NI 43-101 TECHNICAL REPORT PERTAINING TO THE:

# SAPEENA PROPERTY

UNGAVA BAY AREA Quebec

NTS 24F/06-07

March 14, 2014

Prepared for Genius Properties Ltd.

Prepared by: Alain Tremblay, Eng., and Donald Théberge, Eng., M.B.A.

## DATE AND SIGNATURE PAGE AND CERTIFICATE OF QUALIFICATION

#### **Certificate of Qualified Person**

I, Donald Théberge, Eng., M.B.A., do hereby certify that:

- a) I am registered under the name Solumines, and my place of business is located at 54 De La Vigie, Lévis, Province of Quebec, G6V 5W2;
- b) I am the qualified person responsible for the preparation of Sections 1 to 5 and 9 to 27 of the technical report entitled *"NI 43-101 Technical Report pertaining to the: Sapeena Property, Ungava Bay area, Quebec, NTS 22F/06-07. Prepared for Genius Properties Ltd."* and dated March 14, 2014;
- c) I graduated with a degree in geological engineering from the University du Québec à Chicoutimi in 1978. I obtained a Master of Business Administration (M.B.A.) from Laval University in 1994. I am a member in good standing of the Ordre des Ingénieurs du Québec (No. 32368). I have worked as a geological engineer since my graduation in 1978. My relevant experience for the Sapeena project was acquired during my years working as a project geologist for Serem (1978-1981), as a senior geologist for Agnico-Eagle (1982-1989), as a technical inspector for Natural Resources Canada's C.E.I.P. program (1989-1990), and during the course of many mandates for junior exploration companies;
- d) I did not visit the property;
- e) I am responsible for the sections 1 to 5 and 9 to 27of the technical report;
- f) I am independent of the issuer in accordance with Section 1.5 of National Instrument 43-101
   Standards of Disclosure for Mineral Project;
- g) I have read the definition of "qualified person" set out in National Instrument 43-101, and certify that by reason of my education, affiliation with a professional association (as defined in National Instrument 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101;
- h) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that Instrument and Form;

i) As at March 14, 2014, to the best of my knowledge, information and belief, the Technical Report contained all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated March 14, 2014,

DO? ENG DONALD THÉBERGE ona col Theberge wannunnun

Donald Théberge, Eng., M.B.A.

## **Certificate of Qualified Person**

I, Alain Tremblay, B.A.Sc., do hereby certify that:

- a) I am a geological engineer working for 2419-1538 Quebec Inc., a company otherwise known as Consultations Géo-Logic, whose place of business is located at 1032 De Fontenay-le-Comte, Quebec City, Province of Quebec, G1Y 2Y1;
- b) I am the qualified person for the preparation of Sections 6, 7 and 8 of the technical report entitled "*NI 43-101 Technical Report pertaining to the: Sapeena Property, Ungava Bay area, Quebec, NTS 22F/06-07 Prepared for Genius Properties Ltd.*" and dated March 14, 2014.
- c) I graduated with a B.A.Sc. degree in geological engineering from École Polytechnique in Montréal in 1979. I am a member in good standing of the Ordre des Ingénieurs du Québec, No. 33996. From graduation until 1994, I worked for public, para-public and public companies and the government in the field of mining exploration. During that time, I conducted or supervised geological studies and exploration programs for gold, base metals and industrial minerals in all the geological provinces of the province of Quebec. I founded 2419-1538 Quebec Inc. in 1994 and have since acted as president of the company, which offers geological services for the exploration and development of mining properties.
- d) I was not involved into previous exploration work on this property. As co-author, I reviewed the historical data for the property and adjacent areas and discussed various issues related to the property with co-author Donald Théberge. I did not visit the property recently.
- e) I am independent of the issuer in accordance with Section 1.5 of National Instrument 43-101, Standards of Disclosure for Mineral Projects;
- f) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in National Instrument 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101;
- g) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that Instrument and Form;
- As at March 14, 2014, to the best of my knowledge, information and belief, the Technical Report contained all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed this 14<sup>th</sup> day of March, 2014

Sani Gumllay

Alain Tremblay, Geol.Eng, OIQ 33996

# TABLE OF CONTENTS

DATE AND SIGNATURE PAGE AND CERTIFICATE OF QUALIFICATION	2
1.0) SUMMARY	8
2.0) INTRODUCTION	.13
<ul> <li>2.1) RECIPIENT</li></ul>	13 13 13
3.0) RELIANCE ON OTHER EXPERTS	.13
4.0) PROPERTY DESCRIPTION AND LOCATION	.14
<ul> <li>4.1) AREA</li> <li>4.2) LOCATION.</li> <li>4.3) TYPE OF MINERAL TENURE.</li> <li>4.4) NATURE AND EXTENT OF THE ISSUER'S TITLES</li> <li>4.5) ROYALTIES</li> <li>4.6) ENVIRONMENTAL LIABILITIES</li> <li>4.7) REQUIRED PERMITS</li> </ul>	14 18 18 18 18 18
5.0) PHYSIOGRAPHY, ACCESSIBILITY, INFRASTRUCTURE AND CLIMATE	
<ul> <li>5.1) TOPOGRAPHY, ELEVATION, VEGETATION AND DRAINAGE</li></ul>	19 19
6.0) HISTORY	.20
<ul> <li>6.1) GEOLOGICAL WORK BY THE QUEBEC GOVERNMENT</li></ul>	21 22 22
7.0) GEOLOGICAL SETTING AND MINERALIZATION	.25
<ul> <li>7.1) GENERAL GEOLOGICAL SETTING</li></ul>	27 28 29 29 29 31 31 31 31
8.0) DEPOSIT TYPES	.32
8.1) MAGMATIC PGE-CU-NI AU IN LAYERED GABBRO 8.2) VEINS OR DISSEMINATED CU $\pm$ NI $\pm$ PGE $\pm$ AU $\pm$ AG IN MAFIC TO ULTRAMAFIC INTRUSIONS	34
9.0) EXPLORATION	
10.0) DRILLING	
11.0) SAMPLE PREPARATION, ANALYSES AND SECURITY	.35

12.0) DATA VERIFICATION	35
13.0) MINERAL PROCESSING AND METALLURGICAL TESTING	35
14.0) MINERAL RESOURCE ESTIMATES	36
ITEMS 15 TO 22	36
23.0) ADJACENT PROPERTIES	36
24.0) OTHER RELEVANT DATA AND INFORMATION	36
25.0) INTERPRETATION AND CONCLUSIONS	36
26.0) RECOMMENDATIONS	37
27.0) REFERENCES	39
27.1) Public Reports (chronologic order) 27.2) Assessment Reports (numerical order)	

## List of Figures

Figure 1: Location Map	.15
Figure 2: Claims Map	
Figure 3: Previous Work on the Sapeena Property	
Figure 4: Labrador Trough	
Figure 4: Labrador Trougn Figure 5: Regional and Property Geology	

## List of Tables

Table 1: List of Claims	.16
Table 2: Climate data for Kuujjuaq from Environment Canada	.20
Table 3: Historical Work on the Sapeena Property	
Table 4: Stratigraphy of the Lac Hérodier area, from Clark, T., 1978 (DPV 568)	

## 1.0) SUMMARY

The Sapeena property consists of four claim blocks totalling 28 map-designated cells covering 1,302.85 ha. These claims are located in NTS 24F06 and 24F07. They will expire on May 17, 2014. Exploration work in the amount of \$3,780 will be required upon renewal, along with mining duties in the amount of \$3,164. No accrued work is currently registered on the claims.

On October 2013, Synergy Acquisition Corp., which changed its name to Genius Properties Ltd. on January 28, 2014, entered into an agreement with two Canadian corporations to purchase 3,200 claims located in Canada, including the Sapeena property, in exchange of 10,000,000 common shares of Genius valued at \$0.06 per share. The shares were delivered and Genius now holds a 100% interest in the Sapeena property. The vendors retain a 1% NSR, of which one-half can be purchased by Genius at any time for an amount of \$500,000.

To the knowledge of the author, there are no environmental liabilities pertaining to the Sapeena property. The only permit required to carry out exploration on the property is the usual forestry management permit.

Blocks 1, 2 and 3 of the property are located along the northern part of the Labrador Trough, characterized by a pronounced valley and ridge topography. The bottom of the valley is 500 feet above sea level while the surrounding hills reach an altitude of 1,000 to 1,200 feet. The relief of the most easterly block, Block 4, is gentler, with an elevation that rises gradually from 800 to 900 feet. The entire property area is characterized by discontinuous islands of black spruce separated by lichen-covered bedrock and swampy low-lying areas. The wildlife consists mostly of caribou, black bear, wolf and artic fox. There are several creeks and lakes on all the property blocks and in the neighbouring area that can be used as a source of water for drilling and eventually mining, if appropriate. The property is located in an area containing sporadic discontinuous (10-50%) permafrost.

Access to the property is from Kuujjuaq, a regional centre serviced regularly by Air Inuit. Heavy equipment such as a bulldozer or drill rig can be brought to the property using winter roads. There is no mining infrastructure on the property. In the event of an extensive exploration program, a camp will have to be built to house the personnel and contractors. Food and supplies can be obtained from Kuujjuaq, some 150 km north of the property. Sapeena is located between the Arctic and Sub-arctic climatic zones, with long, cold winters and short, cool summers.

The first work in the area by government was the regional mapping of the Labrador Trough done by Fahrig, in 1955. This was followed in 1970 by a compilation of the metallic mineralization by Dugas. From 1978 to 1987, Clark carried out systematic studies of the Labrador Trough, and was a leading author on this subject.

During the same time, exploration companies were active in the area, mainly exploring for iron. This led to the discovery of multi-million- tonne iron deposits mined by the Iron Ore Company and Hollinger North Shore, in the Schefferville region. On and in the immediate vicinity of the Sapeena property, BHP Minerals completed a regional till sampling program in 1979, oriented towards the search for kimberlites. No interesting results were reported on or in the vicinity of the Sapeena blocks. More recently, since 2000, Osisko Exploration, Virginia Gold Mines, Noranda and finally Everton Resources carried out exploration for copper, nickel and platinum group elements disseminated in gabbroic formations. Samples collected by Osisko on Block 4 returned an average of 0.63% Cu, 0.11% Ni, and 0.22 g/t PGE.

