

**TECHNICAL REPORT  
ON THE  
ALLAMMAQ, EXPO, IVAKKAK, MEQUILLON, MESAMAX AND  
PUIMAJUQ Ni-Cu-PGE DEPOSITS OF THE NUNAVIK NICKEL  
PROJECT  
NUNAVIK, QUEBEC**

**6825000N and 585000E UTM NAD83**

**For**

**GOLDBROOK VENTURES INC.**

**By**

**P & E Mining Consultants Inc.**

**NI 43-101 & 43-101F1  
TECHNICAL REPORT**

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**P & E Mining Consultants Inc.  
Report No. 180**

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## EXECUTIVE SUMMARY

The following report was prepared to provide a NI 43-101 compliant Technical Report on the six deposits situated on the Nunavik Nickel Project, (NNP) for which there are resource estimates (TK excluded due to its small size). Independent Resource Estimates of the nickel, copper, platinum, palladium, gold, (PGE) mineralization on the Allammaq, Expo, Ivakkak, Mequillon, Mesamax and Puimajuq Deposits comprising the Nunavik Nickel Project, Nunavik, Quebec (the “Property” or the “Project”) are detailed in this report. Until this report, each of the Deposits had been reported on independently.

The Nunavik Nickel Project previously belonged to Canadian Royalties Inc., (“CRI”). As of January 13, 2010, Jien Canada Mining Ltd., (“JCM”) acquired all of the outstanding common shares of Canadian Royalties (being the Shares held by holders other than JCM) in exchange for \$0.80 per Share. As a result of the Arrangement, JCM now owns 100% of the outstanding Shares of Canadian Royalties. Goldbrook Ventures Inc. (“Goldbrook”) owns 25% of the voting shares of JCM, and for the purposes of this Technical Report, Goldbrook is the client.

The Expo, Mesamax, Mequillon, Allammaq and Ivakkak Deposits lie on the Expo-Ungava Property located approximately 80 kilometres west of the village of Kangiqsujaq, (Wakeham Bay) and approximately 30 kilometres east-southeast of the Katinniq Mine, part of the Raglan operations of Xstrata Nickel, (a subsidiary of Xstrata PLC). The Property is in the northern Québec region of Nunavik, and is centred at 6825000N and 585000E in UTM NAD83 Zone 18.

The Puimajuq Deposit lies on the New Foreurs East Property, which is contiguous to the east of the Expo-Ungava Property.

Air Inuit and First Air provide daily air service from Montreal and Val-d’Or to the coastal communities of Kuujuaq, Salluit and nearby Kangiqsujaq. Air service from Salluit also connects to the community of Radisson in the James Bay hydroelectric development area.

The Cape Smith Belt in which all of the deposits of the Nunavik Nickel Project lie, is an interpreted foreland thrust-fold belt that constitutes the north-eastern extension of the Trans-Hudson Orogen, an early Proterozoic collision zone, which separates the Archean Superior Province from the Proterozoic Churchill Province. The Trans-Hudson Orogen includes the Thompson Nickel Belt of Manitoba and the New Quebec Orogen (Labrador Trough) on opposite sides of the Superior Province. The Cape Smith (Ungava) Belt extends for 375 kilometres in an east-west direction across the Ungava Peninsula of Nunavik.

The Property is located within the central portion of the assemblage, near the suture separating the foreland from the hinterland domains. The North Domain is dominated by the mostly volcanic Watts Group, which has been interpreted as an Island-Arc accretionary complex. The South Domain includes the Lamarche, Povungnituk, and Chukotat Groups, which are collectively interpreted as an extensional sequence consisting mainly of basalts, sediments and ultramafic rocks grading into oceanic crust towards the north. The boundary between the North and South domains is marked by the regional scale Bergeron Fault, considered to be a subduction zone.

The geology of all six deposits for which there are currently resource estimates is all essentially the same, though the morphology of each can be very different. It is believed that all deposits are part of the Expo Intrusive Suite, as detailed by Mungall, 2004. The dyke portions within which

the deposits lie can be essentially horizontal to essentially vertical, and the proportions of massive to net-textured to disseminated sulphides can vary greatly.

The mineral occurrences along the South Trend as well as those of the Raglan Trend to the north belong to the class of magmatic sulphide deposits, (Eckstrand, 1996).

A broad group of deposits containing nickel-copper-platinum group elements (PGE) occur as sulphur segregations associated with a variety of mafic and ultramafic magmatic rocks. Among such deposits, two main subtypes are distinguishable. In the first, the Ni-Cu sulphide type, nickel and copper are economic commodities contained in sulphide-rich ores that are associated with differentiated mafic sills and stocks and ultramafic volcanic (komatiitic) flows and sills. The second type, magmatic PGE is mined principally for PGE's which are associated with sparsely dispersed sulphides in medium to large, typically layered mafic to ultramafic intrusions.

As a group, magmatic nickel-copper sulphide deposits have accounted for most of the world's past and current production of nickel. International reserves of magmatic sulphide nickel remain large, though they are exceeded by those of lateritic nickel deposits, the only other significant source of nickel.

Most nickel sulphide deposits consist of several closely adjacent, but discrete orebodies, therefore the definition of a "deposit" is rather arbitrary. Individual orebodies may contain from a few hundred thousand to a few million tonnes of ore, and in some instances tens of millions of tonnes of ore. Mining grades are generally about 1 to 3% Ni, but may be higher in some small deposits.

Although Eckstrand (1996) groups the Expo Ungava Deposit with those related to komatiitic flows and related intrusions, considerable evidence suggests that the deposits located along the South Trend are related to continental or continental margin intrusive suites. The fact that these deposits have nickel/copper ratios of approximately 0.8:1 and are universally endowed in PGE also contrasts with the standard komatiitic model.

Petrographic work by Walker (2004) identified pyrrhotite (FeS) as the main sulphide mineral, followed by pentlandite ([Fe, Ni], S) and chalcopyrite (CuFeS<sub>2</sub>). Pentlandite occurs generally as a separate mineral and only rarely as exsolution lamellae in pyrrhotite. It appears to be the main cobalt carrier. Magnetite, (Fe<sub>3</sub>O<sub>4</sub>) is rare to absent.

The results of more detailed mineralogical work at the Mesamax Deposit (Cabri, 2003) are pertinent to Mequillon, Expo, Allammaq, Ivakkak and Puimajuq. At Mesamax, accessory sulphides are galena (PbS), sphalerite (ZnS), cubanite (CuFe<sub>2</sub>S<sub>3</sub>) and cobaltite (CoAsS). Cabri also reported a large number of platinum group minerals (PGEs). He identified sudburyite (PbSb) and a new Pd<sub>2</sub>Sb mineral as the principal palladium carriers in net textured and massive sulphides, respectively, and PGE tellurides such as michenerite (PdBiTe), merenskyite (PdTe<sub>2</sub>), moncheite (PtTe<sub>2</sub>) and kotulskite (PdTe) as well as sperrylite (PtAs<sub>2</sub>). Electrum (a gold-silver alloy of varying composition) appears to be the main gold carrier.

The Nunavik Nickel Project currently holds resources in six (plus the very minor TK Deposit) Deposits.



## Current Global NI 43-101 compliant resources for the deposits on the NNP stand at:

Deposit & Estimate Date	Resource Category	Tonnes	Ni %	Cu %	Co %	Pt (g/t)	Pd (g/t)	Au (g/t)	Discovery
Puimajuq Oct 2009	Indicated	209,000	1.64	2.73	0.06	0.92	2.48	0.09	Canadian Royalties
	Inferred	12,000	2.31	3.23	0.09	1.18	2.63	0.14	
	Measured	560,000	0.93	1.10	0.04	0.60	2.66	0.10	
Allammaq Oct 2009	Indicated	3,761,000	0.90	1.12	0.04	0.50	2.18	0.10	Canadian Royalties
	Inferred	1,591,000	0.47	0.53	0.03	0.28	1.15	0.06	
Mesamax Jan 2007	Indicated	2,218,000	1.89	2.57	0.08	0.97	3.63	0.20	Canadian Royalties
	Inferred	31,000	1.61	1.78	0.07	0.60	3.57	0.15	
Mequillon Sept 2007	Indicated	5,374,000	0.74	1.07	0.04	0.70	2.65	0.23	Historic Significantly augmented by CRI
	Inferred	3,085,000	0.82	1.12	0.04	0.65	2.57	0.18	
	Measured	8,562,000	0.76	0.76	0.04	0.32	1.36	0.08	
Expo Jan 2007	Indicated	478,000	0.81	0.83	0.04	0.32	1.33	0.07	Historic Significantly augmented by CRI
	Inferred	1,128,000	1.22	1.55	0.05	0.64	3.14	0.15	
Ivakkak Feb 2007	Indicated	40,000	1.24	1.30	0.05	0.69	2.90	0.10	Canadian Royalties
	Inferred	90,000	1.60	1.20	0.10	0.40	2.00	0.10	
TK Apr 2003	Indicated	7,000	1.60	1.00	0.11	0.40	1.60	0.00	Canadian Royalties
	Inferred								
TOTALS	Measured	560,000	0.93	1.10	0.04	0.60	2.66	0.10	
	Indicated	21,342,000	0.93	1.15	0.05	0.54	2.17	0.14	
	Inferred	5,244,000	0.73	0.92	0.04	0.51	2.03	0.13	

In 2007, SNC Lavalin completed a Definitive Feasibility Study, (“DFS”, or “BFS”) on the Nunavik Nickel Project. For the purposes of the DFS, the project comprises the development of three open pit mines: The Expo Mine, the Mesamax Mine and the Ivakkak Mine. The Ivakkak Mine also has planned underground workings that will be developed once the open pit is exhausted. The Mequillon, Puimajuq and Allammaq Deposits at the time the DFS was completed were not considered advanced enough in terms of resources to be able to consider them.

Conventional open pit mining methods would be used to exploit 98% of the reserves of the project. Mesamax and Ivakkak ores would be blended with Expo ores for the first four years of the project. Reserves from the Ivakkak underground zones A and C would be mined in years 5 and 6 and also blended with ore from the Expo open pit.

Open pit designs incorporate allowances for appropriate access ramps, wall slope angles, catchment berms and minimum mining widths for the equipment selected. The following parameters were used in the pit design: US\$6.00/lb nickel, US\$1.50/lb copper, US\$900/oz platinum and US\$300/oz palladium.

Reserve determinations include allowances for dilution, which vary with each resource. Mining losses were assumed to be 5% (not included in the following table), and were factored into the mining plan and financial analysis. The average strip ratio for open pit mining is 3.37:1 over the life of mine, excluding the waste material extracted during the underground mine development.

### Reserves as per DFS, 2007

	Ore tonnes	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	Waste Tonne	Stripping Ratio (waste/ore) t/t
Mesamax	2,077,000	1.85	2.49	0.07	0.19	0.95	3.46	5,704,000	2.75
Expo	7,843,000	0.68	0.69	0.04	0.07	0.29	1.25	29,834,000	3.80
Ivakkak Pit	604,000	1.22	1.53	0.05	0.16	0.67	3.22	3,136,000	5.19
Ivakkak Underground	197,000	2.28	2.73	0.10	0.21	1.04	4.90		
Total	10,721,000	0.97	1.13	0.05	0.10	0.45	1.86	38,674,000	3.67

Discounted cash flow modeling of the project yields a full equity base case internal rate of return (IRR) of 8.1% and a net present value (NPV) of CAD\$0.85 million at a discount rate of 8%, both

calculated after tax and in nominal terms. A construction escalation rate of 3.5% annually and an inflation rate of 2% during the mine operation were assumed.

Mine site construction of the Nunavik Nickel Project commenced on May 20th, 2008, however in response to the global financial crisis, on August 5th, 2008, the Project was placed on care and maintenance.

The Project infrastructure currently consists of:

- An access-road that links into the existing road-network;
- Employee housing complex for 300 people;
- Potable water and waste-water treatment plants;
- Concentrator foundation with thermosyphons;
- Temporary shelters for equipment and materials;
- Detailed concentrator engineering 90% completed;
- Structural steel, flotation cells and other mill components on site;
- Long-lead items procured (ball mills etc.).

Prior to resumption of the Project construction, Jien Canada Mining should undertake a detailed engineering review. The budget necessary in order to resume construction should reflect the engineering approach and any variance from the original development plans. An amount close to the original estimate of \$465 million is anticipated.

Once the Company is satisfied with the current Project economics, construction should resume with the goal of attaining commercial production as soon as possible.

## **1.0 INTRODUCTION AND TERMS OF REFERENCE**

### **1.1 TERMS OF REFERENCE**

The following report was prepared to provide a NI 43-101 compliant Technical Report on the six deposits situated on the Nunavik Nickel Project, (NNP) for which there are resource estimates (TK excluded due to its small size). Independent Resource Estimates of the nickel, copper, platinum, palladium, gold, (PGE) mineralization on the Allammaq, Expo, Ivakkak, Mequillon, Mesamax and Puimajuq Deposits comprising the Nunavik Nickel Project, Nunavik, Quebec (the “Property” or the “Project”) are detailed in this report. Until this report, each of the Deposits had been reported on independently.

As of January 13, 2010, Jien Canada Mining Ltd., (“JCM”) acquired all of the outstanding common shares of Canadian Royalties (being the Shares held by holders other than JCM) in exchange for \$0.80 per Share. As a result of the Arrangement, JCM now owns 100% of the outstanding Shares of Canadian Royalties. Goldbrook Ventures Inc. (“Goldbrook”) owns 25% of the voting shares of JCM, and for the purposes of this Technical Report, Goldbrook is the client.

This report was prepared by P & E Mining Consultants Inc., (“P&E”) at the request of Mr. Brian Grant, President and COO, Goldbrook. Goldbrook is a Vancouver based company trading on the Toronto Venture Exchange (TSX-V) under the symbol of “GBK” and on the Frankfurt, Germany Stock Exchange under the symbol of “GVE”. The corporate office is located at:

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This report is considered current as of February 22, 2010.

Mr. Antoine Yassa, P. Geo., a qualified person under the terms of NI 43-101, conducted the most recent site visit to the Project from August 25 to 28, 2009. An independent verification sampling program was conducted by Mr. Yassa at that time.

Since 2006, Mr. Eugene Puritch, P. Eng., Ms. Tracy Armstrong, P. Geo., and Mr. Antoine Yassa, P. Geo. have visited the Project and each one of the six deposits on several occasions and on each occasion verification samples were collected.

In addition to the site visit, P & E carried out a study of all relevant parts of the available literature and documented results concerning the project and held discussions with technical personnel from the company regarding all pertinent aspects of the project. The reader is referred to these data sources, which are outlined in the “Sources of Information” section of this report, for further detail on the project.

The purpose of the current report is to provide an independent Technical Report and Resource Estimate of the six deposits on the Nunavik Nickel Property, in conformance with the standards required by NI 43-101 and Form 43-101F. The estimate of mineral resources contained in this

report conforms to the CIM Mineral Resource and Mineral Reserve definitions (December, 2005) referred to in National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects.

## **1.2 SOURCES OF INFORMATION**

This report is based, in part, on internal company technical reports, and maps, published government reports, company letters and memoranda, and public information as listed in the "References" Section 19.0 at the conclusion of this report. Several sections from reports authored by other consultants have been directly quoted in this report, and are so indicated in the appropriate sections. P&E has not conducted detailed land status evaluations, and has relied upon previous qualified reports, public documents and statements by Goldbrook regarding property status and legal title to the project.

Sections 5 through 16 of this report have drawn heavily upon past NI 43-101 compliant reports on the Mesamax, Expo, Mequillon, Ivakkak, Allammaq and Puimajuq Deposits by Todd Keast, P. Geo. (Todd Keast Geological Services Inc.), Henrik Thalenhorst, P. Geo. (Strathcona Mineral Services Limited), G.A. Harron & Associates Inc., P&E Mining Consultants Inc., and Roche Ltd., Consulting Group.

## **1.3 UNITS AND CURRENCY**

Unless otherwise stated all units used in this report are metric. Nickel and copper assay values are reported in percent ("%") and platinum, palladium and gold values are reported in grams per tonne ("g/t") unless some other unit is specifically stated. The CDN\$ is used throughout this report.

## **1.4 GLOSSARY AND ABBREVIATION OF TERMS**

In this document, in addition to the definitions contained heretofore and hereinafter, unless the context otherwise requires, the following terms have the meanings set forth below.

"\$" and "CDN\$"	means the currency of Canada.
"AA"	is an acronym for Atomic Absorption, a technique used to measure metal content subsequent to fire assay.
"asl"	means above sea level.
"Au"	means gold.
"CIM"	means the "Canadian Institute of Mining, Metallurgy and Petroleum."
"CRI"	means Canadian Royalties Inc.
"CSA"	means the Canadian Securities Administrators.
"DDH"	means diamond drillhole.
"DFS"	means Definitive Feasibility Study (previously termed Bankable Feasibility Study)
"E"	means east.
"el"	means elevation level.
"GBK"	mean Goldbrook Ventures Inc.
"g/t"	means grams per tonne.
"g/t Au"	means grams of gold per tonne of rock
"ha"	means Hectare.
"JCM"	means Jien Canada Mining Inc.
"km"	means kilometre equal to 1,000 metres or approx. 0.62 statute miles.

“m”	means metric distance measurement equivalent to approximately 3.27 feet
“M”	means million.
“Ma”	means millions of years. “MDRU” means the Mineral Deposits Research Unit.
“Mt”	means millions of tonnes.
“N”	means north.
“NE”	means northeast.
“NI” m	means National Instrument.
“NN”	means Nearest Neighbour.
“NNP”	means Nunavik Nickel Project.
“NTS”	means National Topographic System.
“NW”	means northwest.
“NSR”	is an acronym for “Net Smelter Return”, which means the amount actually paid to the mine or mill owner from the sale of ore, minerals and other materials or concentrates mined and removed from mineral properties, after deducting certain expenditures as defined in the underlying smelting agreements.
“oz/T”	means ounces per ton.
“P&E”	means P&E Mining Consultants Inc.
“PEA”	means a Preliminary Economic Assessment study.
“ppm”	means parts per million.
“S”	means south.
“SE”	means southeast.
“SEDAR”	means the System for Electronic Document Analysis and Retrieval.
“SW”	means southwest.
“t”	means metric tonnes equivalent to 1,000 kilograms or approximately 2,204.62 pounds
“T”	means Short Ton (standard measurement), equivalent to 2,000 pounds.
“t/a”	means tonnes per year.
“tpd”	means tonnes per day
“US\$”	means the currency of the United States.
“UTM”	means Universal Transverse Mercator.
“W”	means west.

## 1.5 ACKNOWLEDGMENTS

Certain portions of this report were structured and compiled by Ms. Jarita Barry B.Sc. under the supervision of Tracy Armstrong, P.Geo who, acting as a QP as defined by NI 43-101, takes full responsibility for those sections of the report prepared by Ms. Barry, as outlined in the “Certificate of Author” attached to this report.

## **2.0 RELIANCE ON OTHER EXPERTS**

The authors wish to make clear that they are qualified persons only in respect of the areas in this report identified in their “Certificates of Qualified Persons” submitted with this report to the Canadian Securities Administrators.

Although copies of the licenses, permits and work contracts were reviewed, an independent verification of land title and tenure was not performed. P & E has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties.

A draft copy of the report has been reviewed for factual errors by Goldbrook. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of this report.

### **3.0 PROPERTY DESCRIPTION AND TENURE**

#### **3.1 DESCRIPTION AND TENURE**

The Expo, Mesamax, Mequillon, Allammaq and Ivakkak Deposits lie on the Expo-Ungava Property located approximately 80 kilometres west of the village of Kangiqsujuaq, (also known as Wakeham Bay) in the northern Québec region of Nunavik, and centred at 6825000N and 585000E in UTM NAD83 Zone 18. The Puimajuq Deposit lies on the New Foreurs East Property, which is contiguous to the east of the Expo-Ungava Property.

Jien Canada Mining Ltd., (“JCM”) owns the Nunavik Nickel Project. JCM is a wholly owned subsidiary of Goldbrook (25%) and Jilin Jien Nickel Industry Company Ltd. (75%). For the purposes of this report, Goldbrook is the client.

The Expo-Ungava Property, which is one of the 41 properties belonging to the Nunavik Nickel Project, is owned 80% by Jien Canada Mining Ltd. (“JCM”), and 10% by Ungava Minerals Corp./Nearctic Nickel Mines Inc. As of June 30, 2009, the steps necessary to acquire a 100% interest in the Expo-Ungava Property were underway, given that Ungava had failed to bring its joint venture account into good standing.

The New Foreurs East Property, (on which the Puimajuq Deposit lies) is 100% owned by JCM.

JCM holds extensive mineral rights in what is referred to geologically as the South Trend, which covers an area of approximately 972 square kilometres.

A list of the individual properties comprising JCM’s Nunavik Nickel Project and their respective areas is presented in the following table.

**Table 3-1: List of Individual Properties Comprising the Nunavik Nickel Project**

Property Name	No. Claims	Hectares	Sq. Km.	# Acres
67's	28	1,152	12	2,846
Arbitration	29	1,194	12	2,951
Bégin	176	7,310	73	18,062
Béliveau	4	165	2	409
Blazers	73	3,000	30	7,413
Breakaway	54	2,225	22	5,498
Colts	10	410	4	1,013
Cougars	17	699	7	1,728
Cournoyer	25	1,031	10	2,548
Crocodile Tears East	84	3,468	35	8,570
Crocodile Tears West	96	3,560	36	8,798
Dryden	11	453	5	1,120
Expo Ungava	495	20,024	200	49,478
Expo Ungava West	12	398	4	984
Gamache	112	4,321	43	10,677
Generals	19	783	8	1,934
Giants	76	3,128	31	7,730
Giraffe	85	3,499	35	8,646
Grey Goose	112	4,610	46	11,392
Greyhounds	8	328	3	811
Hitmen	16	657	7	1,623
Ice	32	1,316	13	3,251
Inukshuk	0	0	0	0
Lac Chasse	44	1,805	18	4,460
Lac Felix NE	36	1,476	15	3,648
Lafleur	53	2,184	22	5,396
New Foreurs East	53	2,178	22	5,381
New Foreurs West	43	1,766	18	4,364
Olympiques	16	660	7	1,632
Otters	12	493	5	1,218
Pats	14	576	6	1,424
Phoenix	150	5,847	58	14,449
Platters	21	865	9	2,138
Rebels	66	2,725	27	6,733
Robinson	67	2,758	28	6,814
Rockets	32	1,319	13	3,260
Ron Roy West	71	2,919	29	7,212
South Trend	82	3,273	33	8,088
Sting	32	1,313	13	3,244
Vicenza	22	907	9	2,240
Wheat Kings	11	452	5	1,117
Grand Total	2399	97,247	972	240,299



## **4.0 LOCATION, ACCESS, CLIMATE, PHYSIOGRAPHY & INFRASTRUCTURE**

### **4.1 LOCATION AND ACCESS**

The Nunavik Nickel Project area is located approximately 80 kilometres west of the village of Kangiqsujaq, (also known as Wakeham Bay) in the northern Québec region of Nunavik and approximately 30 kilometres east-southeast of the Katinniq Mine, part of the Raglan operations of Xstrata Nickel, (a subsidiary of Xstrata PLC). The Property is centred at 6825000N and 585000E in UTM NAD83 Zone 18.

Air Inuit and First Air provide daily air service from Montreal and Val-d'Or to the coastal communities of Kuujuaq, Salluit and nearby Kangiqsujaq. Air service from Salluit also connects to the community of Radisson in the James Bay hydroelectric development area.

Goldbrook uses commercial air services from Montreal and Quebec City to Iqaluit and Salluit during the summer months to support the exploration programs. Project logistics are facilitated by Air Inuit charter, Twin Otter (DHC-6), shuttle service to the Belanger camp from the coastal village of Salluit, Nunavik, or from Iqaluit in Nunavut. The Property can also be reached by helicopter from the nearby coastal villages. Daily fieldwork requires helicopter support.

Shipping operations (sealift) during the summer months is conducted at Bombardier Beach on Deception Bay and, to a much lesser extent, Douglas Harbour.

In 2005, an access road was constructed from the Deception Bay / Katinniq / Donaldson / Douglas Harbour road network south to the Mesamax Deposit, which has improved access to the Mesamax, Allammaq and Expo areas.

In addition, construction was completed on an additional access road in the fall of 2007 from the east-west Katinniq / Donaldson road south to the Expo Deposit, a distance of approximately 18 kilometres. The road facilitates ground transportation to and from Bombardier Beach at Deception Bay. Work around the Expo complex and the Deposit is now fully ground-supported.

### **4.2 CLIMATE AND PHYSIOGRAPHY**

The Expo-Ungava Property is located on a broad plateau, in an area of gently rolling topography north of the tree line, within the Povungnituk Range. The topography is characterized by moderate to steep east-west trending ridges and valleys. Vegetation consists of sparse shrubs, plants and grasses, which grow to less than 25 centimetres in height. Outcrop ridges are generally bare rock, devoid of vegetation, where outcrop or subcrop is commonly reduced to heaps of frost-heaved blocks and boulders. The low areas between outcrop ridges are typically flat, grass-covered tundra traversed by small streams.

The entire area is affected by permafrost resulting in the widespread formation of soil polygons and other soil solifluction features that form in response to a type of creep that takes place in regions where the ground freezes to a considerable depth and as it thaws during the warm seasons the upper thawed position creeps downhill over the frozen material. The soil moves as a viscous liquid down slopes of as little as 2 or 3 degrees and may carry rocks of considerable size in suspension. At Raglan, the permafrost reaches a depth of 400 metres, and the average rock temperature is -6 C° (Falconbridge Annual Report 1998). Elevation is 550-600 metres above sea

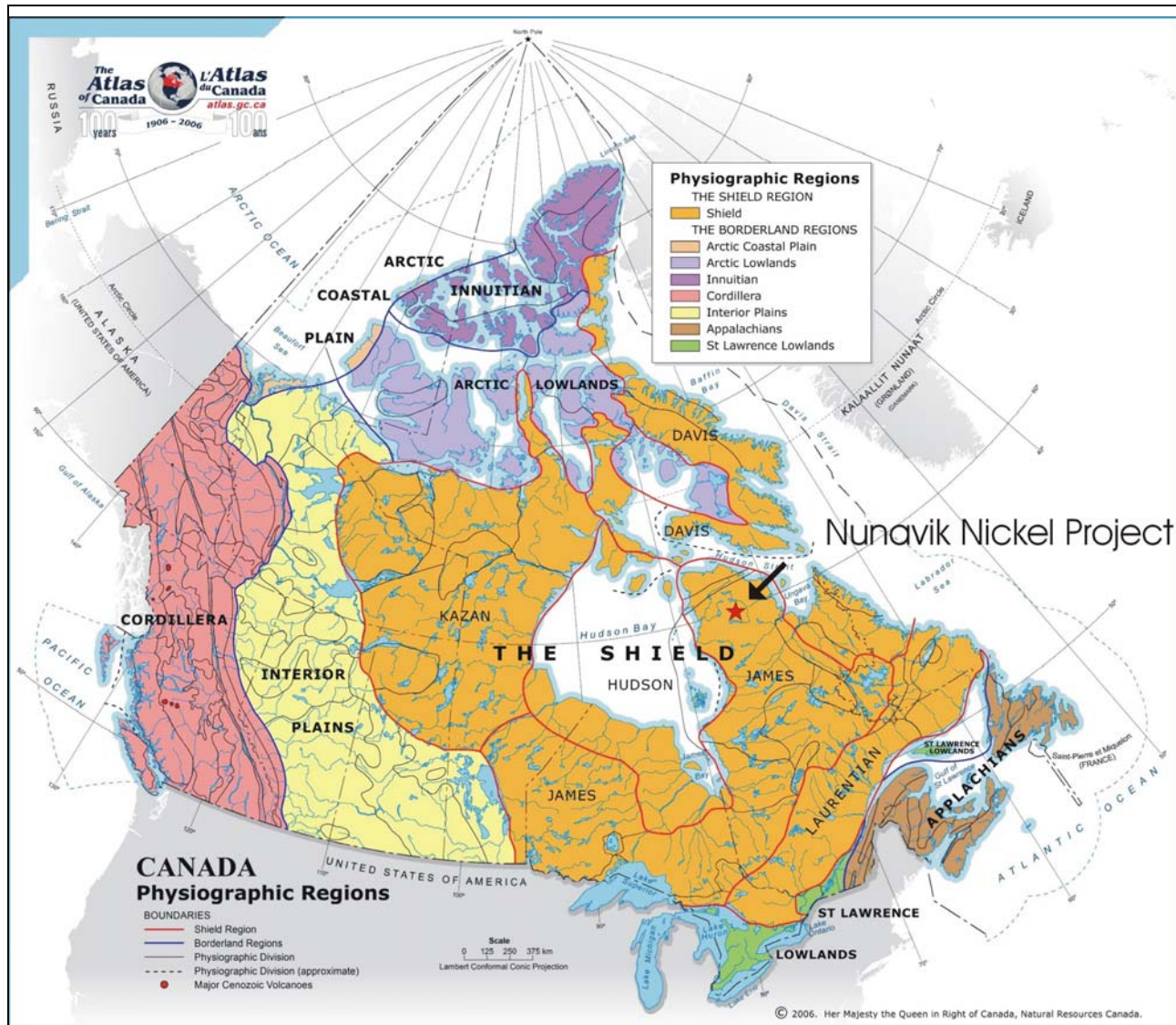
level and the relief is subdued and ranges from 50 to 75 metres. Overburden in the area is generally less than 20 metres in thickness (from drillhole information). The climate of the area is harsh, with summer (July and early August) temperatures ranging from 0 C° to 20 C° while winter temperatures range from 0 C° to -50 C°. Snow can accumulate in any month of the year, and parts of some sheltered ridges can remain snow covered throughout the year. The field season for surface exploration activities optimally lasts the months of June, July, August and early September, with some early winter snow expected in late August and early September. The area is subject to strong wind conditions and periods of dense fog.

### **4.3 INFRASTRUCTURE**

Construction of the Nunavik Nickel Project commenced on May 20th, 2008, however in response to the global financial crisis, on August 5th, 2008, the Project was placed on care and maintenance.

The Project infrastructure currently consists of:

- An access-road that links into the existing road-network;
- Employee housing complex for 300 people;
- Potable water and waste-water treatment plants;
- Concentrator foundation with thermosyphons;
- Temporary shelters for equipment and materials;
- Detailed concentrator engineering 90% completed;
- Structural steel, flotation cells and other mill components on site;
- Long-lead items procured (ball mills etc.).



## **5.0 HISTORY AND PREVIOUS EXPLORATION**

### **5.1 INTRODUCTION**

Previous records indicate that approximately 9,144 metres of core were drilled in the area of the deposits since the 1950's. Much of the historical and relatively recent (1997) drill core from the Property was located by Canadian Royalties and found to be well preserved. Canadian Royalties initially tested for platinum-palladium-gold mineralization in sample pulps from the High North Resources / Expo Ungava 1997 drill program, as none of the previous owners had analysed for PGE. The sample pulps from mineralized zone intercepts from holes EX 97-1, EX 97-2, EX 97-3, and EX 97-4 representing mainly disseminated sulphide mineralization were analysed. As a result of these encouraging findings, Canadian Royalties initiated a re-logging and re-assaying program during the 2001 field program on historic drill core from the Expo Deposit, with particular emphasis on the PGE. Positive results launched multiple, continuous exploration and diamond drilling campaigns which led to the discovery of five deposits and a considerable increase in resources for two others.

### **5.2 EXPLORATION HISTORY**

Section 5.2 of this report draws heavily upon material contained within the following reports:-

- “Raglan South Nickel Project, Nunavik, Quebec, Technical Report and Preliminary Economic Assessment on the Mequillon, Mesamax, Expo and Ivakkak Deposits for Canadian Royalties Inc.” authored by P&E Mining Consultants Inc., and Roche Ltd., Consulting Group., and dated May 5, 2006.
- “Technical Report (2007) and Resource Estimate Update on the Ivakkak Ni-Cu-PGE Deposit, South Trend Property, Raglan South Nickel Project.” authored by G.A. Harron & Associates Inc. and P&E Mining Consultants Inc., and dated March 22, 2007.
- “Technical Report and Resource Estimate on the Allammaq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated May 30, 2008 and the report titled, “Technical Report and Updated Resource Estimate on the Allammaq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated November 20, 2009.
- “Technical Report and Resource Estimate on the Puimajuq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated November 20, 2009.

These reports have been filed on [www.sedar.com](http://www.sedar.com). For more complete and detailed information on the past exploration carried out at the Nunavik Nickel Project the reader is referred to these reports.

#### **5.2.1 EARLY REGIONAL EXPLORATION HISTORY**

Exploration of the Nunavik Nickel Project area has a long history beginning in the general Ungava area with Mr. Murray Watts in the 1930's. Major discoveries over the years include Falconbridge's Raglan deposits in 1964-66, the Amax Expo deposit in 1967, and the CRI TK, Mesamax, Mequillon and Ivakkak deposits in 2001-2005. A summary of the early exploration in the region of the Project area is given in table 5-1 below:

**Table 5-1: Summary of Historical Work Undertaken in the Nunavik Nickel Project Region**

<b>PROPERTY</b>	<b>EXPLORATION AND RESULTS</b>
Gamache Property	Area Mines Ltd (1957) discovered disseminated sulphides on Northern part of the prospect. Anomalous nickel and copper values only.
Giraffe, Ron Roy West, and New Foreurs East and West Properties	Mid-Chibougamau Mines Ltd. (1957) identified Cu-Ni sulphides in peridotite, grading up to 1.7% combined Cu-Ni (grab samples). Amax Exploration (1969) completed 4 holes (301 metres), on mineralized pyroxenite showing - intersected up to 0.5% Ni, 0.7% Cu over 8.4 metres.
Lac Félix Property	Kyak Quebec Mines Ltd (1957) and Newlund Mines Ltd. (1957) - located numerous Cu gossans. Anomalous assays only.
	Société Minière Raglan du Québec Ltée (1983) - located gossans of massive po, py in sediments. Assays up to 0.2% Ni.
	Southern Era (1987), First Western Minerals Inc. (1996), Hunter Dickinson Inc. (1999), and Dumont Nickel Inc. (1999) – explored and identified additional massive sulphides in sediments. No significant assays.
New Foreurs East and West Properties. Colts Property	NovaWest Resources Inc. (1997, 1998) - airborne survey follow-up mapping and prospecting. No significant results Falconbridge Limited (1980) and First Western Minerals Inc. (1996) both completed airborne geophysical surveys.
	Dumont Nickel (1999) - airborne follow-up work identified the “Michelle” ultramafic sill that has low sulphide content where explored - one strong EM anomaly, coincident with a magnetic high and proximal to a Ni-Cu soil remains untested.
Hitmen, 67's, and Pats, Properties	Ran-Lux Minerals Ltd. (1957) - discovered disseminated sulphides in peridotite. Assays up to 0.3% Ni and 0.6% Cu.
	Acquisitor Mines Inc. (1987) and NovaWest Resources Inc.(1998) Anomalous assays in grab samples of ultramafic rocks. Assays from 37 to 2,460 ppm Ni, 22 to 5,340 ppm Cu, 2 to 1,019 ppb Pd, and 15 to 215 ppb Pt.
67's, Pats, Expo West, Rocket, Olympiques and Rebels Properties	Compagnie Minière de l'Ungava (1957 and 1958) - assay from mineralized gabbro yielded 0.7% Ni, 0.5% Cu. Follow-up drilling over areas now covered by the Expo-Ungava property. Cominco (1974) and Amax (1974), conducted mapping and prospecting but no new sulphide occurrences discovered.
	Beaufield Resources Inc. (1986) - airborne magnetics, GeoTEM and VLF surveys with follow up mapping. Three significant PGE anomalies yielded assays up to 0.5% Ni and 0.2% Cu on the Olympiques prospect and 0.1% Ni and 0.2% Cu on Expo West prospect.
Generals Property	Consortium of concession holders (1957) -airborne EM survey identified anomalies in the east part of Generals Property.
	Compagnie Minière de l'Ungava (1957) - discovered showing east of Generals Property that assayed 0.7% Ni, 0.5% Cu.
	Asarco Nickel Co. Ltd. (1957) - located a showing 2 kilometres south of the southwest corner of Generals, which assayed 0.4% Ni and 0.4% Cu.
	Amax Exploration Quebec (1970), Platinum Exploration Canada Inc. (1987), Imperial Platinum Corp (1988), Acquisitor Mines Ltd. (1987) and Ungava Minerals (1996) completed geological, geochemical and geophysical surveys with a general lack of results.
South Trend Property	Compagnie Minière de l'Ungava (1958) - 12 holes (not located directly over South Trend Property), intersected assays up to 1.2% Ni over 16.8 metres, 3.8% Cu over 2.0 metres, and 0.9% Ni and 0.8% Cu over 29.6 metres.
	Imperial Platinum (1987) – geophys surveys, mapping and assaying for Ni, Cu, Pt, Pd, and Au. Four areas hosted in mafic / ultramafic sills with anomalous combined PGE were located, just outside the South Trend Property.
	Geotest Corp. (1987) - mapping and litho-geochemical surveys, included assaying for PGE. Weak Pt, Pd and Au values 6 kilometres east of South Trend (up to 70 ppb Pt, 68 ppb Pd and 182 ppb Au. The highest grab sample was obtained near Vaillant Lake, 15 kilometres east of South Trend, which assayed 459 ppb Pt, 2,071 ppb Pd.
	Geotest Corp.(1987) – “Showing 7” two kilometres west of South Trend assayed 492 ppb Pt, 642 ppb Pd and 118 ppb Au in grab sample.
	Beaufield Resources Inc. (1988) - airborne surveys and mapping. Three PGE anomalies near South Trend Property. Grab sample assays up to 1.0% Ni 1.4% Cu, and 1,482 ppb Pd, a few kilometres west of South Trend Property, and returned up to 0.5% Ni and 0.2% Cu, and 0.1% Ni and 0.2% Cu, a few kilometres east of South Trend Property.

PROPERTY	EXPLORATION AND RESULTS
	Augusta Metals Inc. (1996, 1997) - airborne geophysical surveys, prospecting, and litho-geochemical sampling. No significant assay values.
	Cunico Exploration Ltd. (2000) - mapping and prospecting. A showing 10 kilometres west of South Trend Property, returned 0.2% Ni, 0.3% Cu, 900 ppb Pd, 210 ppb Pt, 22 ppb Au.
Rebels, Crocodile Tears East and West Properties	Hudson-Ungava Nickel Mines Ltd. (1957) - airborne EM / Mag survey and follow-up prospecting and soil surveys. Six showings discovered with assays up to 1.4% combined Ni and Cu. Quebec Raglan Mines Ltd. (1974) - mapping.
	Cominco (1979) - ground magnetics and HEM surveys, mapping and three DDH's (268 metres). Grab samples assays up to 2.3% Ni and 0.5% Cu. DDH had no significant mineralization.
	Beaufield Resources Inc. (1986) - airborne magnetics, GeoTEM, VLF surveys and follow-up mapping discovered three significant PGE anomalies in areas of current interest to CRI. Assays up to 1.0% Ni, 1.4% Cu, and 1,482 ppb Pd in the Crocodile Tears area.
	Stockmen Energy Ltd (1986) and Delaware Resources Corp. (1986) Reconnaissance mapping and litho-geochem sampling. Located differentiated mafic to ultramafic sills with anomalous PGE values (up to 855 ppb Pd in grabs).
	Imperial Platinum Corp. (1987) - ground geophysics and mapping on the NE part of Crocodile Tears and in general area. Disseminated sulphides in ultramafic sills. Assay results at Forcier Lake (Rebels Property), of 0.2 g/t total PGE. Kilo and Lima claim blocks (Crocodile Tears), 0.5 g/t and 0.2 g/t total PGE /10m.
	Augusta Metals Inc.(1996) - airborne geophysics, prospecting, and geochemical sampling. No significant assays.
Ice Property	Acquisitor Resources Inc. (1987) - mapping and prospecting of Ice Property yielded assays ranging up to 1,019 ppb Pd, 215 ppb Pt, 0.25% Ni and 0.5% Cu.
Platters, Vicenza Properties Arbitration, Breakaway, and Giants Properties	Consortium of concession holders (1957) in the area completed a joint airborne magnetic survey. Amax Exploration (1969) and Ron-Roy Uranium Mines (1969) - airborne magnetics and EM, and mapping. Ron-Roy Uranium Mines (1971) - ground mag surveys outlined ultramafic sills.
	Geotest Corp. (1987) and Delaware Resources Corp. (1987) - airborne Mag/EM surveys outlined numerous conductive zones. Follow-up mapping and prospecting yielded grab sample assay 114 ppb Pt and 225 ppb Pd - located in the west part of Breakaway
Mesamax North Grid	High North Resources (1997) - established the Mesamax North Grid over a magnetic feature interpreted as an ultramafic body. In 2002 CRI re-established this grid (8.4 kilometres). No further work recommended

## 5.2.2 RECENT EXPLORATION CARRIED OUT BY CRI

The following is a summary of the more recent exploration carried out at the Mesamax, Expo, Mequillon, Ivakkak, Allammaq and Puimajuq deposits.

### 2001

From July through September of 2001, Canadian Royalties completed an integrated exploration program on portions of the Nunavik Nickel Project, targeting disseminated, net-textured, and massive sulphides within the basal portions of ultramafic flows and/or intrusions.

#### ***Mesamax Main Grid***

- The main grid, originally established in 1997 by High North Resources Inc., was re-established.
- Geological mapping and prospecting conducted along ultramafic unit. Mapping delineated pyroxenite/peridotite unit across 2.8 km grid length.
- HLEM geophysical data identified a number of unexplained conductive features and several magnetic anomalies coincident with surface disseminated sulphide mineralization.
- Two diamond drill holes completed.

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***Mesamax NW Grid***

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- 20.5 line kilometres of grid established in this area.
- Geological mapping, together with a review of historical drill core, identified the North and South Ultramafic units.
- Diamond drilling carried out in a series of fanned holes on a single section intersected PGE mineralization.
- Grab samples returned assays up to 6.6 g/t PGE, in association with Ni-Cu mineralization, with one sample indicating an extension of mineralization 350 metres east of main occurrence.
- Magnetic and HLEM surveys completed on the Mesamax NW grid by High North Resources in 1997 and CRI in 2001 on 100-metre spaced lines define a short and wide near-surface, very conductive zone, dipping to the north and having a limited depth extent.

***Expo Deposit***

- Initial re-assaying program of four historical drill holes from 1997 for PGE. Positive results lead to CRI commencing a re-logging and re-assaying program on historic drill core from the Expo deposit.

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***2002***

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The 2002 field exploration program focused on exploring areas deemed favourable for hosting Ni-Cu-PGE mineralization, including mineralized ultramafic bodies identified during previous exploration programs, areas identified by CRI during the 2001 exploration program, areas of documented sulphide occurrences within or adjacent to ultramafic bodies, and geophysical targets along the ultramafic trend with coincident surface mineralization.

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***Mesamax Rainbow Grid***

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- Rainbow Grid re-established, with a total of 22.6 km of picketed grid lines established.
- Exploration, including mapping, sampling and the assessment of a number of airborne anomalies in the area focussed on the evaluation of the north-eastern continuation of the Mesamax Main ultramafic body.
- A number of grab samples returned results up to 0.1% Ni, 1.1% Cu, and 2.8 g/t PGE.

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***Mesamax Main Grid***

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- Four additional diamond drill holes were completed on the Mesamax Main Grid.

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***Mesamax NW Grid***

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- Work on the portion of the Mesamax NW Grid covering the Phoenix Property included grid establishment, mapping, prospecting, geochemical surveys, geophysical surveys, and limited diamond drilling.
- A 25-metre grid was established over the Mesamax zone.
- A magnetic survey was completed with measurements collected at 6.25-metre intervals.
- An HLEM test was also carried out using a 50-metre coil separation, confirming the previous interpretation.
- 40 diamond drill holes were completed along a 250 metre strike extent of the ultramafic.

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### ***Expo Deposit***

- Diamond drilling in the Expo Northeast area identified a significant mineralized horizon with a strike length in excess of 122 metres.

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### ***Mequillon North Grid***

- The Mequillon North grid established by High North Resources in 1997 was refurbished with the focus on evaluating an area of surface mineralization with associated historic diamond drilling.
- Mapping outlined a 1,500 m by 100 m peridotite ultramafic body, oriented in a northeast-southwest direction.
- A historical showing of sulphide mineralization was re-located along the southwestern margin of the peridotite.
- 10 grab samples yielded up to 0.3% Ni, 0.6% Cu and 1.5 g/t PGE.
- 6 drill holes were completed along the pyroxenite-peridotite body with significant sulphide mineralization encountered in all holes.

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### ***Mequillon Northeast Grid***

- The Mequillon Northeast Grid was established with the purpose to evaluate the northeast continuation of the ultramafic body extending from the Mequillon North grid.
- The ultramafic body was mapped for 900 m in a northeast direction, up to 300 m in width, with sulphide mineralization along the north and south margins.
- A total of 28 grab samples were collected from the areas of mineralization and central portions of the peridotite. The highest grab sample returned 0.5% Ni, 0.9% Cu and 2.3 g/t PGE.
- An electromagnetic survey using the MaxMin II horizontal-loop system with a 100-metre coil separation was completed by Discovery Geophysics Inc. over the Mequillon Northeast grid, indicating a strong near-surface conductor over the centre of the Mequillon ultramafic body.

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## ***2003***

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The successful 2001-2002 exploration programs resulted in an expanded \$5 million program in 2003, including over 20,000 metres of drilling in 170 drill holes at nine exploration areas.

CRI conducted an extensive AeroTEM airborne electromagnetic survey in 2003, of 4,818 line kilometres on the central and eastern portion of the Nunavik Nickel Project area.

With the mineral potential of the Raglan South Nickel Project becoming more apparent, and based on an expanding knowledgebase, CRI acquired an additional 228 km<sup>2</sup> of ground in 2003. CRI also initiated environmental baseline studies in 2003.

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### ***Mesamax Deposit***

- An initial resource estimate on the Mesamax deposit, prepared by Strathcona, was received by CRI on April 15, 2003, incorporating information from 41 diamond drill holes.
- 39 diamond drill holes were completed, confirming the continuity of mineralization within the deposit and extending the deposit to the east, west and depth.



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***Expo Deposit***

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- 67 diamond drill holes were drilled in the Expo Northeast area, identifying a significant mineralized horizon with a strike length in excess of 122 metres.

