

GM 58750

MAGNETIC SURVEY, TORNGAT PROJECT, ALLUVIAQ FJORD AREA

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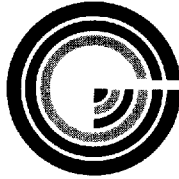


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Secteur minier

13 FEV. 2001

Bureau Régional Val-d'Or

MAGNETIC SURVEY

For TWIN MINING Corp.

TORNGAT Project
Alluviaq Fjord Area, QC, N.T.S. 24P/06

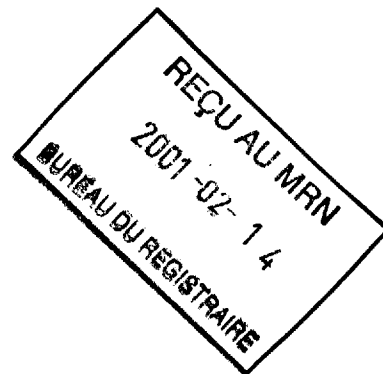
By L. Plante, ing., M.Sc.

October 2000

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GM 58750

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INTRODUCTION

A magnetic survey was carried out over four grids, on the Torngat project, for **Twin Mining Corp.** The property is located in Alluviaq Fjord area, Québec.

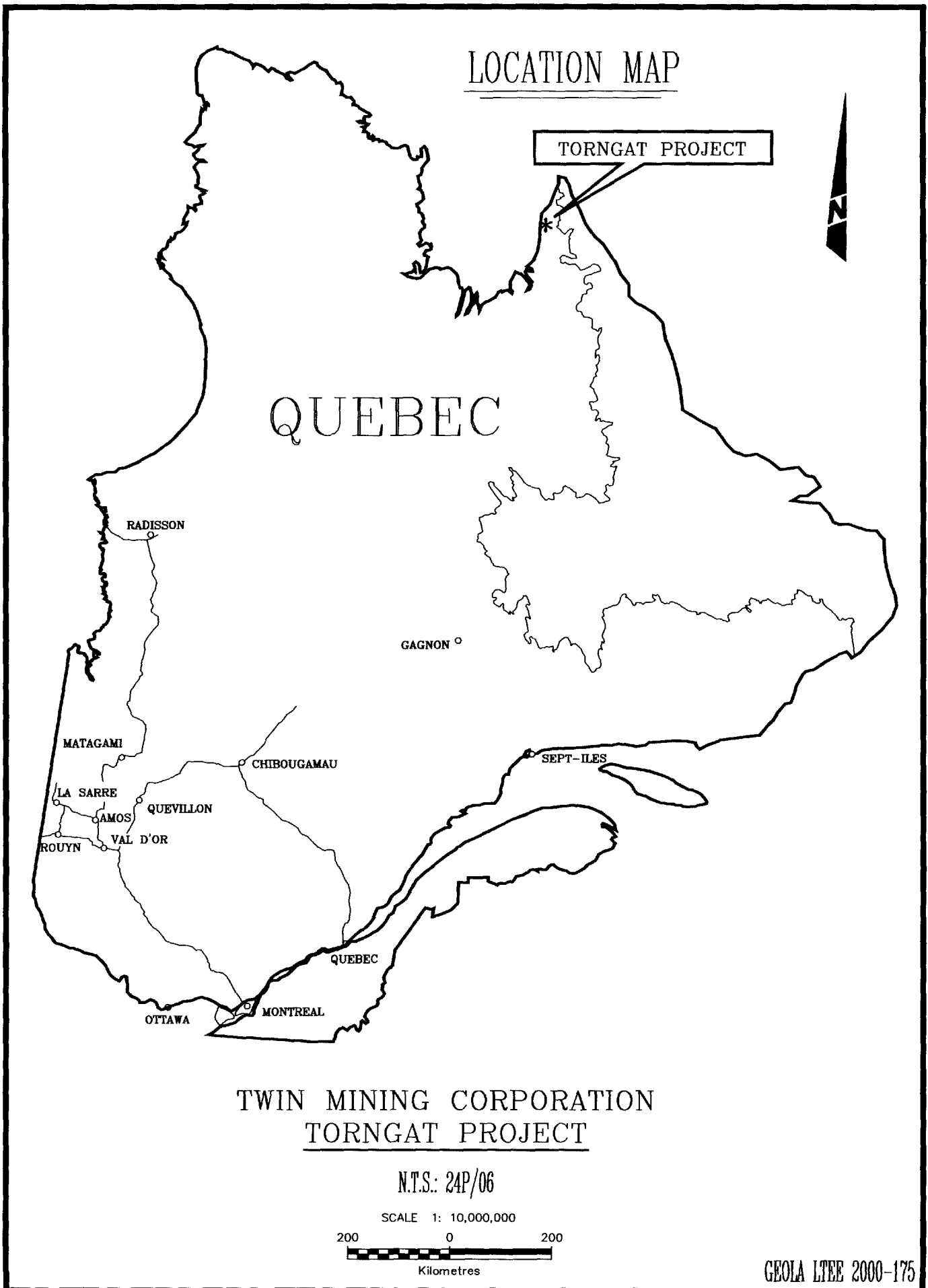
The magnetic survey was done in order to track magnetic kimberlite dykes known to occur in the area.