In 2001, Noranda completed an airborne survey that yielded 235 targets, followed by ground surveys. During the geological reconnaissance, the Sapeena and Canyon showings were discovered and yielded low copper and zinc values. In 2008, Everton staked a large area that included the four blocks of the Sapeena property. Most of the work was concentrated east of the Sapeena blocks. There are no historical resources and no production has ever occurred on the property.

The Sapeena property is located in the western half of the Labrador Trough. The rocks of the area consist of basalts, pyroclastics and gabbros of the Montagnais Group, the sedimentary rocks of the Chioak, and Larch River Formations, the iron formations of the Baby Formation and quartz and sandstones conglomerates. Blocks 1, 2 and 3 are dominated by gabbros, and Block 4 is underlain by gabbros invading a thick sequence of volcanic rocks, mainly volcaniclastites, tuff and chlorite schists.

Up until now, the following mineralization has been reported on the Sapeena blocks:

-Block 1, <u>*Canyon showing*</u>: millimetric veins of chalcopyrite in basalt; the best grab sample returned 0.84% Cu and 0.3 g/t Ag with trace Au and Zn.

-Block 1: <u>Sapeena showing</u>: the best sample in mineralized argillite returned 6.76% Cu, 8.7 g/t Ag, 195 ppm Ni and 533 ppm Zn;

-Block 1: <u>Sapeena gabbroic showing</u>: mineralization in gabbros; the best result was 0.58% Cu, 0.56% Ni, 264 ppb Pd and 36 ppb Pt;

-Block 1: *I, D, J showings*: related to minor shear in gabbros; returned 2.8 g/t Au, 0.12% Cu and 0.02% Ni;

-Block 2: <u>*J*, *L* showings:</u> specks of veinlets and sulphides in a gabbro; a best result of 1.96% Cu, 0.12% Ni and 96 ppb Pd;

-Block 3: *Detour showing*: disseminated sulphides in pyroxenite and gabbros; a best result of 0.82% Cu and 0.01% Ni;

-Block D: <u>*Clark showing:*</u> disseminated pyrrhotite and chalcopyrite in a gabbroic sill; a best result of 0.63% Cu, 0.11% Ni and 0.22 g/t Pt+Pd; average of five samples taken along 250 m of mineralization.

Two deposit types are considered for the Sapeena property. The first is a magmatic PGE-Cu-Ni-Au deposit in layered gabbro. This is the same type as the Paladin, Lac Fortune and Lac Larochelle deposits, also located in the Labrador Trough. These deposits have never been mined. The other type is the vein or disseminated Cu±Ni±PGE±Au±Ag deposit in mafic to ultramafic intrusions. Several deposits of this type are known to occur in the Labrador Trough: Advance 1, North Zone, Chrysler 2, Lac Retty and Lac Bleu.

Genius has not undertaken any exploration work, sampling or drilling since acquiring the property. It was impossible to verify the old data, and the authors were therefore obliged rely on the reported data only. However, this data is considered reliable, having being produced by reputable exploration companies.

The Sapeena property covers seven different occurrences of Cu, Ni, PGE or Au or combinations of these. Most of these occurrences were found recently, in the early 2000s. Geological reconnaissance on these showings returned uneconomic values and/or showed that the mineralized zones were discontinuous. As a result, not much follow-up work was done. The absence of subsequent work may also be due to the remoteness of the area, with only very significant results meriting attention.

Almost all of the occurrences are in a geological context with gabbroic sills and ultramafic rocks of the Montagnais Group. In many places, the gabbros are differentiated or show glomeroporphyric textures. This environment is considered very favourable for Cu-Ni-PGE-Au-Ag mineralization, either magmatic or epigenetic-vein. Descriptions of the showings by previous authors shows that the type of emplacement indeed fits very well with typical mineralization found in the above-mentioned deposit types.

Since the discoveries of these occurrences, some airborne spectrometric and magnetic surveys were done in the area. Spectrometric surveys are useful but do not penetrate the surface bedrock much. On the other hand, magnetic surveys can contribute to the identification of Cu-PGE deposits, although variability in the pyrrhotite magnetic susceptibility and the presence of disseminated magnetite in the mafic units may complicate or alter the signature of a deposit.

We propose to test the possibility that some of these showings may be distal expressions of a larger mineral concentration. The surface occurrences would be linked to larger sulphide deposits at depth, within the gabbroic sequences. An airborne EM survey is recommended to test this hypothesis. This type of survey would detect a possible at-depth source of the identified surface showings. We propose to conduct the survey on the Montagnais Group gabbros that underlie Block 1, 2, 3 and 4.

A two-phase exploration program is recommended, as follows:

#### Phase I:

- An airborne magnetic and electromagnetic survey over all the blocks of the property, first to locate the gabbro and second to test whether sulphide mineralization occurs;
- A geological survey over all the blocks to test the EM anomalies identified, and sampling of all the gabbroic outcrops containing some sulphides, with assaying for Cu-Ni and PGE, and/or other such metals as might be requested;

## Phase II

If warranted by the results of Phase I, a Phase II program would be initiated, consisting of approximately 2,000 m of diamond drilling the test the best targets. The budget to complete both phases is shown below. Please note that exploration costs are higher than usual due to the need for helicopter support for both geology and drilling.

Phase I: Geophysical and geological surveys									
Work	Quantity	Unit	Unit cost	Total					
Program preparation	4	days	\$800	\$3,200					
Helicopter-borne survey, including mob- demob and report	190	km	\$250	\$47,500					
Geological survey and sampling (including room and board, transportation, etc.)	20	days	\$4,000	\$80,000					
Sample analysis	200	samples	\$50	\$10,000					
Report at the end of Phase I: update of NI 43- 101 report and filing with the MRN				\$12,000					
Contingency 12%				\$18,324					
			Тс	otal Phase I	<u>\$171,024</u>				
Phase II: Diar	nond drilli	ng							
Program preparation	4	days	\$800	\$3,200					
Drilling	2,000	m	\$160	\$320,000					
Update of report at the end of Phase II, and filing for statutory purposes				\$12,000					
Contingency 12%				\$39,840					
			То	otal Phase II	\$371,840				
			Total Ph	nase I and II	\$542,864				

## 2.0) INTRODUCTION

## 2.1) RECIPIENT

This technical report on the Sapeena property has been prepared at the request of Genius Properties Ltd. ("Genius").

## 2.2) OBJECTIVES

This report describes the scientific and technical information concerning the exploration activities, both historical and recent, carried out on the Sapeena property.

## 2.3) Source of Data and Information

This report is based on the documentation provided by Genius and the statutory work filed with the Quebec Ministry of Natural Resources (MRNQ). A complete, detailed list of the documentation used is given in Item 27, "References".

## 2.4) Scope of the Personal Inspection by the Qualified Person

The authors have not visited the property.

# 2.5) UNITS USED IN THIS REPORT

Unless otherwise indicated, the units used in this report are in the metric system, amounts are in Canadian dollars, and coordinates are in the UTM system, NAD83, Zone 19.

## **3.0) RELIANCE ON OTHER EXPERTS**

Alain Tremblay, Eng., and Donald Théberge, Eng., M.B.A., are the authors of this report. Alain Tremblay prepared Item 6.0, "History", Item 7.0, "Geology", and Item 8.0, "Deposit Types". Donald Théberge prepared all the other sections of the technical report. No other experts were involved in the preparation of the report.

# 4.0) PROPERTY DESCRIPTION AND LOCATION

# 4.1) AREA

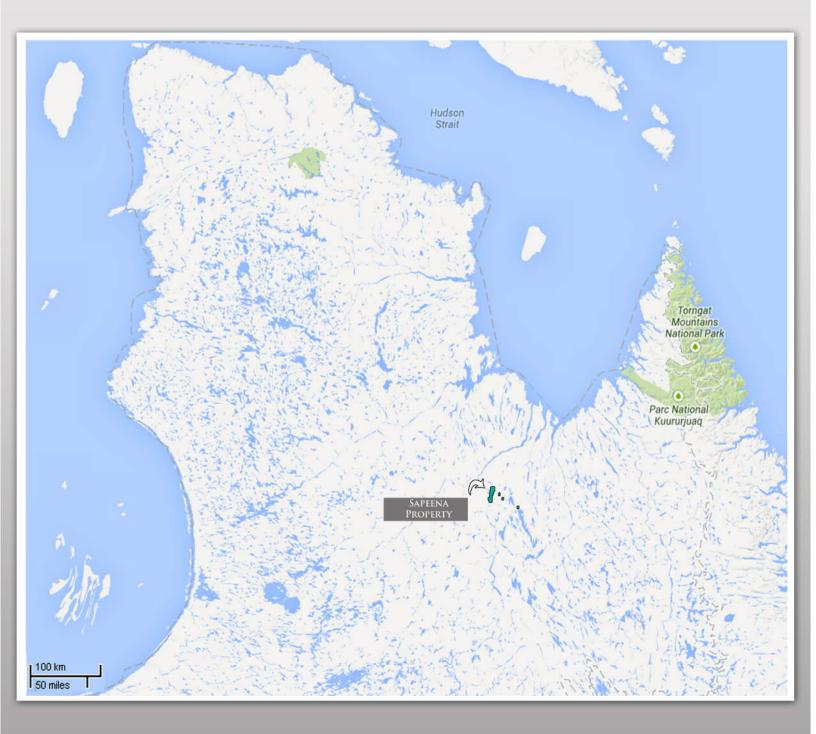
The property is made up of four claims block totalling 28 map-designated claims (CDC), for a total of 1302.85 ha.

# 4.2) LOCATION

The four blocks forming the property are located some 125 kilometres southwest of the Ungava Bay, Quebec. Two of the blocks are in NTS sheet 24F/06 and the other two in adjacent sheet 24F/07. The property is centered on UTM coordinates 500 000E / 6 356 000N. It is located approximately 100 kilometres south-southwest of Kuujjuaq and 15 kilometres to the west of Lac Hérodier. The property boundaries have not been surveyed and do not need to be surveyed, as they are already defined by the NTS coordinate system. The property location is shown in Figure 1, "Location Map".

# 4.3) Type of Mineral Tenure

The Sapeena property is made up of four blocks totalling 28 map-designated claims (CDC) that will expire on May 17, 2014. Exploration work in the amount of \$3,780 will be required upon renewal, along with mining duties in the amount of \$3,164. No accrued work is currently registered on the claims. The claims are registered to the name of Synergy Acquisition Corp, but a request will be made to change the titleholder name to Genius Properties Ltd. The claims are described in Table 1, "List of Claims", and illustrated in Figure 2, "Claims Map".