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***Mequillon Northeast Grid***

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- 18 diamond drill holes completed, defining disseminated to locally massive Ni-Cu-PGE sulphide mineralization of a 400 metre strike length

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**2004**

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With some of its project areas reaching an advanced stage CRI began undertaking predevelopment studies in preparation for any future development of mining operations on the property. In 2004, mineralogical, petrological, metallurgical, mineralogical studies to determine PGE distribution, environmental baseline studies, and additional evaluation of the setting, origin, and emplacement of the Ni-Cu-PGE mineralization in the Expo and Mesamax deposits were initiated.

Preliminary metallurgical results were received by CRI in late 2004 with the following recoveries indicated.

**Table 5-2: Preliminary Metallurgical Results 2004**

Deposit/Ore Type	% Recovery			
	Nickel	Copper	Platinum	Palladium
Mesamax				
Massive Sulphide Ores	82	98	60	93
Net Textured Ores	75	97	67	89
Expo				
Massive Sulphide Ores	82	98	60	93
Net Textured Ores	76	83	80	80
Mequillon				
Massive Sulphide Ores	82	98	60	93
Net Textured Ores	75	97	67	89

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***Mesamax Deposit***

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- An updated resource estimate for the Mesamax Deposit based on the 2003 drilling was received from Strathcona Mineral Services Limited, increasing the estimate to 1,840,000 tonnes grading 1.9% Ni, 2.3% Cu, 0.08% Co, 0.9 g Pt/t, 4.3 g Pd/t, and 0.3 g/t gold. The deposit was considered well suited for open pit mining.
- Pre-feasibility level drilling commenced in late 2004 with 41 holes completed, including 14 metallurgical holes.
- SGS Lakefield completed interim metallurgical test work prior to year-end 2004 on ore samples collected earlier in the year. Initial results indicated no unusual metallurgical characteristics with respect to grindability or payable sulphide concentration using standard floatation techniques.

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### ***Expo Deposit***

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- A topographic survey providing accurate drill hole collar elevations and a basic contour map was completed in 2004 allowing most of the historical data to be incorporated into the database.
- 43 diamond drill holes were completed and 111 drill holes from 2003 and 2004 were incorporated into the database, allowing for the initiation of a resource estimate by Strathcona Mineral Services Limited.
- SGS Lakefield completed interim metallurgical test work on net-textured ore samples collected in 2004. Initial results showed no unusual metallurgical characteristics with respect to grindability or payable sulphide concentration using standard floatation techniques, with recoveries significantly better than work completed by AMAX in the late 1960's and 1970.

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### ***Mequillon Deposit***

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- 77 diamond drill holes were completed, revealing high-grade palladium intercepts greater than 10 g/t over significant intervals at the then eastern limit of the deposit.
- SGS Lakefield completed interim metallurgical test work prior to year-end 2004 on ore samples collected earlier in the year. Initial results indicated no unusual metallurgical characteristics with respect to grindability or payable sulphide concentration using standard floatation techniques.
- An initial estimate of the inferred resources at Mequillon was reported on September 22, 2004, of 1.4 million tonnes at average grades of 0.7% Ni, 0.9% Cu, 2.9 g/t PGE. The estimate was carried out by Strathcona Mineral Services Limited and based on 18 diamond drill holes drilled from 2002 to 2003.

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## ***2005***

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Work at the Nunavik Nickel Project included a significant AeroTEM airborne electromagnetic survey of 2,674 line kilometres on the western portion of the project area. A 15 kilometre road was also constructed from the vicinity of the Donaldson airport on Falconbridge's Raglan mine site to the Mesamax Deposit, allowing equipment access to the deposit area, and the ground transportation of personnel and supplies. A temporary equipment and supply shelter was also constructed to improve project efficiency and extend the season, and environmental baseline field studies were conducted for the third season.

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### ***Mesamax Deposit***

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- An updated resource estimate increased the resource at Mesamax to 1,848,000 tonnes grading 2.1% Ni, 2.6% Cu, 0.08% Co, 0.2 g Au/t, 1.0 g Pt/t and 3.8 g Pd/t. Contributing factors to the new estimate included the drilling of 27 new holes, the loss of massive sulphide due to the geometry of the deposit, the inclusion of one metre of skin of dilution around the deposit, as well as to the metallurgical test work indicating that the near surface oxidized massive sulphide overlying the original resource will produce saleable concentrates at reasonable recoveries.
- A 34 tonne representative bulk sample of drill core from 63 HQ-sized holes was collected from the Mesamax Deposit and used as feed for pilot plant metallurgical testing to be conducted by SGS Lakefield.
- 22 diamond drill holes were completed, 3 of which were drilled for geotechnical purposes and 2 holes (drilled in 2003) were deepened, with drilling defining massive and disseminated Ni-Cu-PGE mineralization over a strike length of 250 metres and widths of up to 100 metres largely occurring between the surface and 80 metres depth.

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***Expo Deposit***

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- A fully compliant resource estimate on the Expo deposit, carried out by Strathcona Mineral Services Limited was received by CRI on August 8, 2005.
- 32 drill holes were completed within and proximal to the Expo deposit, sufficiently defining the limits of the main deposit to allow for the initiation of geotechnical studies.

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***Mequillon Deposit***

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- A 20 person exploration camp was constructed at the Mequillon Deposit to improve project logistics and efficiency.
- Strathcona prepared an updated resource estimate on the Mequillon Deposit as outlined in their technical report dated May 30, 2005.
- 19 holes were drilled at the Mequillon Deposit, extending the known mineralization of the deposit 50 metres east traced continuously for approximately 1300 metres along strike.

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***Ivakkak Deposit***

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- The Ivakkak Deposit was distinguishable on at least two flight lines of the 2005 AeroTEM II geophysical survey flown over the western portion of the Nunavik Nickel Project area.
- Ground geophysical surveys including Max-Min Mk II and Crone TEM (time domain EM) surveys were also carried out over the Ivakkak Deposit. The Max-Min survey defining the deposit over a 200 metre strike length, with a steep dip to the north and a plunge to the northwest. The MAG survey indicated a strong coincident positive response and the TEM survey indicated at least a 100 metre extension to the west and an abrupt termination towards the east.
- The area was geologically mapped and sampled, with disseminated sulphide-bearing pyroxenite/gabbro float found to be containing geochemically anomalous Ni, Cu and PGE values.
- 32 holes were drilled at approximately 25 metre intervals over a strike length of 275 metres, with the Ivakkak Deposit zone remaining open to expansion.
- In March of 2006, CRI reported indicated resources at the Ivakkak Deposit of 520,000 tonnes grading 1.62% Ni, 2.06% Cu, 0.07% Co and 4.4 g/t PGE and 105,000 tonnes inferred resources grading 1.66% Ni, 1.88% Cu, 0.07% Co, and 4.3 g/t PGE.

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***2006***

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A Preliminary Economic Assessment was completed by P&E and Roche Ltd., Consulting Group, the objective of which was to define an initial 8-10 year mining plan for the Nunavik Nickel Project.

Geological mapping, specifically with regard to structural and genetic controls on the distribution of metals in the deposit was undertaken by Dr. James Mungall. Dr. Mungall also conducted a series of modeling exercises which were designed to elucidate the origins of sulphide mineralization at the Mesamax NW, Expo-Ungava and Mequillon Deposits.

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***Mesamax Deposit***

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- The pilot plant metallurgical testing on the 34 tonne bulk sample collected from the Mesamax Deposit in 2005 was initiated by SGS Lakefield in January of 2006.

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***Expo Deposit***

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- In 2006, 44 holes were drilled, including 8 geotechnical holes, four of which were sampled and included in the resource estimate.
- Half drill core samples of Expo mineralization were sent to SGS Lakefield in January of 2006 and again in April, 2006 with the goal of investigating grindability and flotation characteristics of blended Expo and Mesamax mineralization. Of principal interest was the metallurgical response to coarsening primary grind while maintaining acceptable concentrate recovery and grade. Results of the study are reported in “SGS Lakefield Report 10749-004 Report 8”, dated August 8, 2006.
- In December 2006, CRI reported indicated resources for the Expo Deposit of 8,562,000 tonnes grading 0.8% Ni, 0.8% Cu, 0.04% Co, 0.3 g Pt/t, 1.4 g Pd/t and 0.1 g Au/t and inferred resources of 478,000 tonnes grading 0.8% Ni, 0.8% Cu, 0.04% Co, 0.3 g Pt/t, 1.3 g Pd/t and 0.1 g Au/t.

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***Mequillon Deposit***

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- 9 holes were drilled to further test the easterly extension of the Mequillon Deposit.

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***Ivakkak Deposit***

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- 58 diamond drill holes were completed at the Ivakkak Deposit in 2006, outlining mineralization of at least 250 metre strike-length.

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**2007**

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A Preliminary Feasibility Study considering the Mesamax, Expo and Ivakkak Deposits was completed by SNC-Lavalin Inc., in June of 2007. The study demonstrated robust project economics with a rapid payback of the capital investment (1.9 to 2.9 years at US\$10/lb Ni and US\$6/lb Ni, respectively), with significant cash flow being generated by annual metal production that would average over the first four years:

- 11,800 tonnes per year (26,014,000 lb) of nickel in concentrate;
- 17,600 tonnes per year (38,800,000 lb) of copper in concentrate;
- 14,500 oz per year of platinum in concentrate; and
- 78,600 oz per year of palladium in concentrate.

By the end of 2007, the company was ready to commence construction for the Nunavik Nickel Project.

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***Mesamax Deposit***

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- In May of 2007, CRI reported indicated resources for the Mesamax Deposit of 2,217,804 tonnes grading 1.9% Ni, 2.6% Cu, 0.08% Co, 1.0 g Pt/t, 3.6 g Pd/t and 0.2 g Au/t and inferred resources of 31,137 tonnes grading 1.6% Ni, 1.8% Cu, 0.07% Co, 0.6 g Pt/t, 3.6 g Pd/t and 0.2 g Au/t.

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***Ivakkak Deposit***

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- In January of 2007, CRI reported indicated resources for the Ivakkak Deposit of 1,128,000 grading 1.2% Ni, 1.5% Cu, 0.05% Co, 0.6 g Pt/t, 3.1 g Pd/t and 0.2 g Au/t and inferred resources of 41,000 tonnes grading 1.2% Ni, 1.3% Cu, 0.05% Co, 0.7 g Pt/t, 2.9 g Pd/t and 0.1 g Au/t.

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***Allammaq Deposit***

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- The Allammaq Deposit was discovered during the 2007 drill program in which 32 diamond drill holes were drilled, delineating two separate zones of net-textured sulphide mineralization.
- In June of 2008 Canadian Resources announced that it had successfully and conclusively detected the Allammaq Deposit using advanced electromagnetic geophysical techniques (SQUID sensors).
- A production SQUID survey between the Allammaq and Mesamax Deposits commenced during the winter of 2008 and was completed during early summer.

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***Puimajuq Deposit***

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- Canadian Royalties also discovered the Puimajuq Deposit in 2007 while drill-testing a suspected ultramafic intrusion based on EM surveying. Drilling at the deposit totalled 7 holes.

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***2008***

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Early in 2008, Canadian Royalties met several important objectives, including the signing of the Nunavik Nickel Agreement (Impact Benefits Agreement), being issued critical land leases for the 4 mining leases and the 4 waste dumps at Ivakkak, Mequillon, Expo and Mesamax, the commencement of site construction work and the continued growth of its resource base. However, later in the year, CRI was materially impacted by the global financial crisis at the peak of construction activity on the Nunavik Nickel Project and accordingly implemented their Asset Conservation Plan.

On August 5, 2008, CRI announced that activities being carried out on the Nunavik Nickel Project would begin to transition away from full construction and move towards implementing a care and maintenance program. Effectively, all major construction and engineering work were suspended as of that date in order to protect the company's treasury and investment infrastructure.

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***Mequillon Deposit***

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- A Preliminary Economic Assessment on the Mequillon Deposit was completed by P&E in March of 2008, to assess the technical and economic viability of mining the Mequillon mineral deposit as a stand alone project using open pit and underground mining methods.

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***Allammaq Deposit***

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- 35 holes were completed in 2008, with the aim to delineate extensions to the existing deposit and upgrade resource classifications for an open pit resource.

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***Puimajuq Deposit***

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- 17 holes were drilled at the Puimajuq Deposit, with drilling delineating net textured sulphides with a massive sulphide core, within a quasi-vertical pyroxenite dyke.

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***2009 – January 2010***

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On January 13, 2010 Canadian Royalties announced the completion of a plan of arrangement between Canadian Royalties and Jien Canada Mining Ltd., under which Jien Canada acquired all

of CRI's outstanding common shares in exchange for \$0.80 per share and now has 100% interest in the Nunavik Nickel Project.

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#### ***Allammaq Deposit***

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- In October of 2009, CRI reported measured resources for the Allammaq Deposit of 559,855 tonnes grading 0.9% Ni, 1.1% Cu, 0.04% Co, 0.6 g Pt/t, 2.7 g Pd/t and 0.1 g Au/t, indicated resources of 3,760,518 grading 0.9% Ni, 1.1% Cu, 0.04% Co, 0.5 g Pt/t, 2.2 g Pd/t and 0.1 g Au/t and inferred resources of 1,591,493 tonnes grading 0.5% Ni, 0.5% Cu, 0.02% Co, 0.3 g Pt/t, 1.2 g Pd/t and 0.1 g Au/t.

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#### ***Puimajuq Deposit***

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- Also in October of 2009, CRI reported indicated resources for the Puimajuq Deposit of 209,182 tonnes grading 1.6% Ni, 2.7% Cu, 0.06% Co, 0.9 g Pt/t, 2.5 g Pd/t and 0.1 g Au/t and inferred resources of 11,728 grading 2.3% Ni, 3.2% Cu, 0.09% Co, 1.2 g Pt/t, 2.6 g Pd/t and 0.1 g Au/t.

### **5.3 PREVIOUS DRILLING**

#### **5.3.1 MESAMAX DEPOSIT**

Section 5.2.1 of this report draws heavily upon material contained within the report titled, "Technical Report on the South Trend Group of Properties, Nunavik, Quebec, for Canadian Royalties Inc." authored by Henrik Thalenhorst and dated May 29, 2003, and the report titled "Raglan South Nickel Project, Nunavik, Quebec, Technical Report and Preliminary Economic Assessment on the Mequillon, Mesamax, Expo and Ivakkak Deposits for Canadian Royalties Inc." authored by P&E Mining Consultants Inc., and Roche Ltd., Consulting Group., and dated May 5, 2006. These reports have been filed on [www.sedar.com](http://www.sedar.com). For more complete and detailed information on past drilling at the Mesamax Deposit the reader is referred to these reports.

The Mesamax Property contains two Ni-Cu-PGE mineralized ultramafic units, termed the North Ultramafic and South Ultramafic bodies, of which the Southern Ultramafic body is host to the Mesamax Deposit. A summary of past drilling for the Mesamax Property is given below.

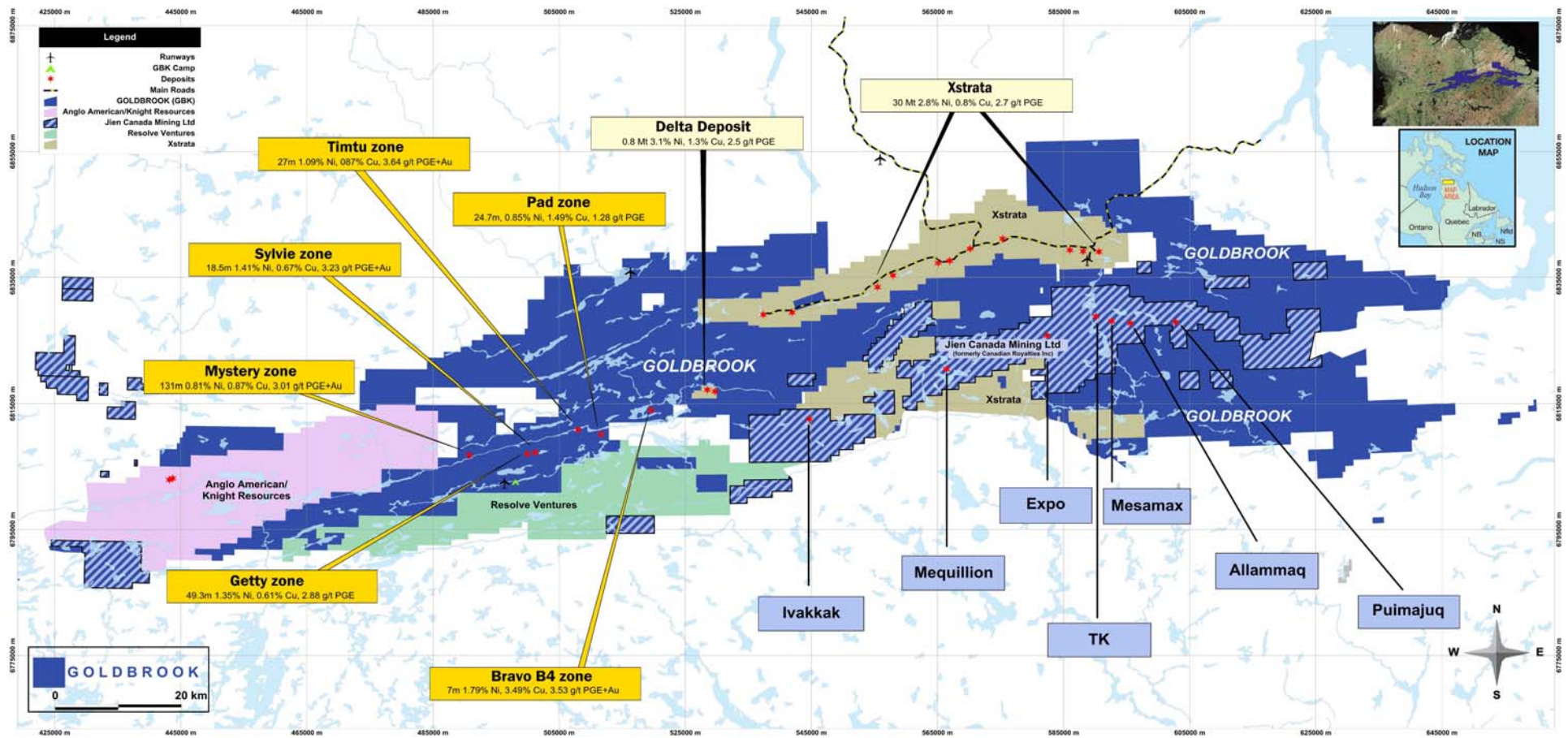
Ron Roy Uranium Mines Ltd ("Ron Roy") along with Amax Exploration Inc. ("Amax") initiated exploration at Mesamax in 1969 and carried out a follow-up drill program in 1970 at both the Mesamax Main Grid and what is now known as the Mesamax NW Grid. The Mesamax Main Grid is entirely located within the Expo-Ungava Property and the Mesamax NW Grid overlaps the boundary between the Phoenix Prospect and the Expo-Ungava Property.

A total of seven holes over 821 metres was drilled at the NW Grid and a total of 19 holes over 1633 metres was drilled at the Main Grid. The focus of the drilling program was to locate Ni-Cu sulphide mineralization and the core was therefore not analysed for PGE. The program was successful in intersecting both massive and disseminated Ni-Cu sulphide mineralization. Some of the 1970 drill holes were later re-sampled and re-assayed by CRI in 2001 and the results of this work have been discussed in Section 5.2 of this report.

CRI commenced drilling in the Mesamax area in 2001 after re-establishing the Mesamax Main grid that was originally established by High North Resources Inc. and Ungava Minerals Corp. Two diamond drill holes over 166 metres were completed at this time at the Main Grid. Both holes intersected mineralized channel-shaped pyroxenite bodies, potentially indicative of proximity to a higher-grade source of massive sulphide mineralization.

In 2002, CRI carried out a comprehensive diamond drill program on the Mesamax Deposit (NW Grid) as follow up to the encouraging results from the previous year. A total of 40 holes were drilled at the deposit at a 25-metre to 50-metre spacing. Drilling defined a near-surface lens of massive sulphide mineralization over a strike length of 250 metres.

The 2002 follow-up program also included four diamond drill holes located within the Main Grid, which continued to identify mineralized channel-shaped ultramafic bodies.



**Figure 5.1: Regional Property Location Map Showing Nunavik Nickel Project Deposits for which there are NI 43-101 compliant Resources (blue text boxes) and surrounding Goldbrook Deposits (orange text boxes).**



CRI undertook infill and step-out diamond drilling at the Mesamax Deposit in 2003. A total of 30 holes were drilled, providing an increase in the level of confidence in the initial resource figures. The drilling extended the strike length of the known mineralization by approximately 30% to the east and west.

In 2004, CRI carried out a mixture of exploration and metallurgical drilling at the Deposit, which included 14 closely-spaced metallurgical holes over 1,640 metres and 27 exploration holes over 1,900 metres. The metallurgical holes were drilled in the central area of the Deposit to initiate flotation testwork on the oxidized portion.

The 2005 drill program by CRI comprised 63 HQ-sized metallurgical drill holes. A 34 tonne bulk sample was collected to obtain information relating to recovery optimization and mill and concentration plant design. The bulk sample was sent to Lakefield Research in Lakefield, Ontario for testing.

In 2006, CRI completed 19 diamond drill holes at the Mesamax Deposit, deepened two holes drilled in the 2003 program and drilled another three holes for geotechnical engineering purposes. The total length of resource drilling undertaken in the 2006 program was 3,438 metres.

Beginning in 2003, Canadian Royalties contracted J. L. Corriveau & Associates Inc. ("Corriveau"), registered Land Surveyors in Quebec to provide survey control for all field grids and diamond drill hole collars. All holes drilled at the Mesamax Deposit were surveyed by Corriveau using a differential GPS method. The surveys are considered accurate to within about 0.1 metre in all three dimensions.

For the holes drilled by CRI, down-hole dip measurements were taken using acid tests at approximately 50-metre intervals. A Reflex down-hole survey instrument was also used to take dip and azimuth measurements at the bottom of each hole.

All past drill programs within and proximal to the Mesamax Deposit prior to Goldbrook's involvement in the project are summarized in Table 5-1 below.

**Table 5-3: Drilling Undertaken at the Mesamax Deposit**

Year	Grid	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
1970	NW	Ron	DDH	AXT	7	827
1970	Main	Ron	DDH	AXT	19	1,633
2001-		CRI	DDH	BQ	76	7,400
2004	NW	CRI	DDH	BQ	27	1,900
2004	NW	CRI	Metallurgical	HQ	14	1,640
2005	NW	CRI	Metallurgical	HQ	63	34 tonne bulk
2006	NW	CRI	DDH	BQ/NQ	19	3,438
2006	NW	CRI	DDH	BQ/NQ	2	
<b>Total</b>					<b>227</b>	<b>16,838</b>

\*CRI extended the depth of holes drilled in 2003.

### 5.3.2 EXPO DEPOSIT

Section 5.2.2 of this report draws heavily upon material contained within the report titled, “Technical Report on the Mineral Resource Estimate Expo Nickel-Copper Deposit, Nunavik, Quebec”, dated August 8<sup>th</sup>, 2005 and authored by T. Keast and H. Thalenhorst, and the report titled “Technical Report and Resource Estimate Update on the Expo Ni-Cu-PGE Deposit, Raglan South Nickel Project, Nunavik, Quebec”, dated February 26<sup>th</sup>, 2007 and authored by P&E Mining Consultants Inc. These reports have been filed on [www.sedar.com](http://www.sedar.com).

Exploration of the Expo Deposit area dates back to the 1950’s, with drilling of the area commencing in 1967 by Expo Ungava Mines Ltd. (“Expo Ungava”) who drilled the discovery hole at Expo at that time. The discovery hole intersected 5.8 metres of massive sulphides averaging 2.2% nickel and 1.6% copper. By the end of 1968 Expo Ungava had completed 43 drill holes outlining the main part of the Deposit over a strike length of 600 metres. Amax continued drilling the deposit in 1969, however they did not substantially increase its size.

The next period of exploration was initiated in 1997 by High North Resources Inc. and Ungava Minerals Corp. (“Ungava”), who undertook a confirmatory drill program comprising six holes.

Canadian Royalties commenced work on the project in 2001 with a re-sampling program of historical drill core. Drilling was initiated by CRI at the Expo Deposit in 2003 and several programs of diamond drilling were completed from this time until 2006. A total of 268 holes over 32,777 metres were completed during this period.

CRI’s 2003 and 2004 drill programs covered the entire known area of mineralization at Expo, with 67 holes being drilled over a total of 6,747 metres in 2003 and 43 holes over a total of 4,825 metres in 2004. During the 2003/2004 drilling programs a total of eight holes were twinned and of those eight holes, three were originally drilled in 1967 and the remaining five in 1968.

The 2005 and 2006 drill programs were designed to expand the resources at Expo. A total of 6,153 metres of drilling were undertaken in 2005, and a total of 4,578 metres in 2006, along with eight geotechnical holes, four of which were included in the resource calculation. The total number of metres drilled in 2005 and 2006, including the four geotechnical holes was 11,317 metres.

The drill contractor for the 2003 to 2006 Expo drill programs was Major Drilling Group (“Major”) who used JKS 300 wireline drill rigs equipped to recover BQ-sized core.

During the 2005 and 2006 exploration programs, CRI once again contracted Corriveau, registered Land Surveyors in Quebec, to survey grids and drill holes at Expo and other deposits within the Project area. Corriveau surveyed all drill hole collars up to and including hole EX-06-143 (excluding hole EX-06-141) at Expo using a differential GPS. The surveys are considered accurate to within about 0.1 metres in all three dimensions.

For the holes drilled by CRI, down-hole dip measurements were taken using acid tests at approximately 50-metre intervals. A Reflex down-hole survey instrument was also used to take dip and azimuth measurements at the bottom of each hole. Dip deviations are typically one degree or less per 100 metres, while azimuth deflection is difficult to evaluate due to the magnetism encountered in the peridotite body.

All past drill programs within and proximal to the Expo Deposit prior to Goldbrook's involvement are summarized in Table 5-2 below.

**Table 5-4: Drilling Undertaken at the Expo Deposit**

Year	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
1967	ExpoUngava	DDH	AXT	8	731
1968	Expo Ungava	DDH	AXT	35	3,281
1969	Amax	DDH	AXT	34	5,439
1997	High North	DDH	BQ	6	1,023
2003	CRI	DDH	BQ	67	6,747
2004	CRI	DDH	BQ	43	4,825
2005	CRI	DDH/Geotechnica	BQ	31	6,153
2006	CRI	DDH	BQ	44	4,578
			<b>Total</b>	<b>268</b>	<b>32,777</b>

*\*In 2005, CRI drilled 8 geotechnical holes at the Expo deposit.*

### 5.3.3 MEQUILLON DEPOSIT

Section 5.2.3 of this report draws heavily upon material contained within the report titled, “Technical Report on the Updated Mineral Resource Estimate, Mequillon Nickel-Copper Deposit, Nunavik, Quebec, for Canadian Royalties Inc.” authored by T. Keast and H. Thalenhorst and dated May 30, 2005. This report has been filed on [www.sedar.com](http://www.sedar.com).

Drilling at the Mequillon Deposit area commenced in 1957 by Minière de l’Ungava (“Cominga”), following the completion of promising geophysical surveys in the area. Three packsack holes and five diamond drill holes (699 metres) were completed between 1957 and 1958, testing the western section of the Mequillon Deposit. All holes intersected significant Ni-Cu sulphide mineralization. No analysis was done for PGE at this time. From this drilling, Cominga concluded that the deposit was not economic and no further drilling was recommended.

The drill hole collars from this period of drilling have been located in the field by CRI and tied to the present day grid.

CRI began work at the Mequillon Property in 2001, with drilling in 2002 and since that time have conducted several phases of drilling. All drilling was undertaken by Major Drilling Group and core was BQ-size.

In the initial 2002 phase of drilling, Canadian Royalties completed six holes, followed-up by 12 holes in 2003. A total of 2,243 metres was drilled during this time, covering a strike length of 500 metres, with drilling carried out on sections 100 metres apart. An extensive follow-up drill program by CRI in 2004 saw the completion of 77 diamond drill holes over 11,575 metres.

CRI continued drilling at the Mequillon Deposit in 2005, completing 19 holes over 5,081 metres and nine holes in 2006 over 2,827 metres. At this time, drilling had defined the deposit over a

total strike length of 1.4 kilometres and to a depth of 260 metres, with the deposit remaining open to the east.

During the 2005 and 2006 exploration programs, CRI contracted Corriveau to survey grids and drill holes at Mequillon and other deposits within the Project area. Corriveau surveyed all drill hole collars up to and including hole MQN-06-125 at Mequillon using a differential GPS. The surveys are considered accurate to within about 0.1 metres in all three dimensions.

For the holes drilled by CRI, down-hole dip measurements were taken using acid tests at approximately 50-metre intervals. A Reflex down-hole survey instrument was also used to take dip and azimuth measurements at the bottom of each hole. Dip deviations are typically one degree or less per 100 metres, while azimuth deflection is difficult to evaluate due to the magnetism encountered in the peridotite body.

All past drill programs within and proximal to the Mequillon Deposit prior to Goldbrook's involvement in the project are summarized in Table 5-3 below.

**Table 5-5: Drilling Undertaken at the Mequillon Deposit**

Year	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
1958	Cominga	DDH	EX	5	699
2002	CRI	DDH	BQ	6	573
2003	CRI	DDH	BQ	12	1,670
2004	CRI	DDH	BQ	77	11,757
2005	CRI	DDH	BQ	19	5,081
2006	CRI	DDH	BQ	9	2,827
			<b>Total</b>	<b>128</b>	<b>22,607</b>

#### **5.3.4 IVAKKAK DEPOSIT**

Section 5.2.4 of this report draws heavily upon material contained within the report titled, "Technical Report (2007) and Resource Estimate Update on the Ivakkak Ni-Cu-PGE Deposit, South Trend Property, Raglan South Nickel Project." authored by G.A. Harron & Associates Inc. and P&E Mining Consultants Inc., and dated March 22, 2007. This report has been filed on [www.sedar.com](http://www.sedar.com).

The Ivakkak Deposit was initially drilled and discovered by Canadian Royalties in 2005. There is no record of drilling prior to this time in the Ivakkak area and only reconnaissance geological mapping has been recorded prior to 2005 in this area of the Nunavik Nickel Project.

The 2005 drill program included exploration drilling in the western extremity of the Project area, leading to the discovery of the Ivakkak Deposit. In total, 32 delineation holes were drilled over 3,532 metres. At the end of the 2005 program, the Deposit remained open to further expansion, and follow-up drilling continued in 2006. At the beginning of the 2006 drill program, the Deposit had been traced for at least 250 metres along strike and to a depth of 125 metres. The 2006 drill program comprised 58 diamond drill holes over 7,362 metres.

All holes drilled at the Ivakkak Deposit were surveyed by Corriveau using a differential GPS method. The surveys are considered accurate to within about 0.1 metre in all three dimensions.

Down-hole dip measurements were taken using acid tests at approximately 50-metre intervals. A Reflex down-hole survey instrument was also used to take dip and azimuth measurements at the bottom of each hole.

The 2005 and 2006 drilling programs undertaken by Canadian Royalties at the Ivakkak Deposit are summarized in Table 5-4 below.

**Table 5-6: Drilling Undertaken at the Ivakkak Deposit**

Year	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
2005	CRI	DDH	BQ	32	3,532
2006	CRI	DDH	BQ	58	7,362
<b>Total</b>				<b>90</b>	<b>10,894</b>

### 5.3.5 ALLAMMAQ DEPOSIT

Section 5.2.5 of this report draws heavily upon material contained within the report titled, “Technical Report and Resource Estimate on the Allammaq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated May 30, 2008 and the report titled, “Technical Report and Updated Resource Estimate on the Allammaq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated November 20, 2009. These reports have been filed on [www.sedar.com](http://www.sedar.com).

The Allammaq Deposit is located approximately three kilometres east of the Mesamax Deposit. Canadian Royalties commenced drilling at Allammaq in 2007 and drilled the discovery hole (MX-07-30) on July 7, 2007, intersecting a 6.60 metre basal zone of 1.68% Ni and 2.34% Cu. A total of 32 holes (MX-07-30 to MX-07-53) were drilled in the 2007 Allammaq program over 5,736 metres, at a spacing of 50 metres and over a strike length of 250 metres. Drilling delineated two separate zones of net-textured sulphide mineralization, of which the basal zone (Allammaq) is of far greater economic significance.

CRI continued drilling in the 2008 season, with the aim of delineating extensions to the existing deposit and upgrading resource classifications for an open pit mine resource, rather than the previously reported underground resource of May 2007.

The 2008 CRI drill program at Allammaq comprised both infill and step-out drilling, with 35 holes over 6,697 metres completed. Drilling in the central region of the deposit was at a 25 metre to 50 metre spacing and step-out drilling at 50 metre to 100 metre spacing. Step-out drilling was extended 300 metres to the west.

At the end of the 2008 drill season, in addition to the Upper and Basal Zones, a third zone (the West Extension) thought to be related to the Upper Zone was outlined. The Basal Zone was also found to exceed 45 metres thickness in the central region of the Deposit. All three zones were included in the updated resource given the newly considered open pit mine design.

Major carried out the drilling at the Allammaq Deposit in 2007, utilising JKS 300 wire line drill rigs and all core recovered was of BQ-size. In 2008, these rigs were replaced with modern

Duralite 500 heli-portable diamond drills, with a significantly greater depth capacity. Core recovery was BQ and NQ-size.

During the 2007 and 2008 exploration programs, Corriveau was contracted to survey grids and drill holes at Allammaq and other deposits within the Project area. Corriveau surveyed all drill hole collars from MX-07-30 up to and including MX-08-107 at Allammaq using a differential GPS. The surveys are considered accurate to within about 0.1 metres in all three dimensions.

Down-hole dip measurements were taken using acid tests at approximately 50-metre intervals. A Reflex down-hole survey instrument was also used to take dip and azimuth measurements at the bottom of each hole. Dip deviations are typically one degree or less per 100 metres, while azimuth deflection is difficult to evaluate due to the magnetism encountered in the peridotite body, however based upon holes that were drilled into the nonmagnetic footwall sediments, the azimuth deviation was found to be around two degrees per 100 metres.

The 2007 and 2008 drilling programs undertaken by Canadian Royalties at the Allammaq Deposit are summarized in Table 5-5 below.

**Table 5-7: Drilling Undertaken at the Allammaq Deposit**

Year	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
2007	CRI	DDH	BQ	32	5,736
2008	CRI	DDH	BQ/NQ	35	6,697
Total				67	12,433

### 5.3.6 PUIMAJUQ DEPOSIT

Section 5.2.6 of this report draws heavily upon material contained within the report titled, “Technical Report and Resource Estimate on the Puimajuq Ni-Cu-PGE Deposit, Nunavik Nickel Project, Nunavik, Quebec.” authored by P&E Mining Consultants Inc., and dated November 20, 2009. This report has been filed on [www.sedar.com](http://www.sedar.com).

Canadian Royalties discovered the Puimajuq Deposit in 2007 while drill-testing a suspected ultramafic intrusion based on EM surveying located within their New Foreurs East Property. The discovery drill hole (NF-07-02) intersected 19.3 metres of net textured mineralization and six follow-up drill holes over 814 metres were completed in the remaining 2007 season. Drilling was carried out at 50-metre spacing over a strike length of 200 metres.

Further delineation drilling was carried out by CRI in 2008, with a total of 17 holes completed over 1402 metres. The program successfully outlined net textured sulphides with a massive sulphide core, within a quasi-vertical pyroxenite dyke.

Major carried out all of the drilling at the Puimajuq Deposit, utilising JKS 300 wire line drill rigs in 2007 (recovering BQ-sized core) and Duralite 500 heli-portable diamond drills in 2008 (recovering both BQ and NQ-sized core).

During the 2007 and 2008 exploration programs, Corriveau continued to survey grids and drill holes at Puimajuq and other deposits within the Project area. Corriveau surveyed all drill hole collars from NF-07-02 up to and including NF-08-25 at Puimajuq using a differential GPS.

Down-hole dip and azimuth measurements were taken using a combination of acid tests and a Reflex down-hole survey instrument in 2007 and solely utilizing the Reflex instrument in 2008. Measurements were taken at approximately 50-metre intervals and at the bottom of each hole. Dip deviations are typically one degree or less per 100 metres, while azimuth deflection is difficult to evaluate due to the magnetism encountered in the peridotite body. Based upon holes that were drilled into the nonmagnetic footwall sediments, the azimuth deviation appears to be around two degrees per 100 metres.

The 2007 and 2008 drilling programs undertaken by Canadian Royalties at the Puimajuq Deposit are summarized in Table 5-6 below.

**Table 5-8: Drilling Undertaken at the Puimajuq Deposit**

Year	Company	Type of Drilling	Core Size	No. of Holes	Length (metres)
2007	CRI	DDH	BQ	7	814
2008	CRI	DDH	BQ/NQ	17	1,402
			<b>Total</b>	<b>24</b>	<b>2,216</b>

## 5.4 PREVIOUS FEASIBILITY STUDIES

In 2007, SNC Lavalin completed a Definitive Feasibility Study, (“DFS”, or “BFS”) on the Nunavik Nickel Project. For the purposes of the DFS, the project comprises the development of three open pit mines: The Expo Mine, the Mesamax Mine and the Ivakkak Mine. The Ivakkak Mine also has planned underground workings that will be developed once the open pit is exhausted. The Mequillon, Puimajuq and Allammaq Deposits at the time the DFS was completed were not considered advanced enough in terms of resources to be able to consider them.

Conventional open pit mining methods would be used to exploit 98% of the reserves of the project. Mesamax and Ivakkak ores would be blended with Expo ores for the first four years of the project. Reserves from the Ivakkak underground zones A and C would be mined in years 5 and 6 and also blended with ore from the Expo open pit.

Open pit designs incorporate allowances for appropriate access ramps, wall slope angles, catchment berms and minimum mining widths for the equipment selected. The following parameters were used in the pit design: US\$6.00/lb nickel, US\$1.50/lb copper, US\$900/oz platinum and US\$300/oz palladium.

Reserve determinations include allowances for dilution, which vary with each resource. Mining losses were assumed to be 5% (not included in the following table), and were factored into the mining plan and financial analysis. The average strip ratio for open pit mining is 3.37:1 over the life of mine, excluding the waste material extracted during the underground mine development. The probable open pit reserve estimates for the three pits on the project are presented in Table 5-9.



**Table 5-9: Reserves as per Definitive Feasibility Study, 2007**

	Ore tonnes	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	Waste Tonne	Stripping Ratio (waste/ore) t/t
Mesamax	2,077,000	1.85	2.49	0.07	0.19	0.95	3.46	5,704,000	2.75
Expo	7,843,000	0.68	0.69	0.04	0.07	0.29	1.25	29,834,000	3.80
Ivakkak Pit	604,000	1.22	1.53	0.05	0.16	0.67	3.22	3,136,000	5.19
Ivakkak Underground	197,000	2.28	2.73	0.10	0.21	1.04	4.90		
<b>Total</b>	<b>10,721,000</b>	<b>0.97</b>	<b>1.13</b>	<b>0.05</b>	<b>0.10</b>	<b>0.45</b>	<b>1.86</b>	<b>38,674,000</b>	<b>3.67</b>

At a site in close proximity to the Expo open pit a process plant will process ore from the pits at a nominal rate of 3,500 tonnes per day. A nickel sulphide and a copper sulphide concentrate will be produced and trucked to the port at Deception Bay for shipment.

A series of low-emission, diesel fired, reciprocating generators will supply electrical power to the project. Waste heat will be recovered from these engines in order to increase the overall energy efficiency of the project.

Permanent accommodations are planned for 172 persons, including dining and recreation services.

A service complex will be provided to service the project's equipment fleet.

A rockfill dam will impound a reservoir to supply the project with fresh water. The reservoir capacity will provide for nine months of water consumption.

A waste rock and tailings co-disposal facility will be constructed adjacent to the Expo open pit and industrial complex.

Upgrades are planned to the existing Donaldson airport infrastructures.

A dedicated wharf and concentrate storage facility will be constructed at Deception Bay. Diesel and jet fuel handling and storage facilities will be provided.

Discounted cash flow modeling of the project yields a full equity base case internal rate of return (IRR) of 8.1% and a net present value (NPV) of CAD\$0.85 million at a discount rate of 8%, both calculated after tax and in nominal terms. A construction escalation rate of 3.5% annually and an inflation rate of 2% during the mine operation were assumed.

For the complete report on the DFS, the reader is referred to [www.sedar.com](http://www.sedar.com) and to the filings made by Canadian Royalties.



## **5.5 PREVIOUS METALLURGICAL TESTING**

### **5.5.1 PRE-CRI METALLURGICAL TESTING**

Amax (1969) reported on initial metallurgical testwork on the Expo Ungava mineralization undertaken at their Climax (Colorado) facility that was directed towards the production of a bulk concentrate without separation of the nickel and copper bearing minerals into separate concentrates.

While the massive sulphides at Expo Ungava were coarse grained and produced a bulk concentrate grading 15% to 20% nickel plus copper at reasonable recoveries, the disseminated sulphides (the material tested assayed from 0.4% to 0.5% nickel and copper each) required very fine grinding to below 75 microns to effect reasonable mineral liberation. There were three adverse mineralogical factors reported by Amax in the disseminated sulphides at Expo Ungava. (1) A portion of the total nickel (0.06%) is silicate nickel and cannot therefore be recovered; (2) *“An appreciable percentage of all of the sulphides occurred as fine disseminations in serpentine gangue that were not subject to liberation by conventional ball milling...”* (Amax 1969, GM-26102, page 16). (3) Pyrrhotite, the most common sulphide mineral that the flotation process attempts to exclude from the concentrates, carries from 0.3% to 0.6% nickel.

### **5.5.2 METALLURGICAL TESTING UNDERTAKEN BY CRI**

The following is taken directly from the Mining and Metallurgy Section of the Raglan South Nickel Project Technical Report #017387 authored by SNC Lavalin, and dated July 2007. This section forms part of the Definitive Feasibility Study (DFS or BFS).

Metallurgical testing of samples from the Nunavik Nickel Project deposits began in 2004, when SGS Lakefield conducted preliminary testing on Mesamax samples and Expo net-textured samples in order to provide projections for two types of flowsheets.

In 2005, testwork was conducted on the Mesamax, Mequillon and Expo Deposits including grindability investigations, flotation development, tailings characterizations and concentrate characterizations.

Major findings were that:

- Expo ore is dictating the fineness of primary grinding;
- Copper floated preferentially for Mesamax. It was not as obvious with Expo ore.

#### **Mineralogical Study**

At the end of 2005 CRI prepared a 33 t bulk sample in order to perform a pilot plant test at SGS Lakefield. The following summarizes the body of work completed on CRI's NNP Mesamax Ni-Cu-PGE Deposit. The scope of the program encompassed comminution studies, laboratory and pilot plant flotation, concentrate and tailings characterization, and determination of the filtration characteristics. The following Tables 5-10 to 5-12 show respectively the analytical analysis from the pilot plant, the results from locked cycle tests and the estimated flotation metallurgy by pit.

The main objectives of the program were:

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- To prepare an overall composite from 33 tonnes of HQ core considered to be representative of the Mesamax Deposit;
- To study the breakage and grindability characteristics of the composite and generate design data for milling;
- To confirm and optimize flotation conditions on a pilot plant feed sample in the laboratory with the focus on reagent conditions, and flowsheet configuration;
- To process the remainder of 33 tonnes of ore in a flotation pilot plant using conditions as set in the laboratory, confirming the established flowsheet and further optimizing conditions as required;
- To provide complete metallurgical balances and summaries describing the overall performance of ore processing;
- To provide circuit design data to be used by an engineering company to design a plant;
- To evaluate the effect of process water recirculation on pilot plant performance and environmental considerations; and
- To provide detailed characterization of tailings (solid-liquid separation design data, environmental) and concentrate characterization (solid-liquid separation testing, self heating testing, detailed analytical analysis) from the pilot plant products.

