GM 47794

GEOPHYSICAL REPORT, CALAMITE GOLD PROPERTY

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GEOPHYSICAL REPORT ON THE CALAMITE GOLD PROPERTY OF HAVILA RESOURCES INC. LA REINE TOWNSHIP, QUEBEC

AUGUST, 1988

VAL D'OR, QUEBEC

JOEL SCODNICK, BSc.
GEOLOGIST

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INTRODUCTION

From July to August, 1988 a line-cutting and geophysical program was conducted over the Havila Resources Inc. property located in La Reine Township, Quebec. A total of 38.8 km of lines were cut and surveyed. The survey methods employed were magnetometric (total field) and VLF (very low frequency) electromagnetic.

The line-cutting and geophysical survey was performed by Albana Exploration of Malartic, Quebec. Several interesting anomalies have been delineated by this survey and at this stage appear to have some relationships with a known gold showing on the property.

This report and the accompanying maps are based on the information provided from the survey, previous assessment reports and from the government compilation maps. All of the geophysical maps are found in the back pocket of this report.

PROPERTY DESCRIPTION, LOCATION AND ACCESS

The property is comprised of 30 mining lots (Fig 1) totalling 1157 hectares (2859 acres). It is located approximately 9 km west-northwest of the town of La Sarre and just 3 km east of the village of Dupuy, Quebec (Fig. 2). The property is characterized by gently sloping topography and is covered mainly by poplar, birch and black spruce. A good part of the property is covered by farmlands. Numerous trails and bush roads pass through the property. Access is excellent by taking highway 111 to Dupuy and then taking a secondary gravel road which runs in an east-west direction right through the middle of the property. The claims are held in the name of Havila Resources Inc., are in good standing and are registered with the Quebec Ministry of Energy and Mines (App. 2). Supplies and services are readily available from the nearby town of La Sarre.

