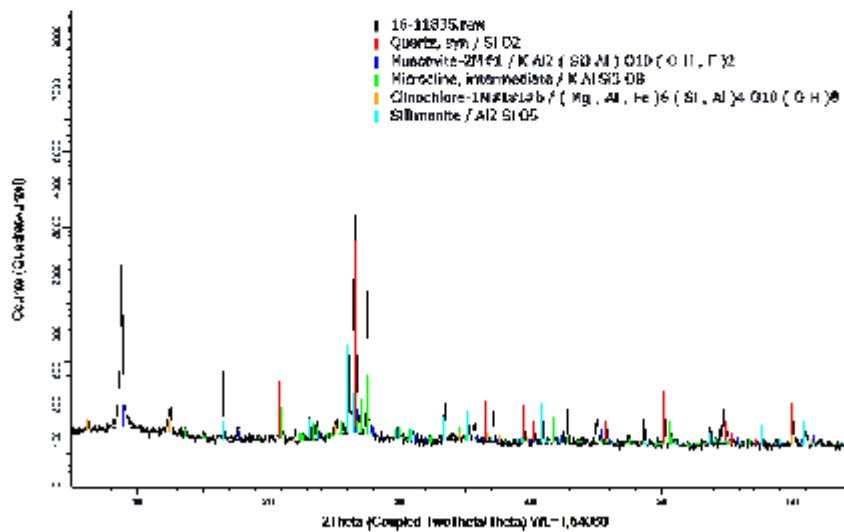


Figure 3: X-ray diffraction pattern of sample D3

## **APPENDIX 2**

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Laboratory Certificate, Analysis of Samples taken during the  
Property Prospecting of the Lac La Dame Property (November 2015)

Quality Analysis ...



Innovative Technologies

Date Submitted: 20-Jan-16  
Invoice No.: A16-00449  
Invoice Date: 18-Feb-16  
Your Reference: 36089 SG16-0028 EARTHMETRIX

Techni-Lab Abitibi Inc.(Actlabs)  
184 Rue Principale  
Ste-Germaine-Boule Quebec J0Z 1M0  
Canada

ATTN: Andre Caouette

### CERTIFICATE OF ANALYSIS

10 Pulp samples were submitted for analysis.

The following analytical package was requested:

Code 1H INAA(INAAGEO)/Total Digestion ICP(TOTAL)  
Code 4C (1-10) Whole Rock Analysis-XRF

REPORT      **A16-00449**

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

Notes:

Elements which exceed the upper limits should be analyzed by assay techniques. Some elements are reported by multiple techniques. These are indicated by MULT.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Eseme".

Emmanuel Eseme, Ph.D.  
Quality Control

ACTIVATION LABORATORIES LTD.  
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5  
TELEPHONE +905 848-9811 or +1.888.228.5227 FAX +1.905.848.9813  
E-MAIL [Ancaster@actlabs.com](mailto:Ancaster@actlabs.com) ACTLABS GROUP WEBSITE [www.actlabs.com](http://www.actlabs.com)



Results

Activation Laboratories Ltd.

Report: A16-00449

Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Be	Ba	Bi	Br	Ce	Co	Cr	Cs	Eu	Fe	Hf	Hg
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
Lower Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	50	1	2	0.5	0.01	1	2	1	0.2	0.01	1	1
Method Code	INAA	MULT INAA / TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	MULT INAA / TD-ICP	MULT INAA / TD-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA
DA-2015-02																							
DA-2015-05	<2	0.3	74	< 0.3	85	< 3	20	188	0.32	6.97	2.8	520	2	< 2	< 0.5	10.8	15	161	< 1	1.1	5.73	12	< 1
DA-2015-06																							
DA-2015-07																							
DA-2015-10																							
DA-2015-11																							
DA-2015-13																							
DA-2015-15																							
DA-2015-16																							
DA-2015-17																							