**Table 5-10: Analytical Analysis – Pilot Plant**

Ore Type	Product	Wt %	Cu	Assays, %, g/t			Cu	% Distribution		
				Ni	Pt	Pd		Ni	Pt	Pd
Mesamax Massive	Comb Concentrate	31.5	16.60	9.34	2.87	6.20	99.2	81.4	59.7	93.0
	Cu Cleaner Concentrate	11.9	32.10	0.76	1.91	5.80	72.8	2.5	15.1	33.2
	Ni Bulk Concentrate	19.6	7.13	14.60	3.46	6.40	26.5	78.9	44.7	59.8
	Combined Bulk Training	68.5	0.058	0.98	0.89	0.21	0.8	18.6	40.3	7.0
	Head (calc.)	100.0	5.19	3.61	1.51	2.10	100.0	100.0	100.0	100.0
Overall Net (Mesamax/Mequillon)	Comb Concentrate	8.9	11.30	7.66	4.66	31.80	96.6	73.0	62.3	85.7
	Cu Cleaner Concentrate	3.0	29.00	0.97	3.69	68.50	84.3	3.0	17.3	64.1
	Ni Bulk Concentrate	5.9	2.16	11.20	5.16	12.40	12.3	70.0	45.0	21.6
	Combined Bulk Training	91.2	0.037	0.29	0.28	0.50	3.4	27.0	37.7	14.3
	Head (calc.)	100.0	1.03	0.94	0.66	3.19	100.0	100.0	100.0	100.0
Expo	Comb Concentrate	7.9	9.56	7.23	3.51	16.60	83.9	77.1	74.7	85.5
	Cu Cleaner Concentrate	2.1	26.90	0.67	5.61	33.70	64.3	1.9	32.6	47.4
	Ni Bulk Concentrate	5.8	3.05	9.73	2.72	10.20	19.5	75.2	42.1	38.1
	Combined Bulk Training	92.1	0.16	0.18	0.10	0.24	16.1	22.9	25.3	14.5
	Head (calc.)	100.0	0.90	0.74	0.37	1.53	100.0	100.0	100.0	100.0

**Table 5-11: Results from Locked Cycle Tests**

Test No.	Comp	Sizing K <sub>80</sub> µm	Objectives	Product	Wt %	Assays, %, g/t								% Distribution							
						Cu	Ni	Pt	Pd	Cp	Pn	Po	NSG	Cu	Ni	Pt	Pd	Cp	Pn	Po	NSG
MQN-LCT1	MUNC "fresh" dc	Pri: 56	Initial locked cycle test with similar conditions to MN-LCT5 - sulphite	Combined concentrate	8.9	12.30	7.16	5.95	31.2	35.7	20.2	23.2	20.8	98.0	76.8	72.1	87.9	98	82.1	13	2.4
		Cu: n/a		Cu Clnr con	3.4	28.70	0.75	5.28	62.2	83.2	2.08	5.62	9.13	87.7	3.1	24.6	67.3	87.7	3.2	1.2	0.4
				Ni Bulk con	5.5	2.10	11.2	6.37	11.9	6.09	31.5	34.3	28.1	10.3	73.7	47.5	20.5	10.3	78.8	11.8	2
		Cu/Ni: 18		Cu/Ni tailing (calc)	15.5	0.013	0.64	0.33	0.52	0.037	1.35	41.6	57.0	0.2	11.9	6.9	2.5	0.2	9.5	40.6	11.2
				Bulk rougher scavenger tail	75.6	0.028	0.12	0.20	0.40	0.08	0.24	9.72	90.0	1.9	11.3	21	9.6	1.9	8.4	46.4	86.4
				Combined bulk tailing Head (calc)	91.1 100.0	0.025 1.12	0.21 0.83	0.22 0.73	0.42 3.16	0.073 3.24	0.43 2.19	15.1 15.9	84.4 78.7	2 100.0	23.2 100.0	27.9 100.0	12.1 100.0	2 100.0	17.9 100.0	87 100.0	97.6 100.0
MQN-LCT1	MUNC "fresh" dc	Pri: 56	Initial locked cycle test with similar conditions to MN-LCT5 - sulphite	Combined concentrate	7.7	14.50	8.04			42.1	22.8	16.5	18.6	96.6	71.8			96.6	76.8	8	1.8
		Cu: n/a		Cu Clnr con	3.0	31.40	0.65			91.0	1.89	-2.55	9.7	80.8	2.2			80.8	2.5	-0.5	0.4
				Ni Bulk con	4.7	3.89	12.7			11.3	36.0	28.5	24.3	15.8	69.5			15.8	74.3	8.4	1.5
		Cu/Ni: 18		Cu/Ni tailing	11.4	0.084	1.21			0.24	2.97	44.5	52.9	0.8	16			0.8	14.8	31.8	7.7
				Bulk rougher scavenger tail	80.9	0.036	0.13			0.11	0.24	11.8	87.8	2.6	12.3			2.6	8.4	60.2	90.5
				Combined bulk tailing Head (calc)	92.3 100.0	0.042 1.15	0.26 0.85			0.12 3.32	0.57 2.24	15.9 15.9	83.5 78.5	3.4 100.0	28.2 100.0			3.4 100.0	23.2 100.0	92 100.0	98.2 100.0

**Table 5-12: Estimated Flotation Metallurgy by Pit**

	Grade						Distribution (%)					
	% Cu	% Ni	% Co	Pt (g/t)	Pd (g/t)	Au (g/t)	Cu	Ni	Co	Pt	Pd	Au
<b>Mesamax Pit</b>												
Head	2.44	1.8	0.07	0.30	3.06	0.19	100	100	100	100	100	100
Cu Conc	29.8	0.8	0.02	2.04	36.7	2.54	86.9	2.3	1.4	12.9	53.9	70.4
Ni bulk Conc	1.1	13.4	0.46	3.35	11.6	0.30	9.9	76.2	61.1	40.2	32.3	13.9
<b>Expo Pit</b>												
Head	0.64	0.63	0.03	0.27	1.16	0.07	100	100	100	100	100	100
Cu Conc	24.1	1.22	0.06	3.3	34.2	2.64	64.88	3.6	2.73	20.52	47.07	55.41
Ni bulk Conc	1.84	6.85	0.34	1.8	6.58	0.28	17.49	71.45	57.54	40.61	31.94	20.91
<b>Mequillon Pit</b>												
Head	0.6	0.43	0.02	0.4	1.52	0.12	100	100	100	100	100	100
Cu Conc	28.7	0.75	0.04	5.28	62.2	9.55	87.7	3.09	2.7	24.6	67.3	88.6
Ni bulk Conc	2.1	11.2	0.54	6.37	11.9	0.35	10.3	73.7	58.5	47.5	20.5	5.2
<b>Ivakkak Pit</b>												
Head	1.55	1.19	0.05	0.62	3.06	0.15	100	100	100	100	100	100
Cu Conc	30.5	0.97	0.04	2.28	37.0	1.88	76.1	3.09	2.57	14.5	57.0	53.9
Ni bulk Conc	3.51	10.3	0.45	2.68	9.89	0.54	19.8	73.5	71.4	38.5	34.3	34.7
<b>Blend Mesamax/Expo (40:60%)</b>												
Head	1.5	1.38	0.05	0.59	2.34	0.14	100	100	100	100	100	100
Cu Conc	26.1	1.02	0.02	1.91	21.1	1.96	84.8	3.5	1.8	15.7	43.8	66.1
Ni bulk Conc	1.25	10.3	0.45	2.69	8.82	0.25	8.4	74.0	60.1	45.4	37.7	13.9

The Mequillon and Ivakkak Deposits were also subjected to testing for the purpose of the Study. The Mequillon net-textured ore has been tested to determine its flotation response. There was no grindability testing done on the Mequillon ore at the time of the DFS. Flotation results from the Mequillon Deposit have indicated that its response was very similar to the net-textured component of the Mesamax Deposit.

The Ivakkak ore is comprised of two distinct zones, a massive sulphide zone grading 2.55% Ni and 2.89% Cu and a net-textured zone grading 0.44% Ni and 0.90% Cu. The Ivakkak zones were tested in early 2007.

The purpose of the additional testing program was to determine the Ball Bond work indices and Rod Bond work indices and to confirm the individual responses of the Mequillon and combined Ivakkak ore and to test the response to blending ore from each deposit.

Two samples were submitted for bench-scale testing. These were a Mequillon sample (Eastern and deeper part of the Deposit), and an Ivakkak ore sample. Approximately 150-kg of Mequillon ore and approximately 150-kg of the Ivakkak ore were required to complete the test program.

Ore was received at SGS Lakefield as a coarse minimum of ½” or ¼” drill core with minimum dimension of ½”. Each of the ore samples was subjected to the following sample preparation:

- Ore received was inventoried and weighed;
- The sample was stage-crushed to ½”, blended, and 25-kg was riffled out for grindability testwork;
- The 25-kg grindability sample was split with 15-kg dedicated for Bond rod mill work index testing and the remainder stage-crushed to 6 mesh for Bond ball mill work index testing;
- The remainder of the sample was stage-crushed to -10 mesh and blended. Approximately 60-kg was riffled out and rotary split into 2-kg test charges and a head sample for assay;
- A fraction of the remainder was combined with the other sample in a ratio set by SLI as an overall representative of blended Mequillon-Ivakkak ore sample. It was anticipated that this blend would be 4 parts Mequillon to 1 part Ivakkak. The blended ore was rotary split into 2-kg test charges and a head sample for assay. Sufficient components of each of the ores must be used to make up 40-kg of blended ore;
- All test charges and bulk reject material was stored in a freezer to minimize opportunities for oxidation;
- Head samples were submitted for Cu, Ni, S, Pt, Pd, Ni (sulf).

The tests for gold, platinum and palladium were assayed by fusion fire assays, ICP OES and the cobalt, copper and nickel were assayed by pyrosulfate fusion, XRF.

## **Metallurgical Test Work**

### **Crushing**

It was recognized that the ore contained an asbestos-form tremolite. Necessary dust collection and related safety precautions were taken throughout the sample preparation processes. Various samples were submitted for an assessment of asbestos mineral content. Three accredited independent laboratories quantified the Mesamax pilot plant feed ore as containing in the range of 0.5% - 1% tremolite.

## **Grinding**

Grindability testing on the massive component of pilot plant ore determined the ore to be soft in terms of impact breakage, abrasion breakage and hardness. The Bond ball mill work index was 9.0 kWh/t. The net-textured component was variable in grindability response, but was on average hard with respect to impact and abrasion breakage. Bond ball mill work indices ranged from 10.5 – 13.7 kWh/t and averaged 12.8 kWh/t. Pilot plant feed ore was determined to be soft overall with a Bond ball mill work index of 10.5 kWh/t. The direct measurement from the pilot plant averaged 9.3 kWh/t.

For the additional test, the two samples were submitted for Bond rod mill work index testing (RWI) and Bond ball mill work index testing (BWI). The Bond RWI test is performed according to the original Bond procedure. It requires 15 kgs of minus ½” material that is preferably prepared at the testing facility. The Bond RWI has been widely used for rod mill (or primary ball mill) sizing.

The Bond BWI test is performed according the original Bond procedure. It requires 10 kgs of minus 6-mesh material that is preferably prepared at the testing facility. The Bond BWI has been widely used for mill sizing, but is also utilized in computer simulation, and variability testing. The closing mesh size for these tests was 150 mesh, consistent with previously tested CRI samples.

In order to calibrate the laboratory mill against flotation product size, an allowance was given for a single grind and particle size analysis on each of the samples. This established the grinding time required to achieve the desired product size of 80% passing 75 microns, and is part of mill selection criteria.

## **Flotation**

Bench-scale flotation was completed on pilot plant feed ore prior to pilot plant operations. A flowsheet identified in previous test programs was adopted. The optimum pH range in the bulk rougher and scavenger stages for copper and nickel metallurgy is on the lower side of pH 10. Pilot plant collector dosages should be set to achieve approximately 20% mass pull to the bulk rougher concentrate and a further 15 – 20% mass pull in the bulk scavenger circuit to ensure that sufficiently high grade Ni concentrates are met at maximum recovery.

A pilot plant was set up to treat 33 tonnes of Mesamax ore considered to be representative of the Deposit. The pilot plant test was completed over 13 day-long runs and one extended run lasting more than 50 hours. The pilot plant metallurgy was refined and optimized. Over the daylong runs recycle process water was gradually introduced into the operations. The recycle rate of the process water was determined to be 91% under stable operation.

Additional tests investigated the separate response of the Mequillon and the Ivakkak ore samples to the developed flowsheet to gauge the appropriate reagent conditions and the amenability of the established flowsheet. The flotation testing also investigated the response of a blended Ivakkak-Mequillon ore.

Six tests were carried out on the Mequillon ore. It was anticipated that the provided ore sample would respond in a similar manner to previously tested Mequillon samples. Three of these tests were rougher kinetics tests and the remainder were batch cleaner tests.

Six rougher tests and six batch cleaner tests were performed on Ivakkak ore. The testing focused on optimization of rougher collector and non-sulphide gangue depressant, appropriate mass recovery split between the bulk rougher and bulk scavenger, and pyrrhotite depressant dosage in the Cu/Ni circuit. A confirmatory locked cycle test was conducted under optimized conditions.

Testing on a blend of Ivakkak-Mequillon ore was initiated once the above testing was completed. One rougher test and one batch cleaner test were performed to confirm the anticipated response. One locked cycle test was completed on blended ore to assess concentrate grade-recovery relationship in a continuous environment.

Products were analyzed for Cu, Ni, and S. Batch cleaner tests generated no more than 10 products each that were assayed for Cu, Ni, and S. Locked cycle tests generated no more than 40 products. Products were assayed for Cu, Ni, Pt, Pd. Selected products were additionally assayed for Pt and Pd. Various particle size analyses were conducted on selected test products.

### **Tailings Desulphidation**

The purpose of the testing program was to evaluate potential techniques to desulphidize tailings from NNP ore in order to obtain non acid-generating tailings.

Flotation testing was performed in order to explore sulphide recovery from the process tailings. Tests have explored the roles of collector, CMC, alkalinity, and promoters in the recovery kinetics of the sulphides present. It was expected that successful recovery of sulphides would involve the use of potassium-amyxanthate (PAX), and carboxy-methyl-cellulose (CMC) to control floatable magnesium silicates.

Up to 90% of sulphide could have been removed, but there was no guarantee that the treated tailings would not generate acid. Golder's geochemical analysis with potentially acid generating waste rock that contained a small amount of sulphide showed that there was a technical risk related to this concept. Desulphidation also meant that two different tailings ponds would be required which would be more complex to manage. The tailings desulphidation was therefore not further considered.

### **Magnetic Separation Testing**

In addition to flotation testing, the potential of magnetic separation to enhance sulphide recovery and concentrate grades was explored. Magnetic separation in several stages was carried out to test different concentrate stages. High-intensity magnetic separation is used to recover magnetic pyrrhotite. Two tests were carried out on Ivakkak ore, using the first Ni-Cu cleaner feed which showed promising potential for rejecting up to 80% of the pyrrhotite in one and 60% in the second test.

## 5.6 PREVIOUS RESOURCE ESTIMATES

Canadian Royalties completed many resource estimates on the Nunavik Nickel Project from 2003 through 2009. All the pertinent reports for the deposits were filed on *www.sedar.com*.

The Expo, Mesamax, Mequillon and Ivakkak Deposit Resource Estimates were reported during 2007. Allammaq and Puimajuq Deposit Resource Estimates were reported in 2009.

All metal prices and \$C/\$US exchange rates were derived from the prevailing 24 month trailing average at the time the individual deposit resources were calculated, and as such, the estimates reported in 2007 and 2009 have different parameters. With one exception (Mequillon, which has an open pit and an underground component) all \$C NSR cut-off values are \$C40/tonne. For Mequillon, the NSR open pit cut-off value used was \$42.50/tonne and for the underground component it was \$75/tonne.

Table 5-13 below presents a summary of the resources discovered and tabulated to date on the Nunavik Nickel Project. The table includes \$C NSR cut-off values, commodity prices and the \$C/\$US exchange rate. As per Table 5-9 above, less than half of the total resources were used in the feasibility study.

The TK Deposit is very small and has not been detailed in this section.

The Allammaq, Puimajuq and Mequillon Deposits were not sufficiently advanced in terms of drilling at the time the DFS was completed.

In addition to the summary table, the complete resource estimation parameters for each deposit are presented in the sub-sections that follow.



**Table 5-13: Current Total Resources on the Nunavik Nickel Project and Parameters Used for Resource Estimation**

<b>Category</b>	<b>tonnes</b>	<b>Ni %</b>	<b>Cu %</b>	<b>Co %</b>	<b>Pt g/t</b>	<b>Pd g/t</b>	<b>Au g/t</b>
Measured Resources	560,000	0.93	1.10	0.04	0.60	2.66	0.10
Indicated Resources	21,342,000	0.93	1.15	0.05	0.54	2.17	0.14
Inferred Resources	5,244,000	0.73	0.92	0.04	0.51	2.03	0.13

<b>Deposit &amp; Estimate Date</b>	<b>NSR cut-off \$/tonne</b>	<b>\$/C/\$US exchange rate</b>	<b>Ni price \$/US/lb.</b>	<b>Cu price \$/US/lb.</b>	<b>Co price \$/US/lb.</b>	<b>Au price \$/US/oz.</b>	<b>Pt price \$/US/oz.</b>	<b>Pd price \$/US/oz.</b>
<b>Expo Jan 2007</b>	<b>\$ 40</b>	<b>\$ 0.80</b>	<b>\$ 5.50</b>	<b>\$ 1.50</b>	<b>\$ 15</b>	<b>\$ 425</b>	<b>\$ 900</b>	<b>\$ 300</b>
<b>Mesamax Jan 2007</b>	<b>\$ 40</b>	<b>\$ 0.80</b>	<b>\$ 5.50</b>	<b>\$ 1.50</b>	<b>\$ 15</b>	<b>\$ 425</b>	<b>\$ 900</b>	<b>\$ 300</b>
<b>Mequillon Sept 2007</b>		<b>\$ 0.80</b>	<b>\$ 5.50</b>	<b>\$ 1.50</b>	<b>\$ 15</b>	<b>\$ 425</b>	<b>\$ 900</b>	<b>\$ 300</b>
<b>Open Pit</b>	<b>\$ 43</b>							
<b>Underground</b>	<b>\$ 75</b>							
<b>Ivakkak Feb 2007</b>	<b>\$ 40</b>	<b>\$ 0.80</b>	<b>\$ 5.50</b>	<b>\$ 1.50</b>	<b>\$ 15</b>	<b>\$ 425</b>	<b>\$ 900</b>	<b>\$ 300</b>
<b>Allammaq Oct 2009</b>	<b>\$ 40</b>	<b>\$ 0.92</b>	<b>\$ 9.02</b>	<b>\$ 2.84</b>	<b>\$ 20</b>	<b>\$ 871</b>	<b>\$ 1,398</b>	<b>\$ 311</b>
<b>Puimajuq Oct 2009</b>	<b>\$ 40</b>	<b>\$ 0.92</b>	<b>\$ 9.02</b>	<b>\$ 2.84</b>	<b>\$ 20</b>	<b>\$ 871</b>	<b>\$ 1,398</b>	<b>\$ 311</b>

## **5.6.1 EXPO DEPOSIT RESOURCE ESTIMATE**

### **5.6.1.1 INTRODUCTION**

The purpose of this report section is to delineate the Expo Deposit Resources in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P. Eng. and Antoine Yassa, P. Geo. of P & E Mining Consultants Inc. of Brampton, Ontario. The effective date of this resource estimate is December 24, 2006.

### **5.6.1.2 DATABASE**

All drilling data were provided by Canadian Royalties Inc. in the form of Microsoft Excel files, drill logs and assay certificates. Thirty (30) drill cross sections were developed on a local grid looking west-southwest on azimuth 261.33<sup>0</sup> with a 30 metre spacing named 9,790-E to 10,660-E. A Gemcom database was provided by the client containing 265 diamond drill holes of which 204 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 10,392 assays for Ni, 10,738 for Cu, 10,932 for Co, 9,773 for Au, 9,931 for Pt and 9,935 for Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **5.6.1.3 DATA VERIFICATION**

A previous technical report authored in 2005 by Strathcona Mineral Services Limited verified all data entry, drill hole surveys and laboratory results and found the database to be in good condition and reliable for resource evaluation. At that time close to 6,000 samples made up the assay database.

At the end of 2006, a verification of assay data entry was performed on 1,884 assay intervals for Ni, Cu, Co, Au, Pt and Pd. A few data entry errors were observed and corrected. The 1,884 verified intervals were checked against assay lab data files from ALS Chemex of Vancouver, B.C., (three samples were still missing at the time of this resource evaluation). The 2006 checked assays represent 18.3% of the data to be used for the resource estimate and all verified assay results represent 76.5% of the entire database.

**Table 5-14: Expo Data Verification Statistics**

<b>Period</b>	<b>Assayed intervals</b>	<b>Used in Resource</b>	<b>Status</b>	<b>Percentage of database</b>	<b>Percentage of Resource</b>
Pre-2005	6072	5024	Verified	58.4%	67.4%
2005	2444	1067	Validated	23.5%	14.3%
2006	1884	1367	Verified	18.1%	18.3%

#### **5.6.1.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drillhole sections. Four domains were developed named Massive Sulphide, Net Textured, Vein and Ultramafic. These domains were physically created with computer screen digitizing on drillhole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated massive, net textured, vein and ultramafic grade characteristics, and zonal continuity along strike and across the sections. In a very few cases mineralization below massive, net textured or vein characteristic grades was included for the purpose of maintaining zonal continuity.

On each section, polyline interpretations were digitized from drill hole to drill hole but typically not extended more than 25 metres into untested territory. Minimum constrained true width for interpretation was 2.0 metres. The interpreted polylines from each section were “extruded” into Gemcom into 3-dimensional polygonal domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

#### **5.6.1.5 ROCK CODE DETERMINATION**

The rock codes used for the resource model were derived from the mineralized domain solids. The list of rock codes used is as follows:

##### **Rock Code Description**

0	Air
10	Massive Sulphide
20	Vein
20	Net Textured Sulphide
30	Ultramafic Rocks
99	Waste Rock
100	Overburden

#### **5.6.1.6 COMPOSITES**

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Any composite calculated that was less than 0.5 metre in length was added to the preceding one metre composite so as to include all composite data. This was done in order to not introduce a short sample bias in the interpolation process. The composite data were extracted to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

### 5.6.1.7 GRADE CAPPING

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated and subsequently analyzed to determine the location of and capping value required to remove outliers that would unduly influence the grade interpolation.

**Table 5-15: Expo Grade Capping Values**

<b>Massive Sulphide Domain (N=285)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	0.46	0.46
Cu	5.5	9	96.8	0.88	0.70
Co	No Cap	0	100	0.44	0.44
Au	1.5	2	99.3	5.37	2.08
Pt	5	1	99.6	0.87	0.86
Pd	15	6	97.9	1.45	1.11
<b>Vein Domain (N=118)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	0.82	0.82
Cu	3	10	91.5	0.81	0.69
Co	No Cap	0	100	0.81	0.81
Au	0.6	3	97.5	3.26	1.50
Pt	2	2	98.3	1.13	0.97
Pd	7	5	95.8	1.48	0.92
<b>Net Textured Sulphide Domain (N=2,994)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	2.5	31	99.0	0.72	0.65
Cu	3	20	99.3	0.89	0.74
Co	0.1	48	98.4	0.63	0.51
Au	1	25	99.2	3.33	1.74
Pt	2	3	99.9	0.77	0.75
Pd	7	28	99.1	1.33	0.90
<b>Ultramafic Domain (N=4,061)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	1	73	98.2	1.08	0.64
Cu	1	137	96.6	1.80	0.84
Co	0.18	2	99.9	0.82	0.72
Au	0.1	118	97.1	2.43	0.81
Pt	0.4	99	97.6	4.20	0.84
Pd	2	105	97.4	3.55	0.91

### 5.6.1.8 VARIOGRAPHY

Variography was not carried out on the constrained domain composites within the four domains in the deposit model. The mineralized domains exhibited good sectional continuity but due to erratically distributed populations, did not yield discernable variograms.

### 5.6.1.9 BULK DENSITY

The bulk density used for the resource model was derived from measurements of test work performed by ALS Chemex of Val d'Or, Quebec on regular core samples obtained from the assay sample submission to the laboratory. A bulk density model was created from these data and utilized to calculate the reported tonnes. The average bulk density from samples was calculated to be 4.59 tonnes per cubic meter in the massive sulphide and vein domains, 3.11 tonnes per cubic metre in the net textured domain and 2.92 tonnes per cubic metre in the ultramafic domain.

### 5.6.1.10 BLOCK MODELING

The resource model was divided into a 3-D block model framework. The block model has 3,136,000 blocks that were 5m in the X direction, 5m in the Y direction and 5m in the Z direction. There were 280 columns (X), 160 rows (Y) and 70 levels. The block model was rotated 8.33 degrees counter clockwise. Separate block models were created for rock type, density, percent, Ni, Cu, Co Au, Pt and Pd.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for the indicated and inferred classifications. The grade blocks within all domains were interpolated using the following parameters.

**Table 5-16: Expo Block Model Interpolation Parameters**

Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
SFMA-IND	0°	0°	0°	13	13	13	3	2	12
SFMA-INF	0°	0°	0°	50	50	50	5	1	12
VEIN-IND	0°	0°	0°	13	13	13	3	2	12
VEIN-INF	0°	0°	0°	50	50	50	5	1	12
SFNET-N-IND	171°	81°	-35°	40	40	7.5	5	6	12
SFNET-N-INF	171°	81°	-35°	250	250	25	5	1	12
SFNET-C-IND	171°	90°	0°	40	40	7.5	5	6	12
SFNET-C-INF	171°	90°	0°	250	250	25	5	1	12
SFNET-S-IND	351°	81°	-35°	40	40	7.5	5	6	12
SFNET-S-INF	351°	81°	-35°	250	250	25	5	1	12
UTRAM-IND	171°	90°	0°	40	40	10	5	6	12
UTRAM-INF	171°	90°	0°	250	250	250	5	1	12
BULK DENSITY	0°	0°	0°	250	250	250	3	1	12

## Interpolation Codes for Ni, Cu, Co, Au, Pt, Pd

SFMA-IND	Massive Sulphide - Indicated
SFMA-INF	Massive Sulphide - Inferred
VEIN-IND	Vein - Indicated
VEIN-INF	Vein - Inferred
SFNET-N-IND	Net Textured – North - Indicated
SFNET-N-INF	Net Textured – North - Inferred
SFNET-C-IND	Net Textured – Centre - Indicated
SFNET-C-INF	Net Textured – Centre - Inferred
SFNET-S-IND	Net Textured – South - Indicated
SFNET-S-INF	Net Textured – South - Inferred
UTRAM-IND	Ultramafic - Indicated
UTRAM-INF	Ultramafic – Inferred

BULK DENSITY      Bulk Density – No Classification

### 5.6.1.11 RESOURCE CLASSIFICATION

For the purposes of this resource, classifications of all interpolated grade blocks were determined from the Ni interpolations for indicated and inferred due to Ni being the dominant revenue producing element in the NSR calculation. All blocks coded by the first interpolation pass were coded as indicated while the remaining blocks coded on the second interpolation pass as inferred.

**Table 5-17: Expo Grade Block Classification Coding**

Domain & Classification	Number	Percent
Massive Sulphide Indicated	4,001	2.4%
Massive Sulphide Inferred	295	0.2%
Vein Indicated	1,165	0.7%
Vein Inferred	745	0.5%
Net Textured Sulphide Indicated	30,539	18.5%
Net Textured Sulphide Inferred	3,467	2.1%
Ultramafic Indicated	66,337	40.1%
Ultramafic Inferred	58,609	35.5%
<b>Total Blocks</b>	<b>165,158</b>	<b>100.0%</b>

### 5.6.1.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model within a Whittle 4X optimized pit shell and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

#### NSR Cut-Off Grade Calculation Components (All currency \$CDN unless stated otherwise)

\$C/\$US (Exchange Rate .....\$0.800  
 Ni Price ..... US \$5.50/lb (\$6.88/lb)  
 Cu Price..... US \$1.50/lb (\$1.88/lb)  
 Co Price..... US \$15/lb (\$18.75/lb)

Au Price .....	US \$425/oz (\$531/oz)
Pt Price .....	US \$900/oz (\$1,125/oz)
Pd Price .....	US \$300/oz (\$375/oz)
Mining Cost .....	\$3.18/rock tonne mined
Process Cost (2,500tpd) .....	\$25.00/tonne milled

#### Massive Sulphide Ni Concentrate

Ni Flotation Recovery .....	82%
Cu Flotation Recovery .....	6%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	52%
Pd Flotation Recovery .....	61%
Concentration Ratio .....	4.6:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	5%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Massive Sulphide Cu Concentrate

Ni Flotation Recovery .....	3%
Cu Flotation Recovery .....	92%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	14%
Pd Flotation Recovery .....	36%
Concentration Ratio .....	6.3:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	23%
Pd Smelter Payable .....	56%

#### Net Textured Ni Concentrate

Ni Flotation Recovery .....	84%
Cu Flotation Recovery .....	22%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	45%
Pd Flotation Recovery .....	41%
Concentration Ratio .....	15.4:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Net Textured Cu Concentrate

Ni Flotation Recovery .....	2%
Cu Flotation Recovery .....	64%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	30%
Pd Flotation Recovery .....	47%
Concentration Ratio .....	47.6:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	57%
Pd Smelter Payable .....	68%

Ni Refining Charges .....	US \$0.50/lb (\$0.63lb)
Cu Refining Charges .....	US \$0.10/lb (\$0.13/lb)
Co Refining Charges .....	US \$2.43/lb (\$3.04/lb)
Au Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pt Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pd Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Ni Smelter Treatment Charges .....	US \$125/tonne
Cu Smelter Treatment Charges .....	US \$103/tonne
Concentrate Shipping .....	US \$54/tonne
General/Administration .....	\$15.00/tonne milled

The above data were derived from the July 2006 Preliminary Economic Analysis on the Expo Deposit.

**In the anticipated open pit operation, Mill Processing and G&A costs combine for a total of (\$25.00 + \$15.00) = \$40.00/tonne milled which became the internal NSR cut-off value.**

In order for the constrained mineralization in the Expo model to be considered as a resource which is potentially economic, a first pass Whittle 4X pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne .....	3.18
Ore mining cost per tonne .....	\$3.18
Process cost per tonne .....	\$25.00
General & Administration cost per ore tonne .....	\$15.00
Process production rate (ore tonnes per year) .....	875,000
Pit slopes (inter ramp angle) .....	55 deg
Massive Sulphide Bulk Density .....	4.59t/m <sup>3</sup>
Vein Bulk Density .....	4.59t/m <sup>3</sup>
Net Textured Sulphide Bulk Density .....	3.11t/m <sup>3</sup>
Ultramafic Bulk Density .....	2.92 t/m <sup>3</sup>
Waste Rock Bulk Density .....	2.90t/m <sup>3</sup>



The resulting resource estimate can be seen in the following table.

**Table 5-18: Expo Deposit Resource Estimate @ CDN\$ 40/tonne NSR Cut-Off Grade**

**Massive Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	701,000	2.71	2.13	0.13	0.10	0.87	2.84	\$344.87
Inferred	30,000	2.43	1.51	0.12	0.06	0.83	2.85	\$293.01

**Vein Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	140,000	1.46	1.57	0.08	0.09	0.54	2.35	\$187.16
Inferred	72,000	1.42	1.46	0.07	0.10	0.52	2.22	\$178.00

**Net Textured Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	7,721,000	0.57	0.62	0.03	0.08	0.27	1.21	\$80.26
Inferred	376,000	0.56	0.66	0.03	0.06	0.24	1.04	\$78.46

The Ultramafic domain was not used for resource reporting purposes. It was only utilized to incorporate dilution into the adjacent Massive, Vein and Net Textured domains for pit optimization purposes.

**All Domains**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	8,562,000	0.76	0.76	0.04	0.08	0.32	1.36	\$103.68
Inferred	478,000	0.81	0.83	0.04	0.07	0.32	1.33	\$107.03

- (1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- (2) The quantity and grade of reported inferred resources in this estimation are conceptual in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

The mineral resources were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

### 5.6.1.13 CONFIRMATION OF ESTIMATE

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted capped average grades and average grade of composites of all samples from within the domain. The results are presented below.

**Table 5-19: Expo Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

**Massive Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	2.41	1.90	0.11	0.09	0.71	2.42
Composites	2.55	1.96	0.12	0.10	0.81	2.71
Block Model	2.62	1.96	0.13	0.09	0.86	2.93

**Vein Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	1.16	1.20	0.06	0.08	0.43	1.93
Composites	1.32	1.37	0.07	0.09	0.49	2.16
Block Model	1.38	1.42	0.07	0.09	0.50	2.19

**Net Textured Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.56	0.59	0.03	0.06	0.24	1.08
Composites	0.56	0.60	0.03	0.07	0.26	1.17
Block Model	0.54	0.60	0.03	0.07	0.25	1.13

The comparison above shows the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain to be similar to the weighted average of all capped assays and composites used for grade estimation in the Net Textured Domain, however, many isolated higher grade assays in the Massive and Vein Domains are contributing to higher block model values than capped assays or composites. The block model invariably represents the metal distribution most correctly of all three methods. This effect is essentially the reverse of assay data clustering.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

**Massive Sulphide Domain**

Block Model Volume = 164,956 m<sup>3</sup>  
 Geometric Domain Volume = 164,913 m<sup>3</sup>  
 Difference = 0.026%

**Vein Domain**

Block Model Volume = 68,404 m<sup>3</sup>  
 Geometric Domain Volume = 68,424 m<sup>3</sup>  
 Difference = 0.029%

**Net Textured Sulphide Zone**

Block Model Volume = 2,894,336 m<sup>3</sup>  
 Geometric Domain Volume = 2,892,817 m<sup>3</sup>  
 Difference = 0.052%

## **5.6.2 MESAMAX DEPOSIT RESOURCE ESTIMATE**

### **5.6.2.1 INTRODUCTION**

P&E Mining Consultants Inc. ("P&E") of Brampton, Ontario was engaged by Canadian Royalties Inc. ("CRI") to update the Mesamax Deposit Resources in compliance with NI 43-101 and CIM standards taking into account all drilling up to and including the 2006 drill program. This resource estimate was undertaken by qualified persons Eugene Puritch, P.Eng. and Antoine Yassa, P.Geo. of P&E Mining Consultants Inc. The effective date of this resource estimate is December 14, 2006.

### **5.6.2.2 DATABASE**

All drilling data was provided by CRI in the form of Microsoft Excel files, drill logs and assay certificates. Thirteen (13) drill cross sections were developed on a local grid looking north-west on azimuth 298.69° with a nominal 25 metre spacing named from 850-W to 1,100-W. A Gemcom database was provided by the client containing 243 diamond drill holes of which 104 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate or were metallurgical sample and geotechnical holes without any assaying performed on them.

The database was validated in Gemcom with minor corrections required. The Assay Table of the database contained 4,784 assays for Ni, 4,784 for Cu, 4,760 for Co, 4,760 for Au, 4,784 for Pt and 4,784 for Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **5.6.2.3 DATA VERIFICATION**

Verification of assay data entry was performed on 4113 assay intervals for Ni, Cu, Co, Au, Pt and Pd. From the 4113 assay intervals, 3543 were verified by comparing double-entry. Original data entry was done for the previous 2004 Resource Evaluation. All assay certificates were re-imported in 2005 from the SGS assay lab certificates and both dataset were compared. A few data entry errors were observed and corrected. The 570 samples from 2006 were checked against assay lab data files from ALS Chemex of Vancouver, B.C. The checked assays represented 78% of the data to be used for the resource estimate and approximately 84% of the entire database.

### **5.6.2.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drillhole sections. Four domains were developed named Massive Sulphide, Net Textured, Oxidized Massive Sulphide and Oxidized Net Textures. These domains were physically created with computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated massive and net textured grade characteristics, and zonal continuity along strike and across the sections. In a very few some cases mineralization below massive or net textured characteristic grades was included for the purpose of maintaining zonal continuity.

On each section, polyline interpretations were digitized from drill hole to drill hole but typically not extended more than 25 metres into untested territory. Minimum constrained true width for

interpretation was 2.0 metres. The interpreted polylines from each section were “extruded” into Gemcom into 3-dimensional polygonal domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

#### **5.6.2.5 ROCK CODE DETERMINATION**

The rock codes used for the resource model were derived from the mineralized domain solids. The list of rock codes used follows:

##### **Rock Code Description for Domains**

0	Air
10	Massive Sulphide
20	Oxidized Massive Sulphide
30	Net Textured Sulphide
40	Oxidized Net Textured Sulphide
99	Waste Rock
100	Overburden

#### **5.6.2.6 COMPOSITES**

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 2.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D domain constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Any composites calculated that were less than 0.5m in length, were added to the preceding one metre composite so as to include all composite data. This was done so as to not introduce a short sample bias in the interpolation process. The composite data were extracted to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

#### **5.6.2.7 GRADE CAPPING**

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated and subsequently analyzed to determine the location of and capping value required to remove outliers that would unduly influence the grade interpolation.

**Table 5-20: Mesamax Grade Capping Values**

<b>Massive Sulphide Domain (N=587)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
<b>Ni</b>	5.0	5	99.1%	0.38	0.37
<b>Cu</b>	9.5	12	98.0%	0.60	0.54
<b>Co</b>	0.25	10	98.3%	0.46	0.38
<b>Au</b>	4.0	8	98.6%	2.51	1.90
<b>Pt</b>	10.0	1	99.8%	1.00	0.96
<b>Pd</b>	35.0	19	96.8%	3.96	1.72
<b>Oxidized Massive Sulphide Domain (N=208)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
<b>Ni</b>	No Cap	0	100.0%	0.30	0.30
<b>Cu</b>	12.0	22	89.4%	0.71	0.57
<b>Co</b>	No Cap	0	100.0%	0.28	0.28
<b>Au</b>	3.0	6	97.1%	4.60	1.49
<b>Pt</b>	7.0	11	94.7%	1.15	0.96
<b>Pd</b>	25.0	15	92.8%	4.55	1.70
<b>Net Textured Sulphide Domain (N=1,137)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
<b>Ni</b>	2.5	44	96.1%	0.91	0.76
<b>Cu</b>	9.0	2	99.8%	1.09	1.03
<b>Co</b>	0.15	15	98.7%	0.80	0.74
<b>Au</b>	1.0	29	97.4%	5.47	1.97
<b>Pt</b>	2.5	4	99.6%	0.76	0.71
<b>Pd</b>	75.0	4	99.6%	7.60	1.95
<b>Oxidized Net Textured Domain (N=233)</b>					
<b>Element</b>	<b>Capping Value % or g/t</b>	<b>Number of Assays Capped</b>	<b>Cumulative % for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
<b>Ni</b>	2.5	7	97.0%	0.88	0.79
<b>Cu</b>	3.5	8	96.6%	1.04	0.86
<b>Co</b>	0.10	7	97.0%	0.81	0.64
<b>Au</b>	0.40	9	96.1%	4.91	1.38
<b>Pt</b>	3.5	3	98.7%	1.35	0.71
<b>Pd</b>	15.0	7	97.0%	2.72	1.09

### 5.6.2.8 VARIOGRAPHY

Variography was not carried out on the constrained domain composites within the four domains in the deposit model. The mineralized domains exhibited good sectional continuity but due to erratically distributed populations, did not yield any discernable variograms.

### 5.6.2.9 BULK DENSITY

The bulk density used for the resource model was derived from measurements of test work performed by ALS Chemex of Val d'Or, Quebec on regular core samples obtained from the assay sample submission to the laboratory. A bulk density model was created from this data and utilized to calculate the reported tonnes. The average bulk density from samples was calculated to be

4.23 t/m<sup>3</sup> for the massive sulphide domain, 4.49 t/m<sup>3</sup> for the oxidized massive sulphide domain, 3.24 t/m<sup>3</sup> for the net textured domain and 3.33 t/m<sup>3</sup> for the oxidized net textured domain.

#### 5.6.2.10 BLOCK MODELING

The resource model was divided into a 3D block model framework. The block model has 480,000 blocks that were 5m in the X direction, 5m in the Y direction and 5m in the Z direction. There were 120 columns (X), 80 rows (Y) and 50 levels. The block model was rotated 28.691 degrees clockwise. Separate block models were created for rock type, density, percent, Ni, Cu, Co Au, Pt and Pd.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for the indicated and inferred classifications. The grade blocks within all domains were interpolated using the following parameters:

**Table 5-21: Mesamax Block Model Interpolation Parameters**

Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
<b>Indicated</b>	29°	299°	-45°	30	30	30	3	4	12
<b>Inferred</b>	29°	299°	-45°	90	90	45	3	1	12

#### 5.6.2.11 RESOURCE CLASSIFICATION

For the purposes of this resource, classifications of all interpolated grade blocks were determined from the Ni interpolations for indicated and inferred due to Ni being the dominant revenue producing element in the NSR calculation. All blocks coded by the first interpolation pass were coded as indicated while the remaining blocks coded on the second interpolation pass as inferred.

**Table 5-22: Mesamax Grade Block Classification Coding**

Domain & Classification	Number	Percent
Massive Sulphide Indicated	2,527	27.0%
Massive Sulphide Inferred	111	1.2%
Oxidized Massive Sulphide Indicated	654	7.0%
Oxidized Massive Sulphide Inferred	8	0.1%
Net Textured Sulphide Indicated	4,715	50.4%
Net Textured Sulphide Inferred	129	1.4%
Oxidized Net Textured Sulphide Indicated	1,181	12.6%
Oxidized Net Textured Sulphide Inferred	30	0.3%
<b>Total Blocks</b>	<b>9,355</b>	<b>100.0%</b>

### 5.6.2.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model within a Whittle 4X optimized pit shell and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

#### NSR Cut-Off Grade Calculation Components (All currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate)	\$0.800
Ni Price	US \$5.50/lb (\$6.88/lb)
Cu Price	US \$1.50/lb (\$1.88/lb)
Co Price	US \$15/lb (\$18.75/lb)
Au Price	US \$425/oz (\$531/oz)
Pt Price	US \$900/oz (\$1,125/oz)
Pd Price	US \$300/oz (\$375/oz)
Mining Cost	\$3.18/rock tonne mined
General/Administration	\$15.00/tonne milled
Process Cost (2,500tpd)	\$25.00/tonne milled

#### Massive Sulphide Ni Concentrate

Ni Flotation Recovery	82%
Cu Flotation Recovery	6%
Co Flotation Recovery	0%
Au Flotation Recovery	0%
Pt Flotation Recovery	52%
Pd Flotation Recovery	61%
Concentration Ratio	4.6:1
Ni Smelter Payable	92%
Cu Smelter Payable	90%
Co Smelter Payable	0%
Au Smelter Payable	0%
Pt Smelter Payable	65%
Pd Smelter Payable	65%

#### Massive Sulphide Cu Concentrate

Ni Flotation Recovery	3%
Cu Flotation Recovery	92%
Co Flotation Recovery	0%
Au Flotation Recovery	0%
Pt Flotation Recovery	14%
Pd Flotation Recovery	36%
Concentration Ratio	6.3:1
Ni Smelter Payable	0%
Cu Smelter Payable	97%
Co Smelter Payable	0%
Au Smelter Payable	0 %
Pt Smelter Payable	23%
Pd Smelter Payable	56%

Net Textured Ni Concentrate

Ni Flotation Recovery	84%
Cu Flotation Recovery	22%
Co Flotation Recovery	0%
Au Flotation Recovery	0%
Pt Flotation Recovery	45%
Pd Flotation Recovery	41%
Concentration Ratio	15.4:1
Ni Smelter Payable	92%
Cu Smelter Payable	90%
Co Smelter Payable	0%
Au Smelter Payable	0%
Pt Smelter Payable	65%
Pd Smelter Payable	65%

Net Textured Cu Concentrate

Ni Flotation Recovery	2%
Cu Flotation Recovery	64%
Co Flotation Recovery	0%
Au Flotation Recovery	0%
Pt Flotation Recovery	30%
Pd Flotation Recovery	47%
Concentration Ratio	47.6:1
Ni Smelter Payable	0%
Cu Smelter Payable	97%
Co Smelter Payable	0%
Au Smelter Payable	0%
Pt Smelter Payable	57%
Pd Smelter Payable	68%

Ni Refining Charges	US \$0.50/lb	(\$0.63lb)
Cu Refining Charges	US \$0.10/lb	(\$0.13/lb)
Co Refining Charges	US \$3.00lb	(\$3.75/lb)
Au Refining Charges	US \$15.00/oz	(\$18.75/oz)
Pt Refining Charges	US \$15.00/oz	(\$18.75/oz)
Pd Refining Charges	US \$15.00/oz	(\$18.75/oz)
Ni Smelter Treatment Charges	US \$125/tonne	
Cu Smelter Treatment Charges	US \$103/tonne	
Concentrate Shipping	US \$54/tonne	
General/Administration	\$15.00/tonne milled	

The above data were derived from the July 2006 Preliminary Economic Analysis on the Mesamax Deposit.

**In the anticipated open pit operation, Mill Processing and G&A costs combine for a total of (\$25.00 + \$15.00) = \$40.00/tonne milled which became the internal NSR cut-off value.**

In order for the constrained mineralization in the Mesamax model to be considered as a resource which is potentially economic, a 0.25% Ni cut-off grade was applied to the model blocks resulting in the resource estimate that can be seen in the following table.



**Table 5-23: Mesamax Deposit Resource Estimate @ CDN\$ 40/tonne NSR Cut-Off Grade****Massive Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	684,852	3.429	4.081	0.136	0.340	1.378	3.925	496.99
Inferred	9,907	3.442	2.891	0.144	0.252	0.888	5.456	418.09

**Oxidized Massive Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	220,398	3.319	6.106	0.128	0.419	2.011	3.144	413.92
Inferred	515	2.805	3.379	0.110	0.127	1.104	6.013	301.29

**Net Textured Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	1,104,271	0.857	1.214	0.038	0.094	0.572	3.677	146.43
Inferred	17,306	0.697	1.300	0.040	0.115	0.449	2.709	129.68

**Oxidized Net Textured Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	208,284	0.811	1.051	0.036	0.073	0.607	2.953	62.56
Inferred	3,410	0.694	0.764	0.034	0.057	0.478	2.087	66.18

**All Domains**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	2,217,804	1.891	2.570	0.077	0.200	0.967	3.632	248.45
Inferred	31,137	1.605	1.782	0.074	0.152	0.603	3.570	197.02

- (1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- (2) The quantity and grade of reported inferred resources in this estimation are conceptual in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

The mineral resources were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

**5.6.2.13 CONFIRMATION OF ESTIMATE**

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted capped average grades and average grade of composites of all samples from within the domain. The results are presented below.

**Table 5-24: Mesamax Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

**Massive Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	3.25	3.82	0.13	0.31	1.28	4.11
Composites	3.44	4.05	0.14	0.33	1.36	3.76
Block Model	3.37	3.87	0.13	0.32	1.31	4.55

**Oxidized Massive Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	3.15	5.69	0.13	0.43	1.83	3.80
Composites	3.34	5.30	0.06	0.20	1.96	2.72
Block Model	3.28	5.85	0.13	0.41	1.90	3.44

**Net Textured Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.78	1.17	0.04	0.09	0.53	3.56
Composites	0.85	1.27	0.04	0.09	0.57	3.56
Block Model	0.82	1.25	0.04	0.09	0.54	3.65

**Oxidized Net Textured Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.72	0.95	0.03	0.07	0.55	2.88
Composites	0.78	1.11	0.03	0.06	0.58	2.74
Block Model	0.77	1.07	0.03	0.07	0.59	2.87

The preceding comparison indicates the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain compared to the length weighted average of all capped assays and composites. used for grade estimation. The Net Textured Domains show a very close comparison among all three values, however, many isolated higher grade assays in the Massive Domains are contributing to higher block model values than capped assays or composites. The block model invariably represents the metal distribution most correctly of all three methods. This effect is essentially the reverse of assay data clustering.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

**Massive Sulphide Domain**

Block Model Volume = 161,436m<sup>3</sup>  
 Geometric Domain Volume = 161,576m<sup>3</sup>  
 Difference = 0.09%

**Oxidized Massive Sulphide Domain**

Block Model Volume = 49,281m<sup>3</sup>  
 Geometric Domain Volume = 49,133m<sup>3</sup>  
 Difference = 0.30%

**Net Textured Sulphide Domain**

Block Model Volume = 349,658m<sup>3</sup>  
Geometric Domain Volume = 348,891m<sup>3</sup>  
Difference = 0.22%

**Oxidized Net Textured Sulphide Domain**

Block Model Volume = 67,056m<sup>3</sup>  
Geometric Domain Volume = 66,776m<sup>3</sup>  
Difference = 0.42%

### **5.6.3 MEQUILLON DEPOSIT RESOURCE ESTIMATE**

#### **5.6.3.1 INTRODUCTION**

The purpose of this report section is to delineate the Mequillon Deposit Resources in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P.Eng. and Antoine Yassa, P.Geo., of P & E Mining Consultants Inc. of Brampton Ontario. The effective date of this resource estimate is September 7, 2007.

