GM 47793

GEOLOGICAL REPORT, CALAMITE GOLD PROPERTY



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GEOFACT INC. 55 Rue Lemieux Val d'Or, Québec J9P 2V9

> GEOLOGICAL REPORT ON THE CALAMITE GOLD PROPERTY OF HAVILA RESOURCES INC. LA REINE & LA SARRE TWPS., QUEBEC

> > M.E.R. SELECTORES MINIERS TUEBEC 10 BEC 29 11 07

September, 1988

JOEL SCODNICK, BSc. GEOLOGIST VAL D'OR, QUEBEC.

Ministère de l'Énergie et des Ressources Service de la Géoinformation Date: <u>2 FEV 1989</u> No G.M.: <u>477793</u>

TABLE OF CONTENTS

PAGE

INTRODUCTION	1
PROPERTY DESCRIPTION, LOCATION AND ACCESS	3
REGIONAL GEOLOGY	6
LOCAL GEOLOGY AND DISCUSSION OF RESULTS	9
CONCLUSIONS AND RECOMMENDATIONS	12

APPENDICES

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APPENDIX	1	:	CERTIFICATE OF QUALIFICATION
APPENDIX	2	:	CLAIM LIST
APPENDIX	3	:	CERTIFICATE OF ANALYSIS
APPENDIX	4	:	TECHNICAL PARAMETERS
APPENDIX	5	:	SELECTED BIBLIOGRAPHY

LIST OF FIGURES

FIGURE	1	:	CLAIM LOCATION MAP
FIGURE	2		PROPERTY LOCATION MAP
FIGURE	3	:	REGIONAL GEOLOGY MAP
FIGURE	4	:	COMPILATION MAP (in back pocket)

INTRODUCTION

During the month of August 1988, a geological survey was conducted over the Havila Resources Inc. property located in La Reine township, Québec. A total of 39 km of lines were traversed. The mapping was done at a scale of 1,2,500. The terrain is comprised of about 1-2% outcrop exposure.

Some interesting shear zones characterized by chlorite schists and silicified felsic volcanics have been discovered in the past by stripping and trenching. Although these shear zones returned only very low grade gold values, there is an indication of a very high degree of stress and alteration patterns which may be associated with a gold showing on the property, located on L6N/1+60W. This gold showing was discovered by diamond drill hole number HR 88-1 which was drilled vertically at L6N/1+60W and intersected 7 cm of spectacular gold fragments.

The results of this mapping program have indicated the possibility that the eastern tip of the granitic stock may actually represent a separate granitic plug which can be seen

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quite well on the regional magnetic map of the area (DP 84-05). This plug appears to be separated from the granitic stock by the band of sheared volcanics. This intrusive unit can be seen as one unit on the regional geology map (Figure 3). The geological structures which have been mapped correlate well with anomalies detected by geophysics.