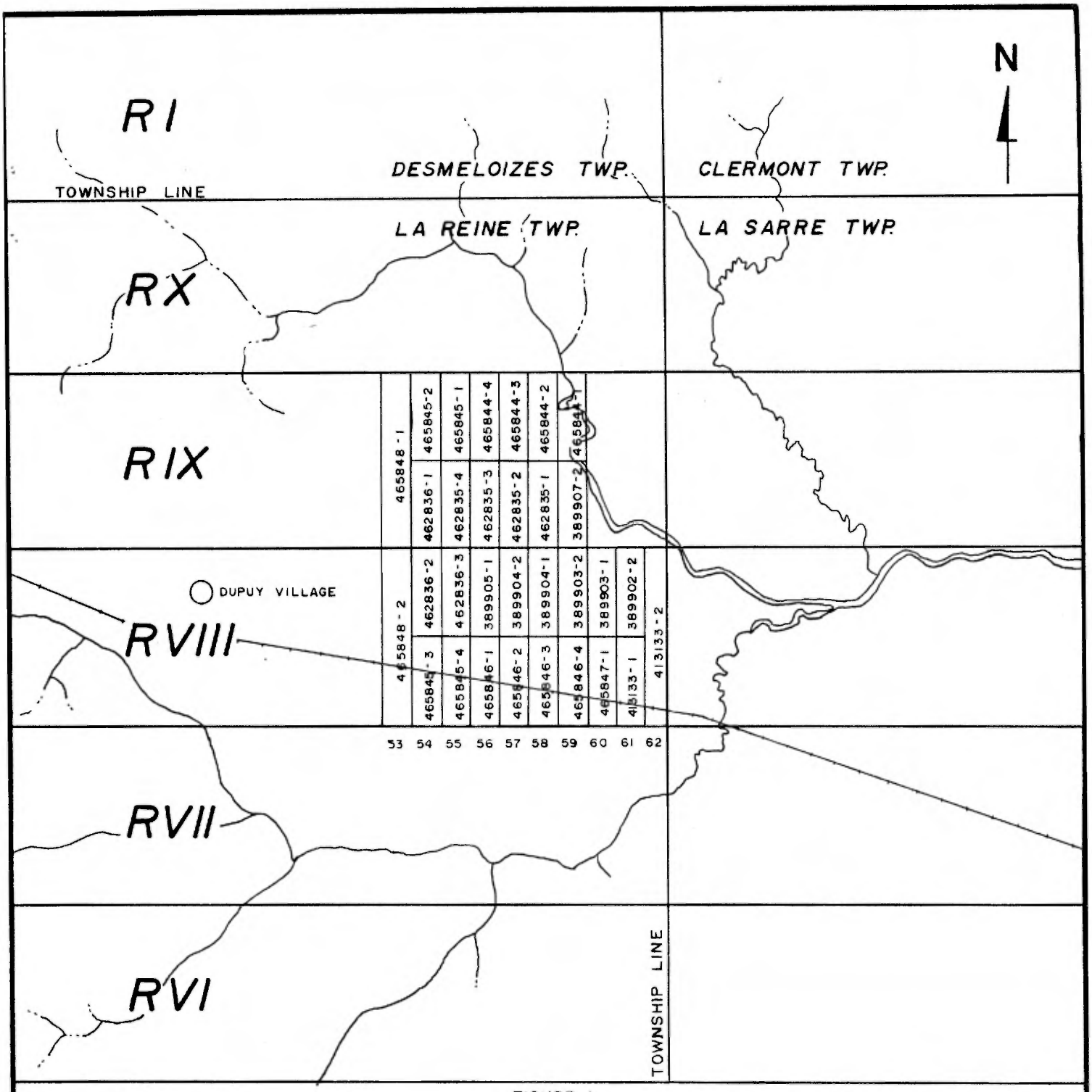


FIGURE 1

HAVILA RESOURCES INC.

