

# ROYAL NICKEL CORPORATION Suite 1200 220 Bay Street Toronto, Ontario M5J 2W4 CANADA

**ANNUAL INFORMATION FORM For the year ended December 31, 2013** 

Dated as of February 27, 2014

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#### **GENERAL MATTERS**

Unless otherwise noted or the context otherwise indicates, the terms "Royal Nickel", "Company" and "our" refer to Royal Nickel Corporation.

For reporting purposes, the Company prepares its financial statements in Canadian dollars and in conformity with International Financial Reporting Standards ("IFRS"). All dollar amounts in this Annual Information Form ("AIF") are expressed in Canadian dollars, except as otherwise indicated. References to "\$", "C\$" or "dollars" are to Canadian dollars, references to US\$ or "U.S. dollars" are to United States dollars.

Market data and other statistical information used in this AIF is based on independent industry publications, government publications, reports by market research firms, or other published independent sources, including Wood Mackenzie, Global Trade Information Services Inc. ("GTIS") and metalprices.com. Some data is also based on Royal Nickel's good faith estimates that are derived from its review of internal data and information, as well as independent sources, including those listed above. Although Royal Nickel believes these sources are reliable, the Company has not independently verified the information and cannot guarantee its accuracy or completeness.

The information contained in this AIF is as of February 27, 2014, unless otherwise indicated.

#### FORWARD LOOKING STATEMENTS

This AIF contains "forward looking information" and "forward looking statements" (collectively referred to as "forward looking statements"). Forward looking statements relate to future events or the Company's future performance. All statements other than statements of historical fact are forward looking statements. Often, but not always, forward looking statements can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "does not anticipate" or "believes" or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Forward looking statements in this AIF include, but are not limited to:

- statements with respect to targeted milestones to achieve development of the Dumont Nickel Project,
- the results and projections contained in the Feasibility Study (defined below), including mineral reserve and resource estimates, ore grade, the expected mine life, anticipated nickel, cobalt, platinum and palladium production, nickel, cobalt, platinum and palladium recovery, development schedule, initial capital costs, cash operating costs and other costs, the projected IRR, sensitivity to, among other inputs, metal prices, the projected payback period, the availability of capital for development and the overall financial analyses,
- financing sources available to develop the Dumont Nickel Project,
- the future financial or operating performance of the Company and its projects,
- the Company's belief that the Company has sufficient funds to meet its obligations and planned expenditures for the ensuing twelve months as they fall due,
- the future price of metals,
- the supply and demand for nickel,
- the estimate of the quantity and quality of the estimate of mineral resources and mineral reserves,
- the realization of mineral resource estimates and mineral reserve estimates,
- costs of production, capital, operating and exploration expenditures,
- costs and timing of the development of the Dumont Nickel Project,

- the ability of the Company to obtain all government approvals, permits and third party consents in connection with the Company's development activities,
- government regulation of mining operations,
- environmental risks,
- reclamation expenses, and/or
- title disputes or claims.

Forward looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward looking statements. Such factors include, among others:

- the actual results of current development activities,
- project delays and funding needs, including increases in operating and capital costs,
- general business, economic, competitive, political and social uncertainties,
- future prices of metals; availability of alternative nickel sources or substitutions,
- actual results of reclamation activities,
- conclusions of economic evaluations.
- changes in project parameters as plans continue to be refined,
- the future cost of capital to the Company,
- possible variations of ore grade or recovery rates,
- failure of plant, equipment or processes to operate as anticipated,
- accidents, labour disputes and other risks of the mining industry,
- political instability, terrorism, insurrection or war,
- delays in obtaining governmental approvals, necessary permitting or in the completion of development or construction activities,

as well as those factors discussed in the section entitled "Risk Factors" in this AIF. Such forward looking statements are also based on a number of material factors and assumptions, including:

- future nickel prices,
- availability of financing,
- permitting and development consistent with Royal Nickel's expectations,
- foreign exchange rates,
- Royal Nickel's ability to attract and retain skilled staff,
- prices and availability of equipment,
- that contracted parties provide goods and/or services on the agreed timeframes, and
- that no unusual geological or technical problems occur.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. **Accordingly, readers should not place undue reliance on forward looking statements.** Forward looking statements contained in this AIF are made

as of the date of this AIF or the date specified in such statement and the Company disclaims any obligation to update any forward looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable securities laws. There can be no assurance that forward looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

#### **CORPORATE STRUCTURE**

Royal Nickel was incorporated under the *Canada Business Corporations Act* on December 13, 2006. Royal Nickel's registered office, head office and records office is at Suite 1200 – 220 Bay Street, Toronto, Ontario, M5J 2W4 and its regional office is located at 42 Rue Trudel, Amos, Quebec, J9T 4N1. The Company is based in Toronto, Ontario and its principal business activity is the acquisition, exploration, evaluation and development of mineral properties. All of Royal Nickel's operating activities are carried on directly by the Company as the Company has no subsidiaries.

Royal Nickel is a reporting issuer in all of the Provinces of Canada. The common shares of the Company (the "Common Shares") are listed on the Toronto Stock Exchange (the "TSX") and trade under the symbol "RNX".

#### GENERAL DEVELOPMENT OF THE BUSINESS

#### The Dumont Nickel Project

The Company's principal asset and sole material property is the Dumont nickel project (the "**Dumont Nickel Project**"), strategically located in the established Abitibi mining camp, 25 km northwest of Amos, Quebec, Canada.

The Dumont Nickel Project consists of 233 contiguous mineral claims totalling 9,306.5 ha. The mineral resource is located mainly in Ranges V, VI and VII on Lots 46 to 62 of Launay township, and in Range V on Lots 1 to 3 of Trecesson township.

#### Mineral Tenure

The mineral properties comprising the Dumont Nickel Project are all mineral claims. Royal Nickel holds a 100% beneficial interest in five claims. Beneficial interest in the remaining 228 claims is held 98% by Royal Nickel and 2% by Ressources Québec Inc. ("RQ"), a subsidiary of Investissement Québec, and held under the terms of the investment agreement entered into by the Company and RQ on August 1, 2012 (the "RQ Investment Agreement").

#### **Underlying Agreements**

The Dumont Nickel Project mineral claims are subject to various royalty agreements arising from terms of the property acquisitions by Royal Nickel or through the sale of royalties. The details of the underlying agreements are described below.

Marbaw Property and Royalty

The Marbaw International Nickel Corporation ("Marbaw") property comprises an area totalling 2,639.0 ha. This area originally consisted of 65 claims. Thirty-four of these claims were ground-staked claims that were converted to map-staked claims by the Quebec Ministry of Natural Resources ("MNR") in 2013.

This property was originally held by Marbaw, but a 100% interest in the claims was sold and transferred to Royal Nickel under an agreement dated March 8, 2007 for consideration that included future consideration. Future consideration consisted of the following: (1) issuance of 7 million common shares in Royal Nickel to Marbaw upon the property being placed into commercial production or upon transfer of the property to a third party; and (2) payment of \$1,250,000 to Marbaw on March 8, 2008. This amount has been paid by Royal Nickel, while the shares have yet to be issued.

Royal Nickel also committed to incur a minimum expenditure of \$8,000,000 on the property. This commitment was met in 2008. The Marbaw property is subject to a 3% NSR royalty payable to Marbaw. Royal Nickel has the right to buy back half of the 3% NSR for \$10,000,000 at any time.

This property is subject to the RQ Royalty and the Red Kite Royalty described below.

Coyle-Roby Property and Royalty

The Sheridan-Ferderber property comprises an area of 256.47 ha corresponding to six historical contiguous ground-staked claims. The claims corresponding to the Sheridan-Ferderber property were converted to map staked claims by the MNR in 2013.

The property was originally held 50% by Terrence Coyle and 50% by Michel Roby, but it was optioned to Patrick Sheridan and Peter Ferderber under an agreement dated October 26, 2006. The option agreement was subsequently assigned to Royal Nickel through an agreement dated May 4, 2007.

Royal Nickel's option to acquire 100% interest in this property was exercised by the completion of \$75,000 in work on the property before October 26, 2008 and by paying \$10,000 to Coyle-Roby by October 26, 2007 and \$30,000 to Coyle-Roby by October 26, 2008. The claims were transferred 100% to Royal Nickel on August 25, 2008.

The property is subject to a 2% NSR royalty payable to Terrence Coyle (1%) and Michel Roby (1%). Royal Nickel has the right to buy back half of this 2% NSR for \$1,000,000 at any time. An advance royalty of \$5,000 per year is also payable to Coyle-Roby beginning in 2011. Advance royalty payments up to and including October 2013 have been made.

These claims are also subject to the RQ Royalty and the Red Kite Royalty described below.

Frigon-Robert Property and Royalty

The Frigon-Robert property comprises two contiguous claims totalling 83.84 ha. The claims were originally held 50% by Jacques Frigon and 50% by Gérard Robert. They were transferred to Royal Nickel through a purchase agreement dated November 1, 2010.