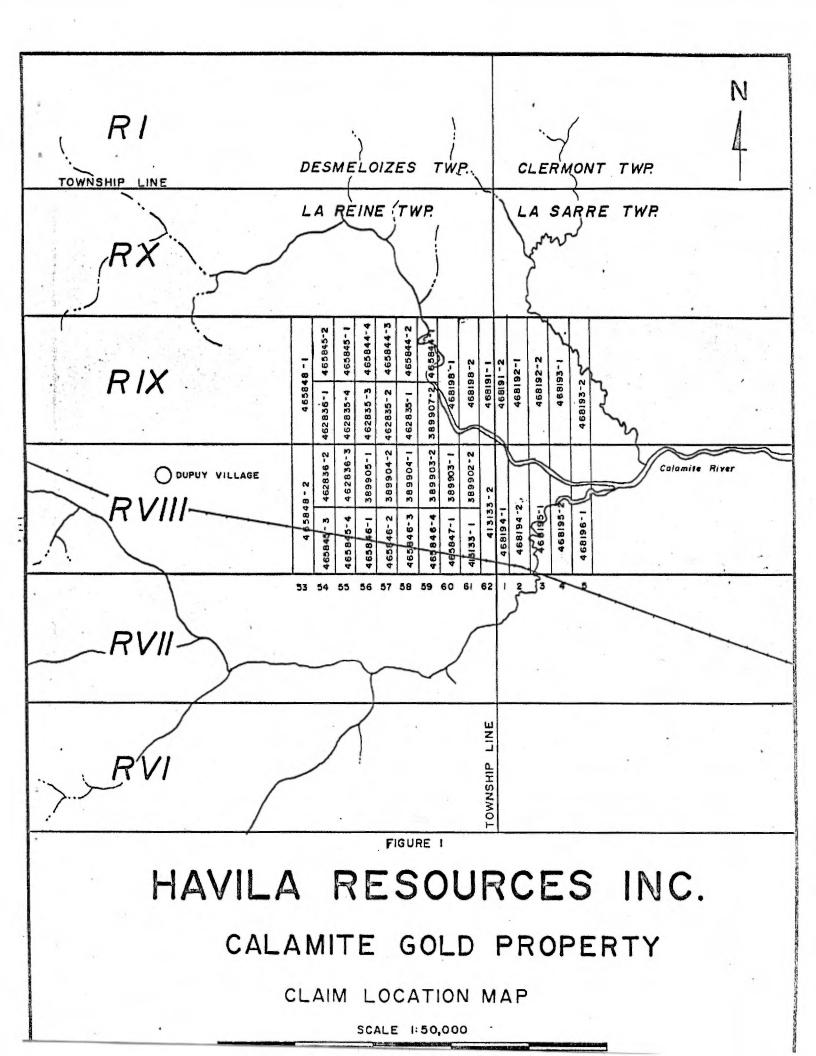
This report and the accompanying maps are based on the information provided from the survey, previous assessment reports and from government compilation maps. A compilation map is provided in the back pocket of this report (MAP HR-6).

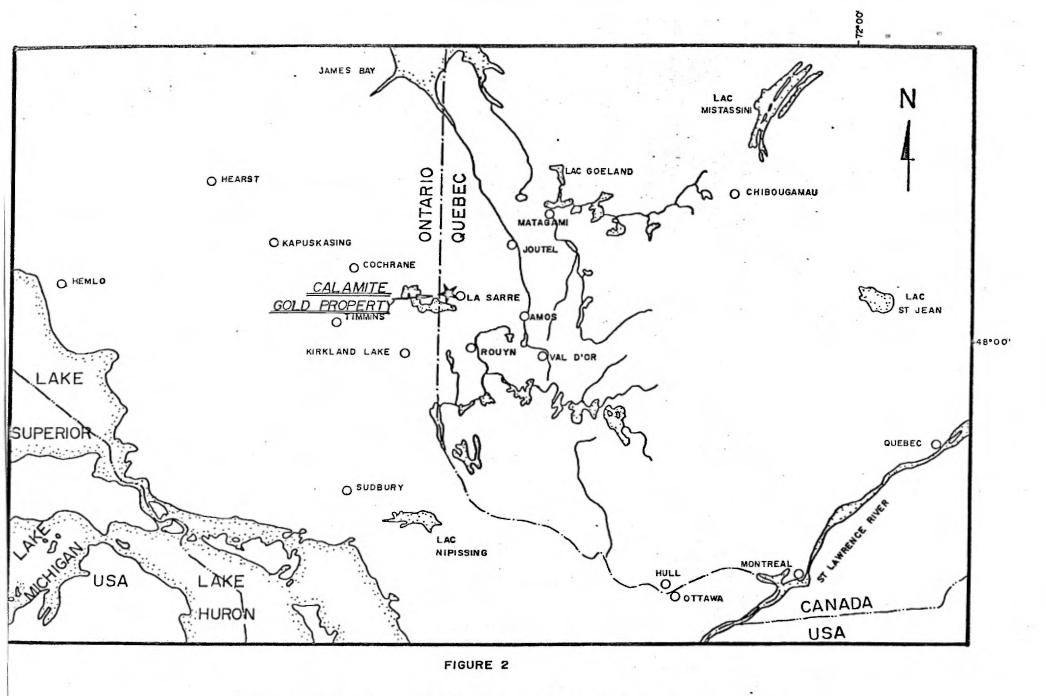
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PROPERTY DESCRIPTION, LOCATION AND ACCESS

The property is comprised of 30 mining lots (Fig. 1) totalling 1,157 hectares (2,859 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 III 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 Supplies and services are readily and Resources (App. 2). available from the nearby town of La Sarre.