#### **5.6.3.2 DATABASE**

All drilling data were provided by Canadian Royalties Inc. in the form of a Microsoft Access database, Excel files, drill logs and assay certificates. Thirty (30) drill cross sections were developed on a local grid looking southwest on an azimuth of 246.4<sup>0</sup> on a nominal 50 meter spacing named from -850E to 600E. A Gemcom database was provided by the client containing 130 diamond drill holes of which 92 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 9,572 assays for Ni, Cu, Co, Au, Pt and Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

#### **5.6.3.3 DATA VERIFICATION**

Verification of assay data entry was performed on 9,572 assay intervals for Ni, Cu, Co, Au, Pt and Pd. A few very minor data entry errors were observed and corrected. The 9,572 verified intervals were checked against digital assay lab certificates from ALS Chemex of Vancouver, B.C. The checked assays represented 100% of the data to be used for the resource estimate and approximately 100% of the entire database.

#### **5.6.3.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drillhole sections. One domain was developed and named as Net Textured. This domain was physically created with computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated net textured characteristics, and zonal continuity along strike and down dip. In a very few cases, some mineralization below characteristic net textured grades was included for the purpose of maintaining zonal continuity. Smoothing was utilized to remove obvious jogs and dips in the domains and incorporated a minor addition of inferred mineralization. This exercise allowed for easier domain creation without triangulation errors from solids validation.

On each section, polyline interpretations were digitized from drill hole to drill hole but not extended more than 25 metres into untested territory. Minimum constrained true width for interpretation was 2.0 metres. The interpreted polylines from each section were “wireframed” in Gemcom into a 3-dimensional domain. The resulting solid (domain) was used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

### 5.6.3.5 ROCK CODE DETERMINATION

The rock codes used for the resource model were derived from the mineralized domain solid and four sub domains that were developed to control search ellipse orientation within the parent domain. The list of rock codes used follows:

#### **Rock Code Description**

0	Air
10	Net Textured South Sub Domain
20	Net Textured North Sub Domain
30	Net Textured North Tail Sub Domain
40	Net Textured Central Sub Domain
99	Waste Rock

### 5.6.3.6 COMPOSITES

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as null data. Any calculated composites that were less than 0.4 metres in length were discarded in order to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

### 5.6.3.7 GRADE CAPPING

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated.

**Table 5-25: Mequillon Grade Capping Values**

<b>Net Textured Sulphide Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent Capping for</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	3.0 %	26	98.8%	0.73	0.57
Cu	10.0 %	1	99.9 %	0.86	0.74
Co	0.15 %	17	99.2%	0.63	0.51
Au	5 g/t	7	99.7 %	3.28	2.18
Pt	2.5 g/t	11	99.5 %	0.68	0.59
Pd	10 g/t	33	98.5 %	0.89	0.67

### 5.6.3.8 VARIOGRAPHY

Variography was not carried out on the constrained domain composites within the domain of the deposit model. The mineralized domain exhibited good sectional continuity but due to an erratically distributed population, did not yield discernable variograms. Additional future drilling may enhance variography for this deposit.

### 5.6.3.9 BULK DENSITY

The bulk density used for the resource model was derived from measurements of bulk density test work performed by ALS Chemex on seventy two net textured sulphide representative samples obtained by the client from drill core. The resulting average bulk density model within the constraining domain created utilizing these samples was calculated to be 3.21 tonnes per cubic metre.

### 5.6.3.10 BLOCK MODELING

The resource model was divided into a 3D block model framework. The block model has 4,915,200 blocks that were 5m in the X direction, 5m in the Y direction and 5m in the Z direction. There were 320 columns (X), 160 rows (Y) and 96 levels. The block model was rotated 23.57 degrees counter-clockwise. Separate block models were created for rock type, density, and percent, Ni, Cu, Co, Au, Pt and Pd.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for the Indicated and Inferred classifications. The grade blocks within the domain were interpolated using the following parameters:

**Table 5-26: Mequillon Block Model Interpolation Parameters**

#### Indicated

Domain Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
South	335°	65°	-70°	45m	60m	10m	5	6	50
North	155°	65°	-60°	45m	60m	10m	5	6	50
North Tail	335°	65°	-30°	45m	60m	10m	5	6	50
Central	65°	335°	-15°	60m	45m	20m	5	6	50

#### Inferred

Domain Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
South	335°	65°	-70°	100m	100m	35m	5	1	50
North	155°	65°	-60°	100m	100m	35m	5	1	50
North Tail	335°	65°	-30°	100m	100m	35m	5	1	50
Central	65°	335°	-15°	100m	100m	35m	5	1	50

### 5.6.3.11 RESOURCE CLASSIFICATION

For the purposes of this resource, classifications of all interpolated grade blocks were determined from the Ni interpolations for Indicated and Inferred due to Ni being the dominant revenue producing element in the NSR calculation.

### 5.6.3.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

#### NSR Cut-Off Grade Calculation Components (All currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate) .....	\$0.800
Ni Price .....	US \$5.50/lb (\$6.88/lb)
Cu Price .....	US \$1.50/lb (\$1.88/lb)
Co Price .....	US \$15/lb (\$18.75/lb)
Au Price .....	US \$425/oz (\$531/oz)
Pt Price .....	US \$900/oz (\$1,125/oz)
Pd Price .....	US \$300oz (\$375/oz)

#### Net Textured Ni Concentrate

Ni Flotation Recovery .....	84%
Cu Flotation Recovery .....	22%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	45%
Pd Flotation Recovery .....	41%
Concentration Ratio .....	15.4:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Net Textured Cu Concentrate:

Ni Flotation Recovery .....	2%
Cu Flotation Recovery .....	64%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	30%
Pd Flotation Recovery .....	47%
Concentration Ratio .....	47.6:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%

Pt Smelter Payable .....	57%
Pd Smelter Payable .....	68%
Ni Refining Charges .....	US \$0.50/lb (\$0.63lb)
Cu Refining Charges .....	US \$0.10/lb (\$0.13/lb)
Co Refining Charges .....	US \$3.00/lb (\$3.75/lb)
Au Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pt Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pd Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Ni Smelter Treatment Charges .....	US \$125/tonne
Cu Smelter Treatment Charges .....	US \$103/tonne
Concentrate Shipping .....	US \$54/tonne
Humidity Factor .....	8%

The above data were derived from the July 2006 Preliminary Economic Analysis. The \$C/\$US exchange rate of \$0.80 was chosen so as to keep the Mequillon resource estimate in line with the parameters that were used for evaluating the Mesamax, Expo and Ivakkak Deposits in late 2006 and early 2007. This \$0.80 exchange rate was initially chosen to reflect long term rate predictions and to align with the very conservative metal prices used for the NSR calculation.

**In the anticipated open pit portion of the Mequillon Deposit, the processing, ore transport to plant and G&A costs combine for a total of (\$25.00 + \$2.50 + \$15.00) = \$42.50/tonne milled which became the internal NSR cut-off value.**

In order for the constrained mineralization in the Mequillon Deposit model to be considered as an open pit resource which is potentially economic, a first pass Whittle 4X pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne .....	\$3.18
Ore mining cost per tonne .....	\$3.18
Ore transport to process plant cost per tonne .....	\$2.50
Process cost per tonne .....	\$25.00
G&A cost per ore tonne .....	\$15.00
Process production rate (ore tonnes per year) .....	875,000
Pit slopes (inter ramp angle) .....	50 deg
Net Textured Sulphide Bulk Density .....	3.21t/m <sup>3</sup>
Ultramafic Bulk Density .....	2.92 t/m <sup>3</sup>
Waste Rock Bulk Density .....	2.90 t/m <sup>3</sup>

**In the anticipated underground portion of the Mequillon Deposit, the mining, ore transport to plant, processing and G&A costs combine for a total of (\$32.50 + \$2.50 + \$25.00 + \$15.00) = \$75.00/tonne milled which became the NSR cut-off value.**

The resulting open pit and underground resource estimate can be seen in Table 5-27.



**Table 5-27: Mequillon Deposit Resource Estimate****Open Pit Net Textured Sulphide Resource @ \$42.50/tonne NSR cut-off grade**

Classification	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	PGE (g/t)	NSR (\$/t)
Indicated	1,447,000	0.73	1.00	0.04	0.21	0.71	2.56	3.48	\$123

**Underground Net Textured Sulphide Resource @ \$75.00/tonne NSR cut-off grade**

Classification	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	PGE (g/t)	NSR (\$/t)
Indicated	3,927,000	0.75	1.10	0.04	0.23	0.69	2.68	3.60	\$128
Inferred	3,085,000	0.82	1.12	0.04	0.18	0.65	2.57	3.40	\$135

**Total Net Textured Sulphide Resource**

Classification	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	PGE (g/t)	NSR (\$/t)
Indicated	5,374,000	0.74	1.07	0.04	0.23	0.70	2.65	3.58	\$127
Inferred	3,085,000	0.82	1.12	0.04	0.18	0.65	2.57	3.40	\$135

- (1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- (2) The quantity and grade of reported inferred resources in this estimation are conceptual in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

It should be noted that the mineral resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

**5.6.3.13 CONFIRMATION OF ESTIMATE**

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted capped average grades and average grade of composites of all samples from within the domain. The results are presented below.

**Table 5-28: Mequillon Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade****Net Textured Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.72	1.07	0.04	0.21	0.64	2.43
Composites	0.74	1.09	0.04	0.21	0.65	2.49
Block Model	0.74	1.12	0.04	0.21	0.65	2.49

The comparison above shows the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain to be similar to the weighted average of all capped assays and composites used for grade estimation.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

#### **Net Textured Sulphide Domain**

Block Model Volume	2,735,259 m <sup>3</sup>
Geometric Domain Volume	2,768,438 m <sup>3</sup>
Difference	1.2 %

## **5.6.4 IVAKKAK DEPOSIT RESOURCE ESTIMATE**

### **5.6.4.1 INTRODUCTION**

The purpose of this report section is to delineate the Ivakkak Deposit Resources in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P.Eng. of P & E Mining Consultants Inc. of Brampton Ontario along with the assistance of Gerald Harron, P.Eng., of G. A. Harron & Associates Inc. The effective date of this resource estimate is December 31, 2006.

### **5.6.4.2 DATABASE**

All drilling data were provided by Canadian Royalties Inc. in the form of their Microsoft Access Ungava Master database, Excel files, drill logs and assay certificates. Twenty two (22) drill cross sections were developed on a local grid looking northwest on an azimuth of 300<sup>0</sup> on a nominal 25 metre spacing named from 150-W to 375-E. A Gemcom database was provided by the client containing 90 diamond drill holes of which 80 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 1,888 assays for Ni, Cu, Co, Au, Pt and Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **5.6.4.3 DATA VERIFICATION**

Verification of assay data entry was performed on 1,888 assay intervals for Ni, Cu, Co, Au, Pt and Pd. A few very minor data entry errors were observed and corrected. The 1,888 verified intervals were checked against assay lab certificates from ALS Chemex of Vancouver, B.C. The checked assays represented 100% of the data to be used for the resource estimate and approximately 100% of the entire database.

### **5.6.4.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drill hole sections. Two domains were developed named Massive Sulphide and Net Textured. These domains were physically created with computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated massive and net textured characteristics, and zonal continuity along strike and down dip. In a very few cases, some mineralization below characteristic massive or net textured grades was included for the purpose of maintaining zonal continuity. Smoothing was utilized to remove obvious jogs and dips in the domains and incorporated a minor addition of inferred mineralization. This exercise allowed for easier domain creation without triangulation errors from solids validation.

On each section, polyline interpretations were digitized from drill hole to drill hole but not extended more than 12 to 15 metres into untested territory. Minimum constrained true width for interpretation was 1.0 metre. The interpreted polylines from each section were “wireframed” in Gemcom into 3-dimensional domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

#### 5.6.4.5 ROCK CODE DETERMINATION

The rock codes used for the resource model were derived from the mineralized domain solids. The list of rock codes used follows:

##### **Rock Code Description**

0	Air
10	Massive Sulphide Domain
20	Net Textured Sulphide Domain
30	Ultramafic Rocks
99	Waste Rock

#### 5.6.4.6 COMPOSITES

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 2.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as null data. Any composites calculated that were less than 0.5m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

#### 5.6.4.7 GRADE CAPPING

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated.

**Table 5-29: Ivakkak Grade Capping Values**

<b>Massive Sulphide Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100.0%	0.43	0.43
Cu	7.0 %	7	96.7%	0.58	0.40
Co	No Cap	0	100.0%	0.42	0.42
Au	2.0 g/t	4	98.1%	2.58	0.95
Pt	2.5 g/t	10	95.3%	0.50	0.39
Pd	15.0 g/t	7	96.7%	0.70	0.44
<b>Net Textured Sulphide Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	2.5 %	6	98.9%	0.82	0.56
Cu	4.0 %	9	98.4%	1.20	0.62
Co	0.10 %	10	98.6%	0.69	0.45
Au	0.5 g/t	17	97.0%	3.93	1.00
Pt	1.5 g/t	17	97.0%	1.24	0.68
Pd	8.0 g/t	21	96.3%	1.43	0.73

#### 5.6.4.8 VARIOGRAPHY

Variography was not carried out on the constrained domain composites within the two domains in the deposit model. The mineralized domains exhibited good sectional continuity but due to low population densities did not yield discernable variograms. Additional future drilling may enhance variography for this deposit.

#### 5.6.4.9 BULK DENSITY

The bulk density used for the resource model was derived from measurements of bulk density test work performed by ALS Chemex on thirty-two massive sulphide and thirty-eight net textured sulphide representative samples obtained by the client from drill core. The resulting average bulk density model created from these samples was calculated to be 4.37 tonnes per cubic meter for the massive sulphide domain and 3.22 tonnes per cubic metre in the net textured domain.

#### 5.6.4.10 BLOCK MODELING

The resource model was divided into a 3D block model framework. The block model has 548,100 blocks that were 5m in the X direction, 5m in the Y direction and 5m in the Z direction. There were 100 columns (X), 160 rows (Y) and 40 levels. The block model was rotated 30 degrees clockwise. Separate block models were created for rock type, density, percent, Ni, Cu, Co Au, Pt and Pd.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for the indicated and inferred classifications. The grade blocks within all domains were interpolated using the following parameters:

**Table 5-30: Ivakkak Block Model Interpolation Parameters**

Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
Indicated	30°	120°	-55°	35m	35m	10m	1	2	12
Inferred	30°	120°	-55°	100m	100m	30m	2	1	12

#### 5.6.4.11 RESOURCE CLASSIFICATION

For the purposes of this resource, classifications of all interpolated grade blocks were determined from the Ni interpolations for indicated and inferred due to Ni being the dominant revenue producing element in the NSR calculation.

#### 5.6.4.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

##### **NSR Cut-Off Grade Calculation Components (All currency \$C unless stated otherwise)**

\$C/\$US (Exchange Rate .....	\$0.800
Ni Price .....	US \$5.50/lb (\$6.88/lb)
Cu Price .....	US \$1.50/lb (\$1.88/lb)
Co Price .....	US \$15/lb (\$18.75/lb)
Au Price .....	US \$425/oz (\$531/oz)
Pt Price .....	US \$900/oz (\$1,125/oz)
Pd Price .....	US \$300/oz (\$375/oz)
Mining Cost .....	\$3.18/rock tonne mined
Process Cost (2,500tpd) .....	\$25.00/tonne milled

##### Massive Sulphide Ni Concentrate

Ni Flotation Recovery .....	82%
Cu Flotation Recovery .....	6%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	52%
Pd Flotation Recovery .....	61%
Concentration Ratio .....	4.6:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

##### Massive Sulphide Cu Concentrate

Ni Flotation Recovery .....	3%
Cu Flotation Recovery .....	92%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	14%
Pd Flotation Recovery .....	36%
Concentration Ratio .....	6.3:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	23%
Pd Smelter Payable .....	56%

#### Net Textured Ni Concentrate

Ni Flotation Recovery .....	84%
Cu Flotation Recovery .....	22%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	45%
Pd Flotation Recovery .....	41%
Concentration Ratio .....	15.4:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Net Textured Cu Concentrate

Ni Flotation Recovery .....	2%
Cu Flotation Recovery .....	64%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	30%
Pd Flotation Recovery .....	47%
Concentration Ratio .....	47.6:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	57%
Pd Smelter Payable .....	68%

Ni Refining Charges .....	US \$0.50/lb (\$0.63lb)
Cu Refining Charges .....	US \$0.10/lb (\$0.13/lb)
Co Refining Charges .....	US \$2.43/lb (\$3.04/lb)
Au Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pt Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Pd Refining Charges .....	US \$15.00/oz (\$18.75/oz)
Ni Smelter Treatment Charges .....	US \$125/tonne
Cu Smelter Treatment Charges .....	US \$103/tonne
Concentrate Shipping .....	US \$54/tonne
General/Administration .....	\$15.00/tonne milled

The above data were derived from the July 2006 Preliminary Economic Analysis on the Ivakkak Deposit.

**In the anticipated open pit operation, Mill Processing and G&A costs combine for a total of (\$25.00 + \$15.00) = \$40.00/tonne milled which became the internal NSR cut-off value.**

In order for the constrained mineralization in the Ivakkak model to be considered as a resource which is potentially economic, a first pass Whittle 4X pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne .....	3.18
Ore mining cost per tonne .....	\$3.18
Process cost per tonne .....	\$25.00
General & Administration cost per ore tonne .....	\$15.00
Process production rate (ore tonnes per year) .....	875,000
Pit slopes (inter ramp angle) .....	55 deg
Massive Sulphide Bulk Density .....	4.37t/m3
Net Textured Sulphide Bulk Density .....	3.22t/m3
Ultramafic Bulk Density .....	2.92 t/m3
Waste Rock Bulk Density .....	2.90t/m3

The resulting resource estimate can be seen in the following table.

**Table 5-31: Ivakkak Deposit Resource Estimate @ CDN\$ 40/t NSR Cut-Off Grade**

**Massive Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	303,000	2.87	3.24	0.12	0.29	1.28	6.02	\$430
Inferred	11,000	3.11	2.94	0.12	0.18	1.42	5.49	\$441

**Net Textured Sulphide Domain**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	825,000	0.61	0.93	0.03	0.09	0.41	2.09	\$101
Inferred	30,000	0.55	0.70	0.03	0.07	0.42	1.94	\$85

**All Domains**

<b>Classification</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
Indicated	1,128,000	1.22	1.55	0.05	0.15	0.64	3.14	\$189
Inferred	41,000	1.24	1.30	0.05	0.10	0.69	2.90	\$181

- (1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- (2) The quantity and grade reported in this inferred resource estimation are conceptual in nature and there has been insufficient exploration to define an indicated mineral resource on the property and it is uncertain if further exploration will result in discovery of an indicated or measured mineral resource on the property

It should be noted that the mineral resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

#### **5.6.4.13 CONFIRMATION OF ESTIMATE**

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted capped average



grades and average grade of composites of all samples from within the domain. The results are presented below.

**Table 5-32: Ivakkak Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

**Massive Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	2.76	3.34	0.11	0.29	1.29	5.84
Composites	2.76	3.29	0.11	0.30	1.27	5.89
Block Model	2.77	3.25	0.11	0.31	1.24	6.23

**Net Textured Sulphide Domain**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.55	0.87	0.03	0.08	0.36	1.89
Composites	0.58	0.92	0.03	0.08	0.39	2.04
Block Model	0.58	0.93	0.03	0.09	0.38	2.02

The comparison above shows the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain to be similar to the weighted average of all capped assays and composites used for grade estimation.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

**Massive Sulphide Domain**

Block Model Volume	96,257 m <sup>3</sup>
Geometric Domain Volume	96,383 m <sup>3</sup>
Difference	0.13%

**Net Textured Sulphide Domain**

Block Model Volume	370,117 m <sup>3</sup>
Geometric Domain Volume	370,065 m <sup>3</sup>
Difference	0.01%

## **5.6.5 ALLAMMAQ DEPOSIT RESOURCE ESTIMATE**

### **5.6.5.1 INTRODUCTION**

The purpose of this report section is to delineate the Allammaq Deposit Resources in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P.Eng. and Antoine Yassa, P.Geo. of P & E Mining Consultants Inc. of Brampton Ontario. The effective date of this resource estimate is October 4, 2009.

### **5.6.5.2 DATABASE**

Drilling data were provided by Canadian Royalties Inc. in the form of a Microsoft Access database, Excel files, drill logs and assay certificates. Forty two (42) drill cross sections were developed on a local grid looking east on an azimuth of 88.4<sup>0</sup> on a 25 metre spacing named from 1500E to 2525E. A Gemcom database was provided by CRI containing 135 diamond drill holes of which 84 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 5,467 assays for Ni and Cu, 5,410 assays for Co, 5,238 assays for Au and 5,371 assays for Pt and Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **5.6.5.3 DATA VERIFICATION**

Verification of assay data entry was performed on 4,646 assay intervals for Ni, Cu, Co, Au, Pt and Pd. A few very minor data entry errors were observed and corrected. The 4,646 verified intervals were checked against digital assay lab certificates from ALS Chemex of Vancouver, B.C. The checked assays represented 100% of the data to be used for the resource estimate and approximately 85% of the entire database.

### **5.6.5.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drill hole sections. Nine domains were developed and were named as Hanging Wall Cu, Hanging Wall Massive, Hanging Wall Net Textured, Hanging Wall Vein, Footwall Massive, Footwall Net Textured, Footwall Vein, West Extension Net Textured and West Extension Vein. These domains were created by computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated mineralization style characteristics and zonal continuity along strike and down dip. In a very few cases, some mineralization below characteristic mineralization style grades was included for the purpose of maintaining zonal continuity. Smoothing was utilized to remove obvious jogs and dips in the domains and incorporated a minor addition of inferred mineralization. This exercise allowed for easier domain creation without triangulation errors from solids validation.

On each section, polyline interpretations were digitized from drill hole to drill hole but not extended more than 50 metres into untested territory. Minimum constrained true width for interpretation was 2.0 metres. The interpreted polylines from each section were “wireframed” in

Gemcom into 3-dimensional domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

#### 5.6.5.5 ROCK CODE DETERMINATION

The rock codes used for the resource model were derived from the nine mineralized domain solids and are listed below:

##### Rock Code Description

10	Hanging Wall Cu Domain	60	Footwall Net Textured Domain
20	Hanging Wall Massive Domain	70	Footwall Vein Domain
30	Hanging Wall Net Textured Domain	80	West Extension Net Textured Domain
40	Hanging Wall Vein Domain	90	West Extension Vein Domain
50	Footwall Massive Domain		

#### 5.6.5.6 COMPOSITES

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D wireframe constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as ½ assay detection limit values. Any composites calculated that were less than 0.25 m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

#### 5.6.5.7 GRADE CAPPING

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated.

**Table 5-33: Allammaq Grade Capping Values**

<b>Hanging Wall Cu Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	2 %	2	84.6	0.84	0.53
Cu	10 %	2	84.6	0.42	0.28
Co	No Cap	0	100	0.76	0.76
Au	1 g/t	2	84.6	1.96	1.44
Pt	2 g/t	1	92.3	0.83	0.60
Pd	6 g/t	1	92.3	0.93	0.73

<b>Hanging Wall Massive Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	4.5 %	3	92.5	0.22	0.21
Cu	4.5 %	3	92.5	0.72	0.69
Co	No Cap	0	100	0.21	0.21
Au	0.3 g/t	3	92.5	1.44	0.84
Pt	2.25 g/t	3	92.5	0.47	0.37
Pd	10 g/t	4	90.0	1.05	0.93

<b>Hanging Wall Net Textured Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	3.5 %	22	98.4	0.89	0.83
Cu	6.5 %	22	98.4	1.45	1.09
Co	0.12 %	25	98.1	0.75	0.67
Au	1.0 g/t	17	98.7	2.64	1.90
Pt	2.75 g/t	7	99.5	0.91	0.80
Pd	15 g/t	5	99.6	1.02	0.91

<b>Hanging Wall Vein Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	0.87	0.87
Cu	10 %	6	94.5	1.16	1.03
Co	No Cap	0	100	0.80	0.80
Au	0.25 g/t	10	90.4	2.32	0.89
Pt	2 g/t	2	98.2	0.75	0.71
Pd	15 g/t	5	95.4	1.14	1.00

<b>Footwall Wall Massive Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	0.35	0.35
Cu	3 %	1	96.4	0.61	0.60
Co	No Cap	0	100	0.36	0.36
Au	0.25 g/t	1	96.4	2.05	0.75
Pt	No Cap	0	100	0.56	0.56
Pd	3.5 g/t	3	89.3	0.91	0.46

<b>Footwall Net Textured Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	3.5 %	5	97.9	1.02	0.94
Cu	6 %	1	99.6	1.52	1.08
Co	0.1 %	9	96.2	0.88	0.70
Au	0.2 g/t	7	97.1	1.26	0.70
Pt	1.2 g/t	2	99.2	0.62	0.61
Pd	4.5 g/t	3	98.7	0.74	0.62

<b>Footwall Vein Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	1.08	1.08
Cu	1.5 %	6	82.9	1.48	0.66
Co	No Cap	0	100	0.97	0.97
Au	0.15 g/t	2	94.3	1.19	0.62
Pt	1 g/t	2	94.3	1.17	0.86
Pd	5 g/t	2	94.3	1.01	0.77

<b>West Extension Net Textured Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	2 %	4	99.0	0.91	0.76
Cu	1.5 %	17	95.8	1.04	0.67
Co	0.13 %	2	99.5	0.75	0.72
Au	0.35 g/t	18	95.2	2.80	1.21
Pt	1.2 g/t	3	99.3	0.70	0.62
Pd	6 g/t	2	99.5	0.89	0.71

<b>West Extension Vein Domain</b>					
<b>Element</b>	<b>Capping Value</b>	<b>Number of Assays Capped</b>	<b>Cumulative Percent for Capping</b>	<b>Raw Coefficient of Variation</b>	<b>Capped Coefficient of Variation</b>
Ni	No Cap	0	100	0.70	0.70
Cu	No Cap	0	100	0.80	0.80
Co	No Cap	0	100	0.75	0.75
Au	No Cap	0	100	0.79	0.79
Pt	No Cap	0	100	0.73	0.73
Pd	No Cap	0	100	0.94	0.94

### 5.6.5.8 VARIOGRAPHY

Variography was carried out on the constrained domain composites within the deposit model. The Hanging Wall and Footwall Net Textured domain composites yielded reasonable directional variograms while the West Extension Net Textured domain composites yielded only omnivariograms. The remaining domains consisted of populations too small to yield discernable variograms. Additional future drilling may enhance variography for those domains.

### 5.6.5.9 BULK DENSITY

The bulk density used for the resource model was derived from bulk density test work performed by ALS Chemex on 1,923 pulp samples that represented all nine domains. The bulk density block model was coded with a simple spherical interpolation pass. The resulting average bulk densities within the constraining domains utilizing these samples were calculated to be 4.2 tonnes/m<sup>3</sup> for massive, 3.5 tonnes/m<sup>3</sup> for veins and 3.1 tonnes /m<sup>3</sup> for net textured.

### 5.6.5.10 BLOCK MODELING

The resource model was divided into a 3D block model framework. The block model has 12,480,000 blocks that were 2.5m in the X direction, 2.5m in the Y direction and 2.5m in the Z direction. There were 520 columns (X), 240 rows (Y) and 100 levels (Z). The block model was rotated 1.55 degrees counter-clockwise. Separate block models were created for rock type, density, percent, Class, Ni, Cu, Co, Au, Pt, Pd and NSR.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model's ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co, Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were three interpolation passes performed on the hanging wall net textured domain for each element for coding blocks in the Measured, Indicated and Inferred classifications. The remaining domains were subjected to two interpolation passes for the Indicated and Inferred classifications. The grade blocks within the domains were interpolated using the following parameters:

**Table 5-34: Allammaq Block Model Interpolation Parameters**

Domain Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
HW-Meas	0 <sup>0</sup>	90 <sup>0</sup>	-30 <sup>0</sup>	30m	20m	7m	2	5	20
HW-Ind	0 <sup>0</sup>	90 <sup>0</sup>	-30 <sup>0</sup>	65m	40m	15m	2	3	20
HW-Inf	0 <sup>0</sup>	90 <sup>0</sup>	-30 <sup>0</sup>	100m	100m	50m	2	1	20
FW-Ind	0 <sup>0</sup>	90 <sup>0</sup>	-30 <sup>0</sup>	30m	30m	10m	2	3	20
FW-Inf	0 <sup>0</sup>	90 <sup>0</sup>	-30 <sup>0</sup>	100m	100m	50m	2	1	20
WE-Ind	0 <sup>0</sup>	90 <sup>0</sup>	-40 <sup>0</sup>	30m	30m	10m	2	3	20
WE-Inf	0 <sup>0</sup>	90 <sup>0</sup>	-40 <sup>0</sup>	100m	100m	50m	2	1	20

#### 5.6.5.11 RESOURCE CLASSIFICATION

For the purposes of this resource, the classification of all interpolated grade blocks was determined from the Ni grade interpolations for Indicated and Inferred due to Ni being the dominant revenue producing element in the NSR calculation.

#### 5.6.5.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

#### NSR Cut-Off Grade Calculation Components (All currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate ..... \$0.92)  
Ni Price.....US \$9.02/lb (\$9.80/lb) 24 mo. trailing avg. price Aug 30/09  
Cu Price.....US \$2.84/lb (\$3.09/lb) 24 mo. trailing avg. price Aug 30/09  
Co Price.....US \$20/lb (\$21.74/lb) 24 mo. trailing avg. price Aug 30/09  
Au Price.....US \$871/oz (\$947/oz) 24 mo. trailing avg. price Aug 30/09  
Pt Price.....US \$1,398/oz (\$1,520/oz) 24 mo. trailing avg. price Aug 30/09  
Pd Price.....US \$311/oz (\$338/oz) 24 mo. trailing avg. price Aug 30/09

#### Net Textured Ni Concentrate

Ni Flotation Recovery ..... 79%

Cu Flotation Recovery .....	7%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	43%
Pd Flotation Recovery .....	26%
Concentration Ratio .....	15.0:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Net Textured Cu Concentrate

Ni Flotation Recovery .....	2%
Cu Flotation Recovery .....	89%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	9%
Pd Flotation Recovery .....	67%
Concentration Ratio .....	32.4:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	42%
Pd Smelter Payable .....	69%

#### Massive Sulphide & Vein Ni Concentrate

Ni Flotation Recovery .....	82%
Cu Flotation Recovery .....	6%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	52%
Pd Flotation Recovery .....	61%
Concentration Ratio .....	4.6:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Massive Sulphide & Vein Cu Concentrate

Ni Flotation Recovery .....	3%
Cu Flotation Recovery .....	92%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	14%
Pd Flotation Recovery .....	36%

Concentration Ratio .....	32.4:1
Ni Smelter Payable .....	0%
Cu Smelter Payable.....	97%
Co Smelter Payable.....	0%
Au Smelter Payable.....	0%
Pt Smelter Payable .....	23%
Pd Smelter Payable .....	56%

Ni Refining Charges .....	US \$0.50/lb (\$0.54lb)
Cu Refining Charges.....	US \$0.10/lb (\$0.11/lb)
Co Refining Charges.....	US \$3.00/lb (\$3.26/lb)
Au Refining Charges.....	US \$15.00/oz (\$16.30/oz)
Pt Refining Charges .....	US \$15.00/oz (\$16.30/oz)
Pd Refining Charges .....	US \$15.00/oz (\$16.30/oz)
Ni Smelter Treatment Charges.....	US \$125/tonne
Cu Smelter Treatment Charges.....	US \$103/tonne
Concentrate Shipping.....	US \$58/tonne
Humidity Factor.....	8%

**In the anticipated open pit mining operation of the Allammaq Deposit, the ore transport to plant, processing and G&A costs combine for a total of (\$5 + \$20+ \$15) = \$40/tonne milled which became the NSR cut-off value.**

The above data were derived from similar resource estimates for the Nunavik Nickel Project. In order for the constrained mineralization in the Allammaq resource model to be considered as a resource which is potentially economic, a first pass Whittle 4X pit optimization was carried out to create a pit shell utilizing the criteria below.

Waste mining cost per tonne	\$3.50
Ore mining cost per tonne	\$5.00
Ore transport to mill and process cost per tonne	\$25.00
General & Administration cost per ore tonne	\$15.00
Process production rate (ore tonnes per year)	750,000
Pit slopes (inter ramp angle)	50 deg
Massive Sulphide Bulk Density	4.2t/m <sup>3</sup>
Vein Bulk Density	3.5t/m <sup>3</sup>
Net Textured Sulphide Bulk Density	3.1t/m <sup>3</sup>
Waste Rock Bulk Density	2.8t/m <sup>3</sup>

The resulting open pit resource estimate can be seen in Table 5-35.



**Table 5-35: Allammaq Deposit Resource Estimate @ C\$40/tonne NSR cut-off**

<b>Measured</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
<b>HW Net</b>	<b>559,855</b>	<b>0.93</b>	<b>1.10</b>	<b>0.04</b>	<b>0.10</b>	<b>0.60</b>	<b>2.66</b>	<b>\$220</b>

<b>Indicated</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
<b>HW Massive</b>	102,754	3.72	2.01	0.15	0.11	1.34	3.27	\$704
<b>HW Net</b>	2,726,347	0.80	1.04	0.04	0.12	0.51	2.28	\$193
<b>HW Vein</b>	183,706	1.89	3.35	0.08	0.08	0.69	3.58	\$496
<b>HW Cu</b>	9,769	0.90	6.03	0.05	0.21	0.81	2.25	\$504
<b>FW Massive</b>	28,202	3.47	1.56	0.16	0.07	0.80	1.89	\$618
<b>FW Net</b>	267,508	0.74	0.79	0.03	0.05	0.35	1.53	\$161
<b>FW Vein</b>	11,437	0.97	0.56	0.04	0.04	0.33	1.82	\$162
<b>West Ext Net</b>	430,795	0.39	0.49	0.02	0.06	0.24	1.09	\$87
<b>Total Indicated</b>	<b>3,760,518</b>	<b>0.90</b>	<b>1.11</b>	<b>0.04</b>	<b>0.10</b>	<b>0.50</b>	<b>2.18</b>	<b>\$211</b>

<b>Inferred</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
<b>HW Massive</b>	8,906	3.91	1.22	0.16	0.09	1.46	3.60	\$688
<b>HW Net</b>	52,486	0.56	1.15	0.03	0.14	0.39	1.90	\$160
<b>HW Vein</b>	6,963	1.89	2.59	0.07	0.07	0.54	2.61	\$440
<b>HW Cu</b>	788	0.84	5.09	0.04	0.28	0.94	2.52	\$441
<b>FW Massive</b>	17,823	3.36	1.51	0.15	0.07	0.93	2.08	\$602
<b>FW Net</b>	39,789	0.63	0.65	0.03	0.05	0.30	1.27	\$135
<b>FW Vein</b>	37,456	0.99	0.62	0.05	0.05	0.28	1.42	\$166
<b>West Ext Net</b>	1,417,068	0.37	0.46	0.02	0.06	0.26	1.07	\$83
<b>West Ext Vein</b>	10,214	1.82	2.50	0.10	0.05	0.35	2.37	\$418
<b>Total Inferred</b>	<b>1,591,493</b>	<b>0.47</b>	<b>0.53</b>	<b>0.02</b>	<b>0.06</b>	<b>0.28</b>	<b>1.15</b>	<b>\$102</b>

(1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

(2) The quantity and grade reported in this inferred resource estimation are conceptual in nature and there has been insufficient exploration to define an indicated mineral resource on the property and it is uncertain if further exploration will result in discovery of an indicated or measured mineral resource on the property

It should be noted that the mineral resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

### 5.6.5.13 CONFIRMATION OF ESTIMATE

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted average capped assay grades and average grade of composites of all samples from within the domain. The results are presented in Table 5-36:

**Table 5-36: Allammaq Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

Category	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Capped Assays	0.81	0.97	0.04	0.09	0.45	1.94
Composites	0.81	0.96	0.04	0.09	0.45	1.93
Block Model	0.70	0.88	0.03	0.08	0.39	1.71

The comparison above shows the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain to be somewhat lower than the weighted average of all capped assays and composites used for grade estimation. This effect resulted from the clustering of some of the data used for grade interpolation. The block model grades reflect a more representative three dimensional grade distribution than the capped assays and composites.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

#### **Net Textured Sulphide Domain**

Block Model Volume	2,143,828 m3
Geometric Domain Volume	2,145,482 m3
Difference	0.08%

## **5.6.6 PUIMAJUQ DEPOSIT RESOURCE ESTIMATE**

### **5.6.6.1 INTRODUCTION**

The purpose of this report section is to delineate the Puimajuq Deposit Resources in compliance with NI 43-101 and CIM standards. This resource estimate was undertaken by Eugene Puritch, P.Eng. and Antoine Yassa, P.Geo. of P & E Mining Consultants Inc. of Brampton Ontario. The effective date of this resource estimate is September 14, 2009.

### **5.6.6.2 DATABASE**

Drilling data were provided by Canadian Royalties Inc. in the form of a Microsoft Access database, Excel files, drill logs and assay certificates. Six (6) drill cross sections were developed on a local grid looking east on an azimuth of 90.5° on a 25 metre spacing named from 1200E to 1325E. A Gemcom database was provided by CRI containing 24 diamond drill holes of which 17 were utilized in the resource calculation. The remaining data were not in the area that was modeled for this resource estimate.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 626 assays for Ni, Cu, Co, Pt and Pd and 593 assays for Au. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system.

### **5.6.6.3 DATA VERIFICATION**

Verification of assay data entry was performed on 626 assay intervals for Ni, Cu, Co, Au, Pt and Pd. No data entry errors were observed. The 626 verified intervals were checked against digital assay lab certificates from ALS Chemex of Vancouver, B.C. The checked assays represented 100% of the data to be used for the resource estimate and approximately 100% of the entire database.

### **5.6.6.4 DOMAIN INTERPRETATION**

Domain boundaries were determined from lithology, structure and Ni, Cu and PGE boundary interpretation from visual inspection of drill hole sections. Two domains were developed and were named Massive and Net Textured. These domains were created by computer screen digitizing on drill hole sections in Gemcom by the authors of this report. The outlines were influenced by the selection of mineralized material that demonstrated mineralization style characteristics and zonal continuity along strike and down dip. In a very few cases, some mineralization below characteristic mineralization style grades was included for the purpose of maintaining zonal continuity. Smoothing was utilized to remove obvious jogs and dips in the domains and incorporated a minor addition of inferred mineralization. This exercise allowed for easier domain creation without triangulation errors from solids validation.

On each section, polyline interpretations were digitized from drill hole to drill hole but not extended more than 25 metres into untested territory. Minimum constrained true width for interpretation was 2.0 metres. The interpreted polylines from each section were “wireframed” in Gemcom into 3-dimensional domains. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

### 5.6.6.5 ROCK CODE DETERMINATION

The rock codes used for the resource model were derived from the two mineralized domain solids and are listed below:

#### Rock Code Description

- 10     Massive Domain
- 20     Net Textured Domain

### 5.6.6.6 COMPOSITES

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D wireframe constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as ½ assay detection limit values. Any composites calculated that were less than 0.25m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

### 5.6.6.7 GRADE CAPPING

Grade capping was investigated on the raw assay values in the combined domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated.

**Table 5-37: Puimajuq Grade Capping Values**

Massive Domain					
Element	Capping Value	Number of Assays Capped	Cumulative Percent for Capping	Raw Coefficient of Variation	Capped Coefficient of Variation
Ni	No Cap	0	100	0.40	0.40
Cu	16.5 %	3	96.3	0.99	0.95
Co	No Cap	0	100	0.40	0.40
Au	0.75 g/t	4	95.0	2.77	1.29
Pt	6 g/t	6	92.5	4.56	0.87
Pd	15 g/t	6	92.5	4.57	1.03

Net Textured Domain					
Element	Capping Value	Number of Assays Capped	Cumulative Percent for Capping	Raw Coefficient of Variation	Capped Coefficient of Variation
Ni	3 %	2	98.9	0.97	0.84
Cu	6 %	6	96.9	1.31	0.98
Co	0.1 %	3	98.5	1.63	0.66
Au	No Cap	0	100	1.39	1.39
Pt	1.5 g/t	2	98.9	0.88	0.69
Pd	10 g/t	4	97.9	5.28	0.97

#### 5.6.6.8 VARIOGRAPHY

Variography was carried out on the constrained domain composites within the deposit model. The Net Textured domain composites yielded reasonable directional variograms while the Massive domain did not yield any discernable variograms. Additional future drilling may enhance variography for that domain.

#### 5.6.6.9 BULK DENSITY

The bulk density used for the resource model was derived from bulk density test work performed by ALS Chemex on 195 pulp samples that represented both domains. The bulk density block model was coded with a simple spherical interpolation pass. The resulting average bulk densities within the constraining domains utilizing these samples were calculated to be 4.2 tonnes/m<sup>3</sup> for massive and 3.2 tonnes /m<sup>3</sup> for net textured.

#### 5.6.6.10 BLOCK MODELING

The resource model was divided into a 3D block model framework. The block model has 690,000 blocks that were 2.5m in the X direction, 2.5m in the Y direction and 2.5m in the Z direction. There were 150 columns (X), 100 rows (Y) and 460 levels (Z). The block model was rotated 0.47 degrees clockwise. Separate block models were created for rock type, density, percent, Class, Ni, Cu, Co, Au, Pt, Pd and NSR.

The percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model's ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co, Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralized Zone. Inverse distance squared (1/d<sup>2</sup>) grade interpolation was utilized. There were two interpolation passes performed on each domain for each element for coding blocks in the Indicated and Inferred classifications. The grade blocks within the domains were interpolated using the following parameters:

**Table 5-38: Puimajuq Block Model Interpolation Parameters**

Domain Profile	Dip Dir.	Strike	Dip	Dip Range	Strike Range	Across Dip Range	Max # per Hole	Min # Sample	Max # Sample
Mass-Ind	0 <sup>0</sup>	90 <sup>0</sup>	-85 <sup>0</sup>	30m	30m	10m	3	4	20
Mass-Inf	0 <sup>0</sup>	90 <sup>0</sup>	-85 <sup>0</sup>	60m	60m	20m	3	1	20
Net-Ind	0 <sup>0</sup>	90 <sup>0</sup>	-85 <sup>0</sup>	30m	30m	10m	3	4	20
Net-Inf	0 <sup>0</sup>	90 <sup>0</sup>	-85 <sup>0</sup>	60m	60m	20m	3	1	20

#### 5.6.6.11 RESOURCE CLASSIFICATION

For the purposes of this resource, the classification of all interpolated grade blocks was determined from the Ni grade interpolations for Indicated and Inferred due to Ni being the dominant revenue producing element in the NSR calculation.

### 5.6.6.12 RESOURCE ESTIMATE

The resource estimate was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

#### NSR Cut-Off Grade Calculation Components (All currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate .....	\$0.92)
Ni Price.....	US \$9.02/lb (\$9.80/lb) 24 mo. trailing avg. price Aug 30/09
Cu Price.....	US \$2.84/lb (\$3.09/lb) 24 mo. trailing avg. price Aug 30/09
Co Price.....	US \$20/lb (\$21.74/lb) 24 mo. trailing avg. price Aug 30/09
Au Price.....	US \$871/oz (\$947/oz) 24 mo. trailing avg. price Aug 30/09
Pt Price.....	US \$1,398/oz (\$1,520/oz) 24 mo. trailing avg. price Aug 30/09
Pd Price.....	US \$311oz (\$338/oz) 24 mo. trailing avg. price Aug 30/09

#### Net Textured Ni Concentrate

Ni Flotation Recovery .....	79%
Cu Flotation Recovery .....	7%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	43%
Pd Flotation Recovery .....	26%
Concentration Ratio .....	15.0:1
Ni Smelter Payable .....	92%
Cu Smelter Payable .....	90%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Net Textured Cu Concentrate

Ni Flotation Recovery .....	2%
Cu Flotation Recovery .....	89%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	9%
Pd Flotation Recovery .....	67%
Concentration Ratio .....	32.4:1
Ni Smelter Payable .....	0%
Cu Smelter Payable .....	97%
Co Smelter Payable .....	0%
Au Smelter Payable .....	0%
Pt Smelter Payable .....	42%
Pd Smelter Payable .....	69%

#### Massive Sulphide & Vein Ni Concentrate

Ni Flotation Recovery .....	82%
Cu Flotation Recovery .....	6%

Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	52%
Pd Flotation Recovery.....	61%
Concentration Ratio .....	4.6:1
Ni Smelter Payable .....	92%
Cu Smelter Payable.....	90%
Co Smelter Payable.....	0%
Au Smelter Payable.....	0%
Pt Smelter Payable .....	65%
Pd Smelter Payable .....	65%

#### Massive Sulphide & Vein Cu Concentrate

Ni Flotation Recovery.....	3%
Cu Flotation Recovery .....	92%
Co Flotation Recovery .....	0%
Au Flotation Recovery .....	0%
Pt Flotation Recovery .....	14%
Pd Flotation Recovery.....	36%
Concentration Ratio .....	32.4:1
Ni Smelter Payable .....	0%
Cu Smelter Payable.....	97%
Co Smelter Payable.....	0%
Au Smelter Payable.....	0%
Pt Smelter Payable .....	23%
Pd Smelter Payable .....	56%

Ni Refining Charges .....	US \$0.50/lb (\$0.54lb)
Cu Refining Charges.....	US \$0.10/lb (\$0.11/lb)
Co Refining Charges.....	US \$3.00/lb (\$3.26/lb)
Au Refining Charges.....	US \$15.00/oz (\$16.30/oz)
Pt Refining Charges .....	US \$15.00/oz (\$16.30/oz)
Pd Refining Charges .....	US \$15.00/oz (\$16.30/oz)
Ni Smelter Treatment Charges.....	US \$125/tonne
Cu Smelter Treatment Charges.....	US \$103/tonne
Concentrate Shipping.....	US \$58/tonne
Humidity Factor.....	8%

**In the anticipated open pit mining operation of the Puimajuq Deposit, the ore transport to plant, processing and G&A costs combine for a total of (\$5 + \$20+ \$15) = \$40/tonne milled which became the NSR cut-off value.**

The above data were derived from similar resource estimates for the Nunavik Nickel Project. In order for the constrained mineralization in the Puimajuq resource model to be considered as a resource which is potentially economic, a first pass Whittle 4X pit optimization was carried out to create a pit shell utilizing the criteria below.