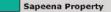


FIGURE:1 PREPARED BY: SOLUMINES DATE:02/28/2014 MAP: 24F06\_24F07

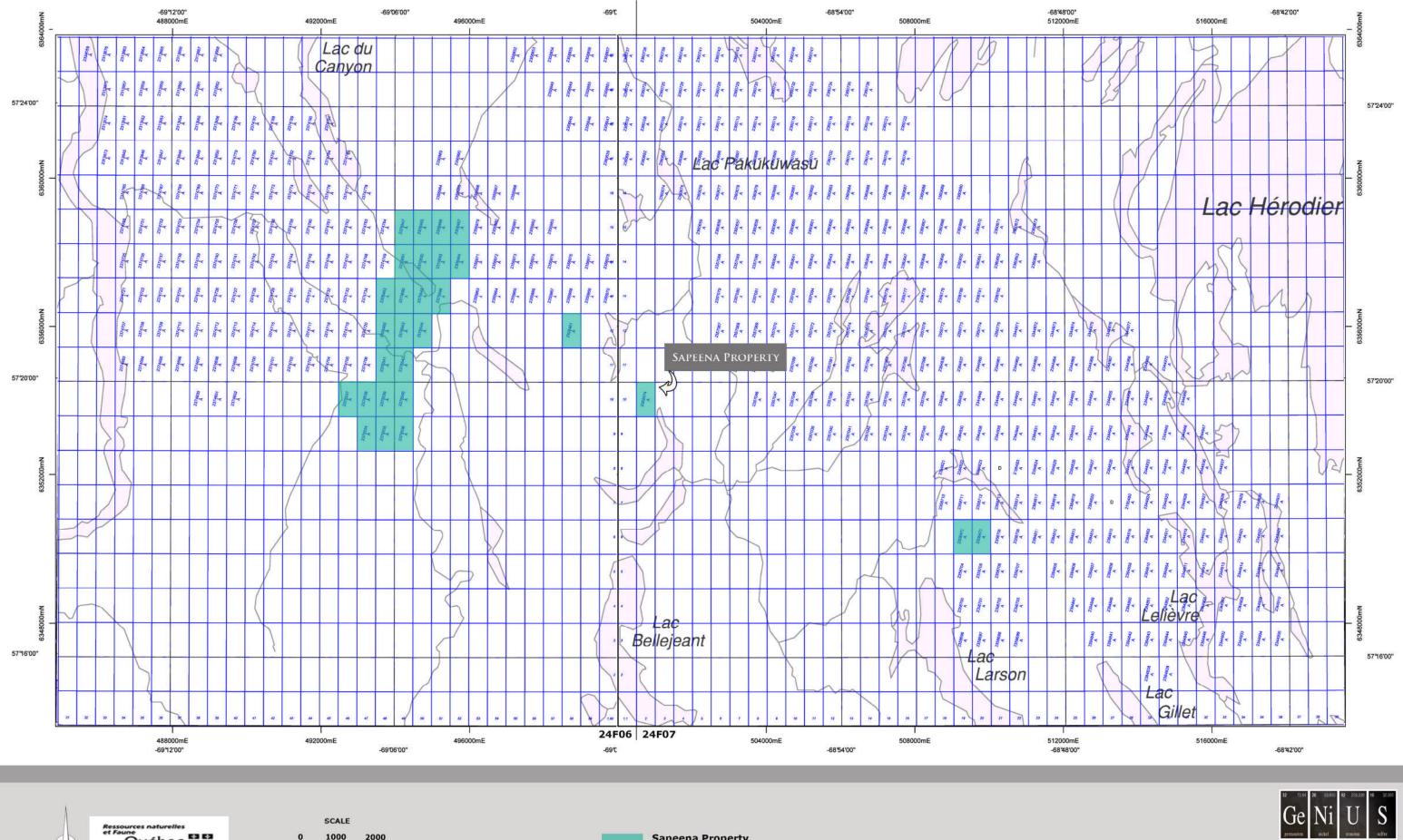


LOCATION MAP Sapeena Property

TABLE 1: LIST OF CLAIMS										
			Area	Accrued	Required	Mining				
NTS sheet	Title #	Expiry date	(Ha)	work	work	duties				
24F06	2308460	May 17, 2014	46.53	\$0	\$135	\$113				
24F06	2308461	May 17, 2014	46.53	\$0	\$135	\$113				
24F06	2308463	May 17, 2014	46.52	\$0	\$135	\$113				
24F06	2308464	May 17, 2014	46.50	\$0	\$135	\$113				
24F06	2308465	May 17, 2014	46.49	\$0	\$135	\$113				
24F06	2308466	May 17, 2014	46.49	\$0	\$135	\$113				
24F06	2308467	May 17, 2014	46.49	\$0	\$135	\$113				
24F07	2308472	May 17, 2014	46.59	\$0	\$135	\$113				
24F07	2308473	May 17, 2014	46.59	\$0	\$135	\$113				
24F07	2308474	May 17, 2014	46.55	\$0	\$135	\$113				
24F06	2310690	May 17, 2014	46.52	\$0	\$135	\$113				
24F06	2310691	May 17, 2014	46.50	\$0	\$135	\$113				
24F06	2310692	May 17, 2014	46.50	\$0	\$135	\$113				
24F06	2310693	May 17, 2014	46.50	\$0	\$135	\$113				
24F06	2378534	May 17, 2014	46.56	\$0	\$135	\$113				
24F06	2378535	May 17, 2014	46.56	\$0	\$135	\$113				
24F06	2378536	May 17, 2014	46.56	\$0	\$135	\$113				
24F06	2378537	May 17, 2014	46.55	\$0	\$135	\$113				
24F06	2378538	May 17, 2014	46.55	\$0	\$135	\$113				
24F06	2378539	May 17, 2014	46.55	\$0	\$135	\$113				
24F06	2378540	May 17, 2014	46.55	\$0	\$135	\$113				
24F06	2378541	May 17, 2014	46.54	\$0	\$135	\$113				
24F06	2378542	May 17, 2014	46.54	\$0	\$135	\$113				
24F06	2378543	May 17, 2014	46.53	\$0	\$135	\$113				
24F06	2378544	May 17, 2014	46.53	\$0	\$135	\$113				
24F06	2378545	May 17, 2014	46.52	\$0	\$135	\$113				
24F07	2378546	May 17, 2014	46.52	\$0	\$135	\$113				
24F08	2378547	May 17, 2014	46.49	\$0	\$135	\$113				
<u>Total :</u>	28 claims		<u>1302.85</u>		<u>\$3,780</u>	<u>\$3,164</u>				

TABLE 1: LIST OF CLAIMS

All the claims are registered in the name of Synergy Acquisition Corp.



Québec 2014-02-19

N

1000 2000 METERS

Sapeena Property



FIGURE:2 PREPARED BY: SOLUMINES DATE:02/28/2014 MAP: 24F06\_24F07

## 4.4) NATURE AND EXTENT OF THE ISSUER'S TITLES

On October 2013, Synergy (now Genius Properties Ltd.) entered into an agreement with two Canadian companies to purchase 3,200 claims located in Canada, including the Sapeena property. As consideration for this acquisition, Genius agreed to deliver 10,000,000 shares at \$0.06 to the vendors on closing of the transaction. The shares were delivered and Genius now holds a 100% interest in the Sapeena property.

## 4.5) ROYALTIES

The two Canadian companies that sold their 3,200 claims to Genius hold a 1% NSR<sup>1</sup> royalty on the property, of which one-half (0.5%) can be purchased by Genius at any time for an amount of \$500,000.

## 4.6) Environmental Liabilities

To the knowledge of the author, there are no environmental liabilities pertaining to the Sapeena property.

## 4.7) REQUIRED PERMITS

The only permit required to carry out exploration work on the property is the usual permit for forestry management. The company must also respect all the environmental laws applicable to the type of work done.

# 5.0) PHYSIOGRAPHY. ACCESSIBILITY. INFRASTRUCTURE AND CLIMATE

## 5.1) TOPOGRAPHY, ELEVATION, VEGETATION AND DRAINAGE

Blocks 1, 2 and 3 of the Sapeena property (western part) are located along the northern part of the Labrador Trough, a Proterozoïc tectonic zone striking NW-SE characterized by a pronounced valley and ridge topography. Elongated lakes in the valley are around 500 feet above sea level, while the crests of the surrounding hills reach an altitude of 1,000 to 1,200 feet. The relief of the most easterly block, Block 4, is gentler, with an elevation that rises gradually from 800 to 900 feet. The entire area

<sup>&</sup>lt;sup>1</sup> NSR: Net smelter royalty.

is part of the boreal zone / forest tundra sub-zone. This is a transition zone between the continuous conifer forests to the south and the tundra to the north. It is characterized by discontinuous islands of black spruce separated by lichen-covered bedrock and swampy low-lying areas. Local wildlife consists mostly of caribou, black bear, wolf and artic fox.

There are several creeks and lakes on all the property blocks and in the neighbouring area that can be used as a source of water for drilling and eventually mining, if appropriate. The property is located in an area containing sporadic discontinuous (10-50%) permafrost.

## 5.2) ACCESSIBILITY

Access to the property is from Kuujjuaq, the local centre, regularly serviced by Air Inuit, then by plane or helicopter, depending on the type of work and location. Heavy equipment such as a bulldozer or drill rig can be brought to the various property blocks using winter roads, as the forest cover is rather discontinuous.

## 5.3) INFRASTRUCTURE

There is no mining infrastructure on the property. Kuujjuaq, with a population of 2,400, is the closest regional centre, and is located some 100 kilometres north of the property. The main Kuujjuaq airport can accommodate major jet aircrafts such as Boeing 737. Fixed-wing aircraft and helicopter services are also available at Kuujjuaq, as well as food and other supplies.

# 5.4) CLIMATE

The property is located along the transition between Arctic and Sub-arctic climate zones. This climate zone is characterized by long, cold winters and short, cool summers. Daily average temperatures range from -30 °C in January to +18 °C in July. Annual precipitations can be considered as light, but precipitation is double during the summer compared to other months of the year. This makes for favourable conditions for winter road building. More climate data is presented in Table 2.