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HAVILA RESOURCES INC.

CALAMITE GOLD PROPERTY

LOCATION MAP

0 km 100 km

SCALE 1:5,000,000

200 km

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REGIONAL GEOLOGY

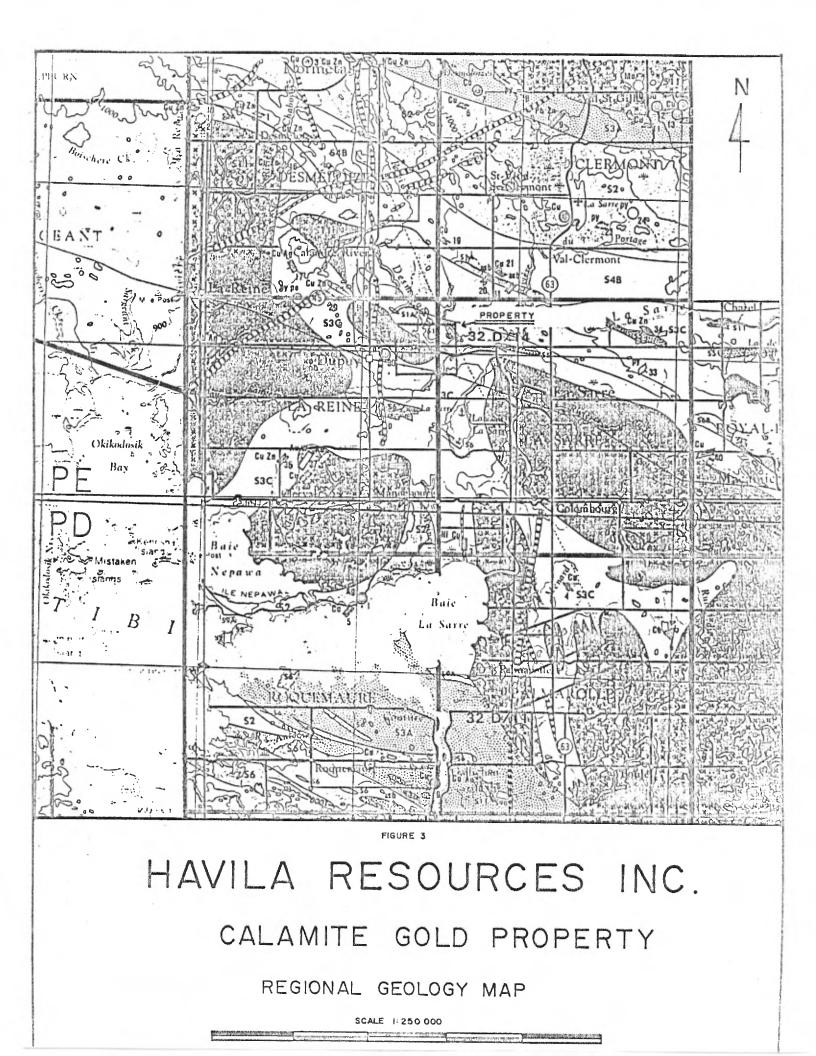
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The CALAMITE GOLD PROPERTY is located within the Abitibi subprovince of the Canadian Shield. The rocks in the area have been metamorphosed to the upper greenschist to lower amphibolite facies. The property is located approximately 55 km north of the mining town of Rouyn and 55 km north of the very well-known "Cadillac-Bouzan Fault" otherwise known as the "Cadillac Break". Several past producers as well as present day producing gold and base-metal mines are located along this structural/lithological break. The regional geological picture can be seen in Figure 3.

The property is located in the La Sarre region which is well known for being in close proximity (15-20 km south) to a former Cu-Zn producer (Normetal Mine). The Normetal Mine appears to be associated with a N-S striking dyke known as the Normetal dyke, in which several other base metal associations have been found. This dyke is located approximately 1 km west of the property.

Several gold associations are found within granitic rocks in the La Sarre region, namely the Manley granite, which is located just

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8 km to the south-west. In the Manley granite, tension fractures host very high-grade gold values associated with Qz-Py-Cp-Pbscheelite mineralization. High grade silver values are also reported. The trend of these pervasive structures are N30°-40°E, extending from Harker-Holloway township in Ontario to the Manley granite in La Reine township to the Dupuy granite where the property is located. It appears that a regional structure may be responsible for the gold mineralization in these places and of which have at least one thing in common, they are all along the same trend.