Waste mining cost per tonne	\$3.50
Ore mining cost per tonne	\$5.00
Ore transport to mill and process cost per tonne	\$25.00

General & Administration cost per ore tonne	\$15.00
Process production rate (ore tonnes per year)	750,000
Pit slopes (inter ramp angle)	50 deg
Massive Sulphide Bulk Density	4.2t/m3
Vein Bulk Density	3.5t/m3
Net Textured Sulphide Bulk Density	3.1t/m3
Waste Rock Bulk Density	2.8t/m3

The resulting open pit resource estimate can be seen in the following table:

**Table 5-39: Puimajuq Deposit Resource Estimate @ C\$40/tonne NSR cut-off**

<b>Indicated</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
<b>Massive</b>	75,889	3.24	4.80	0.12	0.15	1.77	3.70	\$815
<b>Net</b>	133,293	0.73	1.55	0.03	0.06	0.43	1.79	\$209
<b>Total Indicated</b>	<b>209,182</b>	<b>1.64</b>	<b>2.73</b>	<b>0.06</b>	<b>0.09</b>	<b>0.92</b>	<b>2.48</b>	<b>\$429</b>

<b>Inferred</b>	<b>Tonnes</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>NSR (\$/t)</b>
<b>Massive</b>	5,992	3.70	2.83	0.14	0.09	1.56	2.28	\$750
<b>Net</b>	5,736	0.91	3.64	0.04	0.18	0.80	2.97	\$376
<b>Total Inferred</b>	<b>11,728</b>	<b>2.34</b>	<b>3.22</b>	<b>0.09</b>	<b>0.13</b>	<b>1.18</b>	<b>2.62</b>	<b>\$567</b>

- (1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- (2) The quantity and grade reported in this inferred resource estimation are conceptual in nature and there has been insufficient exploration to define an indicated mineral resource on the property and it is uncertain if further exploration will result in discovery of an indicated or measured mineral resource on the property

It should be noted that the mineral resources in this estimate were calculated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council December 11, 2005.

#### 5.6.6.13 CONFIRMATION OF ESTIMATE

As a test of the reasonableness of the estimate, the block model was queried at a 0.01 % Ni cut off grade with blocks in all classifications summed and their grades weight averaged. This average is the average grade of all blocks within the mineralized domains. The values of the interpolated grades for the block model were compared to the length weighted average capped assay grades and average grade of composites of all samples from within the domain. The results are presented below:

**Table 5-40: Puimajuq Deposit Comparison of Weighted Average Grade of Capped Assays and Composites with Total Block Model Average Grade**

<b>Category</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Co (%)</b>	<b>Au (g/t)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>
Capped Assays	1.37	2.42	0.05	0.09	0.83	2.42
Composites	1.37	2.42	0.05	0.09	0.82	2.41
Block Model	1.24	2.09	0.05	0.08	0.67	2.06



The comparison above shows the average grade of all of the Ni, Cu, Co, Au, Pt and Pd blocks in each domain to be somewhat lower than the weighted average of all capped assays and composites used for grade estimation. This effect resulted from the clustering of some of the data used for grade interpolation. The block model grades reflect a more representative three dimensional grade distribution than the capped assays and composites.

In addition, a volumetric comparison was performed with the block volume of the model vs. the geometric calculated volume of the domain solids.

**Net Textured Sulphide Domain**

Block Model Volume	73,474 m3
Geometric Domain Volume	73,614 m3
Difference	0.19%

## **6.0 GEOLOGICAL SETTING**

### **6.1 REGIONAL GEOLOGY**

The Cape Smith Belt in which all of the deposits of the Nunavik Nickel Project lie, is an interpreted foreland thrust-fold belt that constitutes the north-eastern extension of the Trans-Hudson Orogen, an early Proterozoic collision zone, which separates the Archean Superior Province from the Proterozoic Churchill Province (Hynes and Francis, 1982; Hoffman 1990). The Trans-Hudson Orogen includes the Thompson Nickel Belt of Manitoba and the New Quebec Orogen (Labrador Trough) on opposite sides of the Superior Province. The Cape Smith (Ungava) Belt extends for 375 kilometres in an east-west direction across the Ungava Peninsula of Nunavik. The greenschist facies foreland portion of the belt is divided into three structurally superimposed Proterozoic units, from south to north and oldest to youngest: Lamarche, Povungnituk and Chukotat Groups (Lamothe, 1994). The amphibolite grade hinterland is divided into four structurally superimposed Proterozoic units from south to north; Sparton, Parent, Perreault, and Watts Groups (Lamothe, 1994; St-Onge et al., 1992).

The tectono-stratigraphic elements of the belt record a rifting event 2.0-1.9 billion years (Ga) ago, with accumulation of sedimentary and volcanic units (Povungnituk and Chukotat Groups) on a north-facing continental margin. Subsequent closing of the rift during the Hudsonian Orogeny (*ca* 1.8 Ga), resulted in a complex interaction of thrusting, penetrative shearing, metamorphism and imbrication of the foreland thrust belt with the tectono-stratigraphic units of the hinterland (Lamothe, 1994; Lucas and St-Onge 1989; St-Onge and Lucas, 1990; St-Onge et al., 1992). After detailed geological mapping on the Expo Ungava Property in recent years, Mungall (2004) has queried the existence or structural necessity of the various thrust faults postulated by the earlier workers.

The Property is located within the central portion of the assemblage, near the suture separating the foreland from the hinterland domains. The North Domain is dominated by the mostly volcanic Watts Group, which has been interpreted as an Island-Arc accretionary complex. The South Domain includes the Lamarche, Povungnituk, and Chukotat Groups, which are collectively interpreted as an extensional sequence consisting mainly of basalts, sediments and ultramafic rocks grading into oceanic crust towards the north. The boundary between the North and South domains is marked by the regional scale Bergeron Fault, considered to be a subduction zone (Bergeron, 1957; Bergeron, 1959; Lamothe et al., 1983; Lamothe, 1986). The basin is interpreted to record a protracted regime of extension followed by sea-floor spreading and subsequent convergent tectonics marked by folding and thrusting.

### **6.2 LOCAL GEOLOGY**

The geology of all six deposits for which there are currently resource estimates is all essentially the same, though the morphology of each can be very different. It is believed that all deposits are part of the Expo Intrusive Suite, as detailed by Mungall, 2004. The dyke portions within which the deposits lie can be essentially horizontal to essentially vertical, and the proportions of massive to net-textured to disseminated sulphides can vary greatly. A detailed description of the Expo Intrusive Suite ("EIS") as per Mungall is presented below, and the geology of each deposit is detailed in individual sub-sections, accompanied by cross sections typical of each.

## Expo Intrusive Suite

An extensive, irregular body of ultramafic rocks, typically 500 metres wide in outcrop and termed the Expo Intrusive Suite (“EIS”) by Mungall (2004), characterizes the general Expo-Ungava Property area. The EIS “*forms a complex of overlapping gabbroic dikes, ultramafic replacement bodies, dunite pipes, and sill-like peridotite massifs ... in the area surrounding the Expo Ungava Deposit*”. The northern member or branch of the EIS, which contains the Expo Deposit extends for a distance of nearly 50 kilometres in an east-north-easterly direction and bifurcates several times, enclosing what appear to be large “horses” of host rock. There is an intimate association with a gabbro phase that, based on the mapping, becomes the dominant rock type along strike both to the north-east and the southwest. The southern member, with a west-north-westerly strike, has been traced for a distance of at least 10 kilometres and joins the northern branch toward the west before it splits again. The host rocks in the general Expo-Ungava area are predominantly meta-sediments. Both the northern and southern parts of the EIS can be conformable to the host rocks, as well as clearly cross-cut them, (see Figure 6.1).

### 6.2.1 ALLAMMAQ DEPOSIT GEOLOGY

The Allammaq Deposit is hosted by a discordant east-west striking subvertical ultramafic intrusion belonging to the Expo Intrusive Suite. Located some three kilometres to the west, the Mesamax Deposit is thought to be hosted by the same family of intrusions. Intercalated metabasaltic sheet flows and metasediment of the middle member of the Beuparlant Formation are hosts for the intrusion and its related mineralization. In the immediate vicinity of the deposit, the host rocks strike approximately 100° and dip gently at 20° to 30° to the north.

The overall form of the intrusion hosting the Allammaq Deposit is dyke-like. On the geology map and in surface magnetic maps it is distinctly linear and strikes at a low angle to the strike of the host rocks along the west limb of the syncline. As it passes through the hinge of the syncline it is deflected somewhat into a N-W strike before resuming its E-W strike on the east limb of the fold. It is important to note that along the west limb, the level of exposure of the dyke is essentially along a paleo-horizontal trend, whereas on the east limb it is a vertical section. In the west limb the dyke is expressed as a peridotite mass, sheathed in pyroxenite at its margins. The peridotite grades westward into pyroxenite, as the level of exposure gradually moves downward through the dyke. This is suggestive of a dyke formed with pyroxenite near its base and around its edges, and a core of peridotite with a lower limit approximately 100 metres above the base of the dyke. In the east limb there is a rapid transition from peridotite to pyroxenite and then to olivine melano-gabbro (‘‘hornblende gabbro’’).

At the deposit scale, diamond drilling reveals a much more complex structure than can be observed from the limited amount of outcrop available. There are at least three and possibly four phases of the intrusion, each of which may have been emplaced as completely distinct cooling units along the same zone of weakness that guided the first. See Figures 6.2, 6.3 and 6.4.

The most obvious intrusive unit is observed at surface as the peridotite mesa that gives its name to the Mesamax Deposit (Allammaq being the name for the deposit found along the eastern extension of the Mesamax Main grid). Where this unit has been drilled directly on top of the mesa it is observed to be only a few tens of metres thick, and in the field it can be seen to be surrounded by a sub-horizontal fault that offsets it a few tens of metres from the rest of the dyke. This fault is interpreted as a minor thrust fault, perhaps forming a splay off a more important one that can be followed through the subcrop to the north of the mesa and would be several metres

above the present erosional level at the mesa itself. Where this unit was drilled on section 2400E in 2002 (MX-02-06), it was found to be composed of peridotite and pyroxenite through a vertical extent of more than 150 metres, terminating downward against metabasalt.

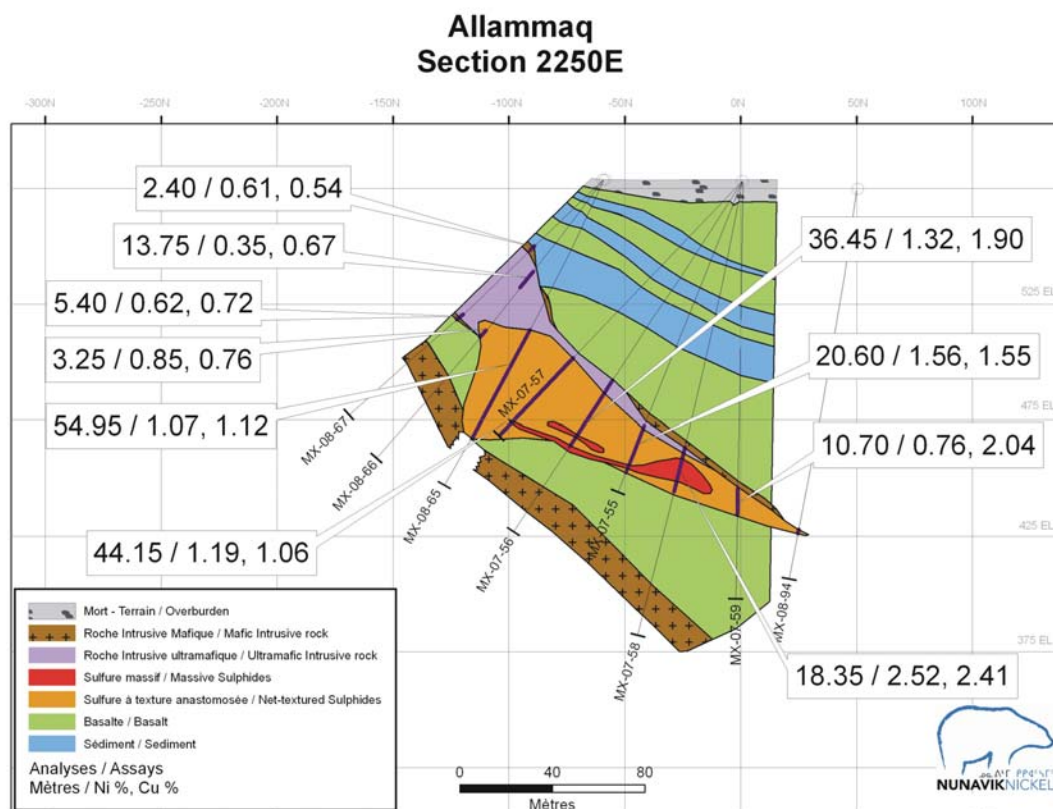
Another intrusive unit is a dyke of hornblende gabbro that was intersected in hole MX-07-42. This dyke was intersected at depth over approximately 20 metres. Contact relations between this unit and the others have not been observed. It may represent an extension of the gabbro dyke that is inferred to underlie the peridotite and has been mapped out toward the east as a possible 'keel' to the mineralized intrusion or it may be a separate narrow dyke. Such bodies are commonly observed near mineralized intrusions in the Nunavik Nickel Project area and although they are considered to be co-magmatic with the mineralization, they do not themselves appear to have any economic potential at the level of exposure at which they manifest themselves as gabbro.

There are two ultramafic intrusive units that carry significant quantities of sulphide mineralization. The upper consists of a trough-shaped mass of pyroxenite which grades upward and inward into peridotite. This body has a clearly defined base north of and at a higher elevation than the massive peridotite and pyroxenite intersected by hole MX-02-06 as described above. It therefore appears to represent a separate body, although it may link to the southern body at a slightly higher structural level than the current level of exposure. Sulphide mineralization is expressed as disseminated to net-textured pyroxenite near the base of the trough, and locally there are narrow vein-like masses of massive sulphide near the basal contact. Contact relations in drill core include "hot" contacts with partially melted basalt and sediment as well as clearly chilled blebby pyroxenite contact facies.

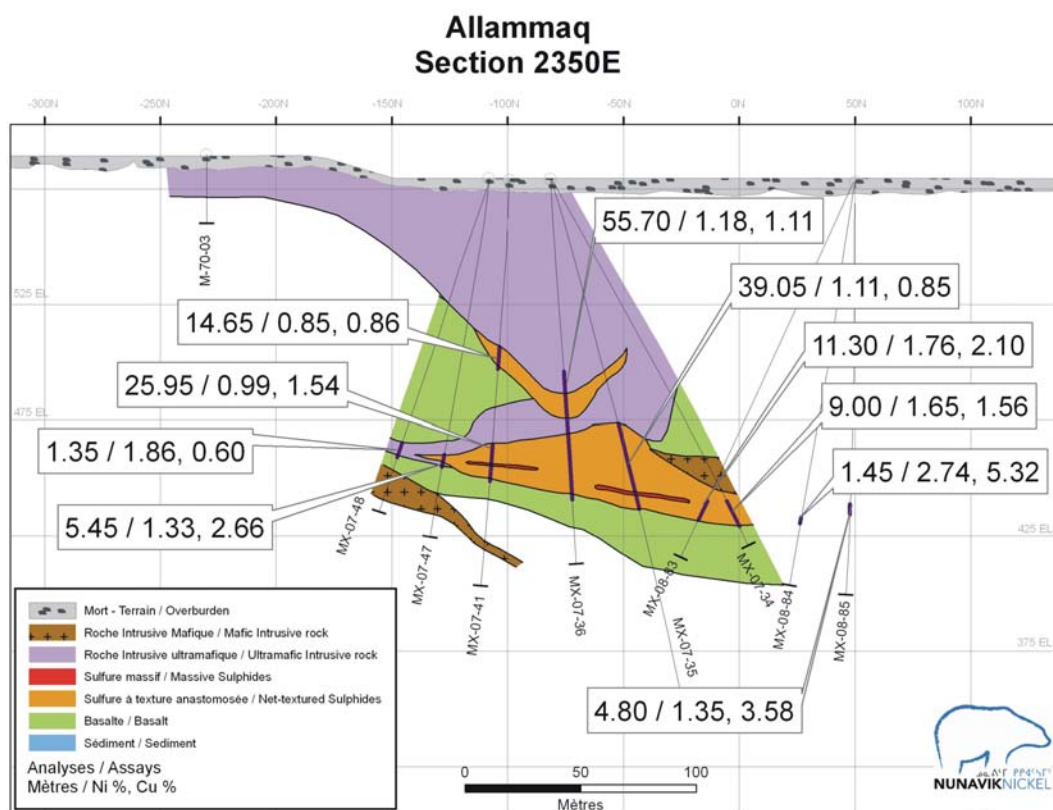
The upper mineralized ultramafic body locally cuts into the upper portion of the lower mineralized body, and where it does so it forms a chilled margin against the coarse-grained pyroxenite of the lower body. In other places the two ultramafic bodies are separated by a screen of metabasalt and metasediment that show clear signs of extensive contact metamorphism. Most of the upper mineralized ultramafic body is barren; significant mineralization is restricted to a relatively narrow zone near its base (Upper Zone).

In sharp contrast, the lower ultramafic intrusion is almost entirely composed of mineralization (Allammaq Deposit). It generally has a sharp chilled pyroxenitic margin above and below, containing blebby and disseminated sulphides, but this margin grades over less than a metre into net-textured sulphide hosted by pyroxenite that fills almost the entire intrusion in some sections. Accompanying the net-textured sulphides is a considerable amount of massive sulphide, which forms intersections up to 10 metres thick and locally forms veins that brecciate the chilled margin and penetrate into the host rocks. Locally the upper margin of the lower ultramafic body is marked by a gradation transition from pyroxenite through gabbro to contact-metamorphosed basalt, indicating that a considerable amount of ultramafic liquid may have passed through this small body before it solidified.



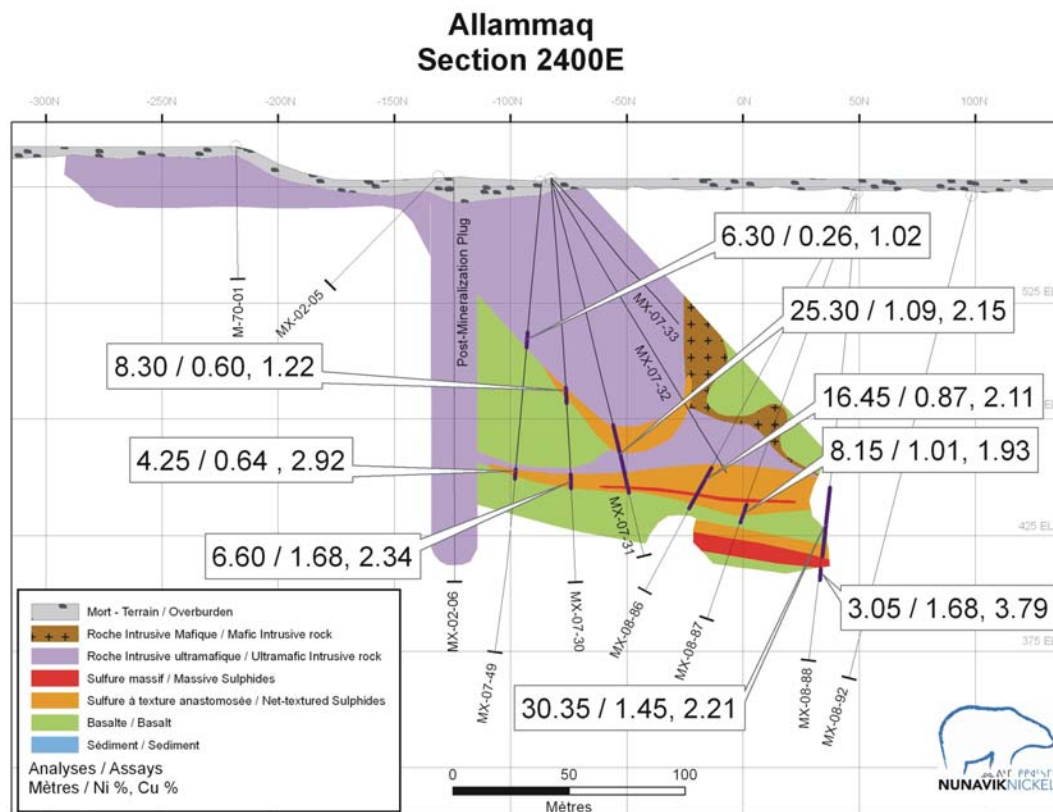


**Figure 6.2: Allammaq Deposit Cross Section 2250E**



**Figure 6.3: Allammaq Deposit Cross Section 2350E**



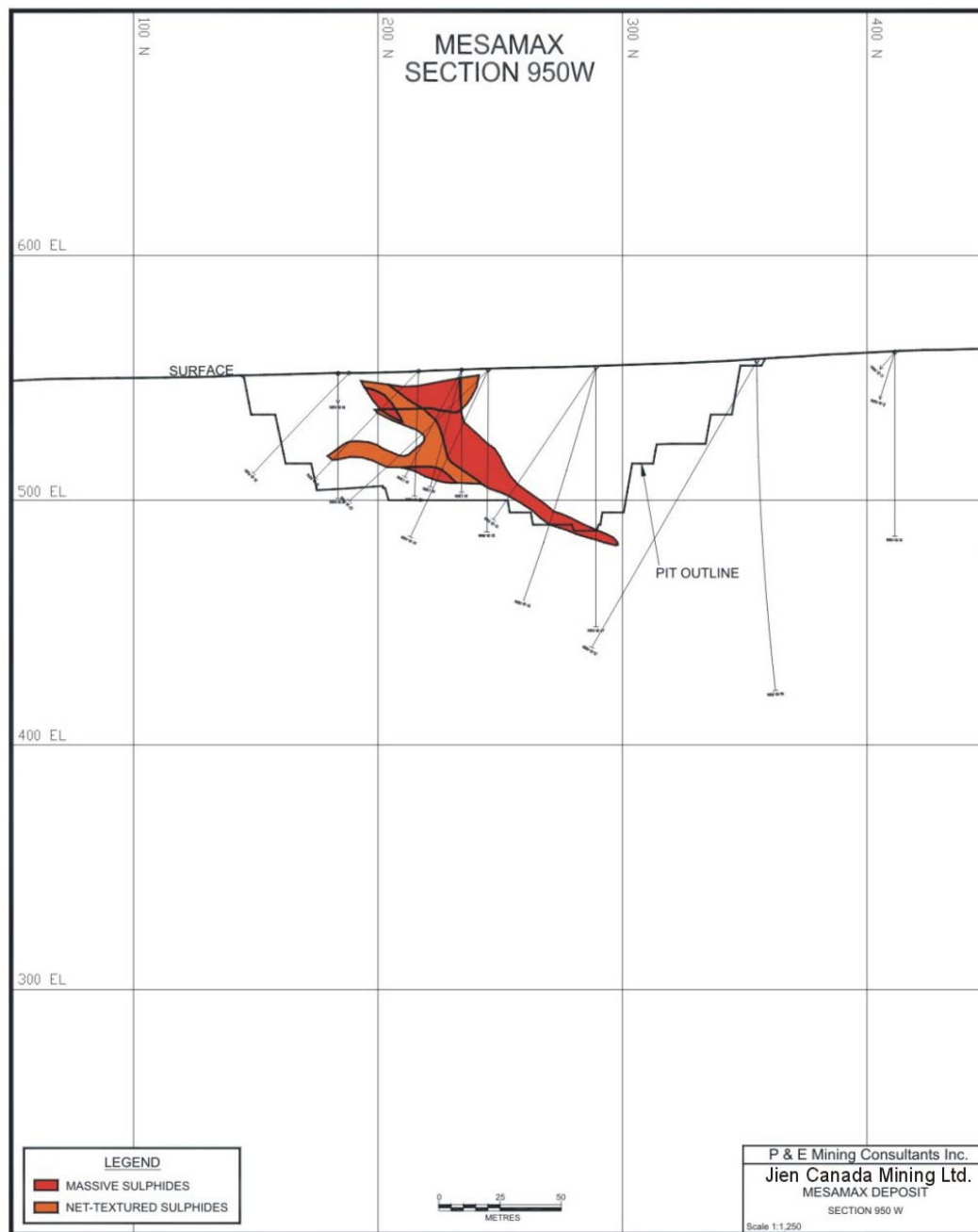


**Figure 6.4: Allammaq Deposit Cross Section 2400E**

## 6.2.2 MESAMAX DEPOSIT GEOLOGY

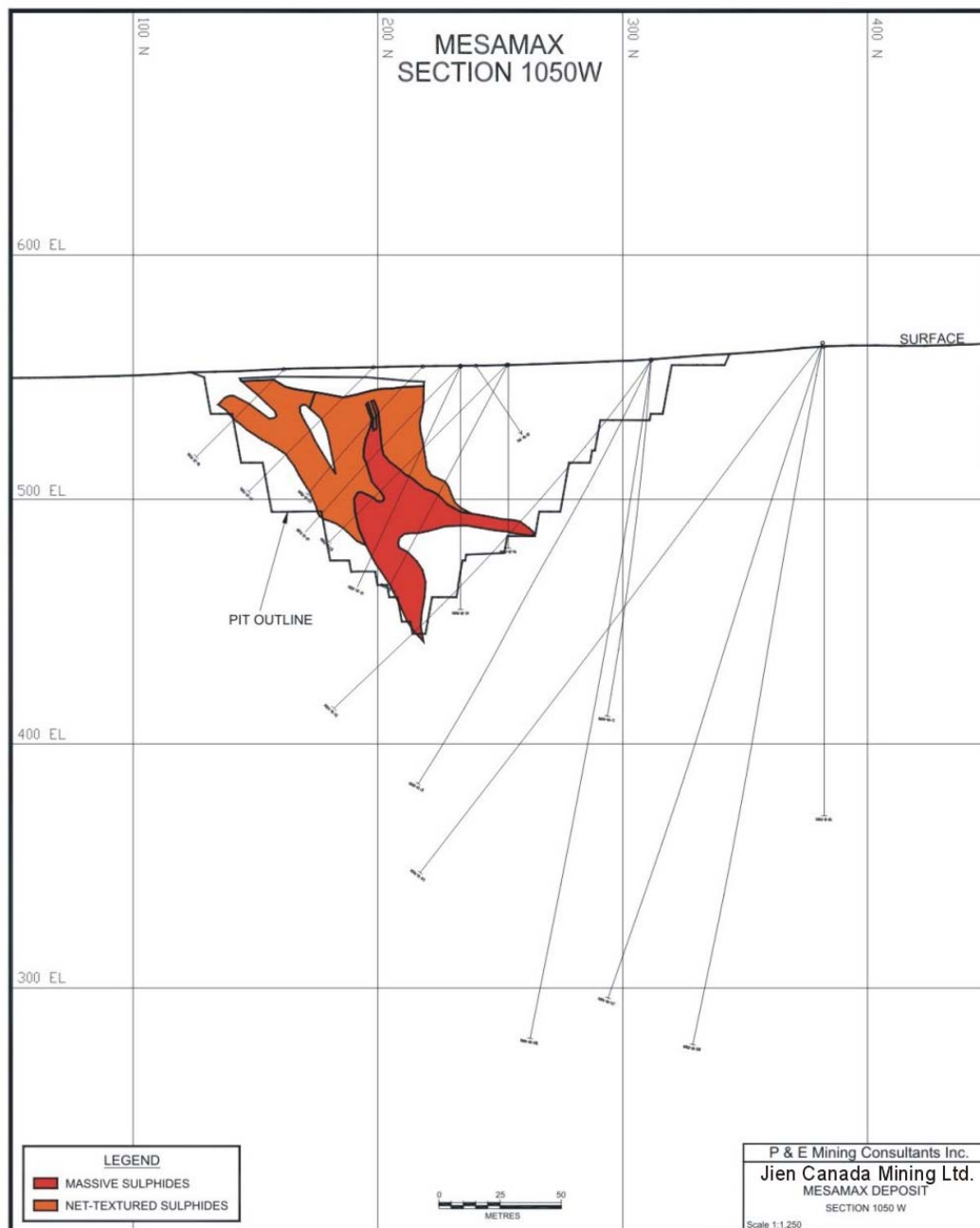
The Mesamax Deposit is hosted by a discordant east-west striking subvertical ultramafic intrusion belonging to the Expo Intrusive Suite.

This deposit dips at approximately 45° and butts up against a fault zone. The host rock is pyroxenite which is surrounded by unmineralized peridotite and slivers of sediment and mafic tuff. The massive sulphide component comprises approximately one third to one half of the mineralization, while disseminated sulphides account for the remainder. See Figures 6.5 and 6.6.



**Figure 6.5: Mesamax Deposit Cross Section 950W**

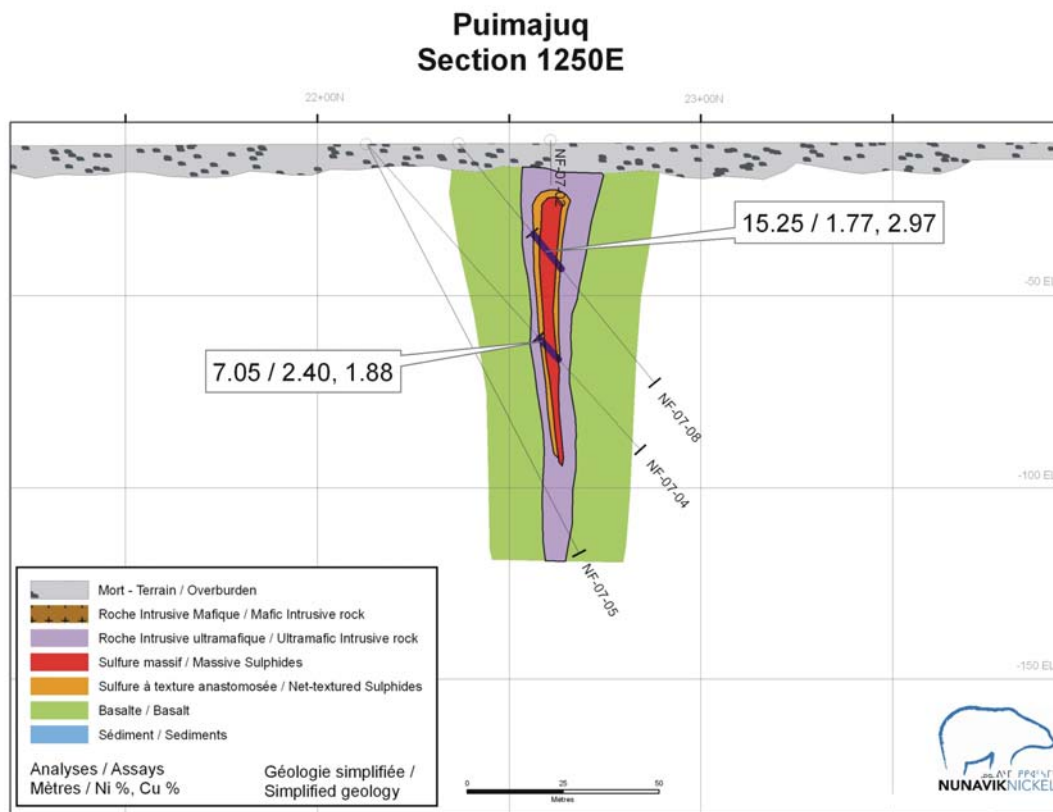




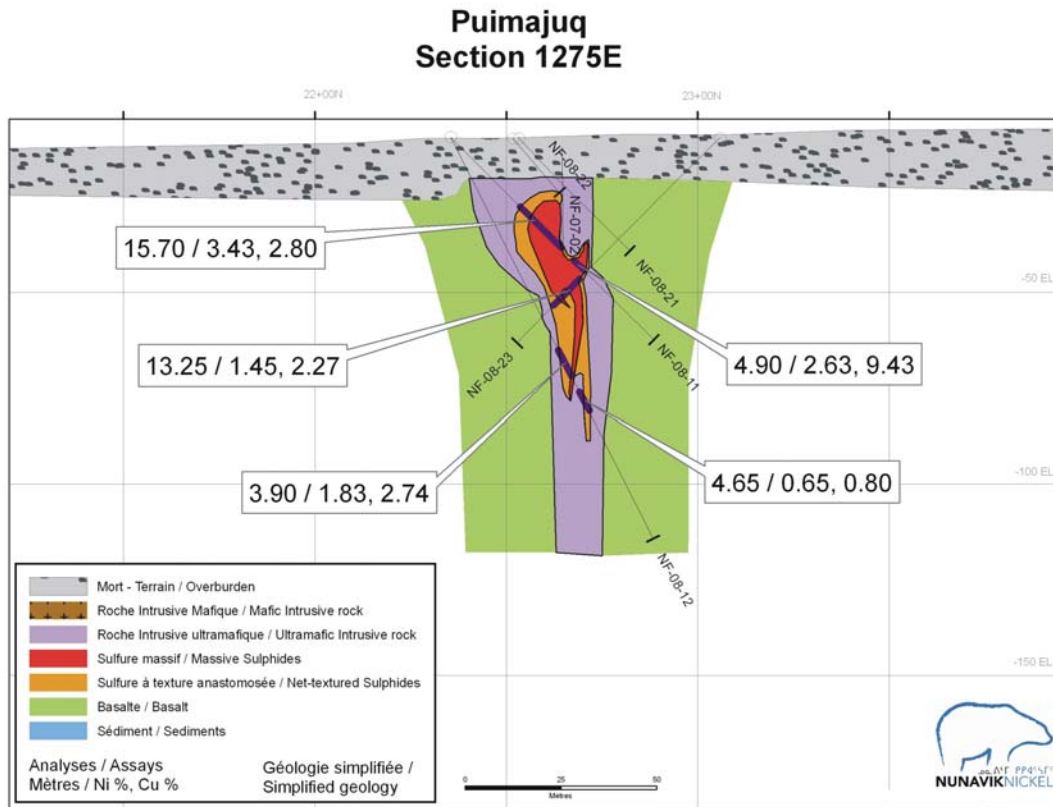
**Figure 6.6: Mesamax Deposit Cross Section 1050W**

### **6.2.3 PUIMAJUQ DEPOSIT GEOLOGY**

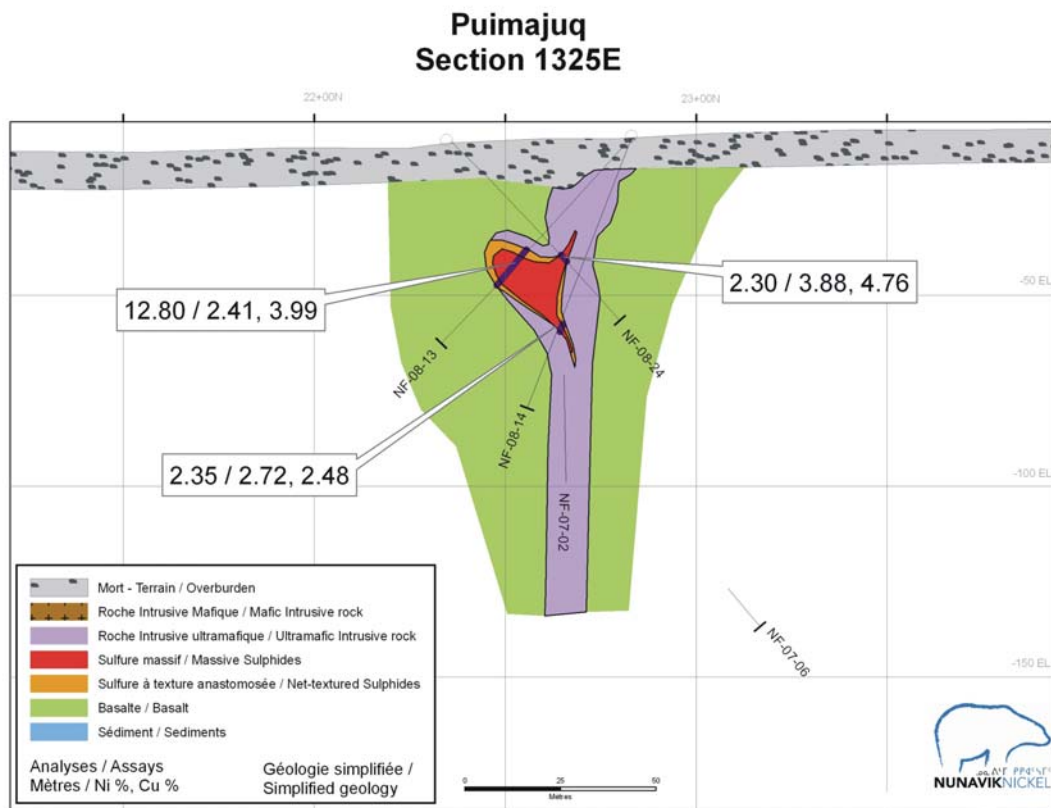
The Puimajuq Deposit is hosted within a near-vertically dipping pyroxenite dyke having a more or less regular shape. The mineralization is generally tabular and vertically dipping but certain drillholes indicate an irregular bulbous thickening close to surface on at least three 25 metre spaced sections. Compared to other deposits on the Property, the massive sulphide component makes up a larger percentage of the deposit compared to the net-textured component. The grades of the Puimajuq Deposit are higher than all the other deposits on the Property. See Figures 6.7 to 6.9.



**Figure 6.7: Puimajuq Deposit Cross Section 1250E**



**Figure 6.8: Puimajuq Deposit Cross Section 1275E**



**Figure 6.9: Puimajuq Deposit Cross Section 1325E**

## 6.2.4 MEQUILLON DEPOSIT GEOLOGY

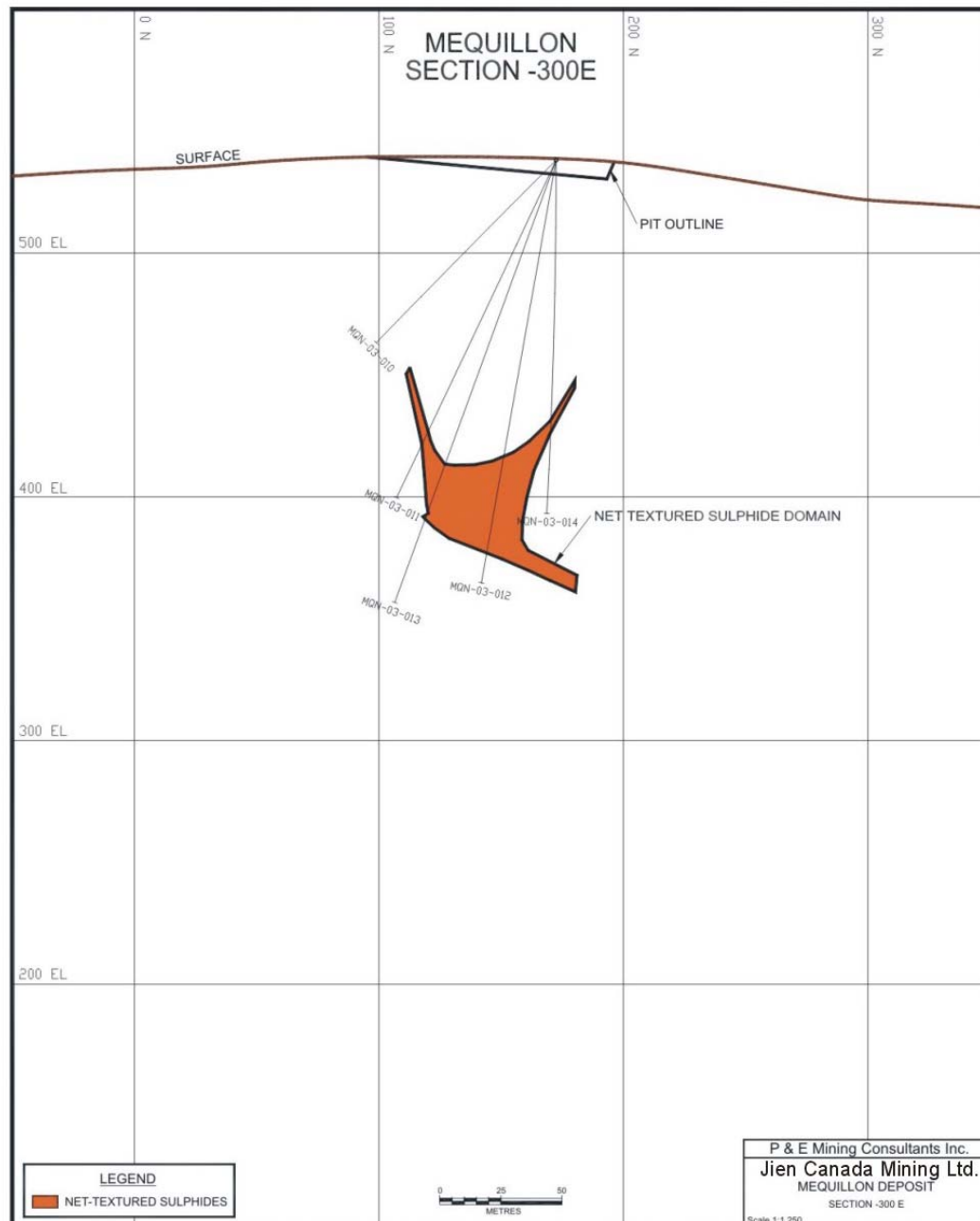
The geology of the general Mequillon area and the immediate Mequillon Deposit is based on surface geological mapping by James Mungall from 2003 to 2006, the interpretation of geophysical information in areas of poor outcrop, and on the cross sectional interpretation of drill results. The following description of the deposit is taken directly from Mungall, 2003.

The Mequillon Deposit occurs in an ultramafic dike having a very regular form over a strike length of approximately one kilometre as it plunges from its basal exposure in the west to a depth of > 200 metres in the east. The dike has a peridotite core, grading through pyroxenite to gabbro on the vertical margins. At the base, the peridotite grades to pyroxenite which persists right to the basal contact with basalt or graphitic schist. The gabbroic upper contacts are gradational in many cases. A pyroxene hornfels or hornblende hornfels thermal aureole grades into a gabbroic hybrid or rheomorphic facies at the contact with intrusive gabbro. There is rarely a chilled margin in these cases, but the edge of the intrusion is gabbroic. The gabbro in the margins contains sparsely disseminated sulfides sometimes showing network texture or blebby sulfides with variable tenor but usually a fair amount of chalcopyrite. The gabbroic margin typically grades inwards through barren pyroxenite and into very low-grade disseminated sulphide-bearing peridotite. In the lower margins the gabbro runs quickly into pyroxenite with disseminated to net-textured sulfides. The hornfels in the base tends to be thinner, possibly due to thermal erosion and assimilation of the contact and consequent telescoping of the thermal aureole, but this may in part be an artifact of the high angle at which basal contacts are intersected.

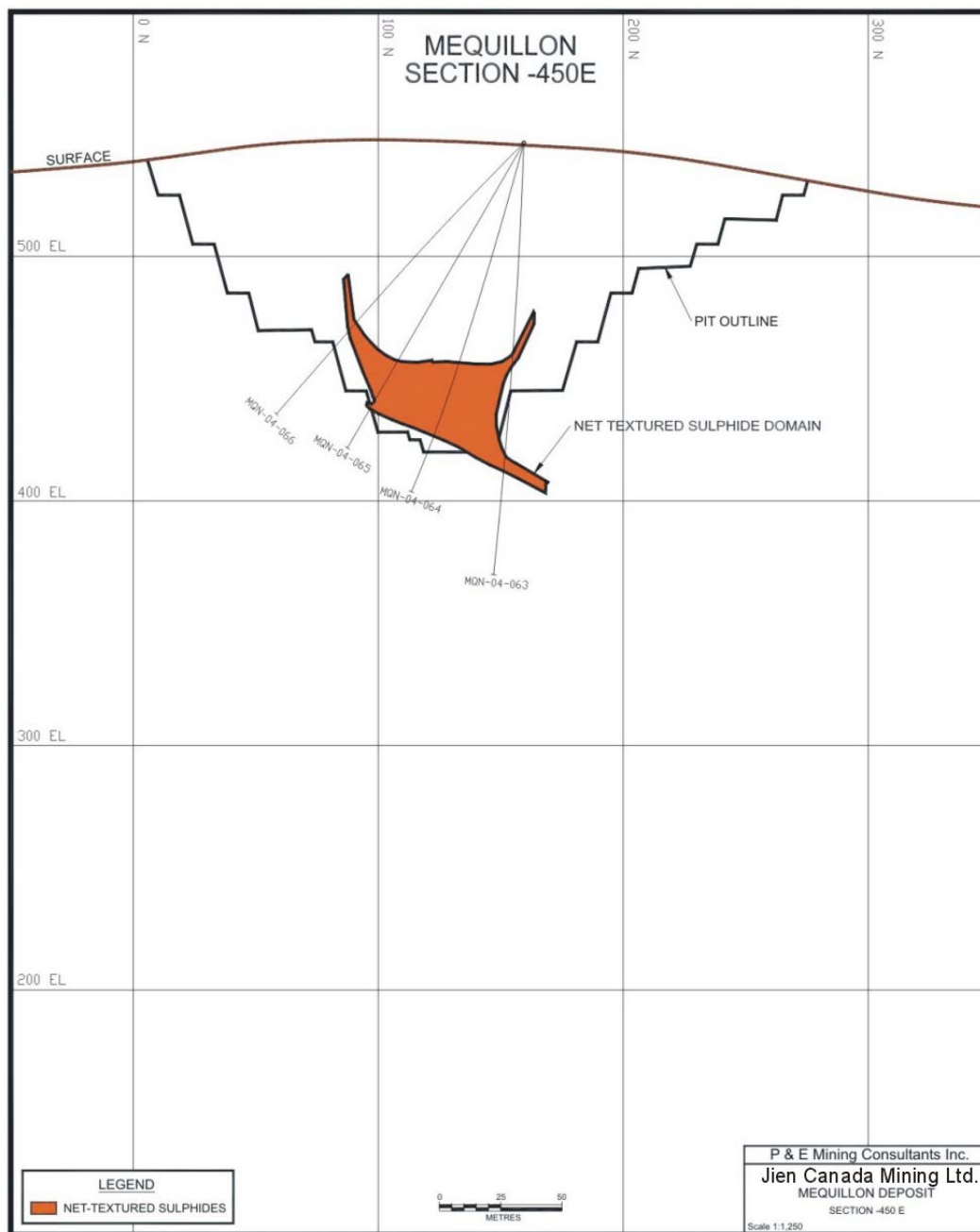
The lower pyroxenite generally has a blebby contact facies which grades rapidly upward into net-textured sulphide with semi-massive portions and locally ragged massive sulphide veins or large blebs. In some instances the pyrrhotite in the net-textured rock has recrystallized to form single oikocrysts up to 6 centimetres in diameter surrounding millimetre-scale pseudomorphs of the pyroxene and olivine primocrysts. The amount of sulphide in the net-textured pyroxenite is steady for about 25 to 20 metres but then drops to a rather lower value, accompanied by the appearance of roughly 1 centimetre patches of sulphide-free pyroxenite giving the rock a distinctly spotty or “leopard” texture. Above the net-textured pyroxenite-hosted sulphide is a broad zone of pyroxenite grading into peridotite containing disseminated sulphide, locally with a network texture but usually not well connected. This unit contains abundant clasts of finer grained peridotite, fine-grained dunite, and rare coarse-grained pyroxenite, all of which generally do not contain sulphide and which therefore substantially dilute the grade. In places this unit forms a clast-supported igneous breccia, but in others the clasts are rare. The generally clast-supported texture persists over about 160 metres, with some breaks into quiet domains of peridotite with disseminated sulphide and rare clasts.