CALAMITE GOLD PROPERTY

CLAIM LOCATION MAP

SCALE 1:50,000

0km 1 km 2km 3km 4 km 5km

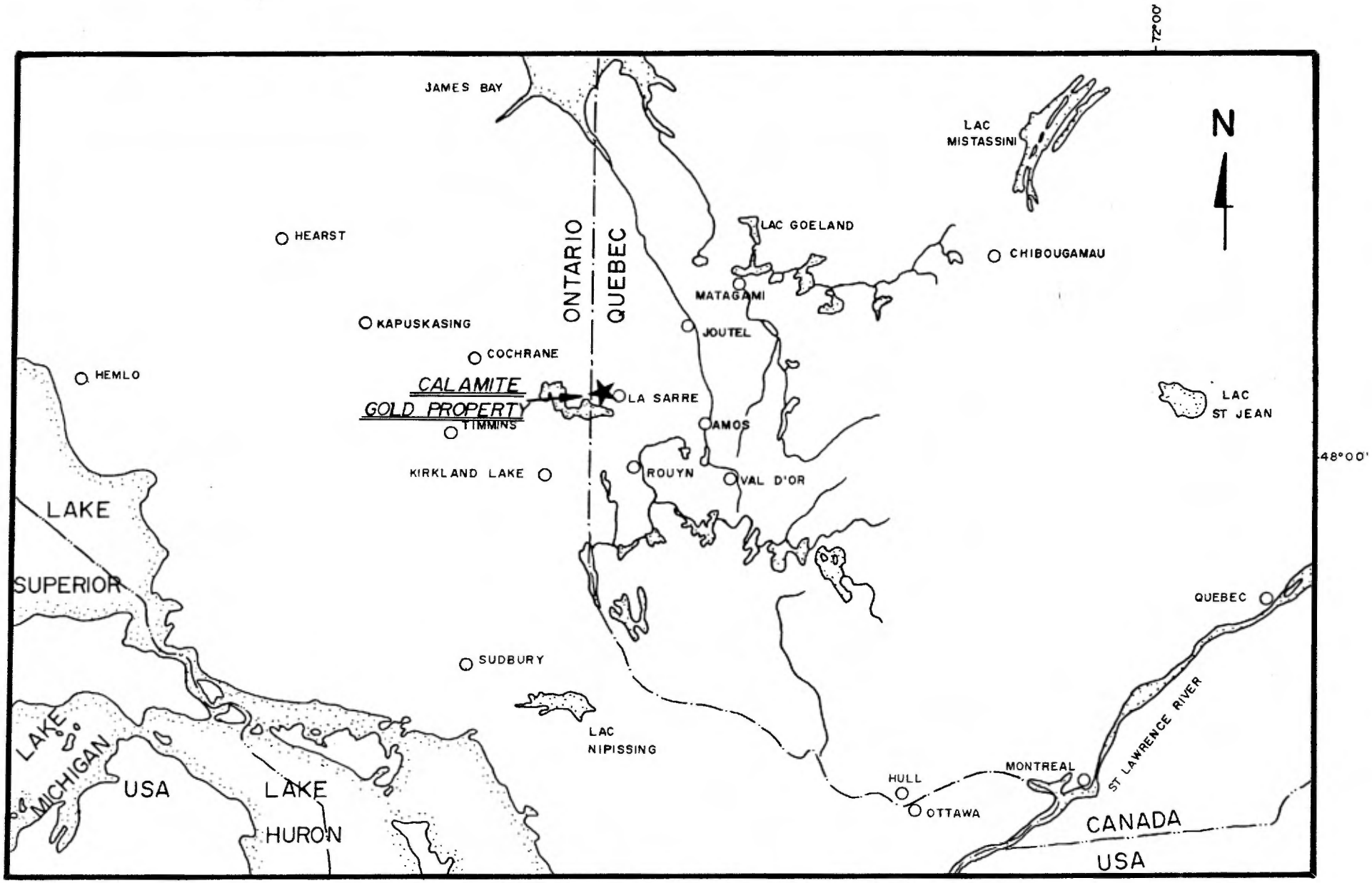


FIGURE 2

HAVILA RESOURCES INC.

CALAMITE GOLD PROPERTY

LOCATION MAP

SCALE 1:5,000,000

0 km 100 km 200 km

GENERAL GEOLOGY

The property is located within the Abitibi subprovince of the Canadian Shield. Approximately two-thirds of the property is covered by a granitic stock, the other third being represented by volcanic rocks. The host rocks (volcanic) are near east-west trending and are characterized by basalts and tuffs. The granitic stock measures approximately 6 km long by 2 km wide, the long axis of which trends NW-SE. A N-S trending diabase dyke is found approximately 1 km west of the property and can be traced up to the Normetal Mine area found only 16 km to the north. Several base metal showings have been linked to this diabase dyke.

Deformation is evident on the property and can be seen as intense shear zones which carry a rather high percentage of sulphides (Py, Cpy, Galena and Sphalerite) as well as precious metals (Au & Ag).

SURVEY METHODS AND INSTRUMENT DATA

The survey was conducted using an EDA OMNI-PLUS instrument which measures the electromegnetic-VLF (very low frequency) and magnetic (total field) fields. The magnetic system has a resolution of 0.5 gammas and the readings were saved in memory and dumped at the end of each day onto a disk. The VLF-EM system measures the change in total field and vertical quadrature field, with an accuracy of 1%. The VLF-EM data is saved in memory and also dumped at the end of each day. A north-south base line transects the middle of the property. All of the cross lines were cut and surveyed in an east-west direction. The transmitting station at Annapolis, Maryland, USA, NSS, 21.4 KHz was used.

From the results of the magnetic and electromagnetic survey it is possible to outline poor conductors such as lithological contacts, sheared lithological contacts, breccias, faults, discordant and concordant shears, alteration zones and mineralized zones which may or may not contain precious and base metal mineralization. The presence of excellent conductors such as graphite can also be outlined by the surveys. The magnetic field was measured and corrected for diurnal changes and contoured on a map at a scale of 1:2500 (MAP HR-3). An electromagnetic profile map shows the

in-phase and out-of-phase components (MAP HR-1). The cross-overs on the profile map indicate the axes of the conductors. The cross overs are converted to high amplitude readings, with some of the background being obscurred and this is represented on the Fraser Filter map (MAP HR-2).