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LOCAL GEOLOGY AND DISCUSSION OF RESULTS

Local lithologies and structures, as well as geophysical anomalies can be seen in the back pocket on Map HR-6. Only the surveyed portion of the property is seen on the compilation map provided. Approximately one-half of the property is underlain by granitic rocks, the rest is comprised of intermediate to felsic metavolcanics (Basalt, Andesite, Dacite) and ultramafics. Narrow ultramafic units are assumed to represent the northern part of the property.

The Dupuy granitic stock measures approximately 6 km in length and about 1,5 - 2 km in width, with the long axis trending N50°W. Sheared structures trend subparallel to this direction at about N20°W. Tension fractures have been found to be approximately at right angles to this shear direction at N50°E.

Only a few outcrops were found on the property. The granite is buff to cream colored on the fresh and weathered surface and contains subordinate biotite, hornblende and epidote. Disseminated sulphides ($\langle 1\% \rangle$) are usually present throughout.

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Within the granite, tension fractures healed with quartz and pyrite are quite common, the fractures measuring from 2-3 mm up to 4-5 cm in width. At 3+75N/3+50E, a quartz tension vein was stripped on surface for about 30 meters. Erratic pyrite mineralization was found in this vein, with local concentrations up to 2-3%, the mineralization being spatially associated to intrusive fragments within the vein. The vein is well fractured and has a rusty-brown weathered surface. Only NIL was returned . 02 for gold assay and the highest silver value assayed 0.12 oz/ton (selected grab sample). The vein becomes highly deformed and more mineralized where it intersects a trenched-out shear zone at L4N/3+50E. The lithological contact cannot be seen. The granite is highly silicified near the upper and lower contacts of the quartz vein. On L4N/3+00E, an outcrop stripped which was contained a dacitic rock mineralized with 2-3% disseminated pyrite. The dacite was intensely sheared.

The shear zone on L4N/3+50E is comprised of chlorite, quartz, carbonate and pyrite schist, and it is extremely friable. The schist contains in places up to 50-60% pyrite. A felsic tension fracture (N50°E) about 1 cm wide was previously assayed for gold

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and silver. Low gold values were returned from this selected sample and subeconomic silver values were returned. A few other areas on the property have been stripped and trenched on this same shear zone with no encouraging results for gold or silver being returned.

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CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are based on the completion of the geological survey, recent geophysical survey and previous work performed on the property. It seems apparent that two pervasive structures appear on the property, one at N20°W, the other at N50°E. The N20°W structure is associated with intense deformation and schistose volcanic rocks mineralized with pyrite. The N50°E structure is associated to tension veins within the granite, erratically mineralized with pyrite and having gold and silver associations.

DDH # HR 88-1 located at L6N/1+60W intersected 7 cm of visible gold. Spectacular fragments of gold were recovered from the core and only 5-10% of this section was recovered as the bit broke at this intersection. This section also assayed high grade values of 1170 1.34% 15% 7.6% Cu, Zn and low grade Ni and Fe. This drill hole targeted a near N-S trending VLF-electromagnetic conductor. The visible gold was intersected at approx. 147'. According to the VLF-EM profile, it appears that the conductor is quite deeper than this intersection.

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As one can see from the compilation map (HR-6), it appears that there is a granitic stock (Dupuy granite) and an eastern plug which probably measures somewhere in the order of 1-1,5 square kilometers. The Dupuy granite is separated from the eastern plug by a shear zone (50-100 m wide) which has been extensively The geological survey indicates that trenched at L4N/3+50E. intense deformation took place between the Dupuy stock and the eastern plug. The area within the granite in close proximity to the lithological contacts (between sections 4E and 5E) represent for metallic mineralization. very good exploration targets Several of the VLF-electromagnetic conductors in this area have very high geophysical signatures as compared to the rest of the property.