	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
	Temperature:												
Daily Average (°C)	-24.7	-24.1	-17.9	-8.7	0.7	7.5	11.8	11	6.4	0	-8.2	-18.3	-5.4
Daily Maximum (°C)	-20.1	-19.1	-12.4	-3.5	5	12.7	17.4	16	10.1	2.8	-4.7	-14.1	-0.8
Daily Minimum (°C)	-29.3	-29.1	-23.3	-13.8	-3.6	2.3	6.1	5.9	2.6	-2.9	-11.6	-22.5	-9.9
	1	1	1	1	Pre	cipitatior	<u>1:</u>			1	1	1	
Rainfall (mm)	0	0.8	0.4	2.9	14.5	42.8	59.6	71.4	69.4	29	4	0.7	295.5
Snowfall (cm)	32.6	29.3	32.3	24.8	14.5	6.5	0.1	0	4.3	26.1	45	36.2	251.7
Precipitation (mm)	31.7	28.9	31.8	27.3	29	49.6	59.6	71.4	73.8	54.6	47.8	36.2	541.6

TABLE 2: CLIMATE DATA FOR KUUJJUAQ FROM ENVIRONMENT CANADA

# 6.0) HISTORY

## 6.1) GEOLOGICAL WORK BY THE QUEBEC GOVERNMENT

The first regional geological map of the Labrador Trough was created by Fahrig, W.F., following field work in 1955 by the Geological Survey of Canada. A preliminary map was issued that year (Study 55-01), followed by a final map, Map 1146A, in 1965.

The first work reported by the Quebec Ministry of Natural Resources (QMNR) was in 1970, when J. Dugas presented a compilation of metallic mineralization in the Labrador Trough on the Fahrig map.

More systematic mapping and geochemical sampling was completed by the QMNR between 1978 and 1987, when T. Clark published geological maps and various studies on the metallogenic potential of the Labrador Trough.

Kimberlite exploration in the late 1990s was an opportunity to re-examine the geological and geochemical data for the area. From 1999 to 2010, several data treatments and syntheses were published with the goal of pinpointing favourable targets for exploration.

In 2011 and 2012, new magnetic and spectrometric surveys were completed in the area, again to define a favourable geological context for various mineralization types. Most pertinent publications are listed in Item 27.

#### 6.2) GEOLOGICAL WORK BY MINING AND/OR EXPLORATION COMPANIES

From the late 1930s up until 1955, the Labrador Trough was explored by private companies, as multi-million-tonne iron deposits were known to be present. Exploration showed that the most promising iron deposits were those of the Iron Ore Company of Canada and Hollinger North Shore, located in the southern portion of the Labrador Trough, around Schefferville and therefore very far south of the Sapeena property. A number of other major but lower-grade deposits belonging to International Iron Ore Ltd., Atlantic Iron Ores Ltd., Fenimore Iron Mines Ltd. and Oceanic Iron Ore of Canada are found along the western shore of Ungava Bay and Lac aux Feuilles, to the north of the Sapeena property.

The first exploration work on the four blocks of the Sapeena property was carried out between 1999 and 2001. Kimberlite exploration was first conducted by BHP Mineral of Canada Ltd. (1999) with a huge regional till sampling program. One sample from the last line of the survey to the north was taken on the northern part of Sapeena Block 1. Other samples from this survey line are located some 2 kilometres on either side of this block. No interesting results were reported.

In 2000, Osisko Exploration Ltd. carried out geological reconnaissance and sampling along the eastern part of the Sapeena property, covering Block 4. This block covers the Clark showing, a copper-nickel occurrence identified by Clark, T. in 1978 (ref. DPV 568) consisting of disseminated sulphides in a gabbroic rock. Five samples collected by Osisko returned an average of 0.63% Cu, 0.11% Ni and 0.22 g/t PGE<sup>2</sup> over 250 metres along the trace of the mineralization.

The presence of numerous gabbroic sills and lenses in the Sapeena property area also attracted the attention of Virginia Gold Mines Inc. and Placer Dome Ltd. who were looking for PGE mineralization. Following geological compilation, a large area was staked and explored by geological reconnaissance and Beep Mat surveys on grid lines spaced at 1 to 3 kilometres. This program covered Sapeena Block 1, 2 and 3. Five new mineralized occurrences were identified. The current Sapeena property was acquired on the basis of these occurrences: Block 1 covers the D-J, Sapeena and Sapeena gabbroic occurrences; Block 2, the J-L occurrence; and Block 3, the Detour occurrence. Three of these occurrences are Cu-Ni mineralization in gabbros, one is a Cu mineralization associated with a sedimentary iron formation and another is an anomalous gold-bearing vein cutting a gabbro.

In 2001, Noranda Exploration Inc. also completed a hyperspectral airborne survey on an area contiguous to the northern border of the Virginia-Placer property. Identification of a total of 235

<sup>&</sup>lt;sup>2</sup> PGE : Platinum Group Elements (Platinum, Palladium, Ruthenium, Rhodium, Osmium and Iridium)

targets was followed by soil sampling, geological reconnaissance and sampling. During this followup, the Sapeena showing and what would become the Canyon occurrence in 2008 were sampled, and returned low values (Cu-Zn in sedimentary iron formations).

In 2005, geophysical survey data was processed by Consorem in order to pinpoint targets for kimberlite exploration. No targets were found on the Sapeena property, the closest lying just outside the eastern edge of Block 1, some 500 metres east of the Sapeena gabbroic occurrence.

In 2008, Consorem re-interpreted previous soil sample survey data in order to define regional areas favourable to Cu, Cu-Ni and Cu-U-REE<sup>3</sup> mineralization. No particular zones were covered by any of the Sapeena property blocks, the closest being a NW-SE trending anomalous zone east of the property.

The last work reported was also in 2008, when Everton Resources Inc. staked an area covering all blocks of the Sapeena property and carried out geological reconnaissance and sampling. Most of the work was concentrated east of the Sapeena blocks location. The most significant find was weak Cu mineralization associated with Py-Po<sup>4</sup> mineralization in a sedimentary unit. Table 3 and Figure 3 below present a compilation of historical work on the Sapeena property.

# 6.3) HISTORICAL RESOURCES

There are no historical resources for the Sapeena property.

## 6.4) **P**RODUCTION

There has never been any production from the Sapeena property.

## 6.5) HISTORICAL DRILLING

Diamond drilling has never been performed on the property.