Projecting from the very base of the intrusion there is a sheet like body of moderately to strongly deformed, net-textured pyroxenite and massive chalcopyrite-rich sulphide, showing durchbewegung texture that dips gently to the northwest. The thickness of pyroxenite can drop to as little as a few tens of centimetres, and the sulphide can persist beyond the furthest extent of the pyroxenite. The cataclastic textures in the sulphide and the presence of a locally strong foliation in the associated pyroxenite indicate that this tail-like body has been deformed and the massive sulphide has been tectonically transported along the fault. The tail-like body may have originated as a vertical dike but has been transposed into the plane of a fault surface that is coincident with a zone of tuffs, volcanic breccia, and graphitic metasediment. The coincidence of

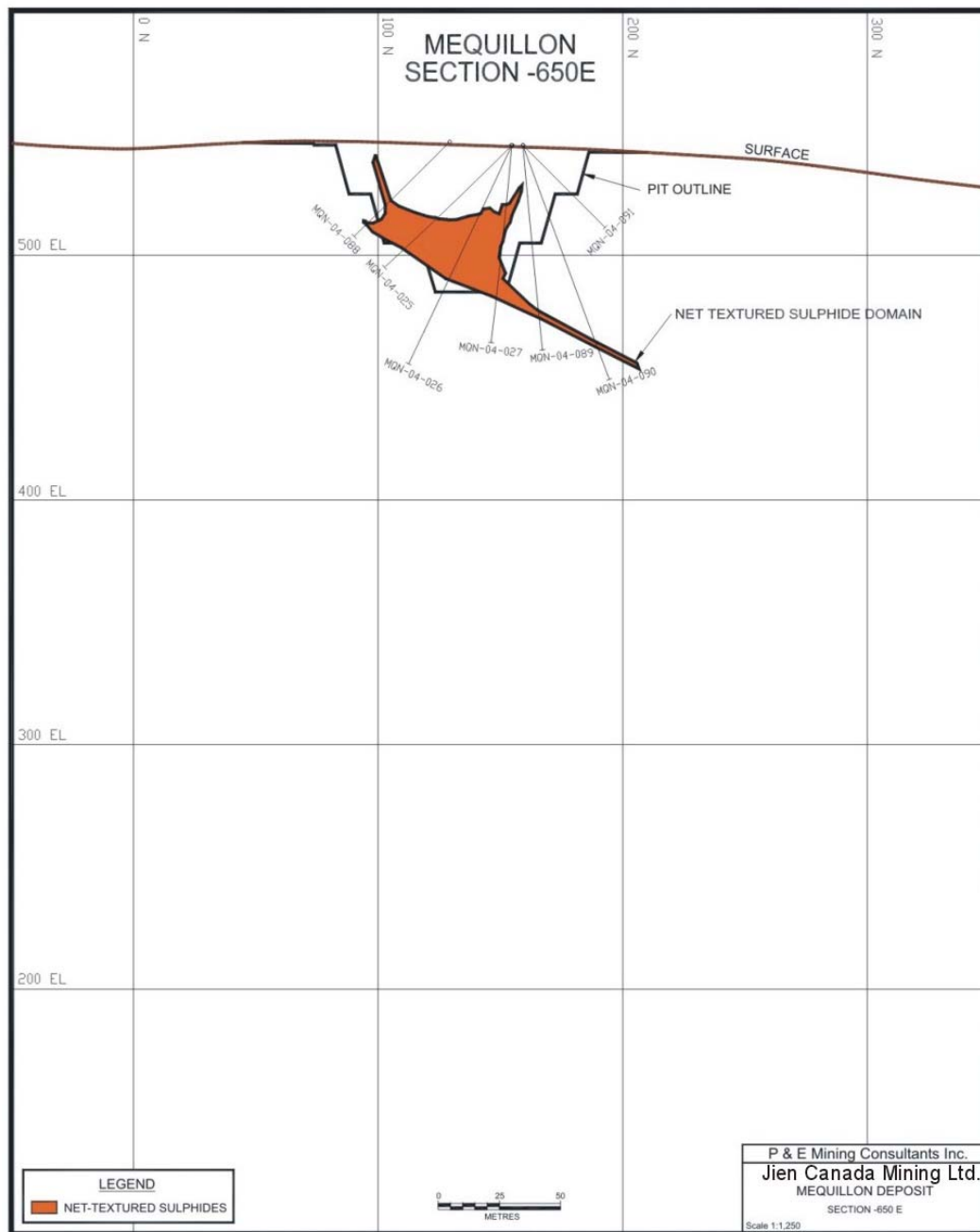
the tail of the dike with the deformed sediments and breccias persists all the way to the surface, where the discovery showing at the western termination of the dike outcrop is located in a narrow valley that is bordered or floored by the same lithologies. Although the deformation textures in this tail of the deposit can be impressive, it is likely that this fault served only to accommodate flexural slip during folding of the enclosing basalt package, since it does not demonstrably offset the stratigraphy in any way at the map scale. See Figures 6.10, 6.11 and 6.12.



**Figure 6.10: Mequillon Deposit Cross Section -300E**



**Figure 6.11: Mequillon Deposit Cross Section -450E**



**Figure 6.12: Mequillon Deposit Cross Section -650E**

## 6.2.5 EXPO DEPOSIT GEOLOGY

The geology of the general Expo area and the immediate Expo deposit is based on surface geological mapping by James Mungall from 2003 to 2006, the interpretation of geophysical information in areas of poor outcrop, and, on the deposit scale on the cross sectional interpretation of drill results.

The local geology is dominated by the northern branch of the EIS, with the Expo Deposit hosted by the northern split of the branch to the north of a large inclusion of sediments. This northern split averages about 200 metres wide on surface, and is trough-shaped in cross section with the southern contact usually steeper (sometimes near-vertical) compared to the shallower, northern

contact. The essentially flat or somewhat undulating bottom of the central part of the trough is usually at a depth of about 100 metres.

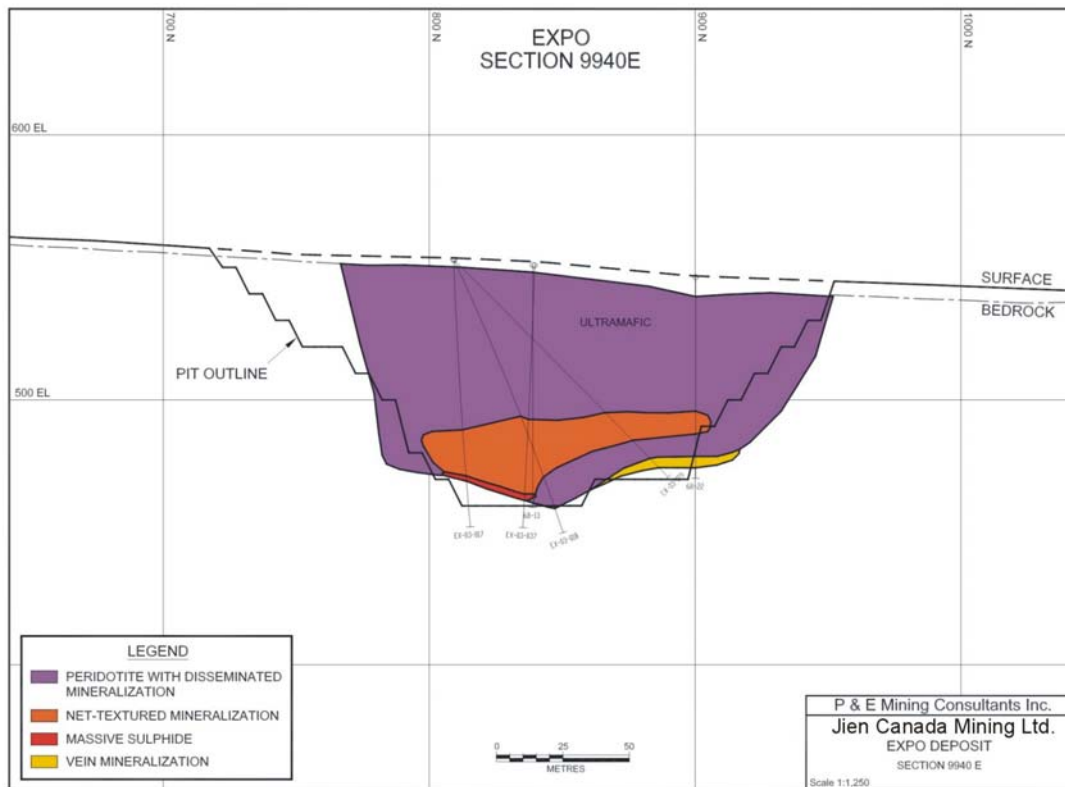
There are indications of multiple mineralized ultramafic units at Expo. In addition to the main body described in the preceding paragraph, there is a near-vertical phase below its eastern part (starting on section 10570 E) that may be a feeder to the complex and has been traced by a few drill holes to a depth of greater than 300 metres. It is also in this area that a lower repetition or branch of mineralized peridotite has been encountered on section 10540 E. Due to insufficient drilling, the feeder and the lower branch are presently poorly constrained in their geometry. The occurrence of massive sulphides in more than one “stratigraphic” position may also be due to multiple ultramafic events.

The Expo peridotite has adjusted to greenschist metamorphic conditions during subsequent metamorphism. *“Peridotite is almost invariably completely serpentinized, to form a compact rock highly resistant to weathering that is deep maroon to brown. Peridotite presents an extremely rough, hackly aspect on weathered surfaces but a smooth dark green to black fresh surface composed of a fine intergrowth of serpentine and chlorite, dotted with grey tremolite patches. Careful inspection commonly reveals the presence of intercumulus or poikilitic primary hornblende and traces of sulphides. The peridotite is generally strongly magnetic due to the presence of abundant microscopic magnetite crystals formed during serpentinization of iron-bearing olivine”*, (Mungall, 2004). The Expo peridotite is characterized by very high Cr (2500 ppm) and Mg (15%) values, compared to the host rocks at both the Mesamax and the Mequillon Deposits.

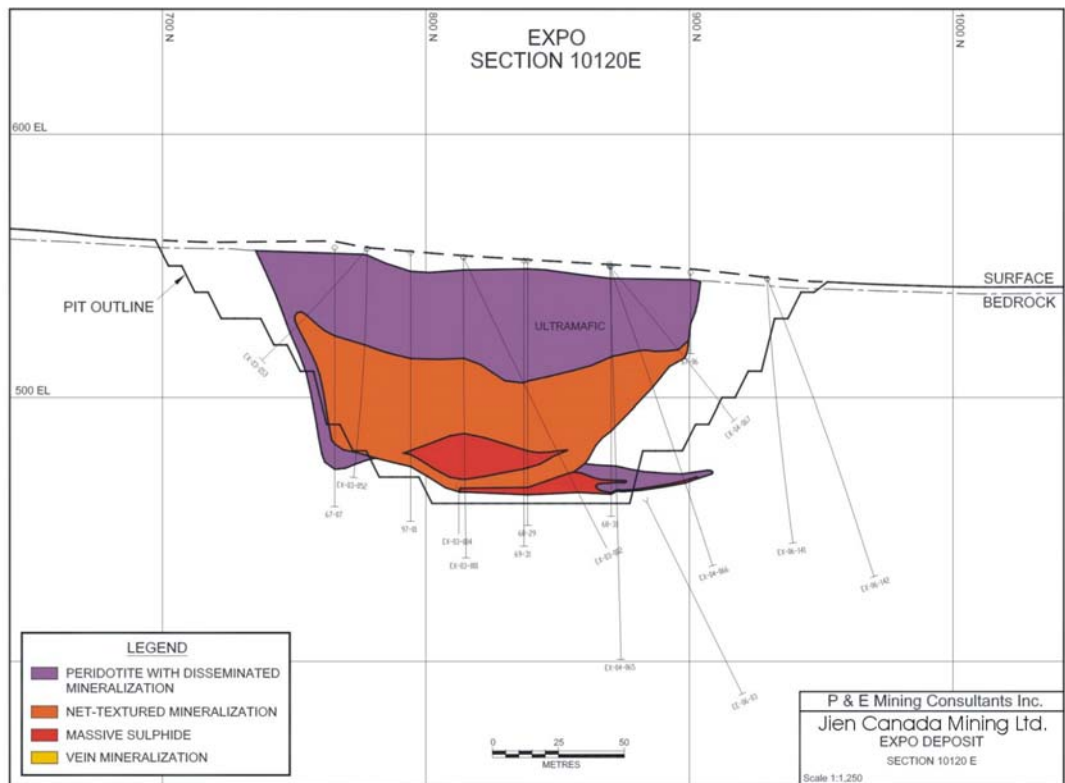
Figures 6.13 and 6.14 and 6.15 provide detailed Gemcom cross-sections at three different locations along the trough. The mineralized trough structure shows considerable complexity. At Section 10540 E (not shown) the trough actually comprises at least three separate intrusions separated by clearly recognizable screens of meta-sediment or well-developed internal chilled margins, and is underlain by at least five more separate sills, all of which bear some amount of sulphide mineralization, including two massive sulphide-bearing sills under station 10050 N. The exact forms of the intrusions cannot be determined from the available drill core information, because many of these bodies have sizes similar to the spacing between drill holes. Figures 6.13 to 6.15 should therefore be taken as a well-constrained illustration of the structural style rather than a faithful representation of reality. A large dike-like body rises up from beneath the main trough and appears to join at between Sections 10540 and 10360 E. This structure may be the feeder for the entire system, but there are not enough data to demonstrate this. Similarly, there appears to be an overall decrease in the number of smaller intrusions under the main trough as one moves westward from Section 10540 E, but this may largely be an artifact of the paucity of deep borehole data in the westerly sections.

The subhorizontal blade-shaped dikes below the main trough extend for considerable strike lengths along its base and may have been fed massive sulphide, but there is no direct evidence for this.

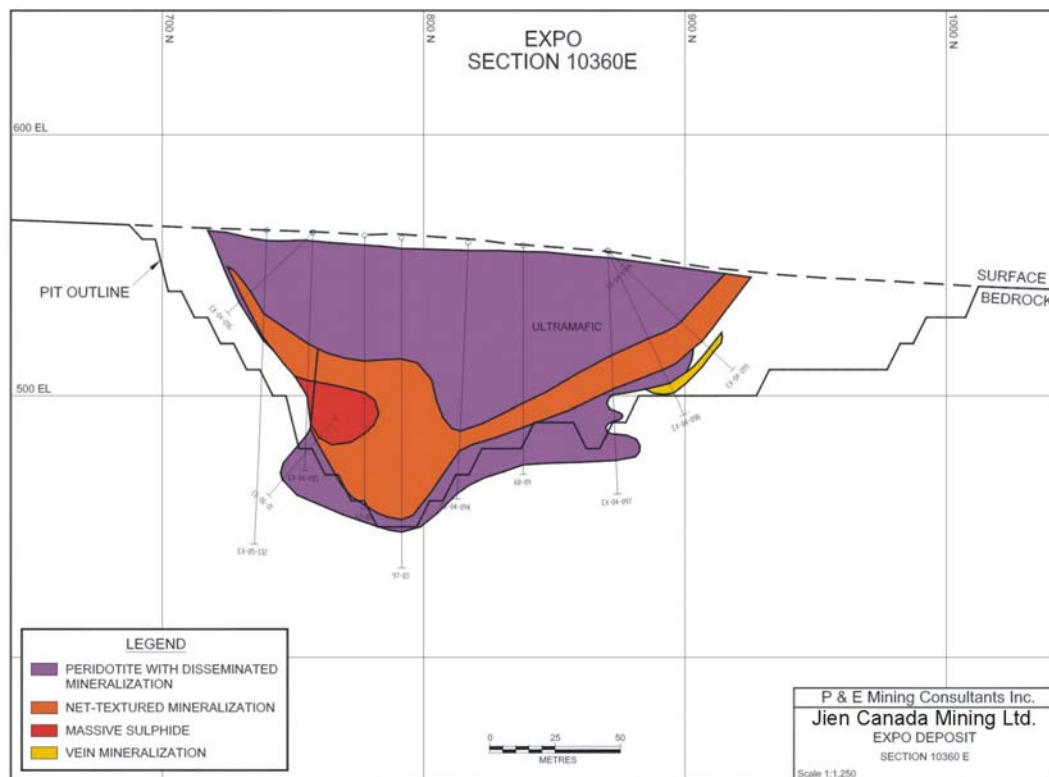




**Figure 6.13: Expo Deposit Cross Section 9940 E (after Mungall, 2006)**



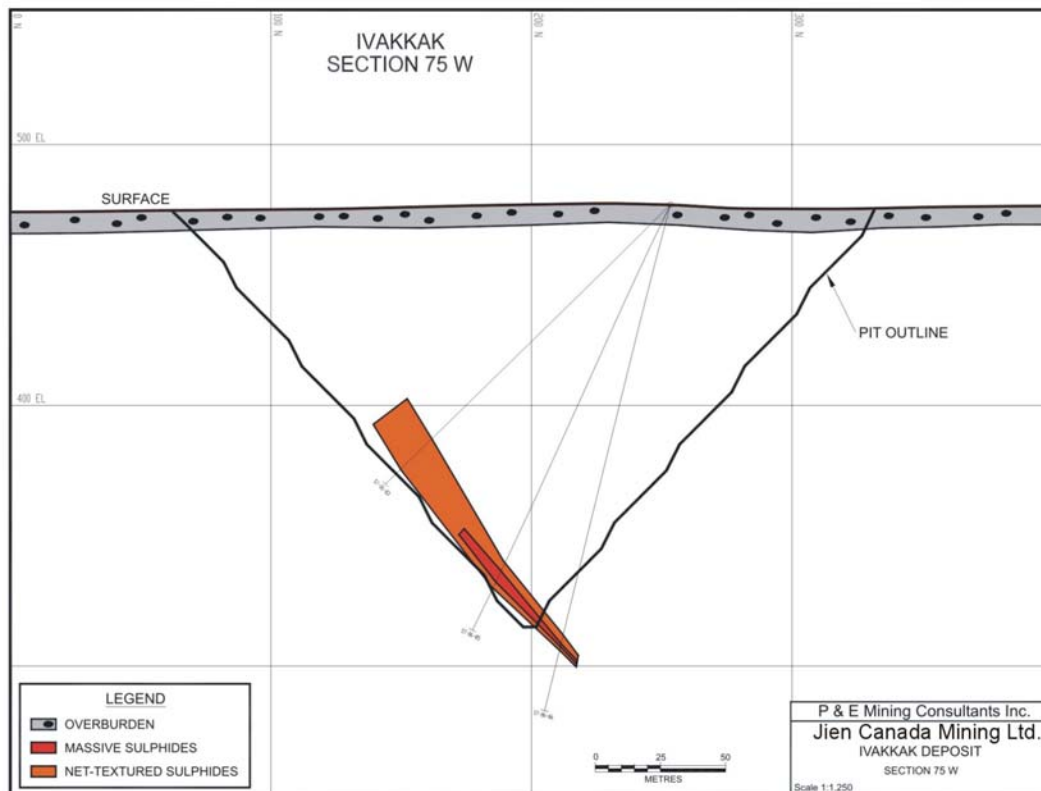
**Figure 6.14: Expo Deposit Cross Section 10120E (after Mungall, 2006)**



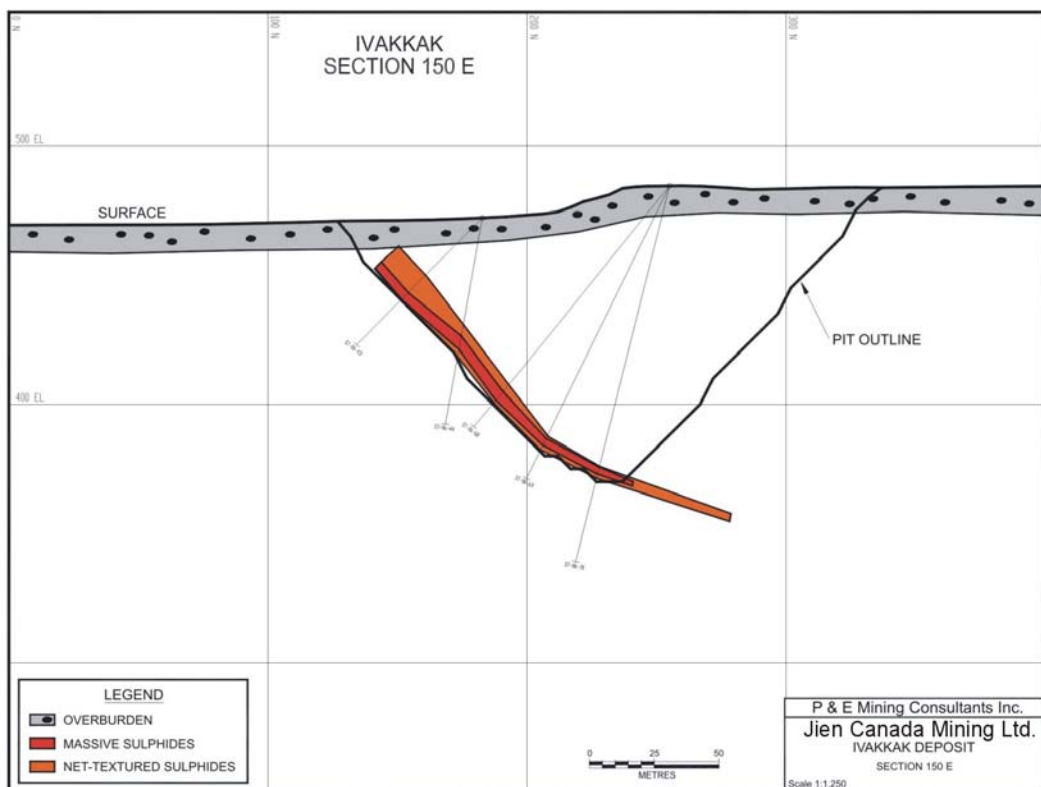
**Figure 6.15: Expo Deposit Cross Section 10360E** (after Mungall, 2006)

## 6.2.6 IVAKKAK DEPOSIT GEOLOGY

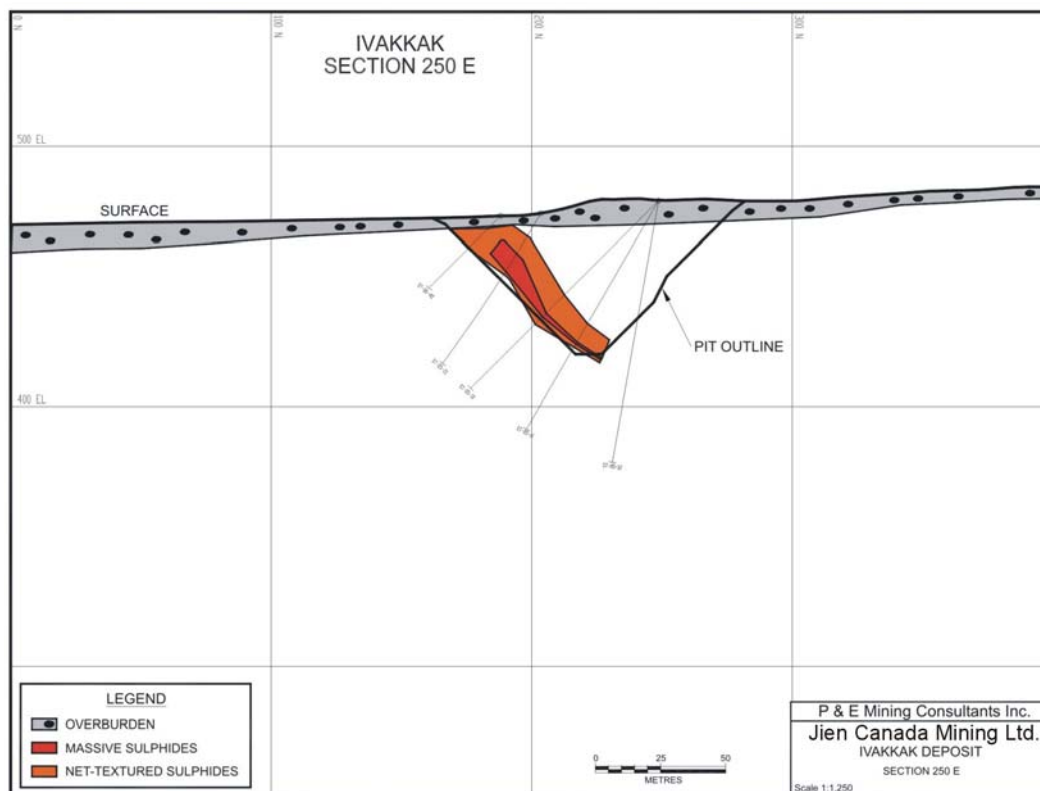
The Ivakkak Deposit is located approximately 20 kilometres west of the Mequillon Deposit and is currently the western-most deposit for which there is a resource estimate. The sulphide mineralization at Ivakkak is hosted in a relatively narrow sill or dyke of peridotite-pyroxenite-gabbro composition intruding mafic volcanic rocks and/or a mixed sequence of mafic volcanic and sedimentary rocks, (see Figures 6.16, 6.17 and 6.18). The mineralization consists of massive, net-textured and disseminated sulphides. Massive sulphides are generally constituted of more than 90% sulphides; the net-textured type contains perhaps 25 to 75% sulphides while the disseminated mineralization contains traces to 25% sulphides. The massive and net-textured types carry sufficiently high base and precious metal concentrations to be of economic interest. The net textured and disseminated types of mineralization are generally of greater volume and extent than the massive sulphides.



**Figure 6.16: Ivakkak Deposit Cross Section 75W**



**Figure 6.17: Ivakkak Deposit Cross Section 150E**



**Figure 6.18: Ivakkak Deposit Cross Section 250E**

## **7.0 DEPOSIT TYPES**

### **7.1 MAGMATIC Ni-Cu-PGE TYPE**

The mineral occurrences along the South Trend as well as those of the Raglan Trend to the north belong to the class of magmatic sulphide deposits. The descriptions that follow are cited from the *Geology of Canadian Mineral Deposit Types 1995*, edited by Eckstrand, Sinclair and Thorpe.

A broad group of deposits containing nickel-copper-platinum group elements (PGE) occur as sulphur segregations associated with a variety of mafic and ultramafic magmatic rocks. Among such deposits, two main subtypes are distinguishable. In the first, the Ni-Cu sulphide type, nickel and copper are economic commodities contained in sulphide-rich ores that are associated with differentiated mafic sills and stocks and ultramafic volcanic (komatiitic) volcanic flows and sills. The second type, magmatic PGE is mined principally for PGE's which are associated with sparsely dispersed sulphides in medium to large, typically layered mafic to ultramafic intrusions.

Nickel-copper sulphide deposits are sulphide concentrations that occur in certain mafic and/or ultramafic intrusions or volcanic flows. Nickel is the main economic commodity; copper may be either a co-product or by-product, and platinum group elements (PGEs) are usual by-products. Other commodities recovered in some cases include gold, silver, cobalt, sulphur, selenium, and tellurium. These metals are associated with sulphides, which generally make up more than 10% of the ore.

As a group, magmatic nickel-copper sulphide deposits have accounted for most of the world's past and current production of nickel. International reserves of magmatic sulphide nickel remain large, though they are exceeded by those of lateritic nickel deposits, the only other significant source of nickel.

Most nickel sulphide deposits consist of several closely adjacent, but discrete orebodies, therefore the definition of a "deposit" is rather arbitrary. Individual orebodies may contain from a few hundred thousand to a few million tonnes of ore, and in some instances tens of millions of tonnes of ore. Mining grades are generally about 1 to 3% Ni, but may be higher in some small deposits. Noteworthy exceptions are some of the ore zones in the Talnakh camp of the Noril'sk area, where substantial orebodies average several per cent Ni and greater than 20% Cu.

There are four subtypes of this deposit and all subtypes have some general similarities. For example, the host intrusions in all cases are either mafic or ultramafic in composition. In addition, most deposits occur as sulphide concentrations toward the base of their magmatic host bodies. Furthermore, all subtypes of nickel sulphide ores usually consist mainly of the simple sulphide assemblage pyrrhotite-pentlandite-chalcopyrite, either as massive sulphides, sulphide-matrix breccias, or disseminations of sulphides. Nickel-copper sulphide ores of any of the subtypes that have undergone tectonic remobilization have been converted to similar-appearing sulphide-matrix breccias. The subtypes differ significantly in their geological-tectonic settings and in the geometric form and style of differentiation of the host magmatic bodies. They differ also in that the magmatic hosts in most subtypes are intrusions, but in the komatiitic subtype most are volcanic flows. Furthermore the ores of the various subtypes show some differences in composition, most noticeably in their Ni:Cu ratios.

Although Eckstrand (1996) groups the Expo Ungava Deposit with those related to komatiitic flows and related intrusions, considerable evidence suggests that the deposits located along the South Trend are related to continental or continental margin intrusive suites. The fact that these deposits have nickel/copper ratios of approximately 0.8:1 and are universally endowed in PGE also contrasts with the standard komatiitic model.

According to Mungall (2007), the parent magma of the Paleoproterozoic Expo Intrusive Suite was a komatiitic basalt with a weakly LILE-depleted composition. Neither the basalts of the Povungnituk Group nor the intrusions of the Expo Intrusive Suite were emplaced in a rifting environment. The Povungnituk Group was emplaced onto a long-lived passive continental margin, followed at least 108M years later by the simultaneous intrusion of the sills and dykes that form the Expo Intrusive Suite and eruption of the lavas of the Raglan Formation. A very strong control on the intrusive style and differentiation of the Expo Intrusive Suite was exerted by its country rocks. Dr. Mungall has also drawn attention to a similar mineralized body sharing many of the characteristics of the Expo Intrusive Suite that is being mined at Jinchuan (Chai & Naldrett, 1992), which might have formed in much the same manner.

## 8.0 MINERALIZATION

Petrographic work by Walker (2004) identified pyrrhotite (FeS) as the main sulphide mineral, followed by pentlandite ([Fe, Ni], S) and chalcopyrite (CuFeS<sub>2</sub>). Pentlandite occurs generally as a separate mineral and only rarely as exsolution lamellae in pyrrhotite. It appears to be the main cobalt carrier. Magnetite, (Fe<sub>3</sub>O<sub>4</sub>) is rare to absent.

The results of more detailed mineralogical work at the Mesamax Deposit (Cabri, 2003) are pertinent to Mequillon, Expo, Allammaq, Ivakkak and Puimajuq. At Mesamax, accessory sulphides are galena (PbS), sphalerite (ZnS), cubanite (CuFe<sub>2</sub>S<sub>3</sub>) and cobaltite (CoAsS). Cabri also reported a large number of platinum group minerals (PGEs). He identified sudburyite (PbSb) and a new Pd<sub>2</sub>Sb mineral as the principal palladium carriers in net textured and massive sulphides, respectively, and PGE tellurides such as michenerite (PdB<sub>i</sub>Te), merenskyite (PdTe<sub>2</sub>), moncheite (PtTe<sub>2</sub>) and kotulskite (PdTe) as well as sperrylite (PtAs<sub>2</sub>). Electrum (a gold-silver alloy of varying composition) appears to be the main gold carrier.

## **9.0 EXPLORATION**

Goldbrook has undertaken no exploration on the Nunavik Nickel Project as of the date of this report.



## **10.0 DRILLING**

Goldbrook has undertaken no drilling on the Nunavik Nickel Project as of the date of this report.

## **11.0 SAMPLING METHOD AND APPROACH**

The previous owner, Canadian Royalties Inc. (“CRI”), began a re-sampling program of old drill core, and re-assay of historic pulp samples for PGE in 2001, once the Property agreement was in place. Due to the positive results obtained from this program, CRI undertook several diamond drilling campaigns on various targets from 2002 to 2008, as well as the collection of grab samples from outcrop and boulders across the Property.

Grab samples were taken in the field to characterize the host rock and approximate metal accumulations in obviously mineralized material, and drill core was sampled to determine the metal concentrations in a quantitative way.

The sampling method and approach remained the same throughout the programs from 2002 through 2008. The last resource estimates were released in 2009 for the Allammaq and Puimajuq Deposits based on 2008 diamond drilling. No further drilling was undertaken on the Property after the 2008 field season.

### **Grab Samples**

Geological mapping, prospecting and collecting of individual rock samples (“grab” sampling) from outcrop or frost-heaved boulders was part of the daily routine in the field.

Sampling was focused on locating mineralization in outcrop or frost-heaved boulders, which offer an effective sampling medium of the sub-crop geology. Grab samples by their nature provide only a characterization of any mineralization found, and being representative is not expected.

Geological mapping and prospecting were completed on picketed grids, and sample locations were referenced from the established grid coordinates. During reconnaissance prospecting traverses off the grid areas, GPS units and aerial photographs were utilized to establish an accurate position. Rock samples 0.5-1.0 kg in size were hammered from outcrop and frost heaved boulders. A unique sample number was assigned to each grab sample, with that unique sample number recorded on the sample bag and a corresponding sample tag placed in the bag.

Coordinates (grid and/or UTM) for each sample were recorded, as well as rock type, mineral content, and other relevant observations. A small rock sample from the same site was collected in a separate bag to be stored at the exploration camp for reference purposes. The sample sites are labelled in the field with a sample number recorded on flagging tape so that the site may be relocated if required.

Samples are sealed in sample bags with twist ties. The majority of rock samples were examined in camp by the geologists to ensure consistency in mapping, mineral identification and sulphide estimation. This information is entered on computer spreadsheets. Samples were placed in shipping bags, tagged and sealed with plastic tie straps for shipping to the assay laboratory.

### **Drill Core Sampling**

Initially, all core logging and core splitting was completed in a core shack at the Expo Camp. As the years progressed and deposits were discovered east and west of Expo, another camp was set

up at the Mequillon Deposit and core was logged and sampled there as well. All core was logged by Canadian Royalties' personnel. Discussions and observations by the core loggers ensured consistent unit identification between them.

The distance between the depth markers added by the drill personnel was measured to check for misplaced markers and for lost core. All logging information was recorded directly into laptop computers. Core intervals identified for sampling were marked with wax crayons, with sample tags placed at the start of a sample interval. The sample length in obvious mineralization was generally one metre, but individual samples were not allowed to cross lithologic contacts or abrupt changes in mineralization. Core was split in half using a hydraulic core splitter, with a sample tag placed in the bag and the bag sealed with staples. Individual bagged samples were placed in shipping bags. Where possible, contiguous sample tag series were used for core logging. Sample intervals were recorded on sample ticket books, and later recorded on the computerized drill logs.

The authors are not aware of any drilling, sampling or recovery factors that would impact the reliability of the core samples. The even distribution of the sulphides in both the massive and disseminated sulphides sampled ensured that the samples were of high quality and representative of the material or mineralization being sampled.

## **12.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

Prospecting rock samples and split core samples were collected and processed by personnel contracted by Canadian Royalties. Many of these samples were re-examined in camp, and core splitting was completed under the direction of the project geologist.

Split core samples were immediately placed in plastic sample bags, tagged and recorded with unique sample numbers. Sealed samples were placed in shipping bags, which in turn were sealed with plastic tie straps. The bags remained sealed until they were opened by ALS Chemex personnel in Val-d'Or, Québec.

All samples were stored in the camp to await a scheduled flight. Samples were not secured in locked facilities, this precaution deemed unnecessary due to the remote camp location. Samples were then shipped by helicopter to the Donaldson airport and loaded directly on a chartered aircraft for transport to Val-d'Or. Samples were collected at the Val-d'Or airport by Canadian Royalties personnel and delivered to ALS Chemex sample preparation facility in Val-d'Or.

ALS Chemex Laboratories is an internationally recognized minerals testing laboratory operating in 16 countries and has an ISO 9001:2000 certification. The laboratory in Vancouver has also been accredited to ISO 17025 standards for specific laboratory procedures by the Standards Council of Canada (SCC).

The split drill core samples were crushed in their entirety to 90% passing 2 millimetres and the crusher was cleaned with barren rock between samples. From the coarse rejects a sub-sample of one kilogram was split and pulverized to 85% passing 75 microns. The pulveriser was cleaned with silica sand between samples.

From each such pulp, a 100 gram sub sample was split and shipped to the ALS Chemex laboratory in Vancouver, British Columbia for analysis. The remainder of the pulp (nominally 100 to 150 grams) and the rejects were initially held at the processing lab for future reference, and later transferred to a warehouse held by CRI in Val-d'Or.

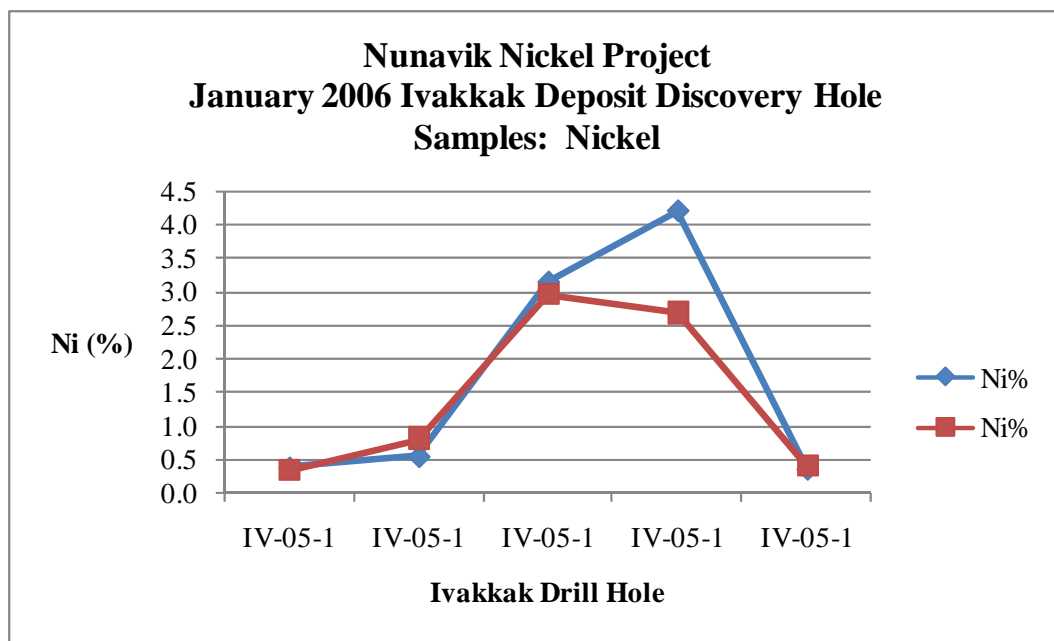
The base metals of economic interest (nickel, copper and cobalt), elements of more general geochemical interest such as arsenic, chromium, iron, magnesium and sulphur, together with 19 additional elements were determined using a 0.25-gram aliquot that was subjected to Geochemical Procedure ME-ICP61, a four-acid digestion followed by inductively coupled plasma - atomic emission spectroscopy (ICP – AES). This method was changed in 2006 to Geochemical Procedure ME-ICP81, (ALS Chemex internal code). This method uses a lithium meta-borate fusion to digest the sample, and is more appropriate for the concentrations encountered for the economic elements.

The precious metals gold, platinum and palladium, were determined by Geochemical Procedure PGM-ICP23, a 30 gram fire assay, followed by ICP-AES. This procedure was changed in 2006 to Geochemical Procedure PGM-ICP27, which is also a 30 gram fire assay with an ICP-AES finish, but the detection limit is 0.03 g/t Au, Pd and Pt instead of 0.001 for Au and Pd and 0.005 for Pt, making it more appropriate for the grades encountered on the Property.

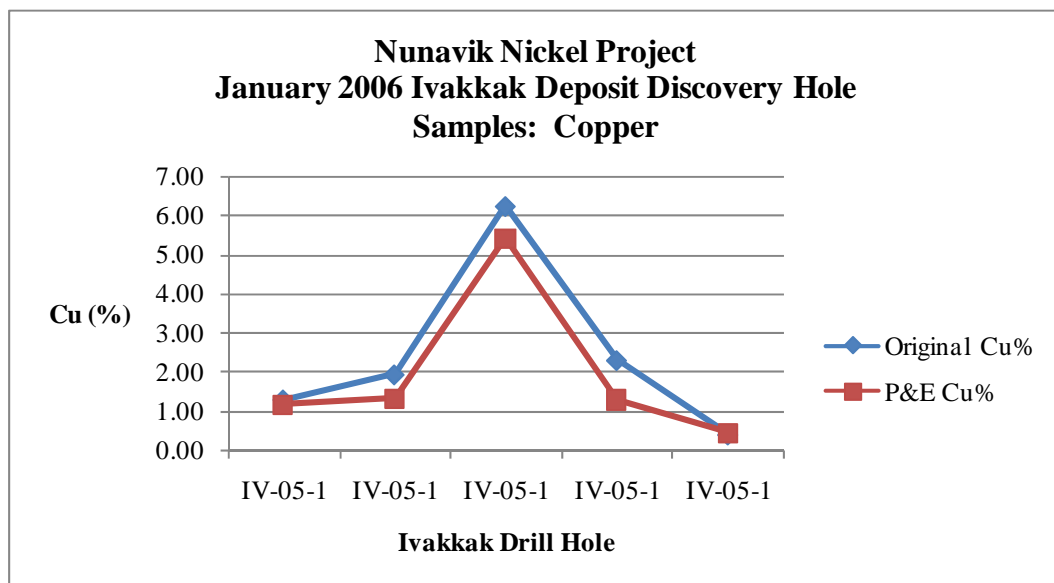
## 13.0 DATA VERIFICATION

### 13.1 SITE VISIT AND INDEPENDENT SAMPLING

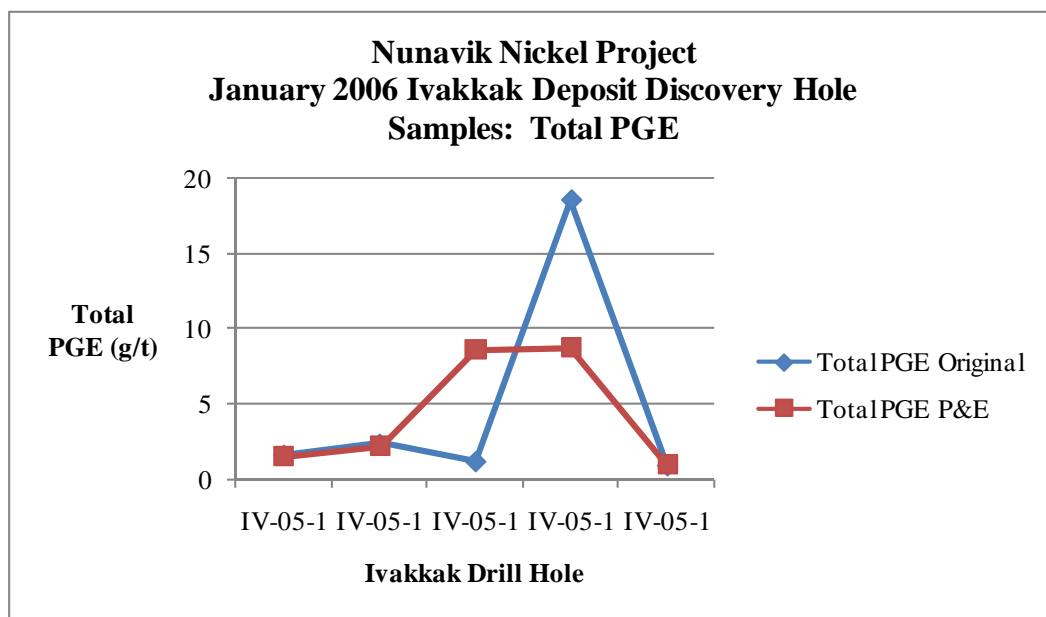
Since 2006, one or more of the authors of this report has visited each of the six deposits at least once and often many times. At each visit, independent sampling of the core was done. Graphs of all the samples taken over the years from 2006 to 2009 inclusively are presented in this section.