A diamond drilling program of fourteen holes consisting of 1,638 m (5,374') is proposed in order to test the best geophysical and geological targets for metallic mineralization (See Appendix 4, Technical Parameters). The geological survey was successful in showing the degree of deformation and alteration near the intrusive contacts and in presenting a new model such that a separate eastern plug exists on the property. Satellitic

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plugs such as these are favorable for gold mineralization. The survey has also shown that no good gold values have been returned on surface, one of the problems being the low percentage of outcrop exposure. The author believes that more interesting mineralization occurs at depth as has already been indicated by DDH #HR 88-1 and also according to information provided by the VLF-EM profiles. There appears to be a good chemical and physical correlation between the granite in the La Reine township area and the Bourlamaque area (GM 43823). More serious exploration work is being conducted in the La Reine area than ever before and it may be the site of a new Gold Camp in the near future.

Respectfully submitted,

Joel Scodnick

Geologist

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APPENDIX 1

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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 northern Ontario.
- 5. I am a Member of the CIM (Canadian Institute of Mining and Metallurgy), APGGQ (Association of Professional Geologists and 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 receive, either directly or indirectly, an 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, September 1988

Joel Scodnick, BSc., AFPPQ; AGAC

Geologist



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APPENDIX 2

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CLAIM LIST

LICENSE NO.	LOT NO.	EXPIRY DATE	RANGE NO.	EXCESS WORK
462836-2	1/2 N L54	23-09-89	8	\$ 951.76
462836-3	1/2 N L55	23-09-89	8	\$ 951.76 \$ 951.76
389905-1	1/2 N L56	09-05-89	8	\$ 2202.02
389904-2	1/2 N L57	09-05-89	8	\$ 1229.62
389904-1	1/2 N L58	09-05-89	· 8	\$ 1229.62
389903-2	1/2 N L59	09-05-89	8	\$ 1786.82
389903-1	1/2 N L60	09-05-89	8	\$ 1786.82
`389902 - 2	1/2 N L61	09-05-89	8	\$ 2246.07
413133-2	L62	21-10-89 ·	8	\$ 1237.29
462836-1	1/2 S L54	23-09-89	9	\$ 951.76
462835-4	1/2 S L55	22-09-89	9	\$ 951.76
462835-3	1/2 S L56	22-09-89	9	\$ 951.76
462835-2	1/2 S L57	22-09-89	9	<pre>\$ 1237.29 \$ 951.76 \$ 951.76 \$ 951.76 \$ 951.76 \$ 951.76 \$ 951.76 \$ 1073.76 \$ 2103.52</pre>
462835-1	1/2 S L58	22-10-89	9	\$ 951.76
389907-2	1/2 S L59	10-05-89	9	\$ 1073.76
468198-1	L60	14-07-89	9	\$ 2103.52
468198-2	·L61	14-07-89	9	\$ 2103.52
468191-1	1/2 S L62	07-04-89	9	\$ 1262.11
468191-2	L01	06-04-89	9	
468192-1	L02	06-04-89	9	
468192-2	L03	06-04-89	9	
468193-1	L04	06-04-89	9	
468193-2	L05	06-04-89	9	
465848-1	L53	22-10-89	9	
465848-2	L53	23-10-89	8	,
468194-1	L01	07-04-89	8	•
468194-2	L02	07-04-89	8	
468195-1	L03	07-04-89	8	
468195-2	L04	07-04-89	8	
468196-1	L05	07-04-89	8	
465845-2	1/2 N L54	22-10-89	9	
465845-1	1/2 N L55	22-10-89	9	
465844-4	1/2 N L56	22-10-89	9	
465844-3	1/2 N L57	22-10-89	9	,
465844-2	1/2 N L58	22-10-89	9	
465844-1	1/2 N L59	22-10-89	9	

LICENSE NO.	LOT NO.	EXPIRY DATE	RANGE NO.	EXCESS WORK
465845-3	1/2 S L54	23-10-89	8	
465845-4	1/2 S L55	23-10-89	8	
465846-1	1/2 S L56	23-10-89	8	
465846-2	1/2 S L57	23-10-89	8	
465846-3	1/2 S L58	24-10-89	8	
465846-4	1/2 S L59	24-10-89	8	
465847-1	1/2 S L60	24-10-89	8	
413133-1	1/2 S L61	21-09-89	8	

Total: \$ 24923.49

NOTE:

The total (\$24,923.49) of excess work is to be carried on into 1989. All of the claims listed above belong in the Calamité property and have already been filed for assessment. The work has already been deducted off the necessary claims. 4

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LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE BOURLAMAQUE ASSAY LABORATORIES LTD.