The property is subject to a 2% NSR royalty payable to Jacques Frigon (1%) and Gérard Robert (1%). Royal Nickel has the right to buy back half of this 2% NSR for \$1,000,000 at any time.

These claims are also subject to the RQ Royalty and the Red Kite Royalty described below.

Pershimco Property and Royalty

The Pershimco property comprises five claims totalling 195.64 ha. The claims were originally held 100% by Pershimco Resources. They were transferred to Royal Nickel through a purchase agreement dated March 18, 2013 for \$30,000. These claims are subject to a 3% NSR royalty payable to Pershimco Resources. Royal Nickel has the option to buy back the NSR in stages at any time by paying \$1,000,000 for the first percent, \$3,000,000 for the second percent and \$6,000,000 for the third percent.

As these claims were acquired after the RQ Investment Agreement, they are not subject to the RQ Royalty. These claims are, however, subject to the Red Kite Royalty.

RQ Royalty

On August 1, 2012, Royal Nickel entered into the RQ Investment Agreement with RQ. Pursuant to the agreement, Royal Nickel received \$12 million and RQ became entitled to receive 0.8% of the net smelter return from the sale of minerals produced from the Dumont Nickel Project and acquired a 2% undivided co-ownership interest in the property (collectively, the "RQ Royalty"). At any time after August 1, 2017, the Company has the right to acquire

all or a portion of the 0.8% NSR for a price of \$10 million per 0.2% increment. Upon acquisition by the Company of the full 0.8% NSR, the 2% undivided co-ownership interest will be re-conveyed to the Company. The RQ Royalty applies to all Dumont Nickel Project claims except the five Pershimco claims that were acquired after the RQ Investment Agreement.

## Red Kite Royalty

On May 10, 2013, Royal Nickel closed a royalty financing with Red Kite. Pursuant to a Net Smelter Returns Royalty Agreement dated May 10, 2013 (the "Red Kite NSR Agreement"), Red Kite (through 8248567 Canada Limited) acquired a 1% net smelter return royalty in the Dumont Nickel Project for a purchase price of US\$15 million (the "Red Kite Royalty").

The Red Kite Royalty applies to all claims comprising the Dumont Nickel Project.

#### Activities

Since acquiring the Dumont Nickel Project in 2007, Royal Nickel has undertaken an aggressive exploration and evaluation program to evaluate and develop the mineral resources. In detailed evaluation of the Dumont Nickel Project, Royal Nickel has completed the following successive National Instrument 43-101 ("NI 43-101") technical reports:

- Preliminary Economic Assessment September 3, 2010
- Pre-Feasibility Study December 16, 2011
- Revised Pre-Feasibility Study June 22, 2012
- Feasibility Study July 25, 2013

These technical reports were supported by detailed exploration and evaluation work including over 171,000 metres of diamond drilling at regularly spaced sections in order to delineate the mineral resource, assess geotechnical properties of the rock and evaluate regional exploration targets on the Dumont Nickel Project. In addition to the resource definition, several programs intended to characterize the deposit and its environment have been undertaken to support development studies. These include geological interpretation studies, deposit and geotechnical modeling, and sampling for metallurgical testing. Detailed laboratory scale metallurgical testing on representative samples from the Dumont Nickel Project has been undertaken leading to a standard flowsheet design and estimate of nickel recovery and concentrate quality.

During 2013, the Company continued its activities in support of the development of the Dumont Nickel Project. The work program focused on completing the feasibility engineering study, regional exploration, geological and geotechnical data collection, metallurgical characterization testwork and flowsheet optimization, and follow up on the Environmental and Social Impact Assessment ("ESIA") filing.

The following were the major activities and accomplishments during the year ended December 31, 2013:

- Feasibility Study: Work on the feasibility study (the "Feasibility Study") was completed by a team comprised of Ausenco Services Pty Ltd. and Ausenco Solutions Canada Inc. ("Ausenco"), SRK Consulting (Canada) Inc. ("SRK"), Snowden Mining Industry Consultants Inc., Golder Associates Ltd. and GENIVAR Inc. (now, WSP Global Inc.) The Dumont Nickel Project NI 43-101 compliant technical report was filed on SEDAR on July 25, 2013.
- Metallurgical Tests Characterization: Additional metallurgical tests were conducted to support the characterization of the ore body and consisted of three additional standard laboratory recovery tests on new samples to fill in spatial and mineralization information gaps identified during the pre-feasibility study;

- **Metallurgical Tests Feasibility Study:** The following metallurgical work was completed to support the Feasibility Study:
  - Optimization laboratory scale test work, focusing on the following areas:
    - slimes flotation kinetics,
    - desliming optimization,
    - reagent optimization for both the slimes and rougher flotation circuits, and
    - awaruite circuit kinetics and optimization.
  - Two samples of concentrate, one Pentlandite dominant and one Heazlewoodite dominant, were submitted to characterize the self-heating potential.
  - Laboratory scale test work was completed focusing on slimes circuit optimization.
  - Five additional locked cycle tests and one open circuit cleaner test were performed to provide overall flowsheet and recovery confirmation on six variability samples.
- **Stakeholder Relations:** The following stakeholder relations activities were completed during 2013:
  - Results from the second phase of the Company's voluntary public consultation process were integrated into the ESIA through exchanges with provincial regulators. The goal of this process was to ensure effective communication and distribution of information and documentation of the concerns, comments and suggestions of the host communities in order to improve upon the Feasibility Study and validate the content of the ESIA. The next phase of public consultation is the government-mandated environmental public hearings based on the ESIA.
  - An MOU was signed with the Abitibiwinni First Nation ("AFN") on April 4, 2013. The MOU will serve as a framework to govern the relationship between the Company and AFN in accordance with our mutual intentions to further build on a relationship characterized by cooperation and mutual respect, in connection with the development of the Dumont Nickel Project. The MOU sets out the areas in which the Company and AFN have agreed to work together and maintain effective avenues of communication to support mutual goals such as environmental responsibility and the enhancement of training, employment and business opportunities for Abitibiwinni community members. At year end, negotiations are in progress with the AFN to establish an Impact and Benefits Agreement within the framework of the MOU signed on April 4, 2013.
- **Environmental and Social Impact Assessment:** The exchange of information with provincial and federal authorities continued as part of the ESIA process.
- Regional Exploration: 4,800 metres of diamond drilling and 20 line-km of surface geophysics were completed to evaluate regional exploration targets that occur within the Dumont property but outside the Dumont resource. Target development based on this geological and geophysical data identified several exploration targets that occur along the footwall of the Dumont intrusion. Several of these targets were drilled in 2013. No significant mineralization was intersected.
- Community Liaison Office: On January 18, 2013, the Company announced the official opening of its new community liaison office located in the municipality of Launay in the Abitibi region of Quebec.

- **2013 Flow-Through Financing:** On March 7, 2013, the Company closed a private placement of 4 million Common Shares designated as "flow-through shares" under the *Income Tax Act* (Canada) at a price of \$0.50 per share for aggregate gross proceeds of \$2 million. In connection with the financing, the Company issued 240,000 broker warrants, with each broker warrant exercisable to acquire one Common Share at a price of \$0.50 per share until March 7, 2014.
- MOU: On March 12, 2013, the Company signed a memorandum of understanding ("MOU") with Tsingshan Holding Group Co., Ltd. The MOU, which is non-binding, set out the objectives of the parties to work together in relation to downstream concentrate processing and the potential to enter into an offtake and/or partnership arrangement. Although the MOU ended on December 31, 2013, the Company remains in constructive discussions with Tsingshan.
- Red Kite Royalty Financing: On May 10, 2013, the Company closed a royalty financing with Red Kite. Pursuant to the Red Kite NSR Agreement, Red Kite (through 8248567 Canada Limited) acquired the Red Kite Royalty for a purchase price of US\$15 million.
- Hydro-Québec Agreement: On September 26, 2013, the Company announced that it had entered
  into an agreement with Hydro-Québec for the construction of a high voltage power transmission
  line to connect the Dumont Nickel Project to Hydro-Québec's existing electricity distribution
  network (the "HQ Agreement"). The connection of the Dumont site to the existing network will
  require the installation of approximately 10 km of 120 kV power lines.
- e3 Plus Award: On November 14, 2013, the Company announced that it had received the 2013 e3 Plus Award, an annual award given by the AEMQ (Quebec Mineral Exploration Association). The e3 Plus Award recognizes a company for its high level of environmental and social responsibility and its compliance with the leading practices outlined in e3 Plus: A Framework for Responsible Exploration. e3 Plus was developed by the Prospectors and Developers Association of Canada to support exploration companies in the continuous improvement of their social, environmental, and health and safety performance.

# Marbridge Mine Property (the "Marbridge Property")

On April 22, 2009, the Company entered into an agreement to acquire a 100% ownership interest in the Marbridge Property from Xstrata plc for a total cash consideration of \$1,000,000. On July 31, 2009, the Company completed the acquisition pursuant to the terms of the agreement and acquired a 100% interest in the Marbridge Property.