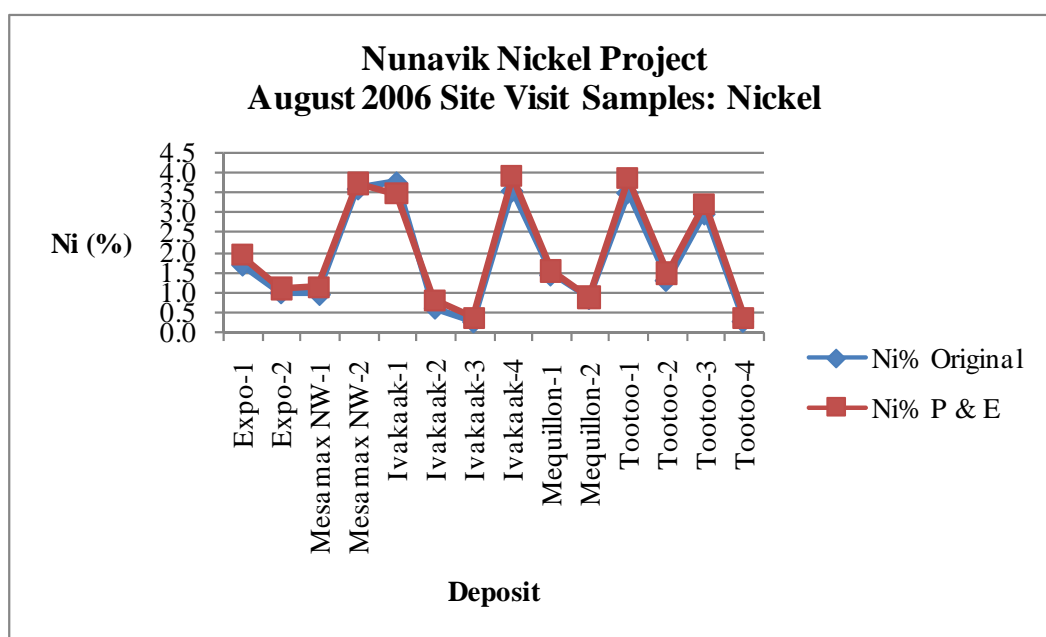
**Figure 13.1: P&E Independent Verification Samples Ivakkak 2006: Nickel**



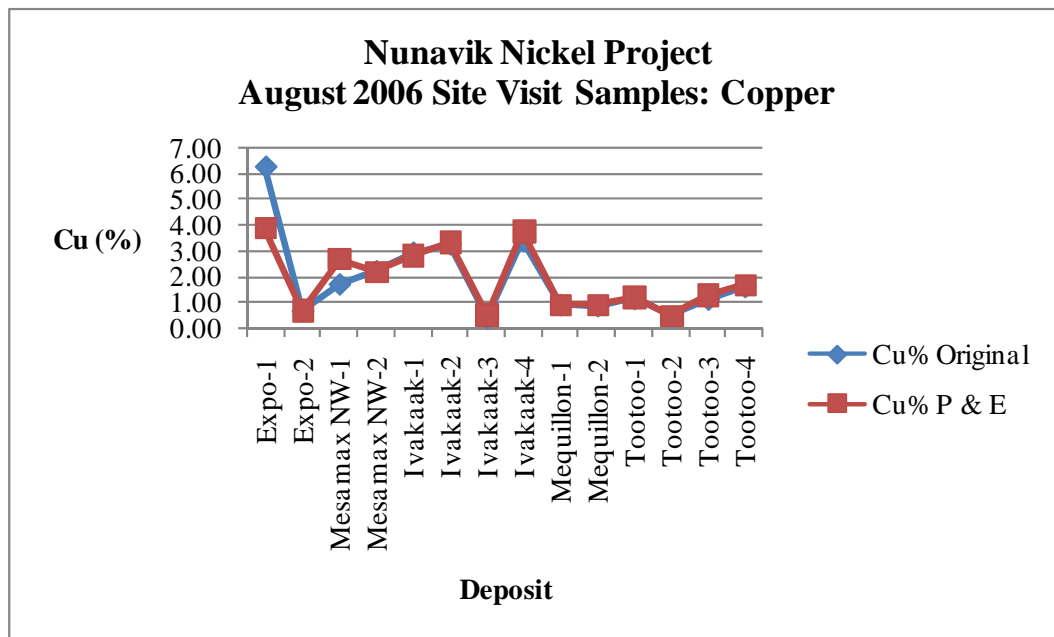
**Figure 13.2: P&E Independent Verification Samples Ivakkak 2006: Copper**



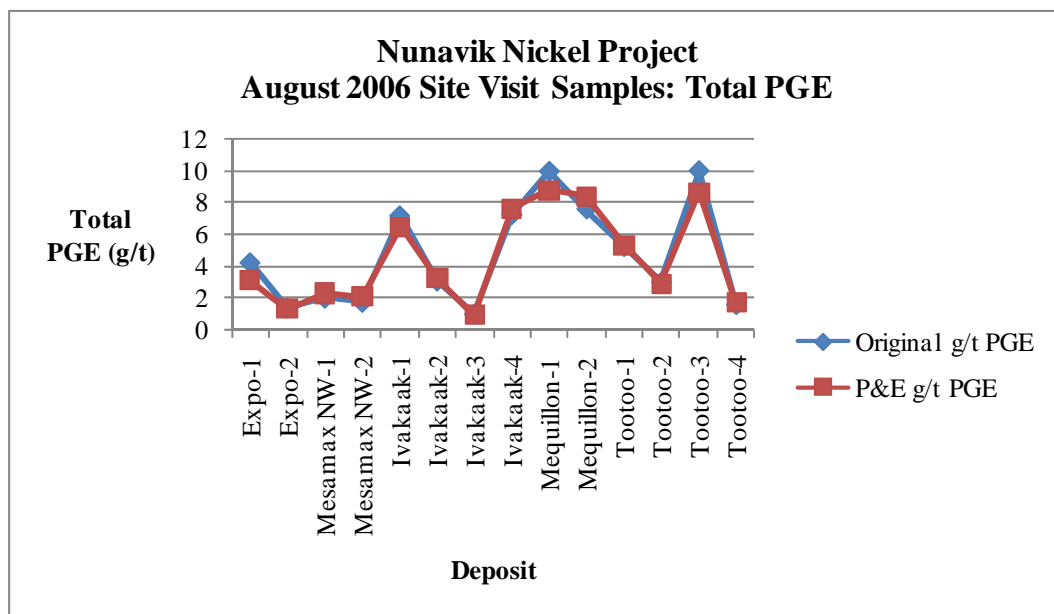
**Figure 13.3: P&E Independent Verification Samples Ivakkak 2006: PGE**



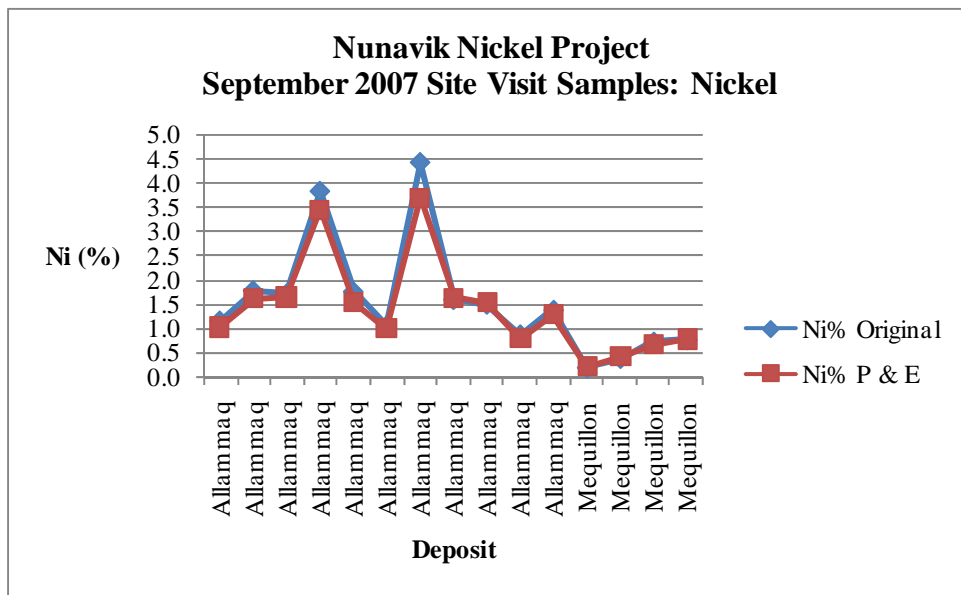
**Figure 13.4: P&E Independent Verification Samples August 2006: Nickel**



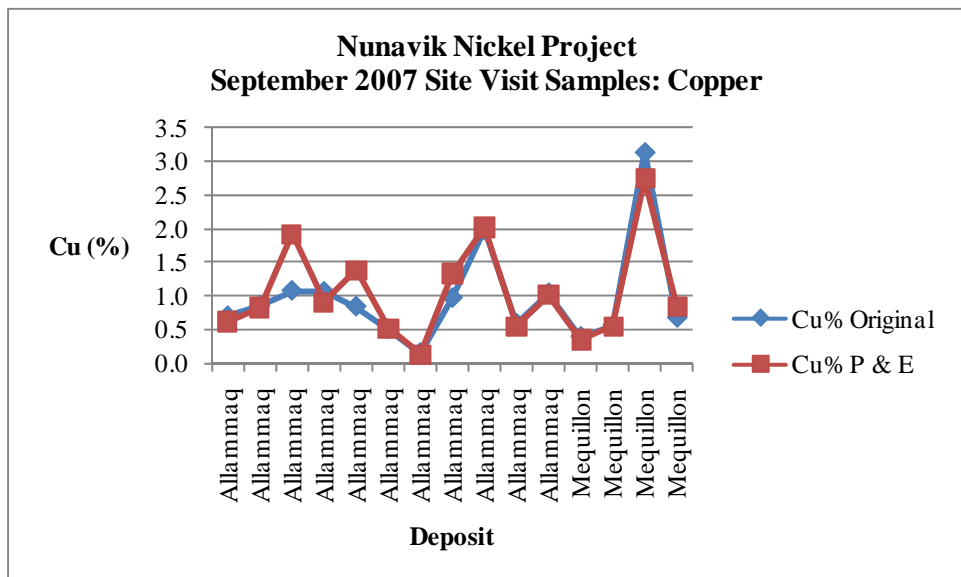
**Figure 13.5: P&E Independent Verification Samples August 2006: Copper**



**Figure 13.6: P&E Independent Verification Samples August 2006: PGE**

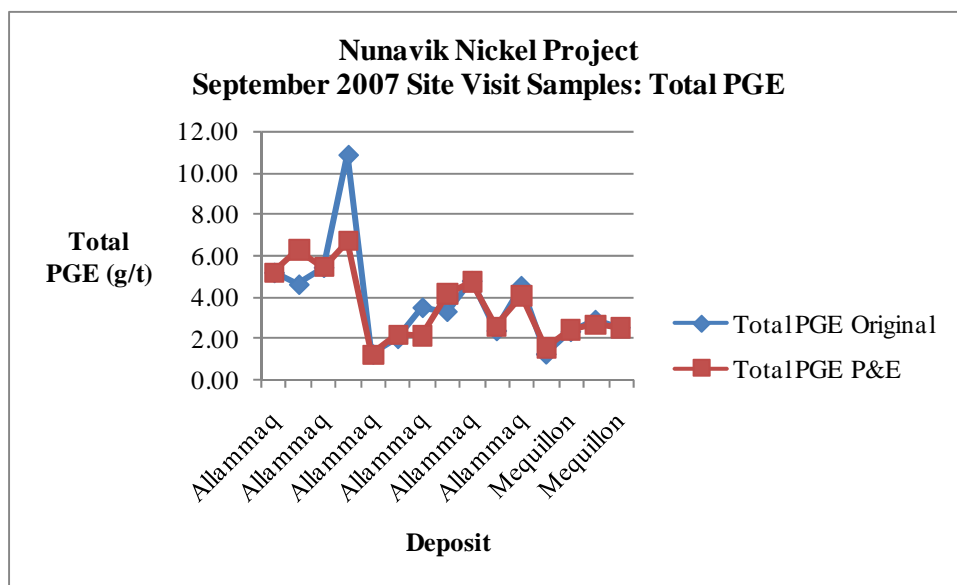


**Figure 13.7: P&E Independent Verification Samples September 2007: Nickel**

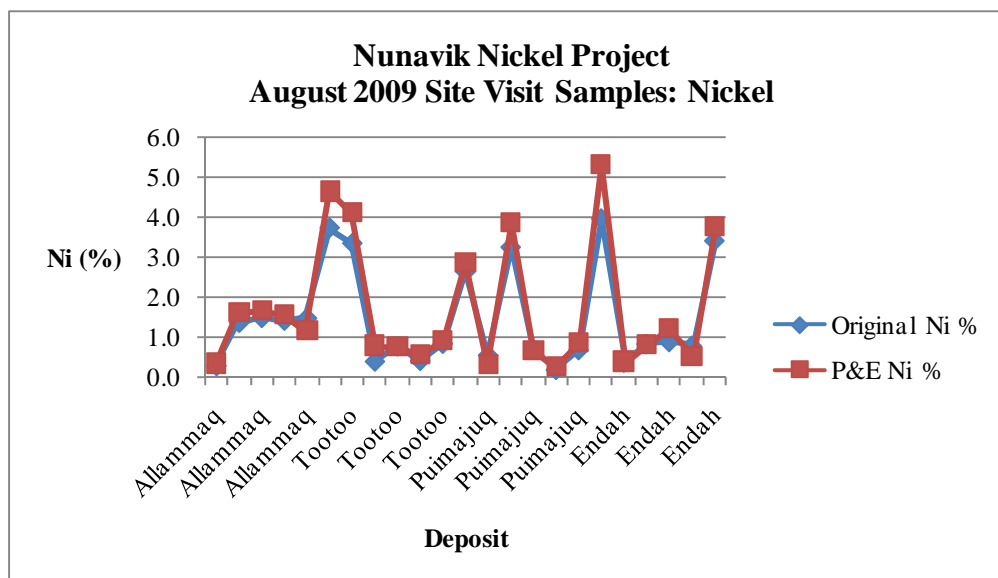


**Figure 13.8: P&E Independent Verification Samples September 2007: Copper**

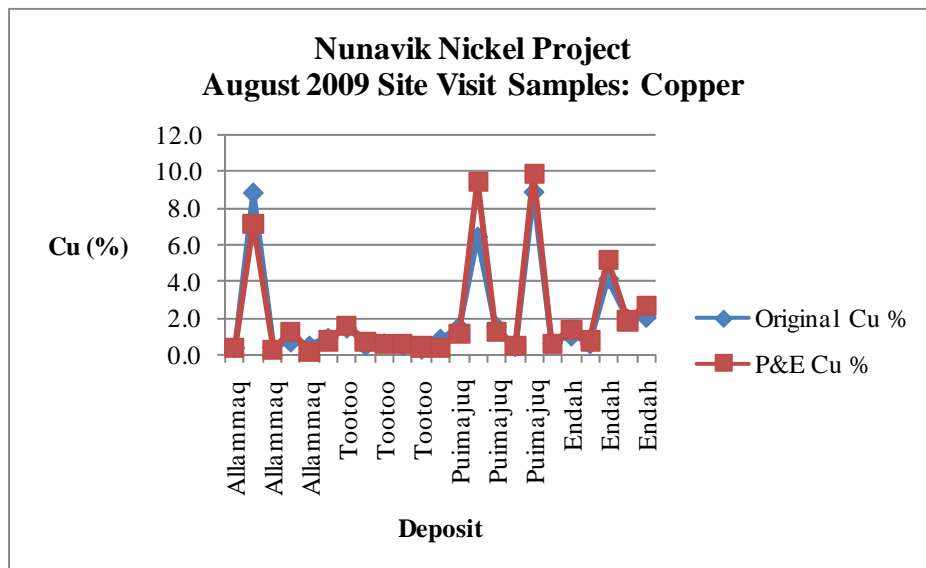




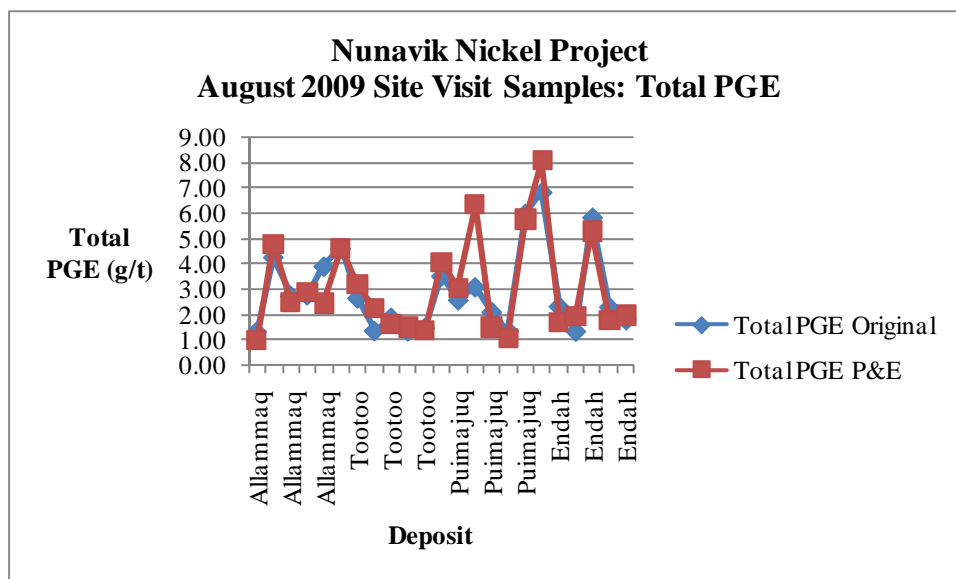
**Figure 13.9: P&E Independent Verification Samples September 2007: PGE**



**Figure 13.10: P&E Independent Verification Samples August 2009: Nickel**



**Figure 13.11: P&E Independent Verification Samples August 2009: Copper**



**Figure 13.12: P&E Independent Verification Samples August 2009: PGE**

## 13.2 HISTORY OF PREVIOUS OWNER QUALITY CONTROL (“QC”)

The author of this section has co-authored several reports on the Nunavik Nickel Project for the previous owner from the years 2006 to 2009 and has been responsible for the data verification sections in all of them. In this section of the current report, a review of the QC from 2002 through 2008 (the last year for which there are data) is presented.

### 13.2.1 2002 QC PROGRAM

The former Property owner, CRI, began a re-sampling program of sample pulps and drill core from historical holes in 2001 after acquiring the Property. In 2002, the company continued with exploration and diamond drill programs. While the 2002 programs did not include certified reference materials, they did include company inserted reference materials with provisional

values for all the elements concerned, and the ALS Chemex internal lab QC for all analytical certificates was examined. A full evaluation of all results was completed by CRI, and the data for the 2002 programs were deemed to be of good quality. A full discussion of the 2002 QC program is presented in the report titled, “Technical Report on the South Trend Group of Properties, Nunavik Quebec for Canadian Royalties”, authored by H. Thalenhorst and T. Keast and dated May 29, 2003. This report was filed on [www.sedar.com](http://www.sedar.com). The author of this section reviewed the data for 2002 and was in agreement with Thalenhorst and Keast that the data were of good quality.

### **13.2.2 2003 TO 2008 QC PROGRAMS**

At the end of the 2002 exploration program, a number of “in-house” or “property” standards were prepared from the coarse reject material from Mesamax drill core, for use in subsequent drill programs.

Three different reference materials were made: Net Textured (CR-CS02-NT and CR-CS03-NTv2) and Massive Sulphide (CR-CS01-MS). Initial round robin characterization of the material was done by three different labs.

During the next three years, (2003, 2004, 2005) both the net textured and massive sulphide standards were used systematically for all Nunavik Nickel Projects. Results for the net textured reference material were acceptable, however the massive sulphide standard often demonstrated a low bias in relation to the characterization round robin.

In 2005, H. Thalenhorst of Strathcona Minerals was asked to review the data and control charts for the 2004 and 2005 data. A recalibration of the massive sulphide standard was done at that time.

In 2006, the results from the CR-CS01-MS standard were showing in excess of a 45% failure rate, which is defined as  $> \pm 3$  standard deviations from the mean.

It was decided once again to re-calibrate the mean and standard deviation for the massive sulphide reference material in 2006. The reasoning behind doing this is summed up in the following communication with Valerie Murphy, B.Sc., C. Chem., and SGS Minerals Services - Quality Control Coordinator.

*“It is far more acceptable to calculate the mean and standard deviation with a large data pool over a long time period (even from a single lab) than to use data gathered in a characterization study that only involves a few laboratories. This is not just a more acceptable and rugged practice for characterization studies but even for certified reference materials as certificate values may be skewed and limited. Typically, a lab will generate large amounts of data that involve different operators, different days, different environmental conditions etc. to capture the true uncertainty of the material and hence the necessary criteria to set appropriate acceptance criteria.”*

The mean and standard deviation were re-calculated using standard procedures of trimming values  $> \pm 2$  standard deviations prior to determining the final value of these parameters.

Once the massive sulphide reference material was re-calibrated using the pool of data from three years, the analytical results (all from ALS Chemex) fell within the acceptable parameters. This was supported by the fact that the ALS Chemex internal QA/QC showed no failures.

The company was also advised to confirm the quality and reliability of the Reference Material CR-CS01-MS and three different labs were selected for a new round robin.

Results of the new round robin indicated that values for copper were confirmed with a total average of the three labs close to the mean that was calculated from three years of repeated assaying. Nickel values were represented by a slightly higher mean.

The recalibrated standards were used in 2007 and 2008. In addition to these property standards, CRI also added three certified reference materials to their sample stream.

From 2003 to 2008, blanks and field duplicates in the form of ½ core were also inserted into the sample stream and formed an integral part of the QC program. The author examined the blank data for all years, and while there were occasional values above the threshold of three times detection limit for certain of the elements, the grades in these anomalous blanks did not contribute to the metal value in any of the cases.

In addition to the company QC samples, ALS Chemex prepared and analyzed their own lab duplicates and inserted their own internal reference standards and blanks. A complete set of the ALS Chemex lab QC data files was obtained and verified.

The author of this section, having been involved continuously with data verification and review from 2005 through 2008, can attest to the fact that the data were of good quality and acceptable for use in all the resource estimates that were produced by CRI.

## **14.0 ADJACENT PROPERTIES**

### **14.1 GOLDBROOK VENTURES RAGLAN PROPERTY**

Even before the acquisition of CRI, Goldbrook held a vast land position contiguous to the north, east and west of the Nunavik Nickel Project, which is called the Raglan Property.

The Raglan Property was first explored in 1974 by Getty Mining Northeast Ltd. who drilled four holes on the Belanger Prospect. Goldbrook began acquiring the claims that constitute the Raglan Property in 2003, and has been exploring continuously since that time.

From 2003 to 2009, a total of 81,803 metres of diamond drilling has been completed on the Property. Goldbrook has also completed AeroTEM airborne magnetic-time domain electromagnetic surveys, as well as borehole EM, airborne VTEM geophysics and regional geology, sampling and prospecting.

The Company has discovered to date several Ni-Cu-PGE mineralized zones along a roughly 40 kilometre trend, known as the Belanger Trend. Currently five zones of significant sulphide mineralization have been defined at the Mystery, Getty, Sylvie, Timtu and PAD-1/R2 Zones.

#### **MYSTERY ZONE**

Goldbrook's most important discovery to date is the Mystery Zone which was drilled extensively in 2008 and 2009. Drilling at Mystery suggests a vertical to steeply dipping mineralized zone varying in thickness from approximately 10 to 60 m along a strike length of over 175 metres. It has been drill tested to a vertical depth of over 375 metres.

#### **TIMTU ZONE**

As part of the 2009 exploration program, Goldbrook drilled the Timtu Zone, which was designed to test the potential of nickel sulphides discovered in 2007.

Drilling extended the known Timtu Zone within the ultramafic rocks in hole TIM09-003, as well as what has been termed the "Copper" zone of approximately eight to ten metres (core length) within the sediments adjacent to the ultramafic footwall. The copper rich zone is characterized by very low nickel and PGE values and is considered a zone of remobilized copper sulphides. Mineralization appears continuous from surface along both limbs of an S-folded peridotite and remains open to depth. Drilling east and west of this section also intersected Ni-Cu-PGE mineralization, extending the zones to the east and west.

#### **PAD ZONE**

Drilling at Pad consisted of four drillholes at the mid and western portion of the zone which have better defined the sulphide potential and provided needed information for additional exploration of the zone in 2010.

## DELTA NORTHEAST PROSPECT

Historical drillhole data, surface mineralization and potential for additional sulphides at the Delta Northeast Prospect were confirmed by 2009 drilling. All three drillholes encountered Ni-Cu-PGE mineralization with two holes having intercepts of significant width and grade.

## DRAGON PROSPECT

Two holes were drilled at the Dragon prospect to test a surface showing and follow-up on encouraging results in a historical drillhole. The results were two short intersections of good grade nickel sulphides which indicate sulphide potential in the immediate area. This prospect will be further tested in 2010.

Tables 14-1, 14-2, 14-3 and 14-4 detail results of all drilling to date on the Raglan Property.

**Table 14-1: Summary of Diamond Drilling from 2003 to 2008**

Zone Drill Hole #	From (m)	To (m)	Core length (m)	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	PGE+ Au
<b>Mystery</b>										
MYS08-003	78.00	209.00	131.00	0.81	0.87	0.04	0.18	0.50	3.01	3.69
MYS08-005	186.00	232.00	46.00	0.74	1.58	n/a	0.30	1.60	6.80	8.70
MYS08-006	263.00	325.10	62.10	0.81	1.03	n/a	0.13	0.62	3.26	4.01
MYS08-012	58.00	160.00	102.00	0.72	1.00	0.04	0.13	0.59	3.03	3.75
MYS08-031	135.00	211.30	76.30	0.91	1.11	0.05	0.33	0.45	2.94	3.72
<b>Getty</b>										
BEL04-21	3.90	53.25	49.35	1.35	0.61	0.06	n/a	0.37	2.88	3.25
GET07-003	10.00	18.60	8.60	1.31	1.67	0.06	0.12	0.47	1.74	2.33
GET07-005	38.00	81.10	43.10	0.69	0.63	0.03	0.04	0.30	1.30	1.64
GET07-008	10.00	47.30	37.30	0.87	0.62	0.04	0.03	0.30	1.44	1.77
GET07-012	61.90	77.40	15.50	1.27	0.53	0.07	0.02	0.35	1.68	2.05
GET07-020	36.10	52.95	16.85	0.76	0.53	0.04	0.11	0.32	1.46	1.89
<b>Sylvie</b>										
SYL07-018	109.10	122.15	13.05	1.66	1.06	0.07	0.06	0.63	4.71	5.40
SYL07-023	96.40	114.90	18.50	1.41	0.67	0.06	0.09	0.41	3.23	3.73
SYL07-032	124.00	149.10	25.10	1.33	0.78	0.06	0.02	0.32	1.23	1.57
SYL07-033	121.40	138.50	17.10	1.76	1.23	0.08	0.05	0.38	1.37	1.80
<b>Bravo B4</b>										
BRA07-006	69.00	96.90	27.90	0.67	1.27	0.03	0.06	0.28	2.27	2.61
BRA07-013	119.00	135.27	16.27	0.62	1.07	0.04	0.05	0.48	2.17	2.70
BEL05-005	6.96	31.69	24.73	0.85	1.49	n/a	n/a	0.14	1.28	1.42
<b>Pad R2</b>										
PDR07-005	57.70	74.40	16.70	0.71	0.37	0.03	0.03	0.25	1.28	1.56
PDR07-006	88.75	106.67	17.92	0.70	0.72	0.02	0.04	0.31	1.53	1.88
<b>Timtu</b>										
BEL05-003	25.00	33.65	8.65	1.01	0.63	n/a	n/a	0.57	2.38	2.95
TIM07-007	19.50	37.10	17.60	0.70	1.00	0.03	0.09	0.37	3.12	3.58

**Table 14-2: Summary of Mystery Drilling 2009**

Zone Drill Hole #	From (m)	To (m)	Core length (m)	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	PGE+ Au
<b>Mystery Main Zone</b>										
MYS09-006	69.0	87.0	18.0	0.71	0.75	0.04	0.10	0.42	2.02	2.54
MYS09-011	244.7	299.0	54.3	0.84	0.98	0.05	0.22	0.51	2.24	2.97
MYS09-013	35.0	53.0	18.0	0.55	0.61	0.03	0.18	0.42	2.00	2.60
MYS09-016	51.0	57.0	6.0	0.59	0.70	0.04	0.05	0.28	1.08	1.41
<b>Mystery North Zone</b>										
MYS09-004	115.8	118.0	2.2	1.24	0.69	0.08	0.06	0.17	1.44	1.67
MSY09-005	155.6	161.8	6.2	0.50	1.26	0.02	0.08	0.14	1.44	1.66
	183.3	186.0	2.7	2.58	1.13	0.15	0.03	0.43	0.53	0.99
MSY09-008	116.4	119.5	3.1	1.64	0.53	0.08	0.03	0.15	0.43	0.61
MYS09-018	115.2	116.9	1.7	1.38	0.59	0.08	0.03	0.28	1.00	1.31

**Table 14-3: Summary of Timtu Drilling 2009**

Zone Drill Hole #	From (m)	To (m)	Core length (m)	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	PGE+ Au
<b>Timtu Main Zone</b>										
TIM09-001	93.3	98.4	5.1	0.96	0.77	0.05	0.10	0.54	3.44	4.08
TIM09-002	96.0	157.3	61.3	0.25	0.25	0.02	0.05	0.13	0.57	0.75
TIM09-003	94.0	100.0	6.0	0.53	0.51	0.03	0.04	0.29	1.23	1.56
	150.6	186.0	35.4	0.86	0.67	0.03	0.06	0.38	1.37	1.81
	195.0	211.0	16.0	0.43	0.61	0.03	0.06	0.31	1.51	1.88
TIM09-005	58.9	65.2	6.3	0.51	0.36	0.03	0.05	0.17	0.71	0.93
	71.3	76.6	5.3	0.95	0.50	0.04	0.04	0.54	2.51	3.09
TIM09-006	93.4	101.5	8.1	0.77	0.89	0.04	0.39	0.64	2.95	3.98
TIM09-007	69.0	75.5	6.5	1.34	0.48	0.06	0.06	0.71	2.48	3.25
TIM09-008	84.7	95.4	10.7	0.87	1.01	0.03	0.23	0.61	2.38	3.22
	194.0	196.1	2.1	0.56	0.70	0.02	0.06	0.25	0.71	1.02
TIM09-010	58.0	62.4	4.4	0.73	0.60	0.03	0.06	0.68	1.82	2.56
TIM09-012	125.0	127.5	2.5	0.50	0.48	0.02	0.03	0.34	1.39	1.76
TIM09-013	59.6	60.6	1.0	1.13	0.49	0.06	0.04	0.96	1.42	2.42
	126.5	153.5	27.0	1.09	0.87	0.05	0.10	0.58	2.96	3.64
TIM09-014	99.0	100.5	1.5	0.67	0.54	0.03	0.12	0.32	1.99	2.43
	108.0	112.5	4.5	0.58	0.40	0.03	0.03	0.29	1.32	1.64
TIM09-015	15.1	19.4	4.3	0.68	1.09	0.04	0.04	0.24	1.00	1.28
	24.4	26.4	2.0	0.62	3.44	0.03	0.07	0.45	1.17	1.69
	56.4	63.5	7.1	0.55	0.59	0.03	0.09	0.34	1.37	1.80
	65.0	68.5	3.5	1.01	0.59	0.05	0.03	0.62	3.23	3.88
TIM09-016	12.2	12.8	0.6	0.98	1.61	0.04	0.08	0.30	1.22	1.60
	13.7	16.2	2.5	3.65	1.87	0.12	0.09	1.83	2.19	4.11
	21.5	27.9	6.4	1.79	3.45	0.06	0.12	2.43	6.66	9.21
	38.8	39.4	0.6	4.25	0.68	0.16	0.03	0.69	2.43	3.15
TIM09-017	69.6	90.6	21.0	0.78	0.64	0.04	0.05	0.44	1.96	2.45
<b>Timtu Copper Zone</b>										
TIM09-003	103.0	111.0	8.0	0.06	1.21	0.01	0.07	0.03	0.33	0.43
	131.0	141.0	10.0	0.02	1.13	0.00	0.03	0.03	0.03	0.09
TIM09-005	80.0	82.0	2.0	0.04	1.91	0.00	0.03	0.03	0.04	0.10
TIM09-006	101.5	113.2	11.7	0.20	1.19	0.01	0.05	0.19	0.74	0.98
TIM09-007	75.5	85.8	10.3	0.03	0.48	0.00	0.03	0.03	0.03	0.09
TIM09-008	174.0	188.0	14.0	0.09	0.72	0.00	0.08	0.03	0.20	0.31
TIM09-012	127.5	130.5	3.0	0.03	1.53	0.00	0.03	0.03	1.20	1.26
TIM09-014	115.6	117.0	1.4	0.31	1.06	0.02	0.04	0.26	1.70	2.00
TIM09-015	68.5	70.5	2.0	0.26	0.89	0.02	0.41	0.06	0.81	1.28
	72.4	73.6	1.2	0.04	0.75	0.00	0.03	0.03	0.03	0.09
TIM09-017	90.6	96.4	5.8	0.25	0.72	0.01	0.37	0.16	0.26	0.79
TIM09-018	29	36.9	7.9	0.04	0.77	0.00	0.04	0.03	0.36	0.43

**Table 14-4: Summary of Pad, Delta Northeast and Dragon Drilling 2009**

Zone Drill Hole #	From (m)	To (m)	Core length (m)	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	PGE+ Au
<b>Pad Zone</b>										
PDR09-001	61.0	67.0	6.0	1.14	0.63	0.04	0.03	0.35	1.18	1.56
PDR09-002	112.0	116.6	4.6	1.53	0.92	0.06	0.03	0.39	1.27	1.69
	119.0	119.4	0.4	1.54	8.00	0.06	0.29	0.12	1.52	1.93
PDR09-004	179.8	180.8	1.0	1.55	0.57	0.06	0.07	0.25	1.12	1.44
<b>Delta Northeast</b>										
DNE09-001	176.2	180.5	4.3	0.60	0.17	0.02	0.07	0.25	0.61	0.93
	183.1	187.0	3.9	0.74	0.17	0.03	0.03	0.22	0.63	0.88
	196.4	199.9	3.6	0.63	0.15	0.03	0.03	0.22	0.55	0.80
DNE09-002	135.8	137.3	1.5	0.51	0.08	0.03	0.03	0.16	0.41	0.60
	145.7	148.9	3.2	0.80	0.53	0.04	0.09	0.33	0.78	1.20
	158.5	161.4	2.9	0.63	0.15	0.03	0.03	0.16	0.43	0.62
<b>Dragon</b>										
DRG09-001	63.0	63.9	0.9	0.73	3.32	0.06	0.11	0.49	4.21	4.81
DRG09-002	85.1	85.8	0.7	1.92	0.93	0.08	0.08	0.48	1.50	2.06

## **ADDITIONAL PROPERTY EXPLORATION**

In 2008, a remote sensing program was undertaken on select portions of the Property, which consisted of a LiDAR (light detection and ranging) survey that was completed over the most explored part of the Belanger trend of deposits in order to generate a digital model of the earth's surface. A VNIR (visible and near infrared) & SWIR (shortwave infrared) hyperspectral survey was completed over large areas of the Goldbrook Property to collect data for visible-thermal imaging of the earth's surface.

A 'SEBASS', a mid-long infrared thermal imaging hyperspectral survey was completed over large sections of the eastern part of the property, along with strips over the western portions. These data are particularly useful in the identification of silicate minerals.

Extensive mapping, prospecting, geochemistry, and a 9,000 km airborne VTEM geophysical survey were completed in 2009.



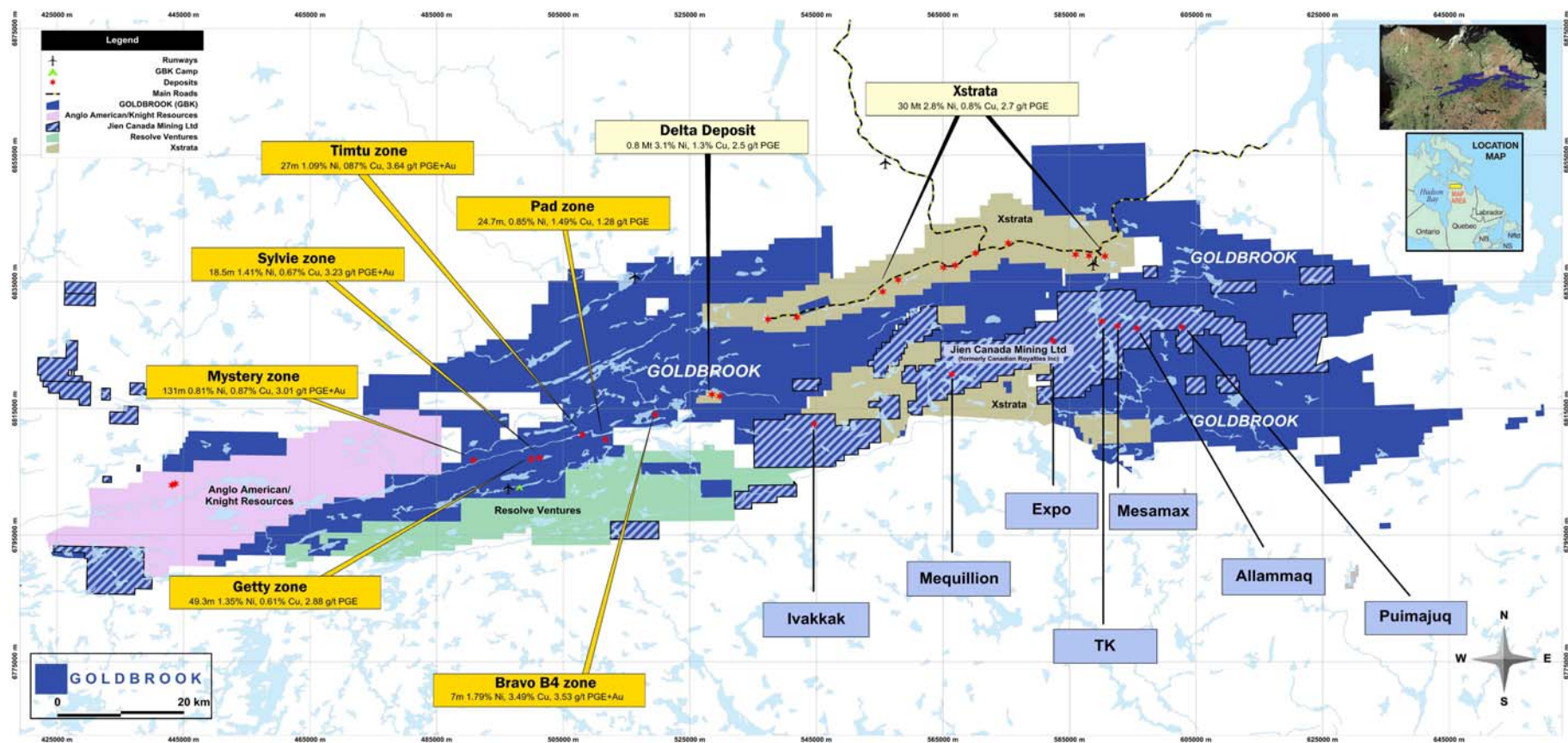


Figure 14.2: Goldbrook Ventures Raglan Property, Nunavik Quebec

## 14.2 XSTRATA NICKEL

The deposits of the currently operating Raglan Mine are located along a parallel belt of rocks approximately 15 kilometres to the north of the Nunavik Nickel Project.

The Raglan Trend stretches 55 kilometres from east to west, with a series of many high-grade ore deposits scattered along its length. While the general geology of the South Trend and Raglan Trend is similar with comparable sulphide mineral paragenesis and with similar sulphide textures, the Ni-Cu ratios are different. The Raglan Trend displays a 3:1 Ni-Cu ratio that contrasts with that of the South Trend, which is generally closer to parity.

Mineralization at Raglan is associated with up to nine separate peridotite flows, which constitute an overall ultramafic body that has been identified along the 55 kilometres. Deposits along this trend include from east to west the Donaldson, Boundary, West Boundary, 13-14, 5-8, Katinniq, East Lake, 2-3 Zone and Cross Lake deposits. The thickness of the sulphide lenses varies from a few metres to a few tens of metres, and the strike length can vary from tens of metres to 200 metres. Production began in April 1998 at Katinniq, which consists of over 20 discrete lenses of massive and disseminated sulphide, which vary in size from 10,000 tonnes to 1.4 million tonnes (Falconbridge Limited, Website May 2003). The lenses extend along an ultramafic horizon 1400 metres in strike length, which dips to the northwest at 45° to 50°. The mineralized horizon has been traced to a depth of 350 metres and is open in that direction.

The Raglan operations consisted of open pits (which have now been exhausted), three underground mines, a concentrator, power plant, accommodation and administration buildings, fresh water supply and fuel storage tanks. The mine site is linked by all-weather roads to an airstrip at Donaldson and to the concentrate, storage and ship-loading facilities at Deception Bay.

The ore from the Raglan mines is crushed, ground and treated at the Raglan mill to produce a nickel-copper concentrate. Milling capacity is now approximately 3,500 tonnes per day. Nickel capacity at the concentrator is now over 28,000 tonnes of nickel-in-concentrate per year. Xstrata Nickel has expanded mine production to 1.3 million tonnes per year. The project to further expand capacity to 2.0 million tonnes per year has been shelved indefinitely.

The concentrate is trucked 100 kilometres to Deception Bay and then shipped via ocean freighter to Québec City within an expected shipping season of at least eight months of the year, and a minimum of six shipments per year. From there, it is sent by rail to the smelter in Sudbury. The smelted matte material is returned by rail to Québec City, and then shipped overseas to Xstrata's Norwegian Nikkelverk refinery for refining into pure metals.

The 2008 versus 2009 production figures are presented in Table 14-5.

**Table 14-5: Raglan Mine Production Figures 2008 versus 2009**

North America – Raglan

Ore mined (t)	1,465,788	1,314,191
Nickel head grade (%)	2.56	2.30
Copper head grade (%)	0.68	0.62
Ore treated (t)	1,310,657	1,300,133
Nickel in concentrate (t)	29,262	25,873
Copper in concentrate (t)	7,188	6,402
Cobalt in concentrate (t)	586	512

On December 5<sup>th</sup>, 2007 Xstrata Nickel announced exploration results and declared that Zone 5-8 was now the largest mineralized zone in Raglan's history and that Zone 5-8 would be Raglan's next mining centre. Zone 5-8 now contains proven and probable mineral reserves of 0.8 million tonnes at 3.02% nickel and 0.80% copper, measured and indicated mineral resources of 0.4 million tonnes at 1.30% nickel and 0.35% copper, and inferred mineral resources of 11.5 million tonnes at 3.00% nickel and 0.80% copper.

**Table 14-6: Xstrata Nickel Raglan Mine Reserves and Resources as of June 2009**

Reserves and Resources as of mid-2009 Xstrata Nickel Report							
	Proven (Mt)	Probable (Mt)	Total (Mt)	Measured (Mt)	Indicated (Mt)	M+I (Mt)	Inferred
Ore tonnes	5.6	6	11.5	5.3	11.1	16.4	14
Nickel (%)	2.24	3.6	2.94	2.49	3.51	3.18	2.9
Copper (%)	0.65	0.88	0.77	0.72	0.98	0.9	0.9
Cobalt (%)	0.05	0.08	0.07	0.05	0.08	0.07	0.1

While the authors cannot suggest at this point that the GBK deposits will attain the scale of the Raglan deposits in the Raglan Trend, there is an undeniable similarity in host rock, ore genesis, style of mineralization and metallurgy.

## **15.0 METALLURGICAL PROCESSING AND METALLURGICAL TESTING**

Goldbrook has not undertaken any metallurgical processing or metallurgical testing on the Property. Previous metallurgical testing on the Property completed by CRI was presented in Section 5.5 of this report.

## **16.0 MINERAL RESOURCE ESTIMATES**

Goldbrook has not completed any mineral resource estimates on the Property. Previous mineral resource estimates completed by CRI were presented in Sub-section 5.6.1 to 5.6.7 of this report.

Surface drill hole plans and 3-D domains from the latest resource estimates for each of the deposits are presented in Appendix-I of this report.

## **17.0 OTHER RELEVANT DATA AND INFORMATION**

There are no other data relevant to this Property that have not been discussed in a previous section of this report.

## **18.0 CONCLUSIONS AND RECOMMENDATIONS**

### **18.1 CONCLUSIONS**

Exploration of the Nunavik Nickel Project area has a long history beginning in the general Ungava area since the 1930's. Major discoveries over the years include Falconbridge's Raglan deposits in 1964-66, the Amax Expo deposit in 1967, and the CRI TK, Mesamax, Mequillon, Ivakkak, Allammaq and Puimajuq Deposits from 2001 to 2007.

The Cape Smith Belt in which all of the deposits of the Nunavik Nickel Project lie, is an interpreted foreland thrust-fold belt that constitutes the north-eastern extension of the Trans-Hudson Orogen, an early Proterozoic collision zone, which separates the Archean Superior Province from the Proterozoic Churchill Province (Hynes and Francis, 1982; Hoffman 1990). The Trans-Hudson Orogen includes the Thompson Nickel Belt of Manitoba and the New Quebec Orogen (Labrador Trough) on opposite sides of the Superior Province. The Cape Smith (Ungava) Belt extends for 375 kilometres in an east-west direction across the Ungava Peninsula of Nunavik.

The Property is located within the central portion of the assemblage, near the suture separating the foreland from the hinterland domains. The North Domain is dominated by the mostly volcanic Watts Group, which has been interpreted as an Island-Arc accretionary complex. The South Domain includes the Lamarche, Povungnituk, and Chukotat Groups, which are collectively interpreted as an extensional sequence consisting mainly of basalts, sediments and ultramafic rocks grading into oceanic crust towards the north. The boundary between the North and South domains is marked by the regional scale Bergeron Fault, considered to be a subduction zone.

The geology of all six deposits for which there are currently resource estimates is all essentially the same, though the morphology of each can be very different. It is believed that all deposits are part of the Expo Intrusive Suite, as detailed by Mungall, 2004. The dyke portions within which the deposits lie can be essentially horizontal to essentially vertical, and the proportions of massive to net-textured to disseminated sulphides can vary greatly.

Early in 2008, Canadian Royalties met several important objectives, including the signing of the Nunavik Nickel Agreement (Impact Benefits Agreement), being issued critical land leases for the four mining leases and the four waste dumps at Ivakkak, Mequillon, Expo and Mesamax, the commencement of site construction work and the continued growth of its resource base. However, later in the year, CRI was materially impacted by the global financial crisis at the peak of construction activity on the Nunavik Nickel Project.

On August 5, 2008, CRI announced that activities being carried out on the Nunavik Nickel Project would begin to transition away from full construction and move towards implementing a care and maintenance program. Effectively, all major construction and engineering work were suspended as of that date in order to protect the company's treasury and investment infrastructure.

On January 13, 2010 Canadian Royalties announced the completion of a plan of arrangement between Canadian Royalties and Jien Canada Mining Ltd. under which Jien Canada acquired all of CRI's outstanding common shares in exchange for \$0.80 per share and now has 100% interest in the Nunavik Nickel Project. Goldbrook holds a 25% interest in Jien Canada.

## 18.2 RECOMMENDATIONS

Construction of the Nunavik Nickel Project commenced in May, 2008, however since August of that year, the Project has been on care and maintenance.

The Project infrastructure currently consists of:

- An access-road that links into the existing road-network;
- Employee housing complex for 300 people;
- Potable water and waste-water treatment plants;
- Concentrator foundation with thermosyphons;
- Temporary shelters for equipment and materials;
- Detailed concentrator engineering 90% completed;
- Structural steel, flotation cells and other mill components on site;
- Long-lead items procured (ball mills etc.).

Prior to resumption of the Project construction, Jien Canada Mining should undertake a detailed engineering review. The budget necessary in order to resume construction should reflect the engineering approach and any variance from the original development plans. An additional 10 Mt of resources are potentially available for conversion into reserves and this should be considered as well. An amount close to the original estimate of \$465 million is anticipated.

Once the Company is satisfied with the current Project economics, construction should resume with the goal of attaining commercial production as soon as possible.