PROPERTY, LOCATION AND ACCESS

The property is located east of the Ungava Bay, at \pm 250 km north-east of the town of Kuujjuak and \pm 1450 km north-north-east of the town of Québec, Québec (N.T.S. 24P/06). The survey covered \pm 1600 hectares over the following claims: P.E.M. 1459, 1462 and 1464.

Access to the property is possible from Kuujjuak by plane or helicopter.

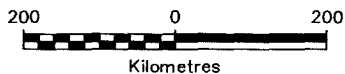
LOCATION MAP



TWIN MINING CORPORATION TORNGAT PROJECT

N.T.S.: 24P/06

SCALE 1: 10,000,000



GEOLA LTEE 2000-175

FIELD WORKS

During the period of August 1st to 25th, 2000, a magnetic survey (total of 183,59 km; total field and vertical gradient) was performed over four grids using a GSM-19 from GEM System. The usual diurnal corrections were made using an automatic base station located in the field.

The grids consist in a set of 50 to 200 metres apart north-west lines. They also include north-east base lines and tie lines. The following table shows the number of kilometres surveyed per grid:

Grid	over Land	over Water	Total
North Du	39,875	0	39,875
Kakivuq	73,400	15,155	88,555
SW	17,575	0	17,575
AD-DD	33,950	3,635	37,585
Total	164,800	18,790	183,59 km

The vertical gradient was measured in the field. However, at the end of the survey, the gradiometer sensor experienced sporadic troubles, giving erratic values at some places. So, the total field values are of good quality everywhere, but some vertical gradient values are defective. This occurred over the west half of the SW grid and over the west part of the AD-DD grid. This is not critical for the interpretation since the spike like gradient values are very strong (well over 1000 nT/m generally) and easy to recognize.

A delay occurred between the end of the survey and the making of the report, because preliminary maps for the grids were not available right away.

DISCUSSION ON THE GEOPHYSICAL METHODS

The magnetic method

A concentration of minerals having a different magnetic susceptibility compared to the surrounding rocks, will give rise to variations in the earth's magnetic field. Systematic observation of the earth's total field over the property, allows us to outline zones of different magnetization, which are related to more or less magnetic geological units or concentrations of magnetic minerals. By measuring or calculating the vertical magnetic gradient, the resolution of the survey is increased, thus helping its interpretation. The magnetic field units are " gammas " (γ) or " nanoTeslas " (nT). $1 \gamma = 1 \text{ nT}$.

Minerals having strong magnetic susceptibility are magnetite and pyrrhotite and are usually but not necessarily associated as primary or accessory minerals in massive sulphide deposits or other possible economic mineralizations. Thus, coincident magnetic and H.E.M. or I.P. anomalies could be important but are not necessarily significant. The global interpretation of the magnetic survey, consisting in delimitating zones of different magnetic susceptibility, is highly advisable. This interpretation contributes in outlining the major geological units and structures such as faults on the property.

DESCRIPTION AND INTERPRETATION

The magnetic survey

Following is a brief description of the data recorded over each grid. From Richard Roy (Francaumaque Explorations), the kimberlite dykes are associated to magnetic anomalies, and correlate well, in general, to the results of our survey. The dykes are striking \pm north-east in general, although they can occur in other directions. The general geological structure strikes north-west over the area (see GSC Map 1429A).

SW Grid: The magnetic field over that grid permits to define two domains. East of 11700mE, more or less, the field is rather low and uniform. Moderate to weak anomalies define east-west striking magnetic axes along the base line 9800mN. These axes may be related to kimberlitic units. West of line 11700mE, many anomalies, reaching over 500 nT, are observed. It seems these anomalies are related to \pm north-west striking sources. Some twisting may be interpreted along these, but the grid line pattern is not suitable to get good picture of north-west trending units.

North Du Grid: The magnetic field is low and uniform over this grid, except for some narrow and moderate anomalies. The amplitude of these anomalies is about \pm 500 nT, but can reach over 1000 nT locally. Some strike \pm north-east, such as those observed near line 29800mE at \pm 7025mN and line 28800mE at 6850mN. All these anomalies are possibly related to kimberlitic units. Other axes strike \pm north-west. See on line 28900mE, at 6000mN for an example.