The Marbridge Property is located 60 km by road southeast of the Dumont Nickel Project and 40 km northwest of Val d'Or, Quebec. The deposits are komatiite hosted and lie within the broad La Motte ultramafic belt within the eastern Abitibi Greenstone Belt. The Marbridge Property comprises two mining concessions totalling 240 ha in La Motte Township.

The four deposits at the Marbridge Property were discovered by prospecting and surface drilling during the period 1957 to 1966. The deposits were previously operated under a joint venture between Falconbridge Nickel Mines and Marchant Mining which produced 702,366 tonnes of ore grading 2.28% Ni and 0.1% Cu over a five year period between 1962 and 1968.

In 2012, four drill holes totalling 107 metres were completed to characterize and evaluate mineralization types identified during compilation of historical data. This work confirmed that a previously unrecognized and poorly tested nickel bearing ultramafic flow horizon (up to 1.39% Ni over 2.02m) is located on the Marbridge property and merits further study and testing. In the summer of 2013, a geological mapping and sampling program was completed over portions of the Marbridge Property in order to identify exploration targets.

#### Jefmar Property (the "Jefmar Property")

On March 26, 2008, the Company signed a formal property acquisition agreement with Jefmar Inc. ("**Jefmar**") relating to the acquisition of a 100% interest in 14 mining claims totalling 586 ha in the La Motte and Figuery townships, in the province of Quebec.

Pursuant to the terms of the agreement, the Company gave the following consideration for the acquisition of the Jefmar Property:

- payment of \$70,000 to Jefmar;
- issuance of 150,000 Common Shares to Jefmar; and
- a 2% NSR granted to Jefmar. The Company has the right and option to buy back 1% of the NSR for a price equal to \$1 million with a minimum of 60 days prior written notice to Jefmar.

On September 10, 2010, the Company entered into a letter agreement with Glen Eagle Resources Inc. ("Glen Eagle") on Jefmar property claim number 2116146 Lot 8, Range 6, La Motte Township ("Claim 2116146") whereby Glen Eagle can earn a 70% interest in this claim by completing exploration expenditures and making option payments to Royal Nickel over a three year period. The option and joint venture agreement outlined in this letter agreement was finalized in April 2011. On September 1, 2013, the option period to complete \$450,000 in exploration expenditures was extended to September 10, 2015. Glen Eagle has completed a total of approximately \$343,000 in exploration expenditures to date, and has made the required option payment of \$10,000 by the September 10, 2013, anniversary date of the agreement to keep the option in good standing. Glen Eagle has completed a NI 43-101 Preliminary Economic Assessment dated January 22, 2013, for a lithium deposit that occurs partly on Claim 2116146.

In July 2013, five claims in the Jefmar claims group were allowed to expire as they were considered to have limited geological prospectivity for nickel and maintaining these claims was not consistent with Royal Nickel's strategic objectives.

#### **DESCRIPTION OF THE BUSINESS**

Royal Nickel is a mineral resource company primarily focused on the acquisition, exploration, evaluation and development of mineral properties. The Company's principal asset and sole material property is the Dumont Nickel Project, strategically located in the established Abitibi mining camp, 25 km northwest of Amos, Quebec, Canada. In addition to the Dumont Nickel Project, the Company also holds the Marbridge Property and the Jefmar Property.

## Overview

The Dumont Nickel Project represents a significant ore reserve that remains open at depth and along strike to the northwest. It is expected to produce 2.8 billion pounds payable of nickel over 33 years of operation. Development of the Dumont Nickel Project is based on a staged approach that results in a processing plant initial treatment rate of 52.5 kt/d of ore with expansion to 105 kt/d in year five. Highlights of the Dumont Nickel Project from the Feasibility Study include:

- after tax NPV of US\$1,137 million at a discount rate of 8% from commencement of construction;
- after tax IRR of 15.2%;
- simple payback period of 6.1 years;
- initial capital expenditure estimate for the 52,500 tpd startup scenario of US\$1,191 million;

- expansion from 52,500 tpd to 105,000 tpd in year five is estimated to require an additional US\$891 million investment:
- initial nickel production of 73 Mlbs (33 kt) annually, expanding in year five to an annual average of 113 Mlbs (51 kt) for the remainder of the 20-year mine life and average production over the 33-year project life of 90 Mlbs (41kt) annually;
- C1 cash costs of US\$4.01/lb (US\$8,840/t) during initial phase and US\$4.31/lb (US\$9,502/t) over year life-of-project (low 2nd quartile of cash cost curve);
- ore reserves of 1.2 billion tonnes at a 0.27% nickel grade containing 6.9 billion pounds of nickel to support a 33-year project life including 1.3 billion pounds of contained nickel in proven reserve;
- 1 million ounce PGE (platinum + palladium) reserve established;
- estimated annual average of US\$427 million earnings before interest, taxes, depreciation and amortization and US\$238 million free cash flow over the 20-year mine life.

Additional potential opportunities exist to improve the economics of the Dumont Nickel Project that have not been included in the Feasibility Study at this time:

- Alternate Downstream Processing Option: The Feasibility Study economics assume selling nickel concentrate to a third party, but an alternate downstream processing option of producing nickel oxide or ferronickel could be utilized as well. This may improve the economics as a result of lower costs, more payable nickel and a larger customer base.
- **Trolley Assist Mining Cost Improvements:** The Feasibility Study pit design allows for the potential to improve the overall mining costs for the Dumont Nickel Project by installing trolley assist during the expansion in year five and utilizing electricity to replace a portion of the diesel fuel consumed by trucks.
- Iron Ore (Magnetite) Concentrate Potential Additional By-product Credit: The Dumont Nickel Project also has the potential to produce a 63.5% magnetite concentrate by-product that could be sold to steel producers to improve the revenue stream for the project.

#### **Corporate Strategy**

Royal Nickel's primary objective is captured through the vision statement: to be a prosperous mining company that grows through the acquisition and responsible development of a high-quality portfolio of base and platinum group metal assets. Royal Nickel's mission statement further defines how it plans to achieve the vision statement: we are the preferred choice for our communities, employees, shareholders and business partners by consistently creating sustainable value through the safe and responsible exploration, development and operation of our mining assets. Combined with the vision and mission statement Royal Nickel has developed a set of values that it has implemented across the Company. These value statements act as guidelines for how Royal Nickel conducts itself and its decision-making on a daily basis. The values are:

- We work safely.
- We treat people with dignity and respect.
- We respect the environment.
- We hold ourselves accountable to deliver on our commitments.

- We create lasting prosperity in the communities where we operate.
- We generate value from our assets.

With the completion of the Feasibility Study for the Dumont Nickel Project in 2013, the focus for 2014 will shift to accelerating financing discussions with potential strategic or financial partners and the permitting process. The Company continues to work with its financial advisor, Rothschild, to arrange financing to fund all stages of the development of the Dumont Nickel Project. The Company will continue to explore options for financing through a combination of strategic partnerships, joint venture arrangements, project debt finance, offtake financing, royalty financing and other capital markets alternatives. The Company believes it can successfully implement its corporate strategy because of its unique strengths, depth of management experience and well-developed relationships in the nickel industry. However, current economic conditions are impacting the timing of the financing process and, while the Company remains optimistic that partnership and financing arrangements will be achieved in a timely manner, there is no assurance that any of the proposals or discussions held to date will lead to a binding proposal or to the signing of definitive agreements.

As the focus of the work is permitting and in order to conserve cash, in January 2014 management implemented a reduction in the workforce with remaining resources focused on the permitting process. Management believes that the Company has sufficient funds to meet its current obligations and planned expenditures into 2015.

The Company will continue to work with the local community to maintain excellent communications and relationships throughout all phases of the project development.

In addition to the work on the Dumont Project, the Company will continue to investigate acquisition opportunities of highly prospective assets, preferably cash-producing, to grow the business in base and platinum group metals. The Company will focus on jurisdictions where it believes the risk is manageable.

Royal Nickel has targeted the following key milestones to achieve the development of the Dumont Nickel Project:

- completion of partnership and financing arrangements;
- receipt of main permit during the second half of 2014;
- estimated construction schedule of 22 months post successful permitting and securing financing;
   and
- assuming permits and financing in place by the end of 2014, project commissioning is targeted to begin in the second half of 2016 followed by production ramp-up.

The milestones reflect the best estimate of permitting timelines based on government review of the ESIA and public hearings. The actual commissioning date and production ramp-up would be approximately 22 months after these items are secured. The Company continues to work diligently to push the development of the Dumont Nickel Project forward as quickly as possible.

The Company will also continue to evaluate the additional upside opportunities of alternative downstream processing, trolley assist and the magnetite concentrate by-product that have the potential to add additional value to the project but were not included in the Feasibility Study in order to simplify the project and reduce implementation risk.

#### **Dumont Nickel Project 2014 Program**

The current estimate for expenditures on the Dumont Nickel Project and corporate expenditures for 2014 is approximately \$9 million.