**Results**

**Activation Laboratories Ltd.**

**Report: A16-00449**

Analyte Symbol	Ir	K	Li	Mg	Mn	Na	P	Rb	Sb	Sc	Se	Br	Ta	Ti	Th	U	V	W	Y	La	Ce	Nd	Sm
Unit Symbol	ppb	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	0.01	1	0.01	1	0.01	0.001	15	0.1	0.1	5	1	0.5	0.01	0.2	0.5	2	1	1	0.5	5	5	0.1
Method Code	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA
DA-2015-02																							
DA-2015-05	< 5	0.27	9	1.37	507	0.19	0.008	< 15	0.8	7.3	< 3	219	< 0.5	0.35	9.0	2.6	85	< 1	20	18.9	49	10	4.5
DA-2015-06																							
DA-2015-07																							
DA-2015-10																							
DA-2015-11																							
DA-2015-13																							
DA-2015-15																							
DA-2015-16																							
DA-2015-17																							

Results

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Report: A16-00449

Analyte Symbol	Sn	Tb	Yb	Lu	Mass	Co3O4	CuO	NiO	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Cr2O3	V2O5	LOI	Total
Unit Symbol	%	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Lower Limit	0.01	0.5	0.2	0.05		0.005	0.005	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.003		0.01
Method Code	INAA	INAA	INAA	INAA	INAA	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
DA-2015-02						< 0.005	0.005	< 0.003	85.44	19.15	8.29	0.051	1.58	0.41	0.85	4.18	0.98	0.05	0.05	0.021	1.24	100.1
DA-2015-05	< 0.01	< 0.5	2.3	0.10	24.9	< 0.005	0.009	< 0.003	56.64	14.19	7.27	0.060	2.29	14.49	0.19	0.32	0.55	0.02	0.01	0.017	4.22	100.3
DA-2015-06						< 0.005	0.005	< 0.003	80.17	10.46	1.87	0.001	0.12	0.22	1.37	5.31	0.35	0.07	0.04	0.005	0.91	100.9
DA-2015-07						< 0.005	0.019	0.003	70.03	16.90	5.59	0.024	0.95	0.14	0.44	2.48	0.90	0.05	0.03	0.018	2.45	100.0
DA-2015-10						< 0.005	0.017	< 0.003	61.45	17.07	6.28	0.011	0.43	1.06	2.05	7.07	1.11	0.03	0.03	0.022	2.27	98.90
DA-2015-11						< 0.005	0.014	0.005	56.32	23.71	8.87	0.034	1.29	0.11	0.52	4.60	1.24	0.04	0.04	0.036	3.51	100.3
DA-2015-13						< 0.005	0.007	< 0.003	68.52	18.54	5.58	0.004	0.41	0.26	0.84	3.13	1.02	0.06	0.04	0.019	2.54	101.0
DA-2015-15						< 0.005	0.006	< 0.003	83.98	21.08	8.15	0.049	1.36	0.13	0.20	2.10	1.08	0.08	0.04	0.027	1.99	100.3
DA-2015-16						< 0.005	0.009	0.004	69.27	16.86	6.07	0.011	1.28	0.06	0.62	4.22	0.61	0.05	0.04	0.027	1.71	100.8
DA-2015-17						< 0.005	0.006	< 0.003	15.99	0.48	0.22	0.006	22.28	28.61	< 0.01	0.11	0.02	0.02	< 0.01	< 0.003	32.53	100.3