<sup>&</sup>lt;sup>3</sup> REE: Rare Earth Elements

<sup>&</sup>lt;sup>4</sup> Py-Po: Pyrite-Pyrrhotite

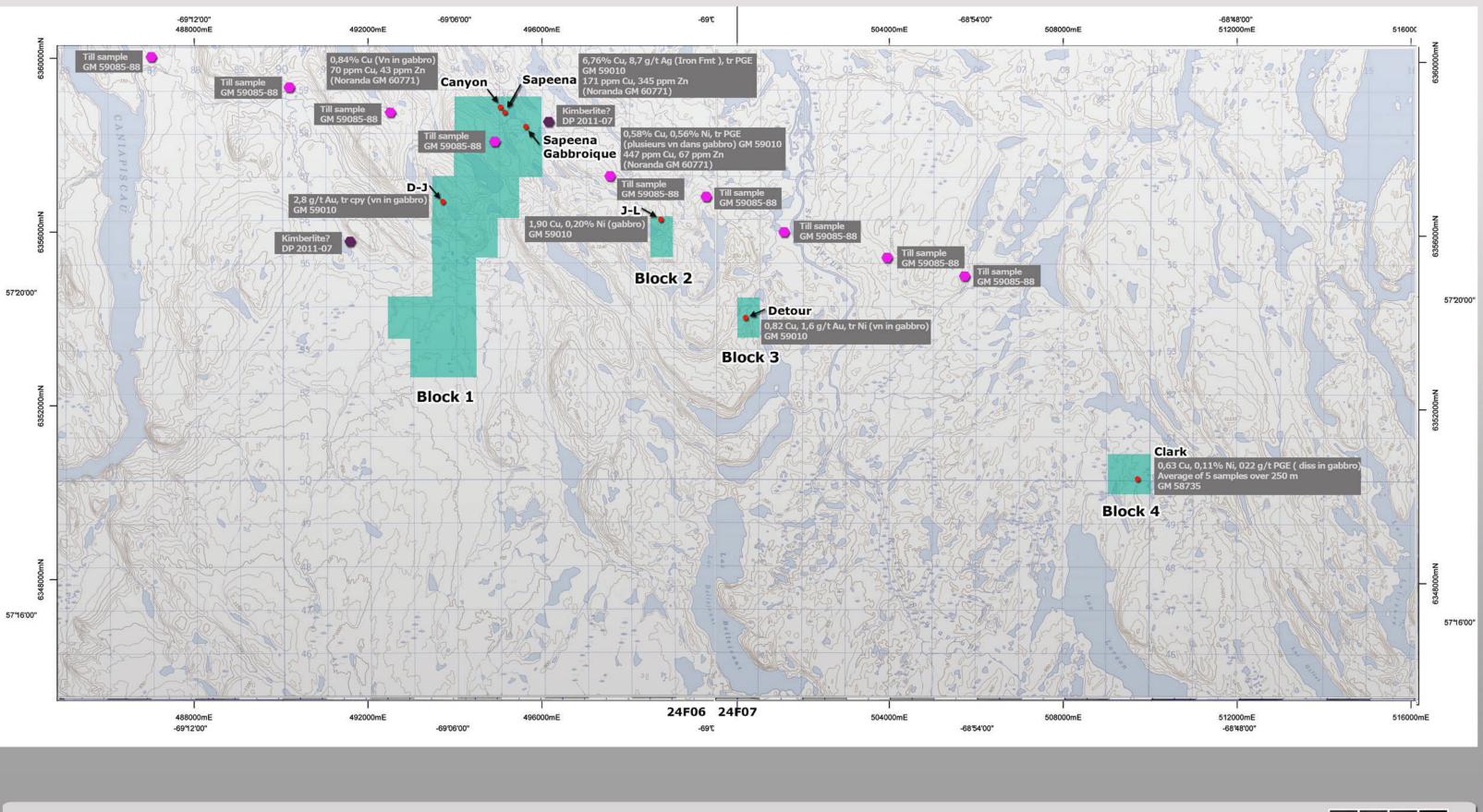






FIGURE: 3 PREPARED BY: Consultations GEO-LOGIC DATE:03/20/2014 MAP: 24F06\_24F07

Reference	Year	Company	Works	Results
GM 59085 GM 59086	1999	BHP Mineral of Canada Ltd.	Till sampling along E-W lines; Reconnaissance over a very large area. Last line to the north is on Sapeena Block 1.	Diamantiferous kimberlites project. No interesting results obtained.
GM 58735	2000	Osisko Exploration Ltd.	Prospecting, Geological mapping, Sampling	Clark showing (Block 4), 0.63% Cu, 0.11% Ni, 0.22 g/t PGE (average) from five samples taken over a distance of 250 m. Disseminated sulphides, discontinuous zone.
GM 59010	2001	Virginia Gold Mines Inc. Placer Dome Ltd.	General area retained from a PGE compilation; Geological reconnaissance; Beep Mat surveys, 1-3 km grid lines	5 showings reported D-J: 2.8 g/t Au from vein in gabbro (Block 1) Sapeena: 6.78%Cu, iron formation (Block 1) Sapeena gab.: 0.58%Cu, 0.56% Ni gabbro (Block 1) Detour: 0.82% Cu, 1.6 g/t Au, vein in gabbro (Block 3) J-L: 1.9% Cu, 0.2% Ni in gabbro (Block 2)
GM 60771	2001	Noranda Exploration Inc.	Hyperspectral airborne survey, Soil sampling, Geological reconnaissance, Sampling	235 targets identified on a large area contiguous to the north of Block 1. All targets examined, three being known occurrences: Canyon: 70 ppm Cu, 43 ppm Zn (Block 1) Sapeena: 171 ppm Cu, 345 ppm Zn (Block 1) Sapeena gab.: 447 ppm Cu, 67 ppm Zn (Block 1)
GM 66584	2005	Consorem	Processing of various types of geophysical surveys to assess favourability to kimberlites occurrences	No kimberlite potential in the Sapeena property area
GM 65081	2008	Consorem	Interpretation of previous soil survey (regional scale) Identification of areas favourable to Cu mineralization	The Labrador Trough shows as a favourable environment for Cu-Ni and Cu-U-REE mineralization. A NW-SE striking zone favourable is present just east of the Sapeena property
GM 64287	2008	Everton Resources Inc.	Geological reconnaissance and sampling	Everton's Canyon and Jack-Rabbit blocks cover the four blocks of the Sapeena property, but sampling was mostly concentrated to the east. Weak Cu mineralization was found in sediment containing 15-20% Py-Po.

# 7.0) GEOLOGICAL SETTING AND MINERALIZATION

## 7.1) GENERAL GEOLOGICAL SETTING

Most of the following description is taken from: Clark, T. and Wares, R., Lithotectonic and Metallogenic Synthesis of the New Quebec Orogen, MM 2005-01.

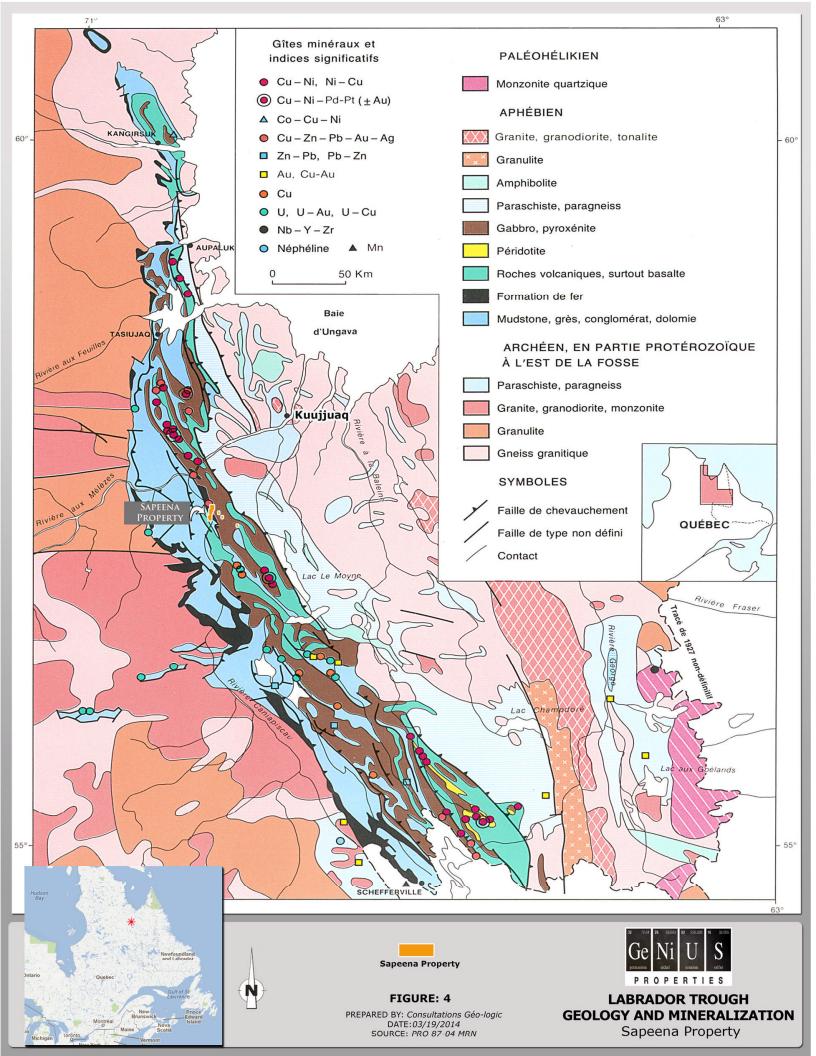
The Sapeena property is located about midway along the Labrador Trough, which is part of the New Quebec Orogen, an Early Proterozoic fold and thrust belt (2.17-1.87 Ga) located on the northeastern margin of the Archean Superior Province (Figure 4). In Quebec, the belt includes two volcaniclastic cycles (2.17-2.14 Ga and 1.88-1.87 Ga). A third cycle composed of syn-orogenic molasse-type metasedimentary rocks overlies the sequence.

The belt is subdivided into 11 lithotectonic zones, each limited by a major thrust fault or erosional unconformity. Each zone is internally uniform with respect to lithological assemblage and structural style, and the distribution of mineral deposit types is characteristic for each zone. Three zones of autochthonous and parautochthonous sedimentary rocks lie along the margin of the Superior Province, three zones are sedimentary and allochthonous and five zones consist of volcaniclastic strata from the first cycle, second cycle, or both cycles – these five zones are allochthonous.

A geological and tectonic framework has been established for the 392 mineral deposits (major deposits and showings) known in the belt. Among these, 336 (86%) are located within the Labrador Trough. Of these 336 deposits, 103 (30%) are iron formations.

Of the remaining 233 deposits, 111 (48%) are interpreted as having mainly a syn- to diagenetic origin, 111 (48%) as having mainly an epigenetic origin, and 11 (5%) as belonging to a different or undetermined type.

Among the syn- to diagenetic deposits, the more common types are magmatic Cu-Ni-PGE (71 deposits or 64% of this class), volcanogenic massive sulphides (20 deposits or 18%), and stratiform sedimentary Cu (11 deposits or 10%). Among the epigenetic deposits, the more common types are vein Cu (49 deposits or 44% of this class), vein or disseminated Cu-Ni-PGE (20 deposits or 18%), vein U (17 deposits or 15%), vein (lode, orogenic) gold (8 deposits or 7%), and vein Ag-Pb-Zn (8 deposits or 7%).



Magmatic Cu-Ni-PGE deposits, hosted mainly in mafic sills and locally in picritic lava flows, formed at the beginning of the mafic volcanic episode ending the second cycle. Tectonometamorphic fluids generated during the Hudsonian Orogeny (1.82-1.77 Ga) are believed to have remobilized preexisting deposits, resulting in the formation of a variety of epigenetic base- and precious-metal deposits. Locally, these deposits are spatially associated with regional or local faults.

## 7.2) REGIONAL GEOLOGY

The Sapeena property is located in the central part (north-south) of the Labrador Trough. The stratigraphy of this area is described by Clark, T. in DPV 568 (1978), Géologie du Lac Herodier, and in ET 87-13 (1987), Stratigraphie, pétrochimie de la formation de fer de Baby dans la région du Lac Herodier. It is presented in Table 4.

Quaternaire/Quaternary (Pléistocène et Récent) (Pleistocene and Recent)			17*	Dépôts morainiques, sable, gravier, blocs Moraine deposits, sand, gravel, boulders
			Di	scordance/Unconformity
		Groupe de Montagnais Montagnais Group	9	Gabbro; un peu de hornblendite (peut-être en partie plus ancien que l'unité 5)/Gabbro; minor hormblendite (may in part be older than unit 5)
		Contact int	rusif ou	a contact-faille/Intrusive or fault contact
			8	Roches volcaniques effusives basiques: coulées massives, laves à coussinets, un peu de tuf et de brèche (en partie intercalés dans l'unité 2)/Basic extrusive volcanic rocks: massive flows, pillow lavas, minor tuff and breccia (in part interbedded with unit 2)
	dnoubu		7	Roches pyroclastiques basiques: tuf, tuf-brèche, agglomérat, un peu de roches volcaniques acides/ Basic pyroclastic rocks: tuff, tuff-breccia, agglomerate, minor acid volcanic rocks
	Sup		Re	elations inconnues/Relations unknown
	iskau		6	Ardoise, shale, siltstone, dolomie, grès non corrélés/ Uncorrelated slate, shale, siltstone, dolomite, sandstone
	iap		Re	elations inconnues/Relations unknown
bian	u/Kan		5	Grès quartzeux, conglomérat, ardoise/Quartz sandstone, conglomerate, slate
ohe	ska		Re	elations inconnues/Relations unknown
Aphébien/Aphebian	de Kaniapiskau/Kaniapiskau Supergroup		4	Formation de fer (formation de Baby ?): faciès carbonaté cherteux, faciès silicaté, dolomie ferrugineuse, chert/ Iron formation (Baby Formation ?): cherty carbonate facies, silicate facies, ferroan dolomite. chert
A			3	Formation de Larch River: ardoise, siltstone, grès, chert/ Larch River Formation: slate, siltstone, sandstone, chert
	gro		D	iscordance locale/Local disconformity
	Supergroupe		2	Formation d'Abner: dolomie, dolomie gréseuse, grès dolo- mitique, un peu de chert, ardoise, siltstone/Abner Forma- tion: dolomite, sandy dolomite, dolomitic sandstone, minor chert, slate, siltstone
			1	Formation de Chioak (?): ardoise, siltstone, grès/Chioak Formation (?): slate, siltstone, sandstone

TABLE 4: STRATIGRAPHY OF THE LAC HÉRODIER AREA, FROM CLARK, T., 1978 (DPV 568)

The blocks of the Sapeena property are located between four and 12 kilometres west of Lac Hérodier. This area is considered to be in the western half of the Labrador Trough. It is underlain by rock assemblages showing characteristics corresponding to the eugeo-synclinal part of the Labrador Trough.