#### The Nickel Industry

#### Uses

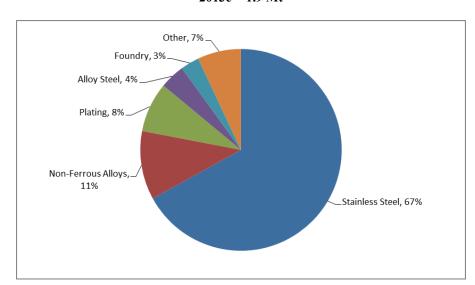
Nickel's main first use is in the manufacture of stainless steel. There are several grades of stainless steel, each with slightly different properties and alloy content. The main alloying element in stainless steel is chromium that provides basic corrosion resistance. A stainless steel is defined as containing a minimum of 10% chromium. There are two main types of stainless steels — ferritic (400 series) and austenitic (200 and 300 series).

Austenitic grades represent around 70-75% of total world stainless steel production. The most commonly used austenitic grade of stainless steel is grade 304, which contains in the range of 8-10.5% nickel and 18-20% chromium. It is frequently referred to as 18/8 grade. There are a variety of variations of grade 304 that have been developed for more specialised applications.

Ferritic stainless steels, which represent approximately 25-30% of the world's total stainless steel production, contain little or no nickel. They have fair to good corrosion resistance, particularly to chloride stress corrosion cracking. They are magnetic and are not hardenable by heat-treatment. The addition of chromium to steel can increase its brittleness so making it more difficult to weld and form. Hence there are technical barriers to how far the addition of chromium may be used to extend corrosion resistance, as well as economic factors to consider. The detrimental effect chromium has on steel's mechanical properties can be mitigated by changing the steel's phase from ferritic to austenitic. This is achieved by the addition of manganese or nickel. Since nickel also enhances the corrosion resistance provided by chromium, it has been the element of choice in most countries. Up until the end of the 1990s, only in India had there been any significant production of manganese bearing austenitic stainless steel (200 series), due largely to high import tariffs for nickel. During the period of high nickel prices in the mid 2000s, Chinese stainless steel users increasingly utilized manganese bearing austenitic stainless steels; however, the manganese bearing grades are less corrosion resistant and such a widespread switch has, as yet, failed to materialize on a global scale. The most common of the manganese bearing stainless steels that are used are grades 201 and 202, which contain 5.5-7.5% manganese and up to 5.5% nickel, although in China the nickel contents in these grades of stainless can be as low as only 1% nickel.

# Global Nickel Consumption by First Use

The following chart demonstrates the 2013 estimated first use nickel consumption breakdown:



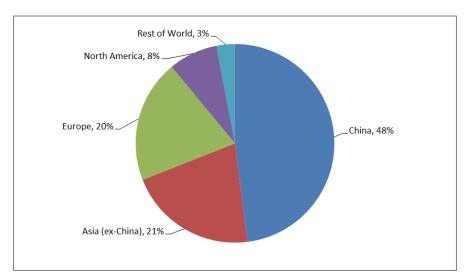
2013e = 1.9 Mt

Source: Wood Mackenzie

Aside from stainless steel, nickel finds applications in extremely diverse areas, from alloys, to plating, to catalysts. Superalloys are defined as those alloys, usually based on a combination of iron, nickel, cobalt and chromium, but with less than 50% iron, that have been developed for use at high temperatures (650°C or higher) where severe mechanical stressing is encountered. Nickel imparts both corrosion resistance and high-temperature strength to these alloys. Nickel is also used as an alloying element in various nickel chromium, molybdenum and maraging steels. Nickel increases the strength of steels that receive no heat treatment. It also improves the hardenability of steels that are to be heat-treated. In case-hardened steels, nickel strengthens both the case and the core so improving wear resistance and minimising cracking. Carbon steel can be plated with both nickel and chromium to impart corrosion resistance. The use of nickel in addition to chromium provides significantly higher corrosion resistance than the use of chromium alone. Nickel and chromium plated steel is used principally in cars and household appliances. Other important uses for nickel include its use in various types of batteries.

#### Demand

Led by significant consumption growth from China, global nickel consumption increased by over 40% between 2002 and 2012 according to the International Nickel Study Group (INSG). Chinese consumption increased more than eight-fold from 2002 to 2012 with China's share of global consumption increasing from 8% in 2002 to 46% in 2012. In 2013, total global nickel consumption was 1.9 Mt according to a preliminary estimate by Wood Mackenzie.

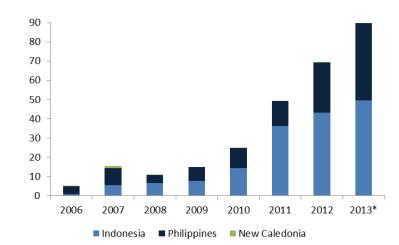


Nickel Consumption by Geography — 2013e

Source: Wood Mackenzie

Wood Mackenzie reported estimated nickel consumption growth of 9% in 2013. China is expected to lead consumption growth driven by increasing demand from its stainless steel industry. Chinese stainless steel production is expected to increase with planned capacity expansions and conversions of traditional steel mills to stainless steel facilities at various locations. Wood Mackenzie forecasts Chinese stainless steel melt output to increase by over 8% per year from 18 Mt in 2013 to 32 Mt in 2020. Since 2006, Chinese imports of nickel direct shipping ores have materially increased supporting the growth in stainless steel demand.

#### **Chinese Imports of Nickel Direct Shipping Ore**



\* Annualized YTD September 2013

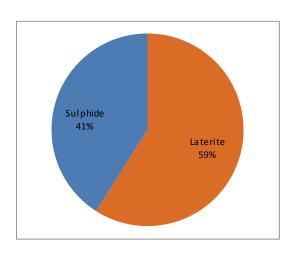
Source: GTIS

Nickel consumption in the United States and Europe is expected to increase more modestly than in China, with growth expected to come from the non-stainless steel uses such as non-ferrous alloys in the aerospace industry.

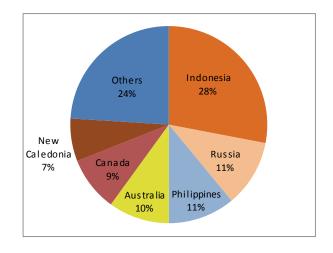
#### Supply

Nickel ore primarily occurs in two forms: sulphide and laterite. Historically, a majority of the world's nickel production has come from sulphide deposits due to the general preference for simple processing technology, whereas nickel mined from laterite ores has faced technical issues in processing which has led to cost pressures. The majority of the world's nickel resources are hosted in laterite ores which are increasingly providing a greater source of supply. In 2013, estimated global refined nickel production was 1.98 Mt, according to Wood Mackenzie, with almost 60% of the world's nickel production coming from laterite deposits compared to one-third of nickel production in 1985. The six largest nickel producing nations represent over 70% of global mined nickel production according to Wood Mackenzie.

Mined Nickel Production by Ore Type — 2013e



Mined Nickel Production by Country — 2013e



Source: Wood Mackenzie

#### Deposit Types

Sulphide deposits are generally higher grade and can be mined via both open pit and underground, whereas laterite deposits are generally lower grade and tend to be open pit mines. As such, sulphides tend to have higher extraction costs with lower processing costs whereas laterites tend to have lower extraction costs but higher processing costs. Despite the fact that laterite nickel deposits account for more of the world's nickel resources, until recently sulphide nickel deposits have accounted for a greater portion of the world's production. The higher historic percentage of sulphide production is primarily due to the use of proven processing technology which has typically resulted in lower operating and capital costs coupled with technical difficulties and cost pressures faced by some laterite projects. As the number of sulphide discoveries has dropped over the years and, since 2006, the rapid emergence of integrated nickel pig iron plants in China that use laterite nickel ore as feed, the proportion of nickel mined from laterite deposits has increased substantially. Further, nickel production ramp-ups are underway at laterite projects like Goro (high pressure acid leaching in New Caledonia), Ramu (pressure acid leaching in Papua New Guinea), Onça-Puma (ferronickel smelting in Brazil), Koniambo (ferronickel smelting in Brazil), Ambatovy (pressure acid leaching in Madagascar) and Barro Alto (ferronickel in Brazil). On the sulphide front, few world class deposits remain undeveloped. The world's largest nickel sulphide operations are displayed as follows:

## 250 232 Annual Nickel Production (Kt) 200 150 100 80 59 46 50 34 0 Norilsk Jinchuan Vale-Sudbury Vale-Voisey's Mount Keith (Russia) (China) (Canada) Bay (Canada) (Australia)

Mined Nickel Sulphide Production — 2013E

Source: Wood Mackenzie, company reports

#### Mining and Processing

Extraction of nickel from the ore is normally done in three steps: ore processing (beneficiation), smelting and refining. The refined metal is then typically sold to metal fabricators. Sulphide ore is amenable to flotation followed by pyrometallurgical smelting and then hydrometallurgical techniques for refining. Laterite ore grades and specific qualities of the ore determine the technology used to process the laterites. Main technologies used to process laterite ores are ferronickel smelting, autoclave leaching (including high pressure acid leach ("HPAL") and ammonia leaching) and nickel pig iron smelting.