GEOFACT INC.

Project 17716

CERTIFICAT D'ANALYSES CERTIFICATE OF ANALYSIS

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ÉCHANTILLONS	
SAMPLES	
	oel Scodnick

VAL D'OR, QUÉ, September 16 19 88 ANALYSES 26 Au, 9 Ag, 2 Cu. 2 Zn, 2 N

	Sample No.	<u>Au g/tonne</u>	Ag oz/ton	<u>Cu</u> %	Zn %	Ni %
	CA-					
	17716	Nil	-	-	-	_
	17717	Nil	N.D.	-	<u> </u>	-
	17718	Nil	N.D.	-	-	-
	17719	Nil	-	-	_	-
	17720	Nil	-	_ ·	-	-
	17721	Nil	-	÷		
	17722	Nil	0.12	0.001	0.001	N.D.
	17723	Nil	-	_	-	
	17724	Nil	-	_	-	_
	17725	Nil	N.D.	-		_
	17726	Nil	-	-	-	
	17727	Nil	_	_	-	-
	17728	Nil	0.03		-	_
	17729	Nil	0.03	-	-	-
	17730	Nil	N.D.	0.001	0.001	N.D.
	17731	Nil		-	-	_
	17732	Nil	N.D.	-	-	– ·
	17733	Nil	N.D.	-		_ ``
	17734	Nil	-	-	-	-
-	17735	Nil	-	-	_	_
-			,			
•	17737	Nil	-	-	-	-
٠	17738	• Nil	-	-	-	_
	17739	Nil	-	-	-	_
	17740	Nil	-			· -
	17741	Nil	-		-	-
	17742	Nil	-			-

For Ag: N.D. means less than 0.02 oz/ton. For base metals: N.D. means less than 0.001%.

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APPENDIX 5

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M.E.R. DP 84-05, 32 D14-200-0100, Carte de champ magnétique total, 1=50,000, 1=20,000, 1983.

Chartré, E. Propriété R. Béland, Levé électromagnétique, Canton La Reine, 1984.

GM-43823 Beaufield Resources Ltd., La Reine and La Sarre townships, La Sarre Project, Addendum to 1985 drilling report, Geological compilation report and exploration proposal, La Reine Batholith area, Northwestern Quebec, 1986, 40p, 32D/11,14.

DPV-744 Gîtes Minéraux du Québec, Région de l'Abitibi, Feuille Rouyn-Noranda, 32D, M308.

Scodnick, J. Geophysical Report on the Calamite Gold Property of Havila Resources Inc., La Reine Township, Quebec, August 1988.

DIAMOND DRILL RECORD

	PROPERTY CALAMITE GOLD PROPERTY	H	OLE NO	HR88-	-1	
SHEET NUMBER	l of 3 SECTION FROMTO)	STA	RTED		-06-88
LATITUDE	ITUDE DATUM			MPLETED	07-06-88	8
DEPARTURE	BEARING0		UL1	FIMATE E	DEPTH]	5]'
ELEVATION	DIP90		_ PRC	POSED D	DEPTH2	00'
DEPTH FEET	FORMATION	SAMPLE No	WIDTH OF SAMPLE	GOLD OZ/TON	SLUDGE GOLD OZ/TON	
0-47'7"	OVERBURDEN					
47'7"-151'	<pre>GRANITE: Medium grained, contains 3-7% (4-5% ave.) of amphibole_crystals (hornblende), euhedral_development Homogeneous section. Local_alteration of amphiboles. Local_carbonitization associated to Quartz-healed tension fractures. Rock is comprised of 45-50% k-spa 35-40% Quartz, 5-7% plagioclase feldspar_and 2-3% amphiboles. At 64'3", 1/2" Quartz tension fracture, unmin, 1-2% diss Py in hr. 20 TCA. At 67'10", 1/4" (TW) QC shear vein, VLDP, 1-3% diss Py in hr, 25 TCA At 76'5", 1/4" (TW) Q tension vein, 1% diss Py in hr 30-35 TCA. At 88'1", 1/4" (TW) Q tension vein, LDP, 1-2% diss Py in hr, 20 TCA. From 93'4" to 93'11" ble granite, altered (silicified and carbonatized). From</pre>	ar		ÉNERGIE ET RESSAURCES SECTEUR MUNS	2 2 SEP. 1988 Bureau régional val d'Or	# ut 03783 TM88 267 025
	<u>98'1" to 98'7", as above. At 110'1", 1/4"-1/2" (TW)</u> <u>Q, VLDP, VLDP in hr, 20 TCA. Misiing core from 103'-</u> <u>(5' in total). Fragments of broken bit contain sever</u> grains of visible gold. At 117'8", 1/2" (TW) Q, unmi <u>LDP, VLDP in hr, 20-25 TCA. From 122'10" to 123', b1</u> WLDD _ Fragm 1221 to 123 61 _ VLDD LDD _ 1/4" (TW) Q 2	al n eached	Ministè Se Date: No G.M.;	vice de la	cia et das Res Géoinformat 1980 93	tion
	VLDP. From 123' to 123.6', VLDP-LDP, 1/4" (TW) Q, ?	1LA,		·····		┠┠
I	From 123'6" to 123'9", bleached, VLDP, unmin in hr.	SIGNE	:0 <u>} - </u> {)] _		