These rocks include: massive and pillowed basalts, pyroclastics and gabbros of the Montagnais Group; dolomites (Abner Formation); slates, siltstones and sandstones (Chioak and Larch River Formations); iron formations (Baby Formation; and quartz sandstones and quartz-pebble conglomerates.

Metamorphic grade increases from west to east, from greenschist facies to amphibolite facies so that the area beginning at about Lac Hérodier and further east is underlain by various paragneisses (biotite gneisses, hornblende gneisses, marbles, quartzites), amphibolites and pegmatites.

The rocks show a general NW-SE direction mostly dipping to the east and presenting evidence of intense folding everywhere. Thrust faults, also NW-SE, are present mostly to the west of the Sapeena property.

## 7.3) PROPERTY GEOLOGY

The Sapeena property consists in four distinct blocks. Blocks 1, 2 and 3 cover various mineralized occurrences in an area dominantly underlain by gabbroic material of the Montagnais Group (Figure 5).

The most extensive block (Block 1), overlies to the south the contact between gabbros of the Montagnais Group and dolomites of the Abner Formation. The mineral occurrences that motivated the staking of Block 1 are located in the northern half of the block (see Figure 3). Mapping by Clarke, T. (1978) shows that thin horizons of sandstones, conglomerates, slates and shales are inter-bedded within the dominant gabbroic sill sequences. The measured schistosities trend NW with a moderate dip to the east.

Block 2 and 3 are small blocks dominated by gabbroic sills, with some slates and shales. While the orientation of the schistosity is the same on Blocks1 and 2, Block 3 shows mostly north-south trending, steeply-dipping schistosities, being proximal to a fold nose.

Block 4 covers a copper-nickel and PGE occurrence found by Clarke, T. during his 1978 mapping program (the Clark showing). The geology of this area is somewhat different, as the occurrence is located in a glomeroporphyric gabbroic sill invading a thick mafic sequence of volcanites, volcaniclastites, tuffs and chloritic schists.

## 7.4) MINERALIZATION

As mentioned earlier, the various blocks of the Sapeena property were acquired to cover seven different previously-identified mineralized occurrences. The location of these occurrences is shown in Figure 3. Surface sampling was the only work done on these occurrences.

#### 7.4.1) BLOCK 1 - CANYON

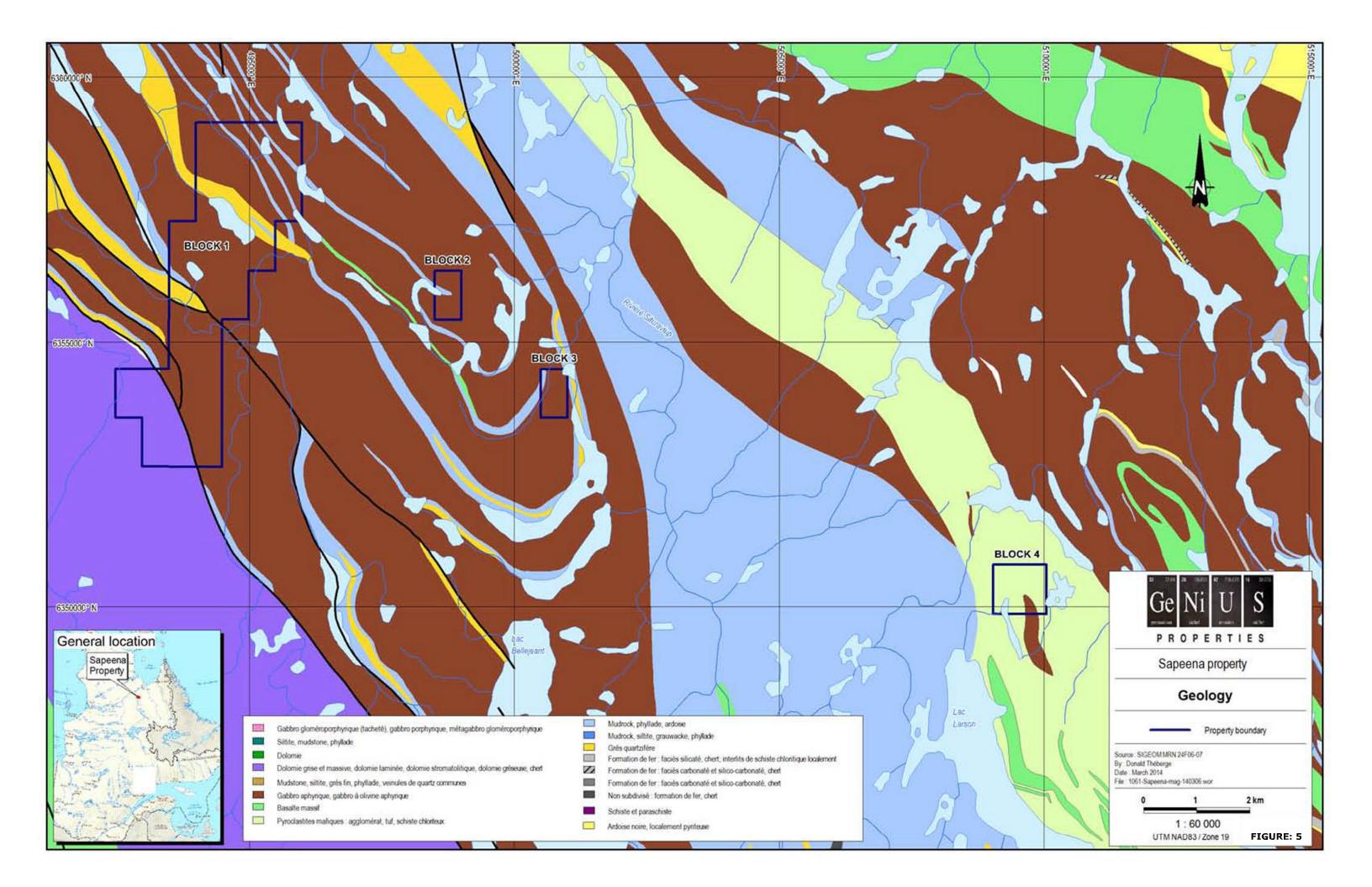
This occurrence in the northeast part of the block and some 300 metres from the north boundary was reported by Everton Resources Inc. (GM 64287). It consists of a millimetric vein of chalcopyrite in a meta-basalt. This mafic volcanic unit is part of a rock sequence that includes gabbros, mudshales and schists. The sedimentary units contain 5 to 50% sulphides as pyrite, pyrrhotite and chalcopyrite.

The best grab sample returned 0.842% Cu and 0.3 g/t Ag with trace Au and Zn. Other samples taken by Everton, and possibly earlier by Noranda Exploration Inc. (GM 60771), returned lower values.

#### 7.4.2) BLOCK 1 - SAPEENA

This mineralized occurrence is located some 50 metres south of the Canyon occurrence (GM 59010). It consists of graphitic argillites containing 1-30% iron sulphides (pyrrhotite and pyrite) as disseminations of fine laminations with occasional chalcopyrite veinlets. More quartzitic units with iron formations overlay the graphitic argillites. Semi-massive to massive sulphide veinlets are observed in that part of the sequence. The sediments are themselves overlain by massive mafic volcanites, and all the units are invaded by a differentiated gabbro.

Many samples were collected from the argillites. Most of them returned less than 1% Cu on average, with trace Ag and Zn. The best sample (42234) yielded 6.76% Cu, 8.7 g/t Ag, 195 ppm Ni and 533 ppm Zn. One sample from the iron formations showed trace PGE, with 90 ppb Pt and 82 ppb Pd.



#### 7.4.3) BLOCK 1 - SAPEENA GABBROIC

This occurrence is located some 600 metres southeast of the Sapeena showing. This area is a mafic to ultramafic, differentiated sequence (GM 59010). The base of the sequence is formed by a homogeneous, medium-grained gabbro. It is overlain by a differentiated ultramafic to mafic sequence consisting of a pyroxenite basis that evolved to a leucocratic gabbro that included some glomeroporphyric phases and blue-quartz-eye phases as conformable lenses.

Mineralization is concentrated in the various facies of the differentiated gabbro. It consists of disseminated pyrrhotite and chalcopyrite in the massive gabbro and veins/veinlets filling fractures and chloritic shear zones. The best values were obtained from veins that can contain up to 15-20% pyrrhotite and 15-35% chalcopyrite.

Two zones were identified (west and east), but the best results were from the east zone. Many samples returned on average 0.5% Cu and 0.25% Ni with 50-200 ppb Pd. The best sample reported returned 0.58% Cu, 0.56% Ni, 264 ppb Pd and 36 ppb Pt.

#### 7.4.4) BLOCK 1 - D-J

This occurrence is located in the mid-west part of the property, some 300 metres from the western boundary (GM 59010). It is related to a minor shear and fracture zone within an altered, blue-quartz-eye gabbro filled by quartz and sulphides. The sulphide mineralization within the vein consists of 1-3% pyrrhotite and 2-3% chalcopyrite. Some sulphide dissemination can be observed in the gabbro along the vein.

Sample 67954 from the quartz vein returned 2.8 g/t Au, 0.12% Cu and 0.02% Ni, while sample 67953 from the gabbro yielded 1.12 g/t Au and 0.05% Cu.

## 7.4.5) ВLOCK 2 - J-L

This occurrence is located in the north part of Block 2. This is the only mineralization reported on this block. The host rock is a medium-grained, massive gabbroic sill in which specks and veinlets of sulphides were identified. These sulphides include pyrrhotite and chalcopyrite. Sample 42347 (GM 59010) returned 1.96% Cu, 0.12% Ni and 96 ppb Pd. Some 435 metres north of this occurrence (just outside the northern boundary), more mineralization with similar grades was obtained from a chloritic zone in a gabbro, near the contact with sulphide-rich graphitic argillites.