The cost structure of ferronickel smelter projects is heavily dependent on energy prices because considerable energy is required in ore drying, roasting and smelting processes (as laterites have high moisture content). Transportation is the other major cost element for ferronickel smelter projects that are not co-located. Capital cost requirements in setting up ferronickel smelter projects can be lower than in HPAL projects (depending on scale), but running costs can be higher (depending on where energy is sourced).

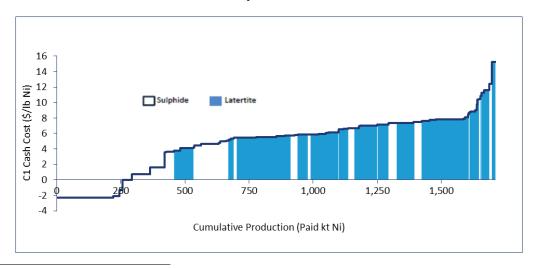
HPAL projects generally require higher capital cost than ferronickel smelter projects, but, as discussed above, the operating costs of running HPAL projects can potentially be lower than ferronickel smelter projects. HPAL operations are also highly sensitive to the cost of sulphur and/or sulphuric acid.

Nickel pig iron is a low purity ferronickel containing between 3% and 15% nickel, which is less than conventional ferronickel, which typically contains between 20% and 40% nickel. Nickel pig iron technology is relatively old but has gained prominence (especially in China) during the commodities boom of the mid 2000s when iron ore and nickel prices were both elevated. Certain steel smelters in China blend nickel ore with conventional iron ore to produce stainless steel feed products. Nickel pig iron is essentially produced from lower grade laterite ores sourced mainly from Philippines and Indonesia. Generally, the cost of producing nickel from laterite ore is much higher than producing from sulphide ore. With nickel pig iron using low grade laterite ores, the cost of producing nickel is typically even higher.

#### Nickel Production Costs

The cost of producing nickel primarily depends on the process used to extract the metal, which depends on the mineralogy of the ore. Historically, sulphides processing is the most cost effective due to simpler mineralogy, higher ore grades and by-products. In the laterite category, HPAL operating costs have come under pressure due to operational difficulties, whereas ferronickel processing is energy intensive with fewer by-product credits. The following figure illustrates a comparison of unit cash costs of nickel production for sulphide and laterite ore types:

#### Nickel Industry 2013 C1 Cost Profile



Source: Wood Mackenzie

# **Pricing and Outlook**

Nickel primarily trades on the LME and all references to nickel prices are based on trading on the LME. The closing, high, low and average prices per pound of nickel in U.S. dollars for each of the three years ended December 31, 2013, 2012 and 2011 were as follows.

|   | 2013<br>(US\$/lbs Ni) | 2012<br>(US\$/lbs Ni) | 2011<br>(US\$/lbs Ni) |
|---|-----------------------|-----------------------|-----------------------|
| Closing   | 6.34                  | 7.75                  | 8.29                  |
| High  | 8.44                  | 9.90                  | 13.17                 |
| Low   | 5.97                  | 6.89                  | 7.68                  |
| Average   | 6.81                  | 7.95                  | 10.36                 |
| As of the date of this AIF, the price per pound of nickel was US\$6.43. |                       |                       |                       |

Longer-term nickel supply and demand fundamentals remain strong and favourable in the context of the expected Dumont Nickel Project start-up. Wood Mackenzie reported nickel consumption growth of 9% in 2013. China is expected to continue to lead consumption growth driven by increasing demand from its stainless steel industry. As existing supply is expected to plateau, new projects will be increasingly relied upon to narrow the expected future supply deficit. As discussed above, nickel supply has increasingly come from laterite deposits which have historically faced greater technical and operating challenges and have been the sole source of feed for the nickel pig iron (NPI) industry in China. Should new projects face such challenges, future supply could be further constrained. The follow table illustrates the trends in nickel production by ore type.

# 2000 1800 1600 1400 1200 1000 800 600 400 200 0 Laterite Sulphide

#### **Nickel Production by Ore Type**

Source: Wood Mackenzie

A key supply issue came to fruition on January 12, 2014 when the Indonesian government implemented a full export ban on unprocessed nickel ore, reducing global mined nickel supply by approximately 25–30% going forward. NPI output in China grew to record levels in 2013, as multiple integrated nickel pig iron/stainless steel plants began operations, however, supply is set to contract as Indonesia will no longer be a substantial exporter of nickel ore to China as a result of the ban on exports of unprocessed nickel ore. Chinese imports of Indonesian ore remained at high levels in 2013, as Chinese consumers not only increased production, but stockpiled ore in advance of the Indonesian ore export ban. Royal Nickel believes that the Indonesian government will strictly enforce the ban on unprocessed nickel ore exports resulting in a 25–30% reduction in world mined nickel supply and, with limited availability of suitable high grade ore elsewhere, there is the potential for nickel shortages by mid-2015.

In addition to the trends in the nickel pig iron industry, a number of other key themes for the nickel industry remain intact. In 2013, a number of the new nickel projects that began production during the previous year faced continued challenges in ramping up production. Overall, 2013 was similar to 2012 as the robust supply growth from traditional supply anticipated by many market forecasters once again failed to meet expectations with the bulk of the supply growth provided by nickel pig iron production in China

During 2013, the final set of large scale projects that were launched during the prior peak in nickel prices in 2007 began ramping up: Koniambo, Glencore's joint venture in New Caledonia, produced its first ferronickel following the first quarter of 2013 and Taganito, Sumitomo Metal Mining's project in the Philippines, began production during the third quarter of 2013. Aside from these projects, there has been a drop in investment in new nickel projects as a result of declining nickel prices and economic shocks following the nickel market peak in 2007.

This environment continues to highlight the value of the Dumont Nickel Project with its proposed use of conventional, proven technology in a simple open pit mine/mill sulphide operation and its location in the Abitibi

region of Quebec, a province which continues to permit mines and one of the top rated mining jurisdictions in the world.

Royal Nickel remains very positive on the outlook for the nickel market in 2015-2016 and beyond as Dumont is one of few projects in the pipeline which will be required to meet ongoing growth in nickel demand in the latter half of this decade. Royal Nickel believes nickel prices will have to rise substantially in the second half of the decade to force demand in line with available supply, as illustrated by our nickel supply/demand forecast below.

#### 2,800 2,646 Demand 2,600 2,400 New NPI / Price Driven Demand 693 560 2.200 396 2.000 286 1.800 1.600 1.400 1,200 1,000 800 **Existing Supply** 600 400 200 2010 2013 2014 2015 2016 2017 2018 2019 2020

# Royal Nickel Forecast Global Nickel Supply/Demand Balance

Source: Royal Nickel

#### **Competitive Conditions**

The nickel exploration and mining business is a competitive business. The Company competes with numerous other companies and individuals in the search for (i) the acquisition of attractive nickel and other copper, platinum group metal, molybdenum or chromium properties; (ii) qualified service providers and labour; and (iii) equipment and suppliers. The ability of the Company to acquire these metal properties in the future will depend not only on its ability to operate and develop its present properties, but also on its ability to select and acquire suitable producing properties or prospects for exploration and development. See "Risk Factors - Competition".

# **Employees**

As at December 31, 2013, the Company had a total of 41 employees. In January 2014, the Company implemented a reduction in the workforce such that the Company has a total of 27 employees as of the date hereof.

#### **Environmental Protection**

The current and future operations of the Company, including development and mining activities, are subject to extensive federal, provincial and local laws and regulations governing environmental protection, including protection and remediation of the environment and other matters. Compliance with such laws and regulations increases the costs of and delays planning, designing, drilling and developing the Company's properties. See disclosure regarding environmental matters under the description of the Dumont Nickel Project (discussed below).

# THE DUMONT NICKEL PROJECT

Unless otherwise indicated, information in this section is summarized or extracted from the Feasibility Study entitled "Technical Report on the Dumont Ni Project, Launay and Trécesson Townships, Quebec, Canada" dated July 25, 2013. The authors of the Feasibility Study are L.P. Staples, P. Eng. (Ausenco Services Pty Ltd.), J.M. Bowen, MAusIMM (CP) and K.C. Scott, P. Eng. (Ausenco Solutions Canada Inc.), S.B. Bernier, P.Geo., C.C. Scott, P. Eng., J.F. Duncan, P. Eng. and B.A. Murphy, FSAIMM (SRK Consulting (Canada) Inc.), D.A. Warren, Eng. (Snowden Mining Industry Consultants Inc.), V.J. Bertrand, géo. (Golder Associates Ltd.) and S. Latulippe, Eng. (GENIVAR Inc., now WSP Global Inc.), each of whom is "independent" of Royal Nickel and a "Qualified Person", as defined in NI 43-101. The Feasibility Study was prepared in accordance with the requirements of NI 43-101 as of July 25, 2013.