DISCUSSION OF GEOPHYSICAL SURVEYS AND RESULTS

Most of the interior of the surveyed portion of the property is characterized by a rather low magnetic susceptibility with a background of approximately 58,540 gammas. An interesting magnetic anomaly occurs in the eastern part of the property (between 4E and 7E and L-200N, L-600N) where the contours are disrupted. An indication of N-S bearing shears and subsequent folds are evident. The magnetic signature in this area reaches an amplitude of +300 gammas. In the north-central part of the property almost in trend with the N-S BLO, the magnetic contours are disrupted showing evidence of shearing and/or faulting. This occurs mainly on L-1000N and L1600N to L1700N.

On L-1000N the magnetic signature reaches an amplitude of +120 gammas. At L-1600N and L-1700N the anomaly is +560 gammas. Although the magnetic discontinuity is N-S, the anomaly is NW-SE trending which appears to outline the northern contact of the granitic stock. The magnetic signature increases to +260 gammas in the southern part of the grid. The southern contact lies probably 100-200 meters south of the grid. Three isolated anomalies (+200 gammas) occur at L-1100N/200E, L-1000N/275E and L-900N/375E. Three other isolated anomalies occur on the property between line 800N and 900N which run right by the road. These anomalies are caused

by farm houses.

A total of 18 electromagnetic conductors numbered one through eighteen have been delineated by the survey. Several other rather isolated and less important conductors are present but have not been shown on the map provided or discussed in this report. Most of the conductors are north-south trending but others deviate northwesterly and northeasterly and usually display s-shaped or z-shaped anomalies, which seem to be due to shearing or faulting in the immediate area.

Conductors 6 and 7 show a right-handed displacement between L6N and L7N as well as a high in-phase to out-of-phase ratio which indicates a good conductor. Conductors 10,11,12 & 13 appear to represent the same geophysical horizon as they are all basically along trend (generally north-south to N20 W). It is interesting to note that a hole was drilled vertically (H88-1) at L6N/1+60W and intersected gold mineralization. These four anomalies are moderate to strong conductors and show right-handed displacement between L7N and L8N which can be seen between conductor 10 and 11. Moderate to very strong anomalies are charaterized by conductor 14,15,16,17 & 18, with 15 and 17 being z-shaped. Conductor 15 and 17 appear to be the best conductors located on the grid and are both located in an area with a higher magnetic signature. The magnetic signature between L2N and L6N and between 4+50E and 8E is quite anomalous and indicates folded

and sheared/faulted structures. A brief description of each of the conductors follows this discussion and are listed below in order of conductor number, length, trend and conductive strength.

#1) 320m, N-S, weak to moderate.

#2) 310m, N10 W, moderate to strong.

#3) 150m, N-S, very weak.

#4) 200m, N5 W, very weak.

#5) 300m, N-S, weak to moderate.

#6) 250m, N27 E, very strong on L6N, left-handed displacement at 6+50N.

#7) 560m, N33 W from 6+50N to L8N, N28 E from L8N to 11+50N, right-handed displacement at 6+50N, strong from L10N to 11+50N.

#8) 210m, N-S, weak.

#9) 220m, N-S, weak.

#10) 325m, generally N-S but trends N20 E from L9N to 10+50N, N22 W from 7+50N to L9N and N25 E from 7+50N to 8+70N, moderate.

#11) 220m, generally N-S, right-handed displacement at 6+25N, moderate to strong.

#12) 290m, N23 W, moderate.

#13) 320m, generally N-S but trending N20 E from 2+30N to 13N, moderate to strong.

#14) 200m, N12 E, strong at L8N.

#15) 460m, N32 E generally, strong to very strong at L6N.

#16) 160m, N5 E, strong.

#17) 590m, N15 W from 0+50N to L2N, N30 E from L2N to L4N, generally N-S from L4N to 6+50N, strong to very strong from L3N to L5N.

#18) 315m, N10 W, moderate to moderately-strong.