#### 7.4.6) BLOCK 3 - DETOUR

This occurrence is located in the middle of Block 3. The area is covered by ultramafic to mafic rocks, including pyroxenite and glomeroporphyric leucocratic gabbro. The mineralization consists of disseminated sulphides (2% pyrrhotite) and veinlets filled by pyrrhotite and chalcopyrite. Sample 42191 (GM 59010) returned 1.6 g/t Au, 0.82% Cu and 0.01% Ni.

## 7.4.7) BLOCK 4 - CLARK

The Clark showing is located in the eastern half of Block 4. This mineralized occurrence was first identified by Clark, T. during his 1978 mapping program that led to the publication of DPV 568. Disseminated pyrrhotite and chalcopyrite was found to occur discontinuously in a glomeroporphyric gabbroic sill. The mineralization can be traced laterally for more than 250 metres. Sampling by Osisko Exploration Ltd. in 2000 (GM 58735) returned an average of 0.63% Cu, 0.11% Ni and 0.22 g/t Pt+Pd from five samples collected over a distance of 250 metres.

## 8.0) DEPOSIT TYPES

Most of the mineralized occurrences on the various blocks of the Sapeena property contain Cu, Ni  $\pm$  Au  $\pm$  PGE. They were found to be associated with mafic to ultramafic intrusive bodies. This type of mineral association is basically related to two deposit categories: 1) Magmatic PGE-Cu-Ni-Au in layered gabbro, and 2) veins or disseminated Cu  $\pm$ Ni  $\pm$ PGE  $\pm$ Au  $\pm$ Ag in mafic to ultramafic intrusions.

A metallogenic compilation by Clark, T. and Wares, R. (MM 2005-01) showed that these two types of mineralization account for 23% (91/392) of all of the most significant mineralized sites of the entire Labrador Trough. The following is an extract from their publication.

# 8.1) MAGMATIC PGE-CU-NI AU IN LAYERED GABBRO

Some of the magmatic deposits of this type found in the Labrador Trough are composed essentially of PGE-rich disseminated sulphides, similar to the mineralization already identified on the Sapeena property. Three of them were discovered in pegmatitic gabbro in the northern part of the Labrador Trough: the Paladin, Lac Lafortune, and Lac Larochelle deposits.

In the Paladin deposit, PGE-rich disseminated sulphides (1-5%) are hosted in a differentiated mafic sill. The PGE occur in a leucogabbro horizon (the "Paladin horizon") and in an overlying pegmatitic gabbro horizon. The Paladin horizon extends discontinuously over a distance of at least 1.2 kilometres and up to 2 metres thick. It contains 1-5% chalcopyrite + pyrrhotite. Selected samples collected over the entire length of the zone returned an average grade of 0.30% Cu and 2.25 g it Pd + Pt (Pd/Pt = 6).

The Lac Lafortune deposit occurs in a horizon of pegmatitic, mesocratic olivine gabbro in a differentiated gabbro. The deposit consists of weakly-disseminated chalcopyrite (about 3%), pyrrhotite, and traces of magnetite in an irregularly-shaped body measuring about 1.5 metres on surface. The PGE occur mainly in tellurides (Pt-merenskyite, hessite) within the chalcopyrite. Four grab samples returned an average grade of 1.45% Cu, 0.08% Ni.

The Lac Larochelle deposit occurs in pegmatitic gabbro. A grab sample with 3-5% sulphides (chalcopyrite and pyrite) returned 0.64 g/t Pd, 0.35 g/t Pt, and 3.30 g/t Au (Scott, 1988).

Textures suggest that these deposits are of magmatic-hydrothermal origin. This type of PGE deposit is not common in differentiated gabbroic complexes but has been documented elsewhere. The metallogenic significance of gabbroic pegmatites and hydrothermal fluids for the concentration of PGE has been demonstrated at the Lac des lles deposit in Ontario. Because of the absence of basal sulphides in sills associated with these magmatic deposits, the magmas were not saturated in sulphides at the time of their emplacement. Thus, they probably had not lost PGE during an earlier episode of sulphide separation. These deposits seem to have originated from PGE-rich fluids produced during the differentiation and crystallization of the mafic magma. In this kind of deposit, the abundance of disseminated sulphides ranges from 1 to 10%.

The abundance of PGE in these deposits compared to copper and nickel suggests that the mafic magmas were fertile and enriched in PGE at the time of their emplacement. It is possible that sills of this type, lacking any sulphide accumulation near their base, are good targets for PGE deposits. Bodies or horizons of pegmatitic or granophyric gabbro are relatively common in Montagnais sills, and some are mineralized in disseminated pyrrhotite. Sills whose upper parts contain a horizon of pegmatitic gabbro with a small amount of disseminated sulphides (< 10%) are worth sampling for PGE and Au; thick (>500 metres), differentiated sills are the best targets.

#### 8.2) VEINS OR DISSEMINATED CU ±NI ±PGE ±AU ±AG IN MAFIC TO ULTRAMAFIC INTRUSIONS

Several magmatic Cu-Ni deposits (previous section) display features, such as the presence of sulphide veinlets, that suggest partial or minor tectono-metamorphic remobilization of magmatic sulphides. However, hydrothermal veins or disseminated Cu ±Ni ±PGE ±Au ±Ag deposits are distinct, due to the greater abundance of the remobilized component compared to the magmatic component and, in some cases, to compositional differences compared to magmatic Cu-Ni deposits. Type 19 deposits generally form veins in fault zones or in the schistosity, and do not necessarily occur within mafic or ultramafic rocks.

Epigenetic Cu-Ni deposits show various characteristics. These include:

- Veinlets of chalcopyrite (±pyrrhotite) in fault zones cutting biotite paraschist, pyroxenite, and aphyric gabbro (Hopes Advance 1 – North zone);
- Veinlets and disseminations of chalcopyrite-pyrrhotite in biotite schist and basalt (Hopes Advance 3);
- Quartz-chlorite-chalcopyrite veinlets cutting gabbro (peripheral to Chrysler 2), and chalcopyrite veinlets in fault zones (along the margins of Chrysler 2);
- Quartz-ankerite-calcite-chlorite-epidote-pyrite-chalcopyrite veins (propylitic alteration) in shear zones cutting gabbro (near the Aulneau Lake deposits);
- Altered envelope composed of the assemblage stilpnomelane + ankerite + magnetite + pyrite + chalcopyrite bordering massive sulphides (in the Lapage deposit at Aulneau Lake);
- Altered envelope composed of the assemblage iron-rich chlorite (ripidolite) + quartz + biotite + talc + argillaceous component + pyrite bordering massive sulphides (in the Lac Retty – Lac Bleu deposit and probably in the Chrysler 2 deposit).

These epigenetic deposits are enriched in copper compared to the magmatic deposits, resulting in lower Ni/Cu ratios. They also display a relative increase in concentrations of PGE, particularly palladium, and locally show increases in Au and Ag. The PGE are locally hosted in small telluride grains (< 150  $\mu$ m) included in chalcopyrite. Studies of several deposits have revealed that the PGE occur in the following minerals: sudburyite [(Pd,Ni)Sb], merenskyite [(Pd,Pt)(Te,Se ,Bi)J, kotulskite [Pd(Te,Bi)], temagamite [Pd HgTe], michenerite [(Pd,Pt)BiTe], melonite [NiTe<sub>2</sub>], altaite [PbTe], and hessite [Ag<sub>2</sub>Te].

Throughout the Labrador Trough, magmatic Cu-Ni deposits show evidence of late remobilization of precious metals. Deposits in the northern part of the orogen, where deformation and metamorphism were at their strongest, present an interesting potential for hydrothermal Cu-Ni-Ag-PGE deposits. Elsewhere, PGE, particularly Pd, are concentrated in iron-rich alteration haloes of hydrothermal origin bordering Cu-Ni massive sulphide deposits. The potential for Cu-Ni deposits in thus increased where hydrothermal alteration and PGE, Au and Ag enrichment are well developed, in the margins of sulphide bodies or in nearby fault zones.

## 9.0) EXPLORATION

Genius Properties Ltd. has not undertaken any exploration work since acquiring the property.

## 10.0) DRILLING

Genius Properties Ltd. has not done any drilling since acquiring the property.

# 11.0) SAMPLE PREPARATION. ANALYSES AND SECURITY

Genius has not done any sampling on the property. Sampling is reported in historical reports, mainly from geological surveys. Most of the work was done by reputable exploration companies, and we have no reasons to believe that the reported results might not be reliable. However, sample preparation, analyses and security were not described in the historical reports.

# 12.0) DATA VERIFICATION

The historical data cannot be verified, and the authors were obliged to rely on the reported exploration results alone.

# 13.0) MINERAL PROCESSING AND METALLURGICAL TESTING

Mineral processing and metallurgical testing have never been performed on the Sapeena property.

# 14.0) MINERAL RESOURCE ESTIMATES

There are no mineral resources estimates on the Sapeena property

## ITEMS 15 TO 22

- Items 15 to 22 are as follows:
- 15.0) Mineral Reserve Estimates;
- 16.0) Mining Methods;
- 17.0) Recovery Methods;
- 18.0) Project Infrastructure;
- 19.0) Market Studies and Contracts;
- 20.0) Environmental Studies, Permitting and Social or Community Impact;
- 21.0) Capital and Operating Costs;
- 22.0) Economic Analysis.

These items refer to properties at the development stage and do not apply to the Sapeena property.

## 23.0) ADJACENT PROPERTIES

There are currently no adjacent properties that could have a material impact on the Sapeena property.

## 24.0) OTHER RELEVANT DATA AND INFORMATION

All the relevant technical data and information available has been provided in the preceding items.

#### 25.0) INTERPRETATION AND CONCLUSIONS

The Sapeena property covers seven different occurrences of Cu, Ni, PGE or Au or combinations of these. Most of these occurrences were found recently, in the early 2000s. Geological reconnaissance on these showings returned uneconomic values and/or showed that the mineralized zones were discontinuous. As a result, not much follow-up work was done. The absence of subsequent work may also be due to the remoteness of the area, with only very significant results meriting attention.