Portions of the following information are based on assumptions, qualifications and procedures which are set out only in the full Feasibility Study. For a complete description of the assumptions, qualifications and procedures associated with the following information, reference should be made to the full text of the Feasibility Study which is available for review on the System for Electronic Document Analysis and Retrieval ("SEDAR") located at www.sedar.com.

## **Project Description and Location**

The Dumont Nickel Project is located in the province of Quebec, approximately 25 km by road, northwest of the city of Amos, 60 km northwest of the industrial and mining city of Rouyn-Noranda, 70 km northwest of the city of Val D'Or. Amos has a population of 12,584 (2006 Census) and is the seat of the Abitibi County Regional Municipality (Figure 1).

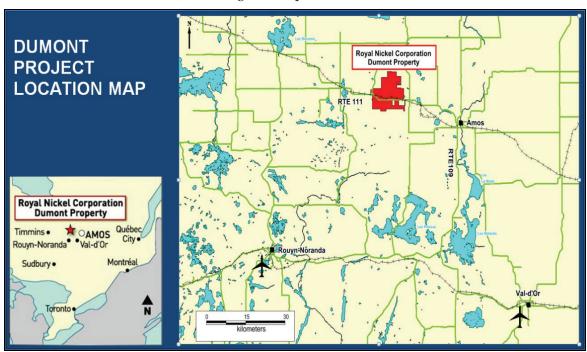


Figure 1: Project Location

As of the date of this AIF, the Dumont Nickel Project consists of 233 contiguous mineral claims totalling 9,306 ha. The longitude and latitude for the Dumont Nickel Project are 48°38'53" N, 78°26'30"W (UTM coordinates are 5,391,500N, 688,400E within UTM zone 17 using the NAD83 Datum). As shown on Figure 1, the property is located approximately 25 km west of the city of Amos, 60 km northeast of the industrial and mining city of Rouyn-Noranda, 70 km northwest of the city of Val d'Or. The mineral resource is located mainly in Ranges V, VI and VII on Lots 46 to 62 of Launay Township, and in Range V on Lots 1 to 3 of Trécesson Township.

The Company holds 100% beneficial interest in five claims; the beneficial interest in the remaining 228 claims is held 98% by the Company and 2% by Ressources Québec Inc. The Dumont mineral claims are subject to various royalty agreements arising from terms of property acquisitions by the Company or through the sale of royalties. The details of the underlying mineral claim agreements are described in this AIF under "General Development of the Business – The Dumont Nickel Project".

# **Exploration Permits & Authorizations**

Exploration work on public land (Crown land) is conducted under a forestry operational permit granted by the Quebec Ministry of Natural Resources and Wildlife ("MNRF") and renewed periodically. Exploration work on agricultural zoned lands is conducted under a permit granted by the Quebec Agricultural Land Commission ("CPTAQ"). Exploration work on private surface rights not owned by Royal Nickel is conducted under the terms of access agreements between Royal Nickel and individual landowners. Stream crossings have been constructed under permits issued variously or jointly by the MNRF, CPTAQ, and the Quebec Ministry of Sustainable Development, Environment and Parks ("MDDEP"). Royal Nickel is not aware of any formal native land claims on the territory of the Dumont Nickel Project within the St. Lawrence drainage basin. Algonquin First Nations, however, assert aboriginal rights over parts of western Quebec and eastern Ontario. Consultation with First Nations is a responsibility of the federal and provincial governments. Nonetheless, Royal Nickel initiated discussions with the local Algonquin Conseil de la Première nation Abitibiwinni and on April 5, 2013 entered into a memorandum of understanding for cooperation regarding the development of the Dumont Nickel Project.

#### Mineral Rights in Quebec

Under Quebec mining law, the holder of a claim has the exclusive right to explore for mineral substances (other than petroleum, natural gas and brine, sand, gravel and other surfaces substances) on the parcel of land subject to the claim. A claim has a term of two years. It may be renewed for additional periods of two years by completing minimum exploration work requirements and paying renewal fees. The holder of one or more claims may obtain a mining lease for the parcels of land subject to such claims, provided the holder can prove the existence of a workable deposit on the property.

The mineral claims confer subsurface mineral rights only. Approximately 40% of the surface rights for the property are held privately by a number of owners, resident both in the area and outside the region. Royal Nickel has purchased or acquired options to purchase approximately 680 ha of private surface rights overlying the Dumont Nickel Project. The remainder of the surface rights are public land (Crown land).

A portion of the lands are classified as an agricultural zone, where agricultural land and agricultural activities are to be respected and preserved. Mining activity on these lands would require authorization for non-agricultural use or exclusion of these lands from the agricultural zone by the CPTAQ. This must be requested by the local municipality. The application for exclusion must demonstrate that there are no suitable non-agricultural lands available for the stated purpose in the municipality. Royal Nickel does not expect that exclusion of these lands to develop the Dumont Nickel Project would be unreasonably withheld. The application for exclusion has been filed and received by the CPTAQ on February 20, 2013. A final ruling is expected in early 2014.

Use of surface rights for mining and associated activities under the terms of a mining lease is subject to environmental permitting and public consultation. Access to surface rights for private lands would be obtained by negotiating purchase from private surface rights holders. Access to surface rights for public lands would be obtained through the mining lease and surface lease processes. Prior to commencing any mining, the operator of a mine or mill on the land subject to a lease must submit a rehabilitation and restoration plan for the site and deposit a financial guarantee. No compensation may be claimed by the holder of a mining claim from the holder of a mining lease for the depositing of tailings on the parcel of land that is subject to the claim. As a result of amendments to the *Mining Act* (Québec) subsequent to the completion of the Feasibility Study, granting of a mining lease by the Ministry of Natural Resources requires prior granting of the environmental certificate of authorization, public consultation conducted by the Bureau d'audiences publiques sur l'environnement ("BAPE"), approval of the mine site rehabilitation and restoration plan and submission of a scoping and market study on the processing of ore in Quebec.

#### **Environmental Liabilities**

Neither the authors of the Feasibility Study nor Royal Nickel is aware of any outstanding environmental liabilities attached to the Dumont Nickel Project and neither is able to comment on any remediation that may have been undertaken by previous companies.

# Accessibility, Climate, Local Resource, Infrastructure and Physiography

The Dumont Nickel Project is located in the province of Quebec, approximately 25 km northwest of the city of Amos.

The climate at the Dumont Nickel Project is continental with mean temperatures ranging from -17.3°C in January to +17.2°C in July, with an annual mean temperature of 1.2°C. Total average annual precipitation is 918 mm. While field exploration work can be conducted year-round, drill access in low-lying boggy areas is best during the frozen winter months. Also, periodic heavy rainfall or snowfall can hamper exploration at times during the summer or winter months. The climate at the Dumont Nickel Project would be suitable to year-round open-pit mining operations. The climate setting is analogous to that of the former Dome Mine open-pit near Timmins, Ontario or Osisko's Canadian Malartic open-pit mine 60 km to the south of Dumont.

The principal economic activities in the region are agriculture and forestry. The sustainable nature of these industries has contributed to a stable population. As a result, Amos is well serviced by a large number of businesses and industrial suppliers. The Dumont Nickel Project would require construction of additional accommodation in town, but the municipal economy is sufficiently evolved and diversified that responsibility for the investment in, and construction of, additional accommodation would likely be provided by third parties. The existing infrastructure in town is likely adequate to support the expanded population.

Amos has a municipal airport but is not serviced by regularly scheduled commercial flights. The nearest cities with airports serviced by regularly scheduled flights are Rouyn-Noranda (2011 Census population 41,012), which is 120 km by road to the southwest, and Val d'Or (2011 Census population 31,862), which is 90 km by road to the southeast. Both Rouyn-Noranda and Val d'Or have traditionally been centres for the mining industry, and there is a large base of skilled mining personnel resident within the region.

The project site is well serviced with respect to other infrastructure, including:

- Road Provincial Highway 111 runs along the southern boundary of the property.
- Rail The Canadian National Railway (CNR) runs through the property, slightly to the north of Highway 111 but south of the engineered pit.
- Power The provincial utility, Hydro-Québec, has indicated that it would be feasible to extend the powerline to site from the high voltage line that runs 5 km south of Highway 111 and that power from the grid would be made available to the project.
- Water The project concept includes a closed system for water, with water that would be reclaimed from tailings being reused in the process plant.
- Natural Gas Although the use of natural gas is not considered in the Feasibility Study, an existing pipeline extends to within approximately 25 km to the south of the property.

The Dumont Nickel Project exhibits low to moderate relief up to a maximum of 40 m and lies between 310 and 350 m above sea level. The Arctic-Atlantic continental drainage divide runs along the northern boundary of the property. Water for the diamond drilling programs is obtained from several creeks which run through the property and is generally pumped to the drill sites. However, fresh water can also be supplied by the nearby Villemontel River. Wildlife on the property consists of moose, black bear, beaver, rabbit and deer. Some logging has been conducted on the property with the wood being used primarily for pulp.