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Analyte Symbol	Au	Ag	Ag	Cu	Cd	Mo	Pb	Ni	Ni	Zn	Zn	S	Al	As	Be	Be	Bi	Br	Ce	Co	Cr	Ce	Eu	
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
Lower Limit	2	0.3	5	1	0.3	1	5	1	20	1	50	0.01	0.01	0.5	50	1	2	0.5	0.01	1	2	1	0.2	
Method Code	INAA	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	
NIST 994 Meas																								
NIST 994 Cert																								
MICA-FE Meas																								
MICA-FE Cert																								
MICA-FE Meas																								
MICA-FE Cert																								
GXR-4 Meas		3.8		6570	0.4	287	46	39		72		1.79	5.70			2	17		1.04					
GXR-4 Cert		4.0		6520	0.880	310	52.0	42.0		73.0		1.77	7.20			1.90	19.0		1.01					
AN-G Meas																								
AN-G Cert																								
GXR-8 Meas		0.3		66	< 0.3	3	92	27		130		0.02	13.2			1	< 2		0.22					
GXR-8 Cert		1.30		66.0	1.00	2.40	101	27.0		116		0.0180	17.7			1.40	0.290		0.180					
AC-E Meas																								
AC-E Cert																								
AC-E Meas																								
AC-E Cert																								
BIR-1a Meas																								
BIR-1a Cert																								
DNC-1a Meas				93			< 3	246		59														
DNC-1a Cert				100.00			6.3	247		70.0														
SBC-1 Meas				29	< 0.3	2	28	83		182						3	3							
SBC-1 Cert				31.0000	0.40	2.40	35.0	82.8		186.0						3.20	0.70							
OREAS 45d (4-Acid) Meas				363		7	15	252		43		0.04	6.97			< 1	3		0.19					
OREAS 45d (4-Acid) Cert				371.0		2.500	21.8	231.0		45.7		0.049	8.150			0.79	0.31		0.185					
SdAR-M2 (U.S.G.S.) Meas				241	5.0	11	858	52		816						8	< 2							
SdAR-M2 (U.S.G.S.) Cert				236.0000	5.1	13.3	808	48.8		760						8.6	1.05							
DMMAS 119 Meas	1640														1890	1180					48	77		
DMMAS 119 Cert	1754														1850	1252					49	73		
DA-2015-05 Orig																								
DA-2015-05 Dup																								
DA-2015-17 Orig																								
Method Blank		< 0.3		4	< 0.3	8	< 3	< 1		< 1		< 0.01	0.04			< 1	< 2		< 0.01					
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Method Blank																								
Method Blank		< 2		< 5						< 20		< 50			< 0.5	< 50			< 0.5		< 1	< 2	< 1	< 0.2
Method Blank																								

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Report: A16-00449

Analyte Symbol	Fe	Hf	Hg	Ir	K	Li	Mg	Mn	Ni	P	Rb	Sb	Sc	Se	Sr	Ta	Ti	Th	U	V	W	Y	Zn	
Unit Symbol	%	ppm	ppm	ppb	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
Lower Limit	0.01	1	1	5	0.01	1	0.01	1	0.01	0.001	15	0.1	0.1	3	1	0.5	0.01	0.2	0.5	2	1	1	0.5	
Method Code	INAA	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	
NIST 994 Meas																								
NIST 994 Cert																								
MICA-FE Meas																								
MICA-FE Cert																								
MICA-FE Meas																								
MICA-FE Cert																								
GXR-4 Meas					3.62	11	1.86	159		0.134					209		0.29			89			16	
GXR-4 Cert					4.01	11.1	1.86	155		0.120					221		0.29			87.0			14.0	
AN-G Meas																								
AN-G Cert																								
GXR-6 Meas					1.84	37	0.87	1050		0.034					46					104			14	
GXR-6 Cert					1.87	32.0	0.809	1010		0.0350					35.0					186			14.0	
AC-E Meas																								
AC-E Cert																								
AC-E Meas																								
AC-E Cert																								
BIR-1a Meas																								
BIR-1a Cert																								
DNC-1a Meas						4									130		0.29			142			17	
DNC-1a Cert						5.20									144.0		0.29			148.0000			18.0	
SBC-1 Meas						148									177		0.53			221			36	
SBC-1 Cert						163.0									176.0		0.51			220.0			36.5	
OREAS 45d (4-Acid) Meas					0.36	21	0.23	507		0.035					31		0.19			107			13	
OREAS 45d (4-Acid) Cert					0.412	21.50	0.245	490.000		0.042					31.30		0.773			235.0			9.53	
SdAR-M2 (U.S.G.S.) Meas						18									146					28			31	
SdAR-M2 (U.S.G.S.) Cert						17.9									144					25.2			32.7	
DMMAS 119 Meas	3.54								2.11			8.1	8.8						25.5				16.4	
DMMAS 119 Cert	3.59								2.11			7.9	8.5						26.3				17.2	
DA-2015-05 Orig																								
DA-2015-05 Dup																								
DA-2015-17 Orig																								
Method Blank					< 0.01	< 1	< 0.01			< 0.001					1		< 0.01			< 2			< 1	
Method Blank					< 0.01	< 1	< 0.01			< 0.001					< 1		< 0.01			< 2			< 1	
Method Blank					< 0.01	< 1	< 0.01								< 1		< 0.01			< 2			< 1	
Method Blank					< 0.01	< 1	< 0.01								< 1		< 0.01			< 2			< 1	
Method Blank																								
Method Blank	< 0.01	< 1	< 1	< 5					< 0.01		< 15	< 0.1	< 0.1	< 3		< 0.5		< 0.2	< 0.5			< 1	< 0.5	
Method Blank																								