Almost all of the occurrences are in a geological context with gabbro sills and ultramafic rocks of the Montagnais Group. In many places, the gabbros are differentiated or show glomeroporphyric textures. This environment is considered very favourable for Cu-Ni-PGE-Au-Ag mineralization, either magmatic or epigenetic-vein. Descriptions of the showings by previous authors shows that the type of emplacement indeed fits very well with typical mineralization found in the above-mentioned deposit types.

Since the discoveries of these occurrences, some airborne spectrometric and magnetic surveys were done in the area. Spectrometric surveys are useful but do not penetrate the surface bedrock much. On the other hand, magnetic surveys can contribute to the identification of Cu-PGE deposits, although variability in the pyrrhotite magnetic susceptibility and the presence of disseminated magnetite in the mafic units may complicate or alter the signature of a deposit.

We propose to test the possibility that some of these showings may be distal expressions of a larger mineral concentration. The surface occurrences would be linked to larger sulphide deposits at depth, within the gabbro sequences. An airborne EM survey is recommended to test this hypothesis. This type of survey would detect a possible at-depth source of the identified surface showings. We propose to conduct the survey on the Montagnais Group gabbros that underlie Block 1, 2, 3 and 4.

## 26.0) RECOMMENDATIONS

Given the above observations, a two-phase exploration program is recommended, as follows:

#### Phase I:

- An airborne magnetic and electromagnetic survey over all the blocks of the property, first to locate the gabbro and second to test whether sulphide mineralization occurs;
- A geological survey over all the blocks to test the EM anomalies identified, and sampling of all the gabbro outcrops containing some sulphides, with assaying for Cu-Ni and PGE, and/or other such metals as might be requested;

#### Phase II

If warranted by the results of Phase I, a Phase II program would be initiated, consisting of approximately 2,000 m of diamond drilling the test the best targets. The budget to complete both

phases is shown below. Please note that exploration costs are higher than usual due to the need for helicopter support for both geology and drilling.

Phase I: Geophysical and geological surveys									
Work	Quantity	Unit	Unit cost	Total					
Program preparation	4	days	\$800	\$3,200					
Helicopter-borne survey, including mob- demob and report	190	km	\$250	\$47,500					
Geological survey and sampling (including room and board, transportation, etc.)	20	days	\$4,000	\$80,000					
Sample analysis	200	samples	\$50	\$10,000					
Report at the end of Phase I: update of NI 43- 101 report and filing with the MRN				\$12,000					
Contingency 12%				\$18,324					
			Тс	otal Phase I	\$171,024				
Phase II: Diar	nond drilli	ng							
Program preparation	4	days	\$800	\$3,200					
Drilling	2,000	m	\$160	\$320,000					
Update of report at the end of Phase II, and filing for statutory purposes				\$12,000					
Contingency 12%				\$39,840					
			То	otal Phase II	\$371,840				
			Total Ph	nase I and II	\$542,864				

## 27.0) REFERENCES

#### 27.1) PUBLIC REPORTS (CHRONOLOGIC ORDER)

**EP 2012-01** - EVALUATION DU POTENTIEL EN MINERALISATIONS DE SULFURES MASSIFS VOLCANOGENES DE TYPE PELITIQUE-MAFIQUE POUR LA FOSSE DU LABRADOR. 2013, By LAMOTHE, D. 44 pages. Other digital data.

**DP 2011-07** - LEVE MAGNETIQUE ET SPECTROMETRIQUE AEROPORTE DE LA RIVIERE KOKSOAK, PROVINCE DE CHURCHILL. 2012, By D'AMOURS, I., INTISSAR, R. 8 pages. Other digital data.

**PRO 2012-01** - CIBLES D'EXPLORATION DETERMINEES A PARTIR DES DONNEES DE SPECTROMETRIE DANS LES SECTEURS DU LAC LE MOYNE ET DE LA RIVIERE KOKSOAK, PROVINCE DE CHURCHILL. 2012, By D'AMOURS, I., SIMARD, M. 8 pages.

**RP 2012-02** - INTERPRETATIONS STRUCTURALES ET METALLOGENIQUES DANS LA FOSSE DU LABRADOR A PARTIR DES CARTES MAGNETIQUE ET SPECTROMETRIQUE. 2012, By CLARK, T., D'AMOURS, I. 12 pages.

CG SIGEOM24F – SIGEOM GEOLOGICAL MAP(S) - Sheet 24f. 2010, by the MRNF.

**PRO 2009-09** - REANALYSE DE SEDIMENTS DE FOND DE LAC DANS LA PARTIE NORD-EST DU QUEBEC (SOUS-PROVINCE D'ASHUANIPI, OROGENE DU NOUVEAU-QUEBEC ET PROVINCE DE CHURCHILL SUD-EST). 2009, By MAURICE, C., LABBE, J. Y. 8 pages.

**MM 2005-01** - LITHOTECTONIC AND METALLOGENIC SYNTHESIS OF THE NEW QUEBEC OROGEN (LABRADOR TROUGH). 2006, By CLARK, T., WARES, R. 175 pages. Other digital data.

**MM 2004-01** - SYNTHESE LITHOTECTONIQUE ET METALLOGENIQUE DE L'OROGENE DU NOUVEAU-QUEBEC (FOSSE DU LABRADOR). 2004, By CLARK, T., WARES, R. 182 pages. Other digital data.

**PRO 2000-05** - KIMBERLITES ET DIAMANTS DANS LE NORD DU QUEBEC. 2000, Par MOORHEAD, J, PERREAULT, S, BERCLAZ, A., SHARMA, K. N. M., BEAUMIER, M., CADIEUX, A. M. 10 pages. 1 microfiche.

**DV 84-01** - CARTE DES GITES MINERAUX DU QUEBEC - REGION DE LA FOSSE DU LABRADOR. 1990, Par AVRAMTCHEV, L, CLARK, T, MARCOUX, P, BELANGER, M, WILSON, C. 42 pages. 1 MAP / 20F M-371 A M-390 (1/250 000 SCALE) AND 1 LEGEND. 5 microfiches.

**FG 024F - CL** - CARTE DE LOCALISATION DES GITES MINERAUX 024F. 1990, By M E R. 1 MAP (1/250 000 SCALE) WITH MARGIN NOTES. 1 microfiche.

**DP-87-14** - GEOCHIMIE DES SEDIMENTS DE LAC - REGION DU LAC OTELNUK. 1987, By BEAUMIER, M. 35 MAPS (1/250 000 SCALE). 6 microfiches.

**ET 87-13** - STRATIGRAPHIE, PETROGRAPHIE ET PETROCHIMIE DE LA FORMATION DE FER DE BABY DANS LA REGION DU LAC HERODIER (FOSSE DU LABRADOR). 1987, By CLARK, T. 42 pages. 1 microfiche.

**PRO 87-04** - GEOLOGIE ET MINERALISATIONS DE LA REGION DE LA FOSSE DU LABRADOR. 1987, By CLARK, T. 1 page. 1 8 1/2 X 11 COLOUR MAP (1/2 800 000 SCALE). 1 microfiche.

**PRO 87-18** - ELEMENTS DU GROUPE DU PLATINE DANS LA FOSSE DU LABRADOR. 1987, By CLARK, T. 7 pages. 1 microfiche.

**DP-86-26** - GEOCHIMIE DES SEDIMENTS DE LAC - REGION DU LAC OTELNUK. 1986, By BEAUMIER, M. 2 MAPS (1/250 000 SCALE). 1 microfiche.

**DPV 568** - REGION DU LAC HERODIER ( NOUVEAU-QUEBEC) - RAPPORT PRELIMINAIRE. 1978, By CLARK, T. 45 pages. 1 MAP / 2F (1/50 000 SCALE). 2 microfiches.

<u>The Filling of the Circum-Ungava Geosyncline</u>, Dimroth, E; Baragar, W R A; Bergeron, R; Jackson, G D; in Symposium On Basins and Geosynclines of the Canadian Shield; Geological Survey of Canada, Paper 70-40, 1970; p. 45-142

**ES 005** - MINERALISATION METALLIQUE DANS UNE PARTIE DE LA FOSSE DU LABRADOR. 1970, By DUGAS, J. 27 pages. MAPS 1674 NORTH AND SOUTH SHEETS (1/253 440 SCALE). 1 microfiche.

**Geology, Lac Herodier, Québec**, Fahrig, W. F.; Geological Survey of Canada, Series "A" Map 1146A, 1965; 1 sheet

Lac Herodier, New Quebec, Fahrig, W. F.; Geological Survey of Canada, Paper 55-1, 1955.

#### **27.2)** Assessment Reports (numerical order)

**GM 66584 - RESEAUX NEURONAUX ET PROSPECTIVITE MINERALE. 2005**, By TREPANIER, S. 58 pages.

**GM 65081 - IDENTIFICATION DE DOMAINES GEOCHIMIQUES A PARTIR DES LEVES REGIONAUX DE SEDIMENTS DE FOND DE LAC - PHASE 2**. 2006, By TREPANIER, S. 82 pages. Other digital data.

**GM 64287 - CAMPAGNE D'EXPLORATION, PROJET KAN-JACK RABBIT**. 2009, By BLOCK, M., GIRARD, R. 60 pages. 2 maps.

**GM 60771 - 2001 HYPERSPECTRAL FOLLOW-UP, LABRADOR TROUGH, KUUJJUAQ AREA**. 2001, By TREPANIER, S. 84 pages. 3 maps. 3 microfiches.

**GM 59086 - TILL MINERALOGY, CANIAPISCAU PROJECT, FINAL REPORT. 1999**, By GIRARD, R. 860 pages. 1 map. 19 microfiches.

**GM 59085 - FINAL REPORT OF THE 1998 HEAVY MINERAL SAMPLING PROGRAM ON THE SUPERIOR RECONNAISSANCE PROJECT AREA 3**. 1998, By ST-PIERRE, M. 24 pages. 1 map. 1 microfiche.

GM 59010 - GEOLOGICAL RECONNAISSANCE, SUMMER 2001, ASSESSMENT REPORT, P.E.M. 1550 AND 1551 PROPERTIES. 2001, By BLANCHET, C. 58 pages. 5 maps. 3 microfiches.

GM 58735 - ASSESSMENT REPORT ON THE 2000 EXPLORATION PROGRAM, GILLET PROPERTY (PEM 1520). 2001, By WARES, R. 49 pages. 2 maps. 2 microfiches.