#### **Exploration & Development Work**

While the presence of ultramafic and mafic rocks has been known on the property comprising the Dumont Nickel Project since 1935, the presence of nickel within the rock sequence was only discovered in 1956. It was not until the 1970s that the existence and potential of the large low-grade nickel mineralization was first recognized.

The major exploration phases for the Dumont Nickel Project are discussed below with the exploration and associated work listed in point form by year.

#### Phase 1: 1935 to 1969

The exploration programs and geological surveys during this period led to the discovery of the Dumont ultramafic sill and associated nickel mineralization.

In 1935, the Geological Survey of Canada ("GSC") conducted a mapping survey over Launay and Trécesson Townships that identified the presence of ultramafic and mafic rocks.

In 1950, Quebec Asbestos Corporation ("Quebec Asbestos") conducted a magnetometer survey over the upper contact of the sill and drilled five diamond drill holes totalling 475 m.

In 1951, an aeromagnetic survey conducted by the GSC outlined the ultramafic sill.

In 1956, Barry Exploration Ltd. conducted a magnetometer survey over the group of claims previously explored by Quebec Asbestos and drilled a further six diamond drill holes. These drill holes resulted in the first reporting of the presence of nickel mineralization.

#### Phase 2: 1969 to 1982

The exploration programs and related geological and engineering studies during this period resulted in the identification of three zones of nickel mineralization.

In 1969, drill holes DT-1 and DT-2, totalling 182 m, were drilled over a group of mineral claims acquired in 1962 by Georges H. Dumont, P. Eng.

In 1970, drill holes DT-3 and DT-4, totalling 364 m, were drilled on an enlarged group of claims with nickel mineralization intersected in each drill hole (DT-3: 0.47% Ni over 2.7 m). Additional mineral claims were acquired to form what was then known as the Dumont property covering the whole of the Dumont ultramafic sill.

In 1970-1971, an enlarged exploration campaign was carried out on the Dumont property that consisted of prospecting, trenching, magnetometer survey and the drilling of an additional 57 diamond drill holes, totalling 21,052 m. The drilling program discovered three zones of nickel mineralization that were nearly adjacent and parallel within the dunite subzone. The central part of the middle zone, having a higher nickel content, was identified as the Main Zone or Main deposit. A portion of the Main Zone is also referred to as the No. 1 deposit where it is defined as the middle mineralized band located between sections 35+00W and 49+00W and located between surface and the 1,500 ft (457.18 m) level.

In 1971, Newmont Exploration Ltd. ("Newmont") conducted metallurgical testwork (heavy media and magnetic separation only) and a mineralogical study on the mineralization. Also in that year, Canada Department of Energy, Mines and Resources, Ottawa, conducted a "Mineralogical Investigation of the Low-Grade Nickel-Bearing Serpentinite of Dumont Nickel Corporation, Val d'Or, Quebec," a study that involved XRD and electron microprobe analysis of the nickel-bearing phases.

In 1971-1972, the Centre de Recherches Minérales ("CRM") carried out a laboratory testwork program on drill core composite samples from the Main Zone, including locked-cycle tests to develop the flowsheet for the concentration

process. Pilot plant tests were also conducted on a bulk sample, blasted out of an outcrop located to the east of the Main Zone.

In 1971-1972, the engineering firm Caron, Dufour, Séguin & Associates ("CDS") completed an ore reserve estimation and feasibility study on the project with the objective of bringing the Main deposit into production, to a depth of 455 m below surface using underground mining methods. The mineral resources of the Main deposit were estimated at 15,517,662 tonnes grading 0.646% nickel after dilution. Based on the results of the feasibility study, CDS recommended that the Main deposit be brought into production.

In 1974-1975, in association with Dumont Nickel Corporation, Timiskaming Nickel Ltd. ("**Timiskaming**") paid for bench and pilot plant tests to be conducted at the University of Minnesota to evaluate the amenability of the low-grade resources to a patented process. Timiskaming and Boliden AB, which evaluated the testwork results, concluded positively that the project had economic potential for a 13,600 t/d open pit mining operation on the estimated 320 Mt of resources at 0.34% nickel, from which the patented segregation process would recover 75% of the nickel.

In 1974, Canex Placer had bench tests conducted at Britton Research Centre Ltd., where a combined flotation-hydrometallurgical process was developed to recover 80% of the nickel contained in the Main Zone. The testwork indicated that this process would also result in the production of magnesia (MgO).

After 1974, with lower nickel prices in the world market, there was reduced interest in developing the property due to the low-grade nature of the deposit.

#### Phase 3: 1982 to 1992

In 1982, exploration resumed on the property and four percussion 15.2 cm (6") diameter holes were drilled and cuttings recovered to prepare a bulk sample.

In 1986, CRM conducted, for the account of Magnitec, a  $H_2SO_3$  leaching test on samples of "rejects from the Dumont mine" to evaluate the possibility of scrubbing the Noranda smelter  $SO_2$ -bearing gas with the tailings from an eventual mining operation on the property. The test solubilized 66% of the MgO and 72.4% of the nickel contained in the samples. Magnitec also tested two core samples for their platinum group element ("**PGE**") content but none was detected.

In 1986, La Société Nationale de l'Amiante reviewed the results of the CRM H<sub>2</sub>SO<sub>3</sub> leach test and indicated that the tailings from an operation on the Dumont property would give a low extraction rate of the SO<sub>2</sub> contained in the Noranda smelter emission gas.

In 1986, J. M. Duke, a geologist from the GSC, studied the mineralization and petrogenesis of the Dumont sill. From his understanding of the sill petrogenesis, Duke concluded that it was possible to discover sulphide enrichment zones at the basal contact of the intrusion and recommended that drilling should be conducted to explore this contact. In his 1986 report, Duke estimated the potential resources for the Dumont property at 175 Mt grading 0.47% nickel over the three nickel enriched layers.

In 1986 and 1987, Dumont Nickel Corporation carried out a geological mapping survey along the basal contact of the sill and drilled 11 holes in mineral claims located in Trécesson Township. Sulphide mineralization was recognized at the basal contact and a relatively high-grade nickel sulphide accumulation was intersected by four holes that also returned significant PGE values. Three holes drilled in the central part of the Dumont property were stopped short due to poor ground conditions in a faulted area.

In 1988 and 1990, Beep Mat (electromagnetic) and induced polarization surveys were carried out for Dumont Nickel Corporation and various anomalies were reported.

In 1992, CRM conducted dry grinding and air aspiration tests to separate the fibrous texture minerals, for the account of Timmins Nickel Inc. ("Timmins Nickel").

After 1992 exploration interest in the Dumont property waned and no work was conducted on the property for a number of years.

#### Phase 4: 1999 to 2006

Since 1999, the following exploration work has been conducted on the Dumont property on behalf of Frank Marzoli.

In 1999, diamond drill hole FM-99-01 was drilled on the southwest of the Main deposit. This 318 m drill hole intersected the basal sill contact but no significant mineralization was encountered.

In 2001, geological and prospecting work was carried out together with the establishment of a network of cut grid lines totalling 96 km.

In 2002, a 150 m long diamond drill hole (DNN-2002-01) was drilled in the northwest portion of the property; however, no core samples were assayed from this hole.

In 2003, a 125 m long diamond drill hole (DNS-03-01) was positioned on section line 36+00 W. This drill hole was successful in intersecting the upper part of the Main deposit and returned a 19.2 m drill core intersection grading 0.56% nickel.

In 2004, diamond drill hole DNN-01-04 was drilled to a length of 125 m in the northwestern portion of the property with no significant results obtained from the eight 2.5 m long core intersections that were assayed.

In 2004, J.C. Caron, P.Eng, former principal of CDS and then with Les Consultants PROTEC, prepared a valuation report on the property in accordance with CIM valuation standards and guidelines.

There was no exploration activity from 2005 to 2006.

#### Phase 5: 2007 to Present

Royal Nickel acquired the property in 2007 and initiated field exploration work in March 2007.

After Dumont was acquired by Royal Nickel, a conceptual study was completed by Aker Solutions in October 2007 and updated in August 2008. The initial report was based on historical resource estimates, which pre-dated the requirements of NI 43-101. These estimates were supported by five new twinned holes, which demonstrated that the historical assays (on which the earlier resource estimates were based) were comparable to results obtained from the twin holes. The independent resource consultants (Micon) considered the historical estimates to be relevant for the purposes of the study.

An updated conceptual study was completed based on a revised NI 43-101 compliant resource estimate prepared by Micon in April 2008, which incorporated 38 holes of new drilling as well as historical drilling. The resource model used a block size of  $10 \text{ m}(X) \times 25 \text{ m}(Y) \times 10 \text{ m}(Z)$  and an inverse distance interpolation. The bulk of material included in the conceptual study mine plan was classified as inferred resources.

The conceptual study considered two scopes of open pit design, a smaller pit (50 kt/d concentrator) and a larger pit (75kt/d concentrator). The conceptual study concluded that the 75 kt/d option generated more attractive economics and that the project was potentially robust.