Analyte Symbol	Ce	Nd	Sm	Ba	Tb	Yb	Lu	Mass	Co3O4	CuO	NiO	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Cr2O3	V2O5	
Unit Symbol	ppm	ppm	ppm	%	ppm	ppm	ppm	g	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Lower Limit	5	5	0.1	0.01	0.5	0.2	0.05		0.005	0.005	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.003	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	
NIST 894 Meas													11.15	1.81	0.77	0.012	0.33	43.13	0.98	0.48	0.12	29.51	0.12	0.311
NIST 894 Cert													11.2	1.80	0.790	0.0118	0.330	43.8	0.980	0.510	0.110	30.2	0.10	0.311
MICA-FE Meas									< 0.005	< 0.005	0.003	34.15	19.43	25.36	0.354	4.72	0.40	0.27	8.72	2.45	0.40	0.02		
MICA-FE Cert									0.003	0.001	0.004	34.4	19.5	25.6	0.350	4.55	0.430	0.300	8.75	2.50	0.450	0.01		
MICA-FE Meas									< 0.005	< 0.005	0.006	34.17	19.45	25.47	0.341	4.74	0.44	0.35	8.88	2.46	0.41	0.01		
MICA-FE Cert									0.003	0.001	0.004	34.4	19.5	25.6	0.350	4.55	0.430	0.300	8.75	2.50	0.450	0.01		
GXR-4 Meas																								
GXR-4 Cert																								
AN-G Meas													46.42	30.12	3.24	0.039	1.86	15.77	1.82	0.14	0.22	0.01	0.01	0.013
AN-G Cert													46.30	29.8	3.36	0.040	1.79	15.90	1.83	0.13	0.22	0.01	0.01	0.012
GXR-6 Meas																								
GXR-6 Cert																								
AC-E Meas													70.27	14.92	2.52	0.057	0.03	0.38	8.75	4.51	0.11			
AC-E Cert													70.35	14.70	2.56	0.058	0.03	0.34	8.54	4.49	0.11			
AC-E Meas													71.36	15.34	2.56	0.059		0.34	8.75	4.62	0.11			
AC-E Cert													70.35	14.70	2.56	0.058		0.34	8.54	4.49	0.11			
BIR-1a Meas													47.26	15.86	11.37	0.173	9.73	12.99	1.76	0.03	0.96			
BIR-1a Cert													47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96			
DNC-1a Meas																								
DNC-1a Cert																								
SBC-1 Meas																								
SBC-1 Cert																								
OREAS 45d (4-Acid) Meas																								
OREAS 45d (4-Acid) Cert																								
SdAR-M2 (U.S.G.S.) Meas																								
SdAR-M2 (U.S.G.S.) Cert																								
DMMAS 119 Meas	34		2.2																					
DMMAS 119 Cert	28.8		2.40																					
DA-2015-05 Orig									< 0.005	0.010	< 0.003	56.86	14.31	7.25	0.061	2.30	14.46	0.19	0.32	0.54	0.02	0.01	0.016	
DA-2015-05 Dup									< 0.005	0.008	< 0.003	56.61	14.06	7.29	0.060	2.28	14.53	0.18	0.33	0.55	0.02	0.02	0.016	
DA-2015-17 Orig									< 0.005	0.006	< 0.003	15.99	0.48	0.22	0.006	22.28	28.61	< 0.01	0.11	0.02	0.02	< 0.01	< 0.003	
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank									< 0.005	< 0.005	< 0.003	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.003	
Method Blank	< 3	< 5	< 0.1	< 0.01	< 0.5	< 0.2	< 0.05	30.0																
Method Blank									< 0.005	< 0.005	< 0.003	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.003	