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DIAMOND DRILL RECORD

	PROPERTY		,,,,,	H(OLE NO.	_ HR - 88 :L			
SHEET NUMBER2_Of_3 SECTION FROMTO					_ STA	ARTED	01-06-88		
LATITUDE		DATUM			_ со	MPLETED	07-06-88		
DEPARTURE		BEARING		-		TIMATE E	DEPTH		
ELEVATION		DIP			_ PRO	OPOSED D	EPTH		
DEPTH FEET		FORMATION		SAMPLE No.	WIDTH OF SAMPLE	GOLD OZ/TON	silver		
	At 137', 1/2" (TW) Qua	rtz, unmin, VLDP in hr. F	rom 140	4"					
	to 141'11", altered (s	ilicified and carbonatized) VLDP.						
	From 141'11" to 142'2"	<u>, broken bit fragments con</u>	<u>tain se</u>	eral					
	visible gold grains up	to 5 mm long, dusted gold	(vfg)						
				13"					
	1/4" (TW) Q tension, bleached, dusted with subordinate								
	native silver, 1-2% vf dusted with native sil	<mark>g diss Py. At 147'8", 1/4</mark> ver(subordinate), 25-30% Py	"_Q_tens y in ve	ion n,					
	bleached hr, 1-2% diss	Py in hr, 20 TCA.							
	63'6"-64'7"			001	13"	0.06	0.34		
	67'5"-68'4"			002	11"	н	11		
	76'0"-77'5"			003	17"	11	11		
<u></u>	87'2"-88'5"			004	15"	11	0.34		
	92'10"-94'6"		1	005	20"	11	0.34		
	97'9"-99'0"			006	15"	н	11		
	109'9"-110'6"			007	9"	11	н		
	117'4"-118'2"			008	10"	0.266	н .		
	122'1"-123'0"			009	23"	0.06	1)		
	123'6"-124'3"			010	9"	11	11		
	140'1"-141'9"			011	8"		0.34		

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DIAMOND DRILL RECORD

	PROPERTYCALAM	CALAMITE GOLD PROPERTY HOLE NC. HR_ 88-1						
SHEET NUMBER	3 of 3	SECTION FROM	то	STA	RTED_0	1-06-88		
LATITUDE DATUM COMPLETED 07-06-88								
DEPARTURE	, <u>, , , , , , , , , , , , , , , , </u>	BEARING		_ บเว	TIMATE D	EPTH		
ELEVATION		DIP		_ PRC	POSED D	EPTH		
DEPTH FEET	FO	RMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD OZ/TON	silver ppm		
-	141'11"-142'2"		012	3"	1.2	3.39		
. <u></u>	142'2"-143'7"		013		0.2	0.34		
	<u>147'4"-148'3"</u>		014		0_333	11.5		<u> </u>
<u> </u>		······································					-	<u> </u>
	, 							
		,,,,,,, _						
	END OF HOLE AT 151'. CO	RE STORED ON PROPERTY.						
	CORE LOGGED BY JOEL SCO							
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