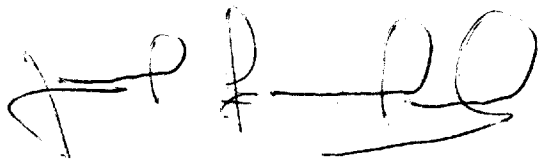
CONCLUSIONS AND RECOMMENDATIONS

The geophysical program conducted over the grid of Havila Resources was successful in delineating several electromagnetic and magnetic anomalies. The long axis of the stock is marked by inferred faults and/or shears as can be seen on Map HR-1. These inferred structures seem to transect and displace several of the conductors which infers a second phase of deformation. Whether or not any metallic concentration is associated with this phase has yet to be determined. The s-shapes of many of the conductors infers a dextral movement. Conductors 6 & 7 sould be probed by diamond drilling as they show very good conductive strength and also apparent shearing or faulting with a right-handed displacement of approximately 100m. Conductors 14,15,16 & 17 are located near coincident magnetic anomalies and are very good target areas. Conductor 10 & 12 lie north and south respectively of DDH HR88-1 (L6N/1+60W) which intersected 7cm of free gold. These two conductors are very important and should be tested by diamond drilling.

This granitic stock, as with many of the satellitic stocks in the Bourlamaque area is characterized by shear or tension stress parallel to the long axis and perpendicular to the long axis. These stress areas are important hosts for metallic mineralization, namely gold, silver and base metals.

To summarize, several interesting target areas have been outlined from the survey and should be tested by diamond drilling in order to determine the gold and base metal potential of the property.

Respectfully Submitted,



JOEL SCODNICK, BSc., AGAC, APGGQ

GEOLOGIST

APPENDIX 1

CERTIFICATE OF QUALIFICATIONS

I, Joel Scodnick, of the Town of Val d'Or, in the Province of Quebec, hereby certify that:

1. I am a Consulting Geologist with the firm of Geofact Inc..

2. I am a graduate of Concordia University in Montreal, and hold a Bachelor of Science degree in Geology.

3. I am a graduate of Algonquin College, Ottawa, and hold an Honours Distinction technician Diploma in Electro-Mechanical Engineering (Drafting).

4. I have 7 years experience in mineral exploration in Canada with 4 years experience in Gold exploration in northwestern Quebec and Northwestern Ontario.

5. I am a Member of the CIM (Canadian Institute of Mining and Metallurgy), APGGQ (Association of Professional Geologists/Geophysicists of Quebec) and AGAC (Associate Member of the Geological Association of Canada).

6. I have no interest, either direct or indirect, in the property which has been described in this report or securities of the company, nor do I expect to recieve, either directly or indirectly, and interest in the property or securities of the company.

7. This report is based on a study of the area and the reports available.

8. Permission is granted to use completely or partially for assessment and qualification requirements but not for advertising purposes.

Dated at Val d'Or, August, 1988

Joel Scodnick, BSc., AFPPQ, AGAC
Geologist

APPENDIX 2

CLAIM LIST

LICENSE NO.	LOT NO.	EXPIRY DATE	RANGE NO.
462836-2	1/2 N L54	23-09-88	8
462836-3	1/2 N L55	23-09-88	8
389905-1	1/2 N L56	09-05-89	8
389904-2	1/2 N L57	09-05-89	8
389904-1	1/2 N L58	09-05-89	8
389903-2	1/2 N L59	09-05-89	8
389903-1	1/2 N L60	09-05-89	8
389902-2	1/2 N L61	09-05-89	8
413133-2	1/2 N L62	21-10-88	8
462836-1	1/2 S L54	23-09-88	9
462835-4	1/2 S L55	22-09-88	9
462835-3	1/2 S L56	22-09-88	9
462835-2	1/2 S L57	22-09-88	9
462835-1	1/2 S L58	22-10-88	9
389907-2	1/2 S L59	10-05-89	9
468198-1	1/2 S L60	14-07-89	9
468198-2	1/2 S L61	14-07-89	9
468191-1	1/2 S L62	07-04-89	9