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## 20.0 CERTIFICATES

### CERTIFICATE of AUTHOR

#### TRACY J. ARMSTRONG, P.GEO.

I, Tracy J. Armstrong, P.Geo., residing at 2007 Chemin Georgeville, res. 22, Magog, QC J1X 0M8, do hereby certify that:

1. I am an independent geological consultant contracted by P& E Mining Consultants Inc;
2. I am a graduate of Queen's University at Kingston, Ontario with a B.Sc (HONS) in Geological Sciences (1982);
3. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No. 566) and the Association of Professional Geoscientists of Ontario (License No. 1204);
4. I have worked as a geologist for a total of 24 years since obtaining my B.Sc. degree;
5. I am responsible for Sections 1 through 15, 17, and co-authored Section 18, as well as the overall structuring of the technical report titled "Technical Report on the Allamqua, Expo, Ivakkak, Mequillon, Mesamax and Puimajuq Ni-Cu PGE Deposits of the Nunavik Nickel Project, Nunavik, Quebec," and dated April 14, 2010;
6. I visited the Nunavik Nickel Project from August 17 to 20, 2006 and from September 13 to 14, 2007;
7. I have had prior involvement with the Nunavik Nickel Project that is the subject of this Technical Report. The nature of my prior involvement is as co-author on several Technical Reports written for Canadian Royalties Inc. dating from 2005 through 2009.
8. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
9. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. This report is based on my personal review of information provided by the Issuer and on discussions with the Issuer's representatives. My relevant experience for the purpose of the Technical Report is:
  - Underground production geologist, Agnico-Eagle Laronde Mine 1988-1993;
  - Exploration geologist, Laronde Mine 1993-1995;
  - Exploration coordinator, Placer Dome 1995-1997;
  - Senior Exploration Geologist, Barrick Exploration 1997-1998;
  - Exploration Manager, McWatters Mining 1998-2003;
  - Chief Geologist Sigma Mine 2003;
  - Consulting Geologist 2003-present.
10. I am independent of the issuer applying the test in Section 1.4 of NI 43-101;
11. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith;
12. I consent to the filing of the Report with any stock exchange and other regulatory authority and any publication by them of the Report for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

DATED this 14<sup>th</sup> Day of April, 2010.

***{SIGNED AND SEALED}***

---

Tracy J. Armstrong, P.Geo.

## **CERTIFICATE of AUTHOR**

### **EUGENE J. PURITCH, P. ENG.**

I, Eugene J. Puritch, P. Eng., residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

1. I am President of P&E Mining Consultants, and am independently contracted by Goldbrook Ventures Inc.
2. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition I have also met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bachelor's Degree in Engineering Equivalency.
3. I am a mining consultant currently licensed by the Professional Engineers of Ontario (License No. 100014010) and registered with the Ontario Association of Certified Engineering Technicians and Technologists as a Senior Engineering Technologist. I am also a member of the National and Toronto CIM.
4. I have practiced my profession continuously since 1978. My summarized career experience is as follows:

- Mining Technologist - H.B.M.&S. and Inco Ltd.	1978-1980
- Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd	1981-1983
- Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine	1984-1986
- Self-Employed Mining Consultant – Timmins Area	1987-1988
- Mine Designer/Resource Estimator – Dynatec/CMD/Bharti	1989-1995
- Self-Employed Mining Consultant/Resource-Reserve Estimator	1995-2004
- President – P & E Mining Consultants Inc.	2004-Present
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am jointly responsible for Section 16 and co-authored Section 18 of the Technical Report titled “Technical Report on the Allamag, Expo, Ivakkak, Mequillon, Mesamax and Puimajuq Ni-Cu PGE Deposits of the Nunavik Nickel Project, Nunavik, Quebec,” and dated April 14, 2010;
7. I have had prior involvement with the Nunavik Nickel Project that is the subject of this Technical Report. The nature of my prior involvement is as co-author on several Technical Reports written for Canadian Royalties Inc. dating from 2005 through 2009.
8. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading;
9. I am independent of the issuer applying the test in Section 1.4 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith.
11. I visited the Nunavik Nickel Project from August 17 to 20, 2006.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 14<sup>th</sup> Day of April 2010

**{SIGNED AND SEALED}**

---

Eugene J. Puritch, P. Eng.

## **CERTIFICATE of AUTHOR**

**ANTOINE R. YASSA, P. GEO**

I, Antoine R. Yassa, P. Geo., residing at 241 Rang 6 West, Evain, Quebec, do hereby certify that:

1. I am an independent geological consultant contracted by P& E Mining Consultants Inc;
2. I am a graduate of Ottawa University at Ottawa, Ontario with a B.Sc (HONS) in Geological Sciences (1977);
3. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224);
4. I have worked as a geologist for a total of 33 years since obtaining my B.Sc. degree;
5. I am responsible for co-authoring Section 16.0 of the technical report titled "Technical Report on the Allammaq, Expo, Ivakkak, Mequillon, Mesamax and Puimajuq Ni-Cu PGE Deposits of the Nunavik Nickel Project, Nunavik, Quebec," and dated April 14, 2010;
6. I visited the Nunavik Nickel Project from August 25 to 28, 2009;
7. I have had prior involvement with the Nunavik Nickel Project that is the subject of this Technical Report. The nature of my prior involvement is as co-author of several Technical Reports dating from 2006 through 2009.
8. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
9. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. This report is based on my personal review of information provided by the Issuer and on discussions with the Issuer's representatives. My relevant experience for the purpose of the Technical Report is:
  - Minex Geologist (Val d'Or), 3D Modeling (Timmins), Placer Dome 1993-1995;
  - Database Manager, Senior Geologist, West Africa, PDX, 1996-1998
  - Senior Geologist, Database Manager, McWatters Mine 1998-2000;
  - Database Manager, Gemcom modeling and Resources Evaluation (Kiena Mine) QAQC Manager (Sigma Open pit), McWatters Mines 2001-2003;
  - Database Manager and Resources Evaluation at Julietta Mine, Far-East Russia, Bema Gold Corporation, 2003-2006
  - Consulting Geologist 2006.
10. I am independent of the issuer applying the test in Section 1.4 of NI 43-101;
11. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith.

DATED this 14<sup>th</sup> Day of April 2010

***{SIGNED AND SEALED}***

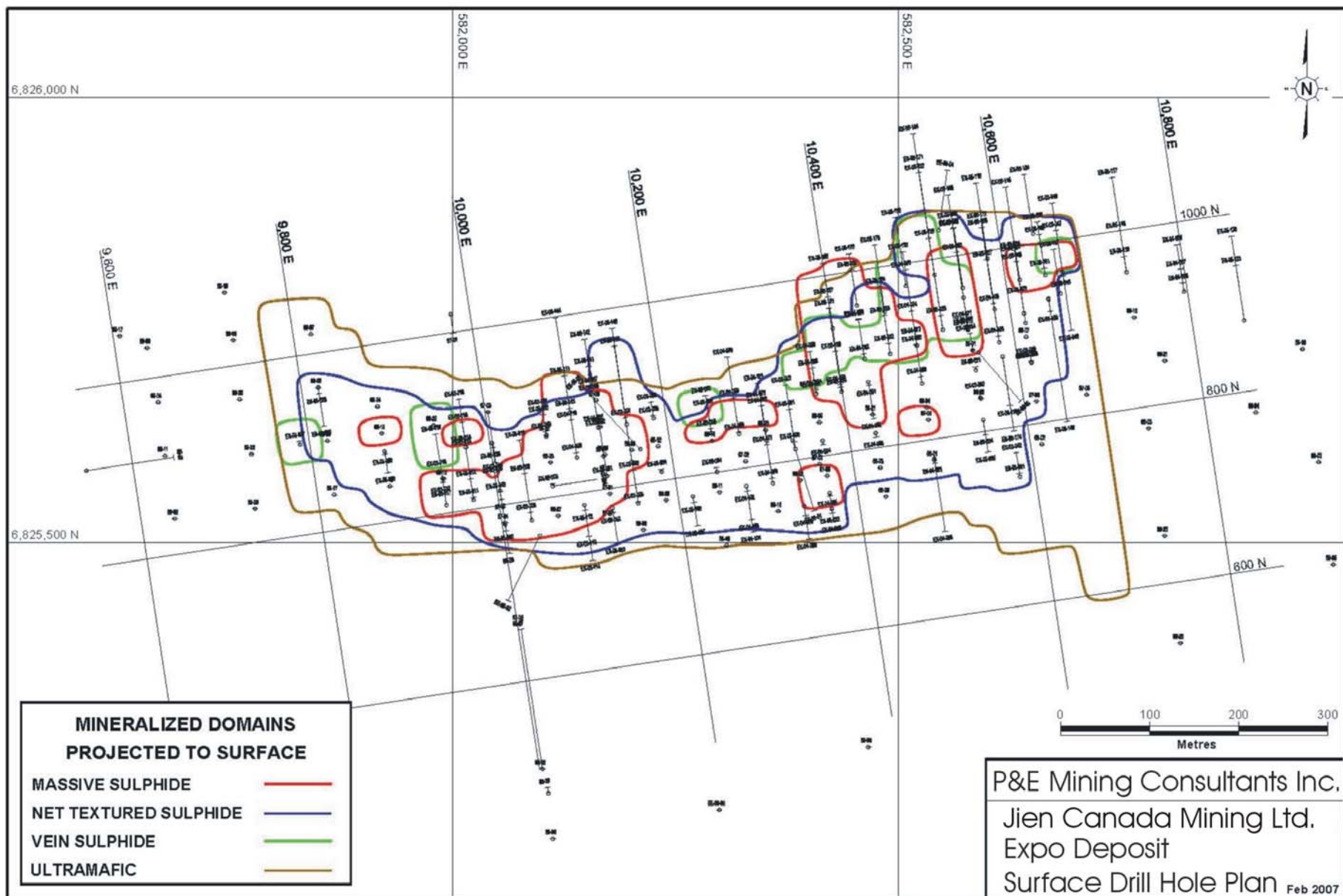
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Antoine R. Yassa, P.Geo.  
OGQ # 224

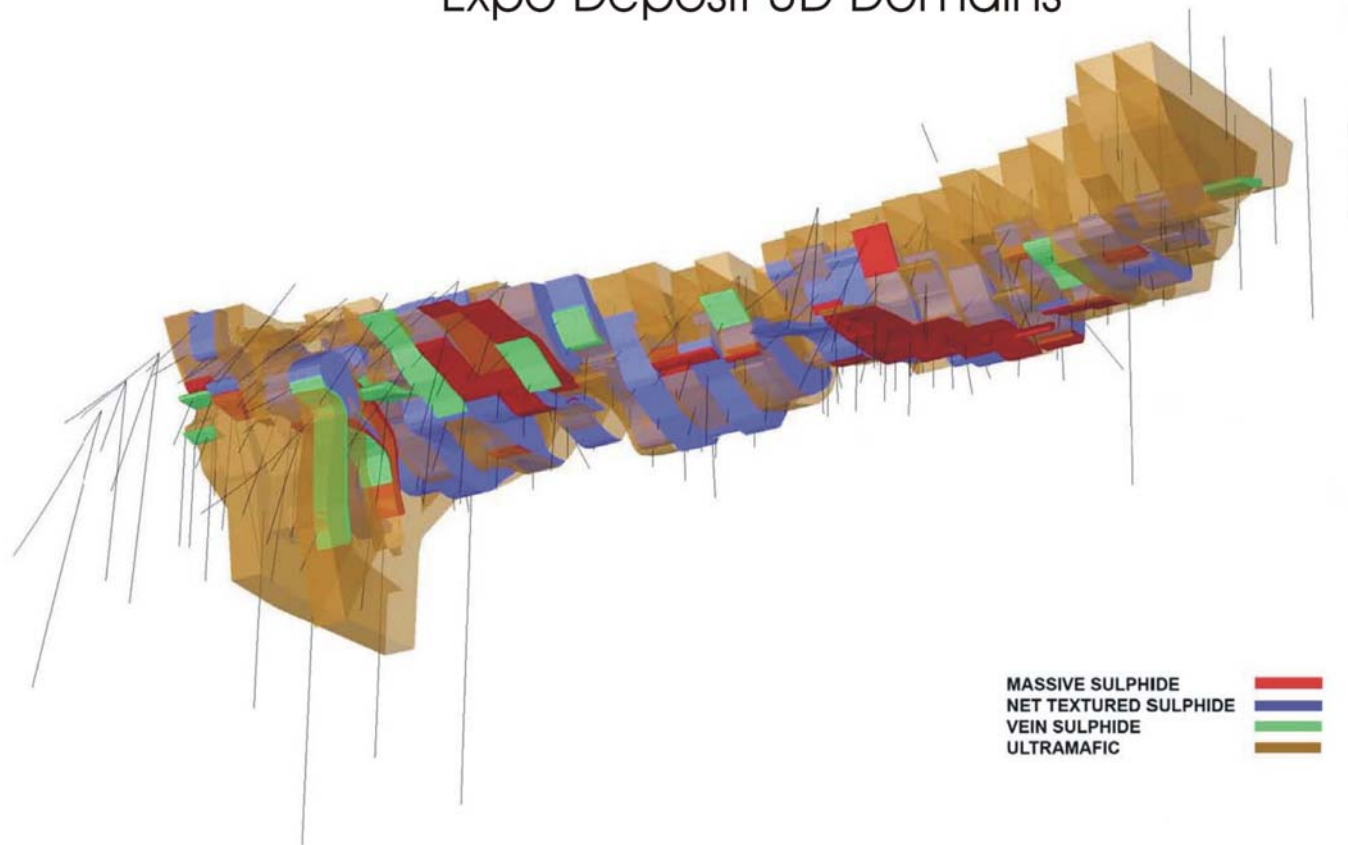


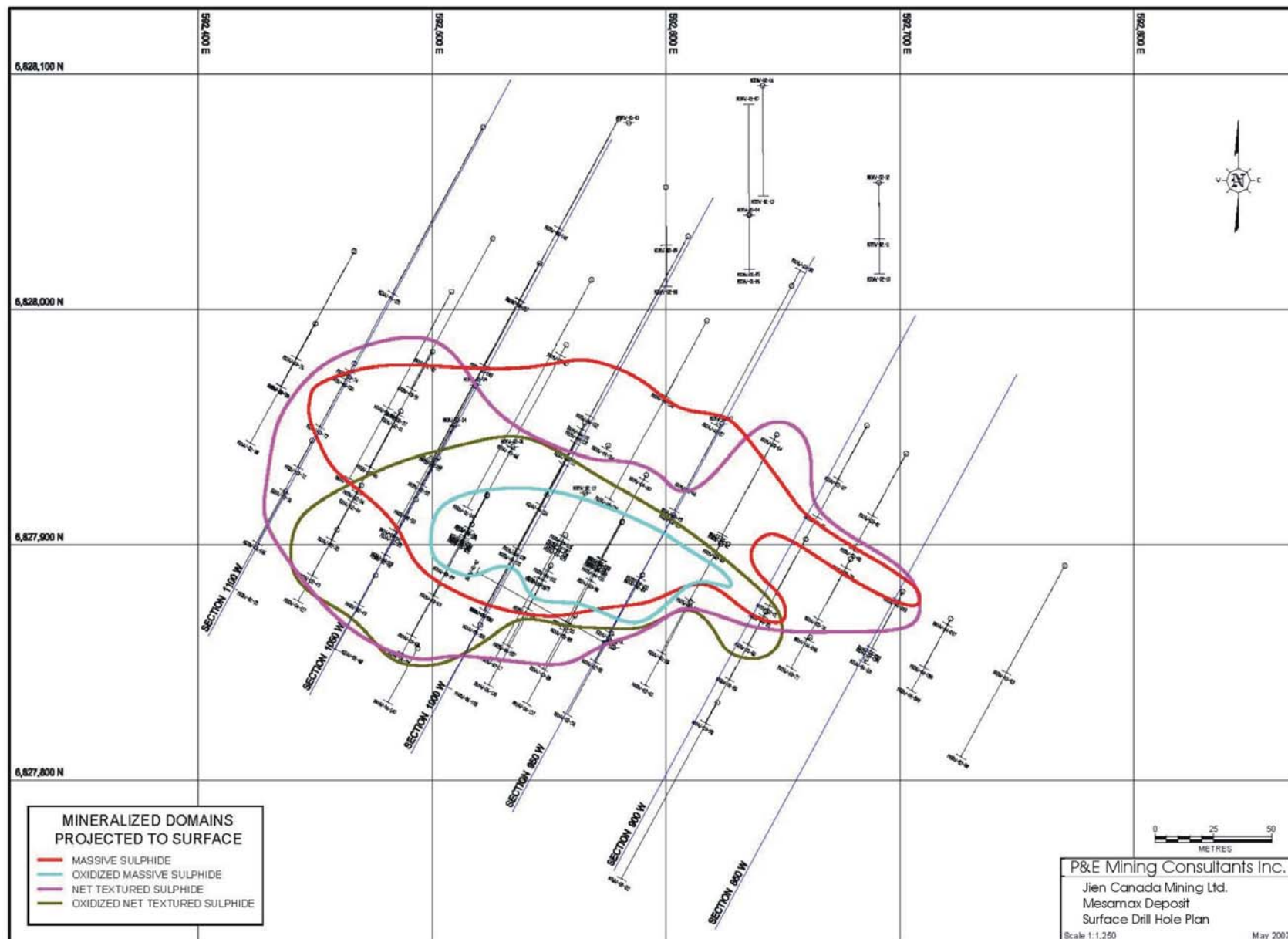
## **APPENDIX-I**

### **SURFACE DRILL HOLE PLANS AND 3-D DOMAINS FOR THE EXPO, MESAMAX, MEQUILLON ALLAMMAQ, IVAKKAK AND PUIMAJUQ DEPOSITS**

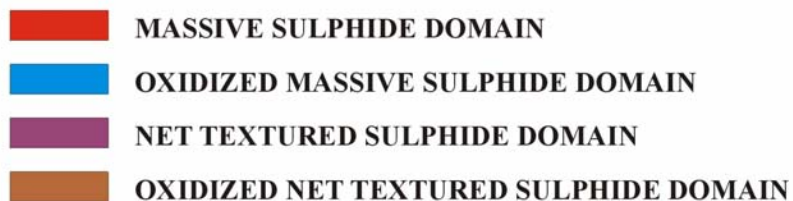
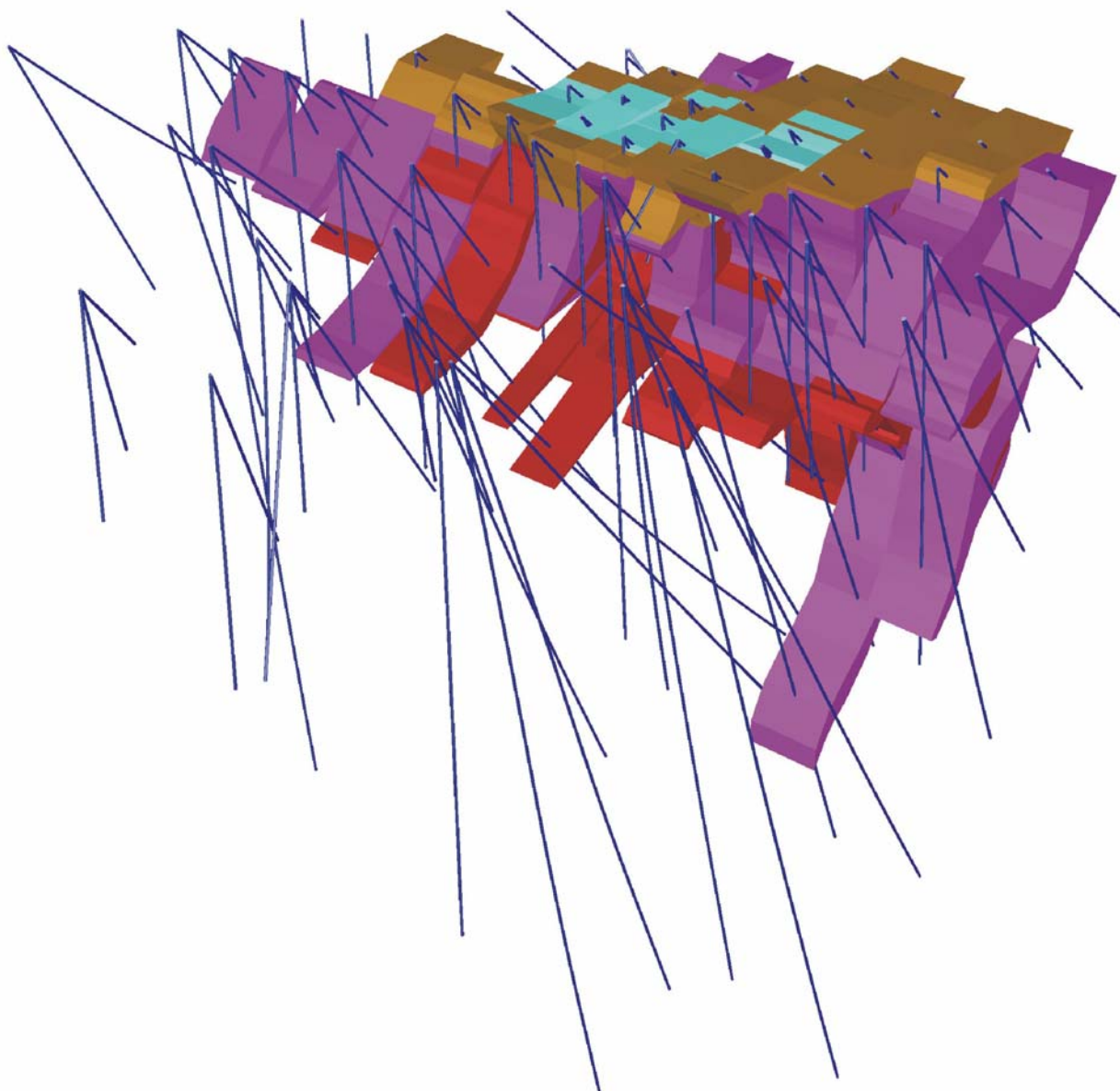


## Expo Deposit 3D Domains

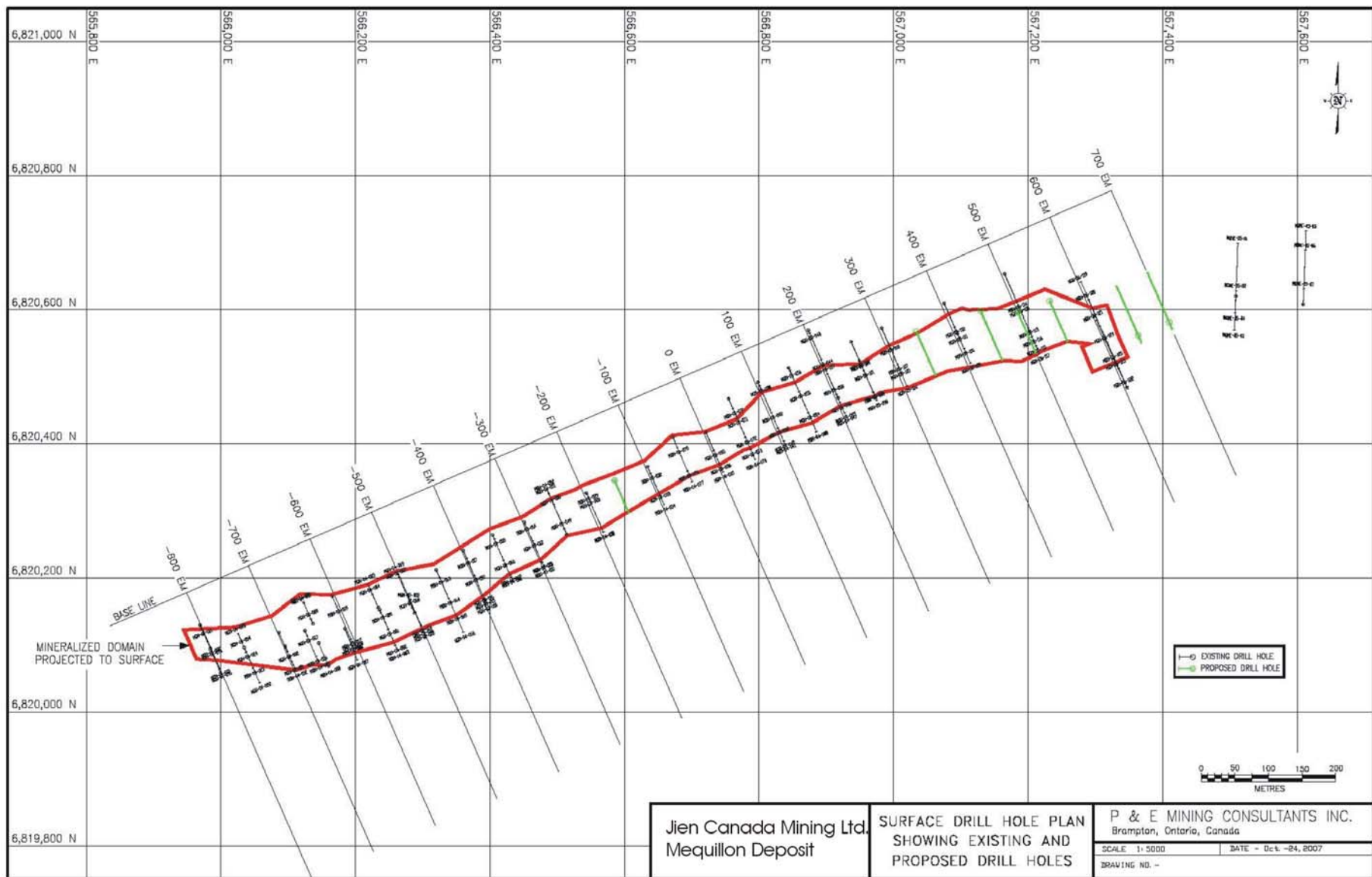




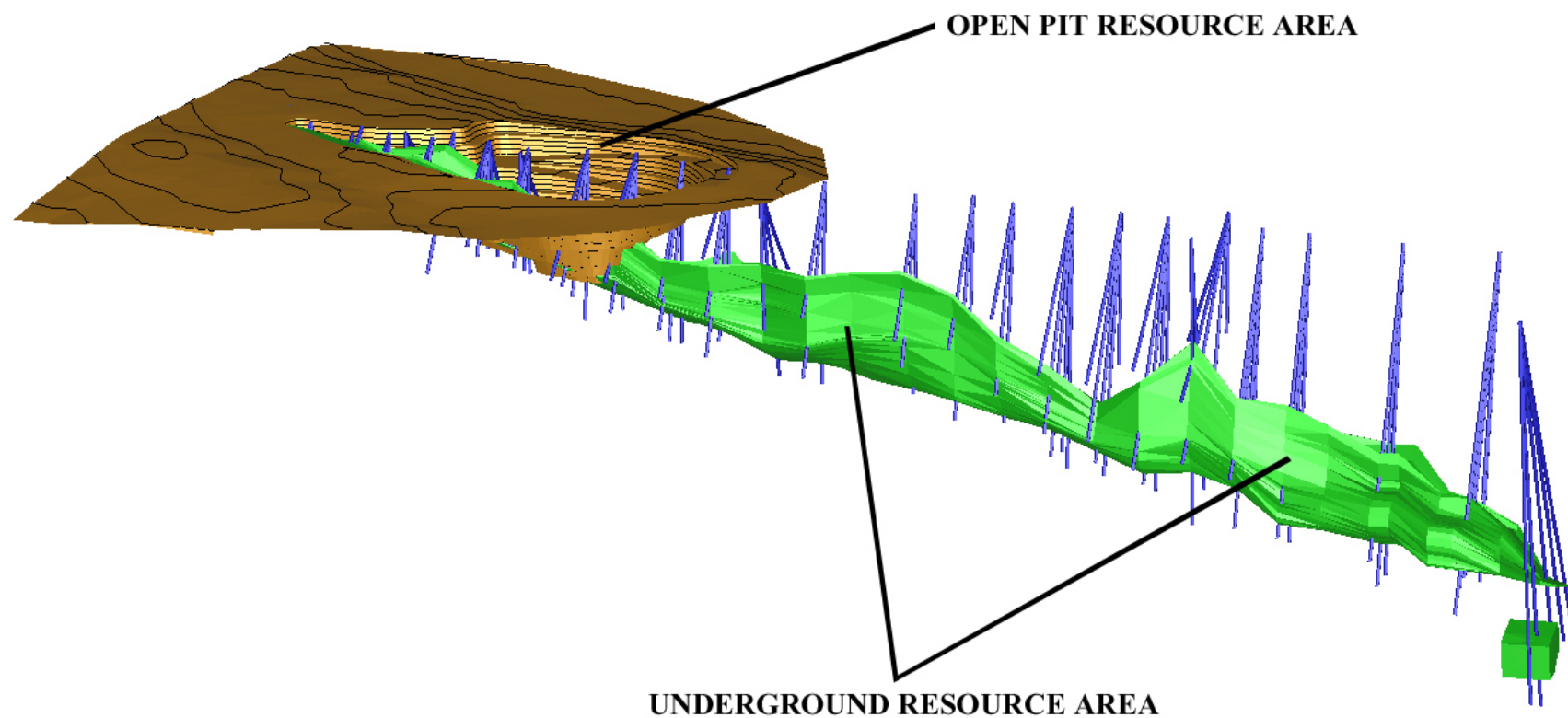
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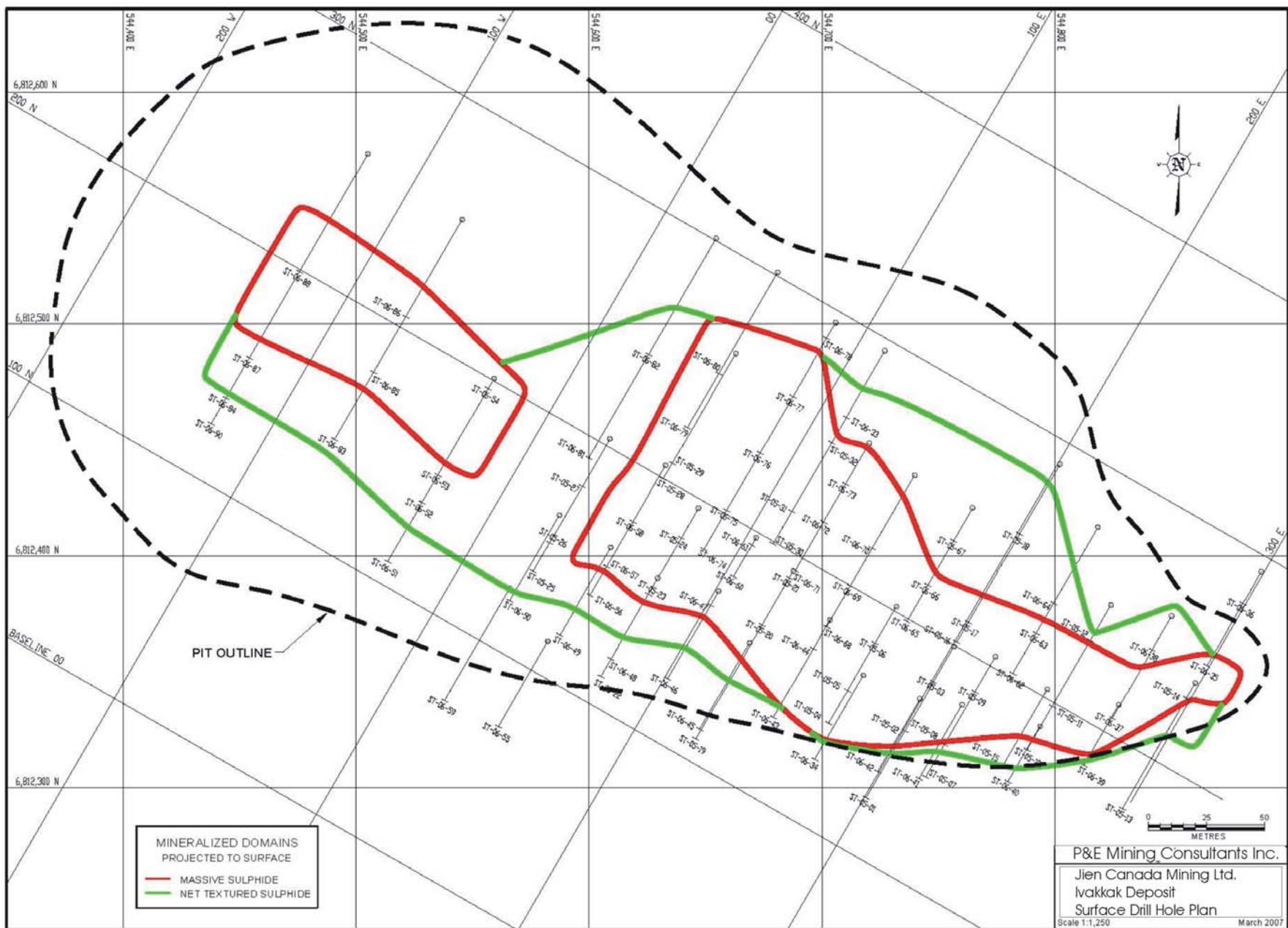






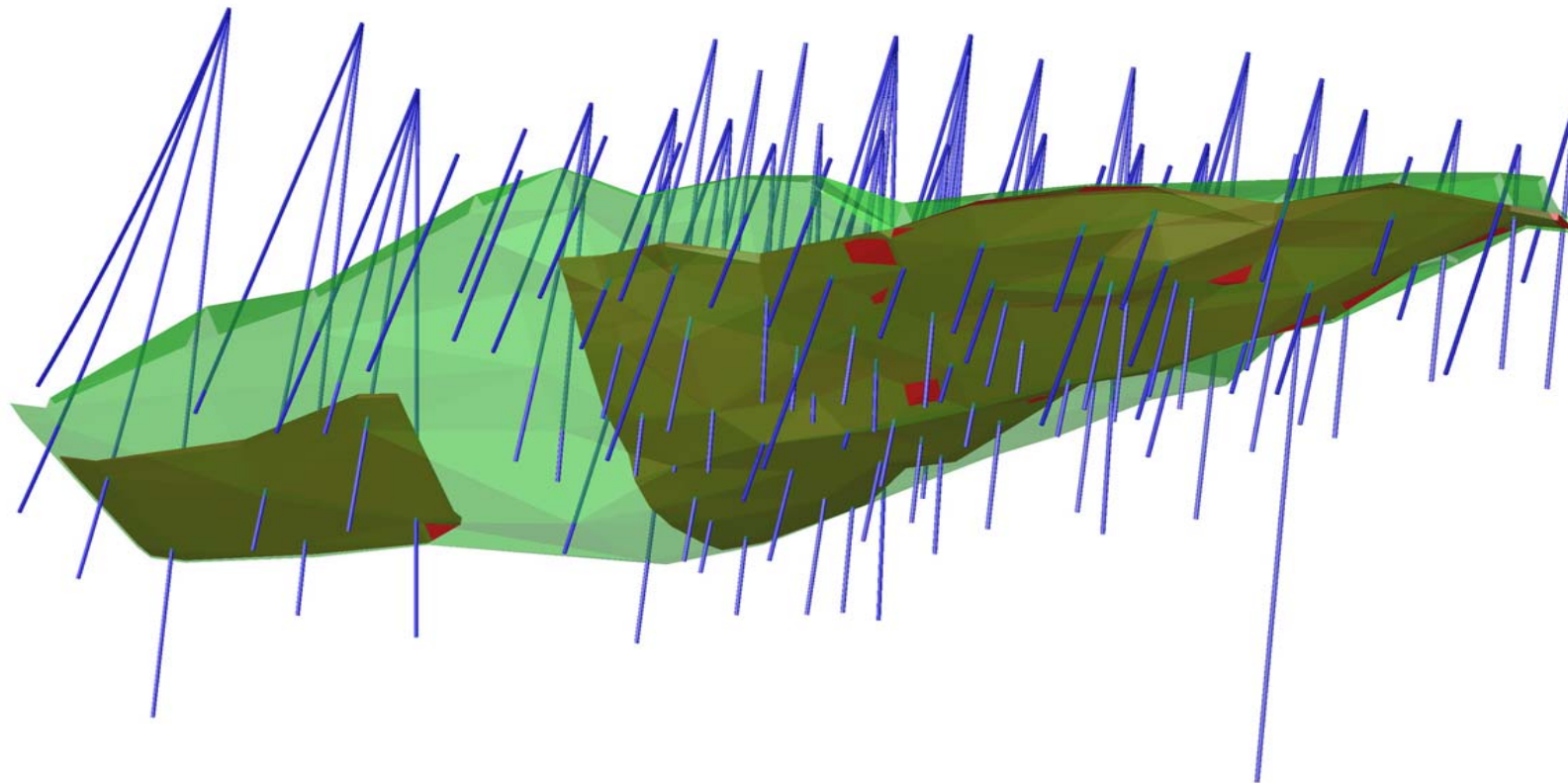
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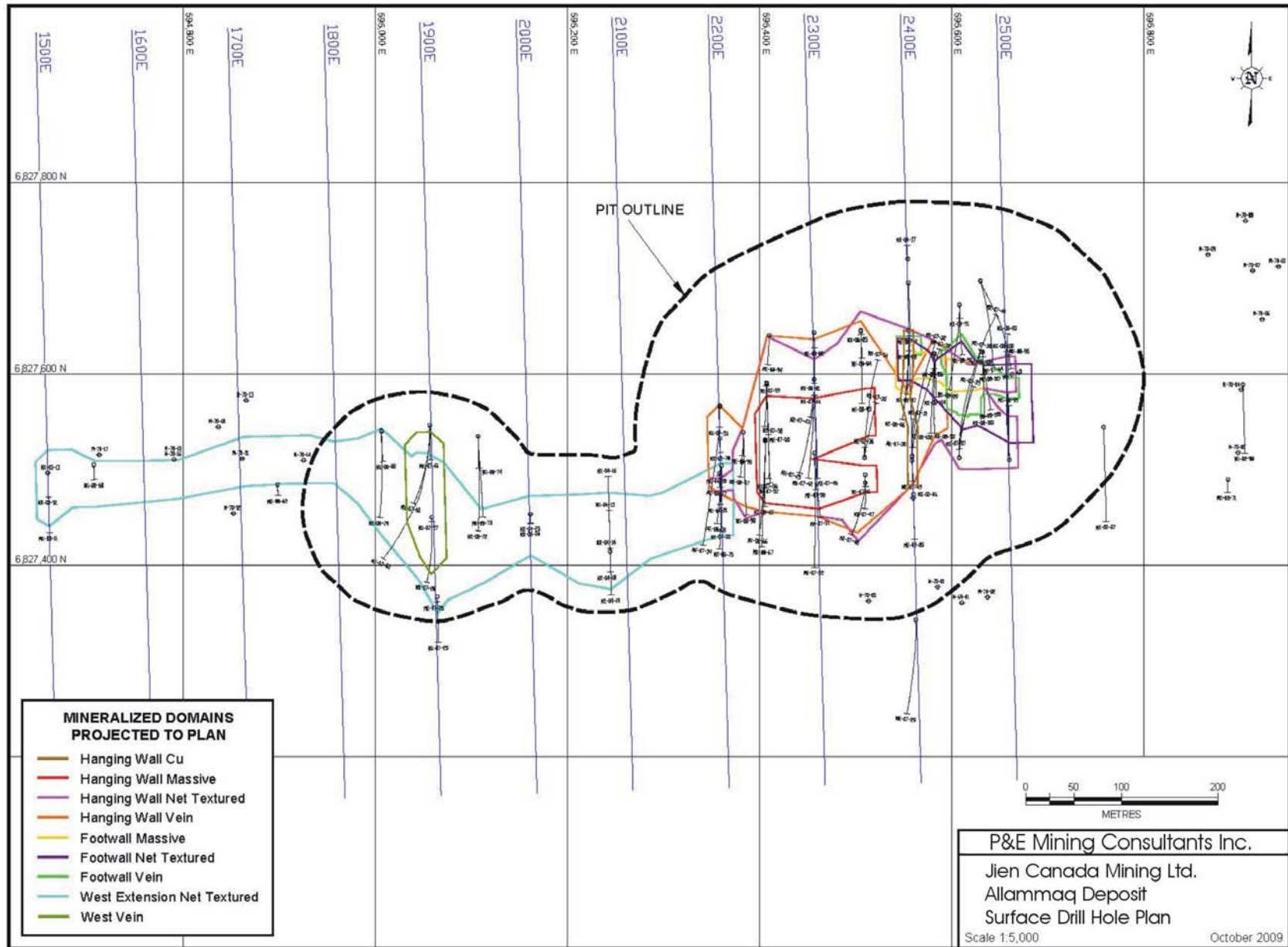




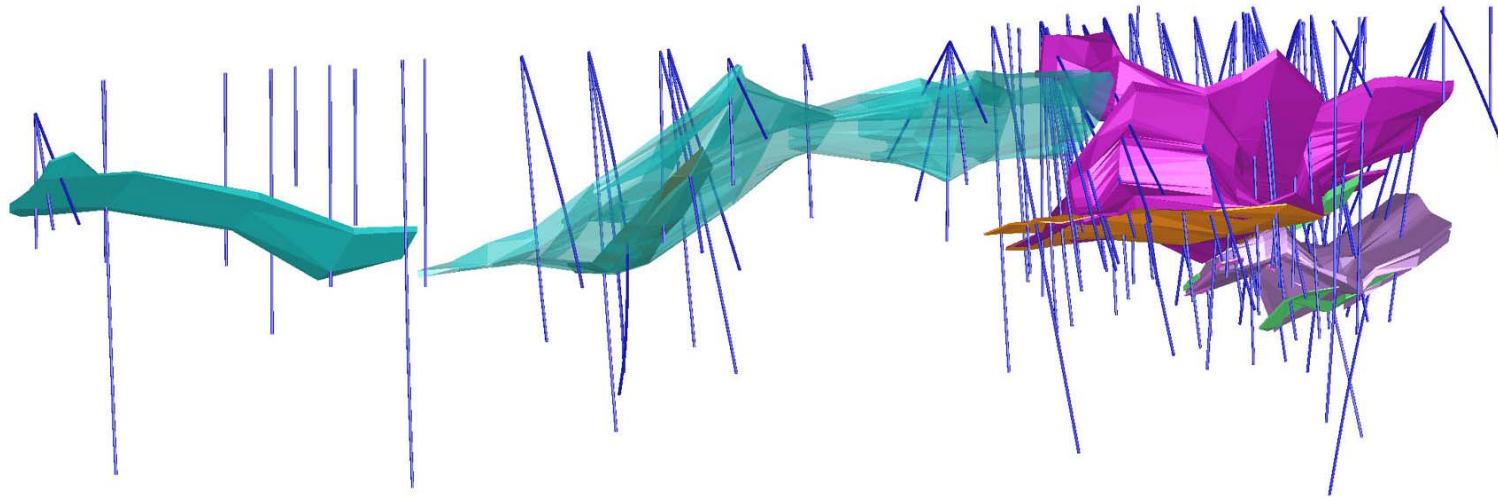


# IVAKKAK PROJECT - 3D DOMAINS







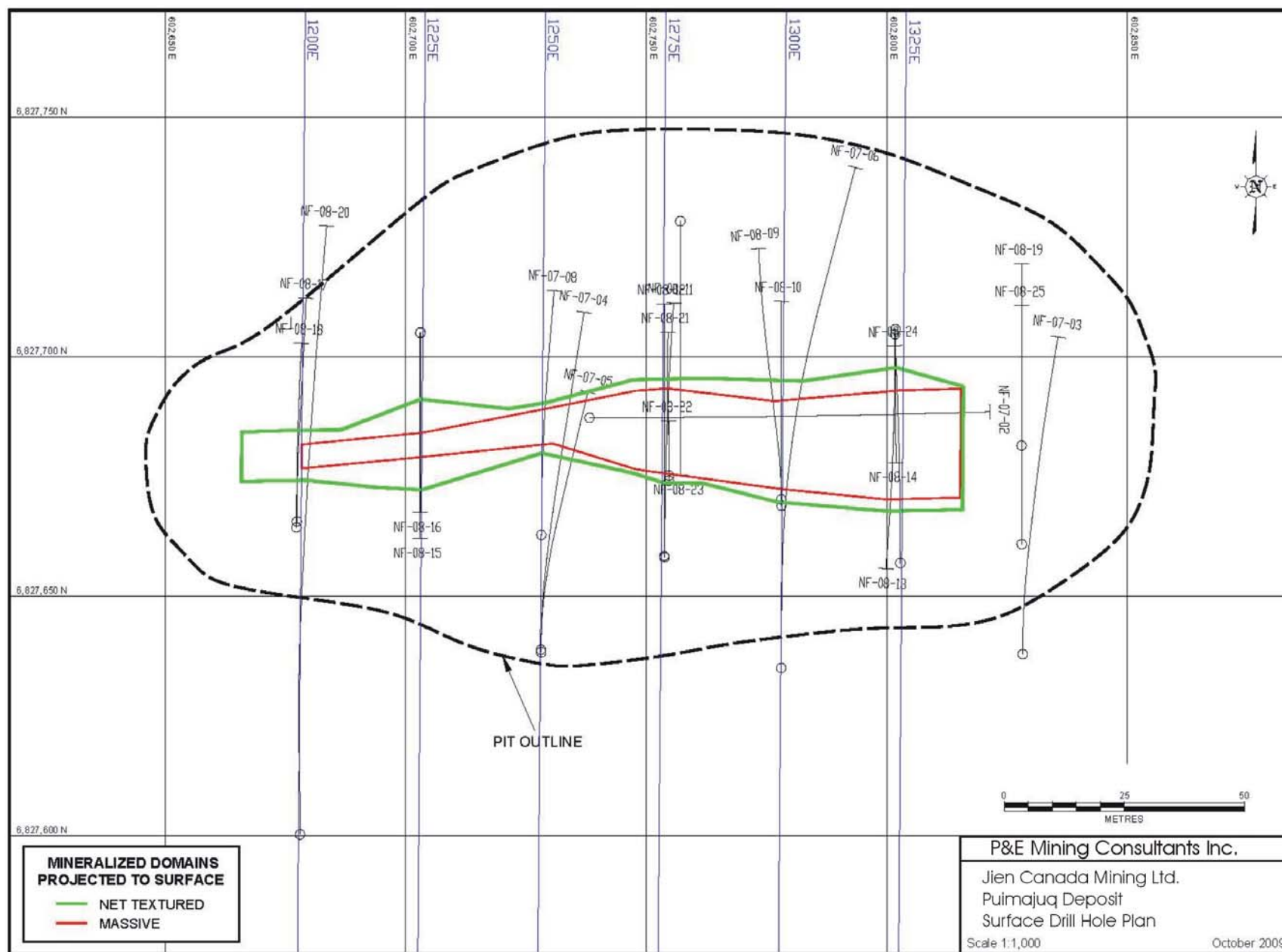


## ALLAMMAQ DEPOSIT - 3D DOMAINS



### DOMAINS

 Hanging Wall Cu (Not Visible)	 Footwall Massive (Not Visible)
 Hanging Wall Massive (Not Visible)	 Footwall Net Textured
 Hanging Wall Net Textured	 Footwall Vein
 Hanging Wall Vein	 West Extension Net Textured
	 West Vein



## PUIMAJUQ DEPOSIT - 3D DOMAINS