AD-DD Grid: The magnetic field defines two domains over this grid, as in the case of the SW grid. In general, the field is low and uniform over

the west part of the grid, i.e. west of line 22100mE. There, some narrow and moderate anomalies form \pm north-east striking magnetic axes (see on line 20900mE, at 8250mN, and on line 20700mE, at 7425mN, for examples). Some other anomalies can also be interpreted as striking \pm north-west. These axes are possibly related to kimberlitic units. East of line 22100mE, many strong anomalies, reaching 1000 or 2000 nT, are observed. They seem to be produced by \pm north-west striking axes. One \pm north-east axis can be interpreted in this domain: it can be seen on lines 22700mE to 23500mE, at \pm 7825mN.

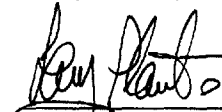
Kakivuaq Grid: The magnetic field is low and uniform over this grid, as in the case of the North Du grid. Some narrow and moderate anomalies are observed locally, defining north-east axes, and being possibly related to kimberlitic units. In particular, one axis crosses the entire grid at \pm 10100mN to 10200mN. Richard Roy (Francaumaque Exploration) told us that this dyke splits east of line 17500mE. One possible extension of that dyke passes on line 18200mE, near 9825mN, and can be interpreted to occur also over the south part line of the line "Lake 400" (see in the Alluviaq fjord, for lines surveyed over the water). A "bull's eye" anomaly is observed on line 17000mE, \pm 9087mN. It might be caused by a 3D magnetic body or by a chimney like body. Its source may not be located directly under the line since the vertical gradient displays negative values. A stronger but narrower anomaly is located just north of the former at \pm 9137mN.

CONCLUSION ET RECOMMANDATIONS

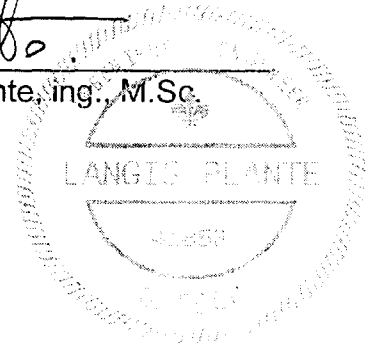
The magnetic data gathered over the different grids permits to define and to trace narrow magnetic axes which may be related to kimberlitic rock units. Geological work was done while the magnetic survey was actually carried out. Consequently, the next exploration step will be decided upon results obtained from that information and from analysis results.

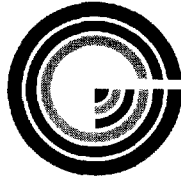
Respectfully submitted,

By:



Langis Plante, ing., M.Sc.





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STATEMENT FOR ASSESSMENT WORK

I, the undersigned Langis Plante, for **Géola Limitée**, certify to the following:

During the period of August 1st to 25th, 2000, a magnetic survey (183,59 km) was carried over four grids, on the Torngat project, for **Twin Mining Corp.**

The property is located east of the Ungava Bay, at ± 250 km north-east of the town of Kuujjuak and ± 1450 km north-north-east of the town of Québec, Québec (N.T.S. 24P/06). The survey covered ± 1600 hectares over the following claims: P.E.M. 1459, 1462 and 1464.

Description of the magnetic method:

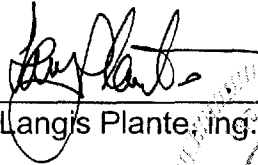
Instrument:	GSM-19, GEM System
Components:	Total field and vertical gradient
Interval:	12,5 m to 6,25 m "continuous" over water.
Precision:	± 1 nT

Operator:

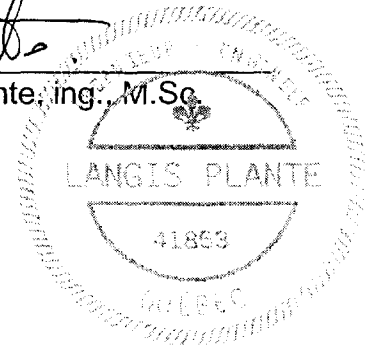
(25 days) Michel Crépeau
42, Harricana Ouest, St-Mathieu, QC

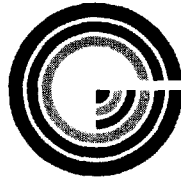
Respectfully submitted,

By:



Langis Plante, ing. M.Sc.





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CERTIFICATE

1. I, the undersigned Langis Plante, residing at 73, chemin Baie Carrière, Val d'Or, QC, graduated with a B.Sc.A degree in geological engineering in 1983 and with a M.Sc. degree in geology (geophysics) in 1986 from Laval University.
2. I am a member of the Ordre des Ingénieurs du Québec and of the Association Professionnelle des Géologues et des Géophysiciens du Québec. I am practicing as an engineer since 1986.
3. I have no direct or indirect interests in the mining claims owned by **TWIN MINING CORP.** nor in the securities of these companies and I have no intention of receiving such interests.
4. The interpretation and recommendations described in this report are based on my general knowledge and on my personal experience in geology, geophysics and mining exploration.
5. I authorize the above-mentioned company to use this report for any legal and/or official purposes.

Signed in Val d'Or, this twenty-sixth (26th) day of October of the year two thousand (2000).



Langis Plante, ing., M.Sc.