Analyte Symbol	LOI	Total
Unit Symbol	%	%
Lower Limit		0.01
Method Code	FUS- XRF	FUS- XRF
<b>NIST 994 Meas</b>		
NIST 994 Cert		
MICA-FE Meas		
MICA-FE Cert		
MICA-FE Meas		
MICA-FE Cert		
GXR-4 Meas		
GXR-4 Cert		
AN-G Meas		
AN-G Cert		
GXR-6 Meas		
GXR-6 Cert		
AC-E Meas		
AC-E Cert		
AC-E Meas		
AC-E Cert		
BIR-1a Meas		
BIR-1a Cert		
DNC-1a Meas		
DNC-1a Cert		
SBC-1 Meas		
SBC-1 Cert		
OREAS 45d (4-Acid) Meas		
OREAS 45d (4-Acid) Cert		
SdAR-M2 (U.S.G.S.) Meas		
SdAR-M2 (U.S.G.S.) Cert		
DMMAS 119 Meas		
DMMAS 119 Cert		
DA-2015-05 Orig	4.23	100.4
DA-2015-05 Dup	4.20	100.2
DA-2015-17 Orig	32.53	100.3
Method Blank		
Method Blank		
Method Blank		
Method Blank		
Method Blank		
Method Blank		
Method Blank		

## **APPENDIX 3**

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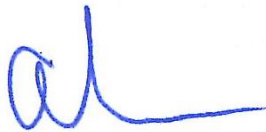
Certification

## Certification

I, Alain Moreau (OGQ #1298), do hereby certify that:

1. I am a consultant geologist for EarthMetrix Technologies Inc., located at 6661, des Écores, Montreal, Quebec, H2G 2J8;
2. I graduated from École Polytechnique de Montréal with a Master Degree in Geological Engineering (M.A.Sc., 1987). I also have an Honours Bachelor Degree from Université de Montréal (B.Sc., 1980). I have practised my profession continuously since that time.
3. I am a member of the Ordre des Géologues du Québec, # 1298;
4. I work in the Mining Industry since 30 years;
5. I am responsible for the preparation of this report (Lac la Dame property). The work has been executed between Mid May 2015 to November 30, 2016;
6. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this report;
7. I do have at present interests in the Lac La Dame property;
8. I am not independent from Alain Moreau and Sylvie Charbonneau;
9. I have read the NI 43-101 guidelines and have prepared the technical report in compliance with these and in conformity with generally accepted mineral exploration industry practices;
10. I consent the use of this report for assessment work and disclosure to regulatory authorities.

Dated, this January 31, 2017, in Montreal, Québec, Canada



Alain Moreau  
Geologist, M.A.Sc., P. Geo.

## **APPENDIX 4**

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### List of Maps

## List of Maps

1. Property sampling sites map, 1: 50,000
2. Property structural map, 1: 75,000
3. Property interpreted geological map, 1: 50,000
4. Property synthesis map, 1: 50,000