Following the positive results of the conceptual study, a Preliminary Assessment was completed in September 2010.

Following the positive results of the Preliminary Assessment, Ausenco was commissioned by Royal Nickel to complete a pre-feasibility study, which was completed in December 2011 ("**Pre-Feasibility Study**").

Following the positive results of the Pre-Feasibility Study, Ausenco was commissioned by Royal Nickel to complete a revised pre-feasibility study, which was completed in June 2012 (the "**Revised Pre-Feasibility Study**").

# Historical Mining and Production

No historical mining or production has been conducted on the Dumont Nickel Project. However, the Val d'Or - Rouyn-Noranda region surrounding the Dumont Nickel Project has been a prolific mining area for the past 100 years.

#### Prior Resource Estimates

Several mineral resource estimates have been completed for the Dumont Nickel Project, including in April 2008, October 2008, April 2010, August 2010, December 2011 and April 2012. Royal Nickel's updated resource model as estimated by SRK is discussed below.

#### **Geological Setting**

# Regional Geology

The Dumont Nickel Project lies within the Abitibi subprovince of the Superior geologic province of the Archean age Canadian Shield. A thick supracrustal succession of Archean volcanic and sedimentary rocks underlies about 65% of the Abitibi belt, and there is evidence to suggest that these supracrustal rocks lie unconformably upon a basement complex of sialic composition. The volcanic rocks are mainly of mafic composition although ultramafic, intermediate and felsic types are also present. The abundance of pillowed and nonvesicular lavas, together with the flyschoid character of much of the sedimentary component, demonstrates the prevalence of deep submarine conditions. However, the occurrence of some fluvial sedimentary rocks and airfall tuffs attest to occasional local non-marine conditions. Numerous small to medium sized synvolcanic intrusions reflect the range of compositions of the lavas themselves.

The supracrustal rocks were deformed and intruded by granitic stocks and batholiths during the Kenoran event about 2,680 to 2,700 million years ago. Folding along generally east-trending axes has commonly produced isoclinal structures. Regional metamorphism is predominantly greenschist and prehnite-pumpellyite facies except in the contact aureoles of the Kenoran granites where amphibolite grade is usually attained. The amphibolite facies metamorphism also occurs in the sedimentary rocks of the Pontiac Group. Two main sets of diabase dykes occur in the Abitibi belt; the north-trending Matachewan swarm and northeast-trending Abitibi swarm which have Rb-Sr ages of 2,690 and 2,147 million years, respectively. The latter are prominent near the Dumont intrusion, although none is known to have cut the body.

The Dumont sill is hosted by lavas and volcaniclastic rocks assigned to the Amos Group. The lavas may be traced eastwards through the town of Amos and are part of the Barraute volcanic complex. Three cycles of mafic to felsic volcanism are recognized and the Dumont sill is one of at least five ultramafic-mafic complexes in the Amos area, which occur at approximately the same stratigraphic level within the mafic lavas of the middle cycle. The host rocks of the sill are for the most part iron-rich tholeitic basaltic lavas although some intermediate rocks are known to occur at the body at its eastern end of the sill.

Although the volcanic rocks have been folded and now dip steeply, a penetrative deformational fabric is only locally developed. In the vicinity of the Dumont sill, pillows in the lavas are not strongly deformed and primary textures such as "swallow-tail" plagioclase microlites are preserved. However, the chemical compositions of many of the rocks are highly altered with many rocks containing significant levels of CO<sub>2</sub>. Three main directions of faulting are recognized in the Amos area with the earliest being the east-trending set of "bedding plane" faults which are believed to have developed during the major period of folding. The second set of faults occurred during the intrusion of the granitic rocks, which was accompanied by the development of steeply dipping faults that strike north to northwest. However, the most prominent faults strike northeast and probably postdate the granitic plutonism with the Dumont sill cut by a number of these northeast, northwest and east-trending faults.

# Project Area Geology

The Dumont Nickel Project is covered by a layer of glacial overburden and muskeg. Mineralization subcrops approximately 30 m below the surface. Contacts between the Dumont sill and its host rocks have not been observed in outcrop but, in overall attitude, the body appears to be conformable to the layering of the volcanic rocks. This is consistent with the interpretation of the Dumont ultramafic body as a sill, but is also consistent with alternate interpretations for conformable ultramafic bodies that occur in ophiolitic associations. Pillowed basalts exposed at the eastern end of the sill clearly indicate a northeast facing direction.

Offsets in the magnetic contours and internal stratigraphy of the ultramafic zone along with oriented drill hole data have provided evidence for a number of faults at a high angle to the long axis of the sill consistent with the northeast, northwest and east-trending regional faults. Structural logging has also identified several faults parallel to the strike of the intrusion. Based on other offsets in mineralization and alteration, there are undoubtedly other faults which have not yet been recognized.

The sill, considered to be a layered mafic-ultramafic intrusion is comprised of a lower ultramafic zone and an upper mafic zone. Although less than 2% of the bedrock surface of the intrusion is exposed in outcrop, the boundaries of the ultramafic zone can be drawn with some confidence based on a magnetometer survey and diamond drilling.

Based on the identified prominent northwest (NW) and northeast (NE) trending faults, the sill can be divided into structural blocks/domains. The true thickness of the upper mafic and lower ultramafic zone varies by location or fault block though the sill. The north-western end of the body has not been outlined precisely; however, the ultramafic zone is a lenticular mass at least 6,600 m in length with an average true thickness of 450 m, with a maximum of 600 m in the central region to a minimum of 150 m in the extreme southeast. The true dip of the ultramafic zone also varies with location in the sill from 60° to 70°. The extent of the mafic zone is much less well defined due to the low density of drill hole data intersecting this zone and its contact with the host rock. An estimated thickness of 200 m is given to this unit based on the limited drill hole data and outcrop locations. No feeder to the Dumont sill has been observed to date.

Two types of mineralization have been identified historically within the Dumont sill, the primary, large low-grade to medium-grade disseminated nickel deposit and the contact type nickel-copper-PGE occurrence discovered in 1987. Drilling by Royal Nickel has also identified discontinuous PGE mineralization associated with disseminated sulphides at lithological contacts in the layered intrusion and within the dunite.

The ultramafic rocks have been serpentinized to varying degrees from partial to complete serpentinization. Along the basal contact of the sill (outside the resource envelope) serpentinization is frequently overprinted by varying degrees of talc-carbonate alteration. The predominant secondary assemblage is lizardite + magnetite + brucite + chlorite + diopside  $\pm$  chrysotile  $\pm$  pentlandite  $\pm$  awaruite  $\pm$  heazlewoodite. Antigorite is developed locally, particularly in the uppermost ultramafic zone. Native copper occurs in and along major fault systems and alongside intercumulus nickel sulphide and awaruite mineralization, more frequently this has been observed in zones that are partially serpentinized. Trace millerite can occur in the steatitized rocks of the basal contact zone and more rarely in large fault zones. The mafic zone is ubiquitously altered to the assemblage actinolite + epidote + chlorite  $\pm$  quartz. Primary textures are pseudomorphously preserved throughout most of the intrusion.

Serpentinization proceeded isovolumetrically on the microscopic scale. On the microscopic scale, serpentinization was isochemical. However, on the whole, as the major elements are re-partitioned into new phases during the process, with the addition of hydrogen, oxygen (water) and chlorine to the system, some phases can be dissolved and transported. The extent of this process is not well described in literature; however, within the Dumont sill, Royal Nickel has observed some evidence (areas of lower than expected whole rock assays) indicating losses to the system, namely calcium and sulphur.

The textures and assemblages of the secondary minerals are indicative of retrograde, low temperature (<350°C) alteration that may well have occurred as a result of an influx of water during the initial cooling of the intrusion. The sill was faulted and tilted into a steeply inclined attitude during the Kenoran event but no penetrative deformational fabric is evident, and the effects of regional metamorphism are minimal.

The age of the Dumont sill is not explicitly known. In early 2010, the Geological Survey of Canada (GSC) attempted to date the upper mafic zone, but was unsuccessful due the lack of dateable minerals. The conformable nature of the body, together with the character of its differentiation, suggests that it was emplaced as a virtually horizontal sill that was folded and faulted during the Kenoran event. It is reasonable to conclude that the Dumont sill is of late Archean age, but is only slightly younger than the enclosing lavas; that are approximately 2,700 million years.

#### Mineralization

#### Disseminated Nickel Mineralization

Nickel-bearing sulphides and a nickel-iron alloy are enriched (grades > 0.35% nickel) in stratiform bands within the dunite subzone and are also broadly disseminated at lower concentrations throughout the dunite and lower peridotite subzones. The number and thickness of these bands varies from place to place in the deposit. Nickel sulphide and alloy concentrations decrease gradationally away from the centre of these bands toward the interband zones where mineralization continues at lower concentrations. The total nickel contained in these rocks occurs in variable proportions in sulphides, alloy and silicates depending on primary magmatic nickel mineralogy and the degree of serpentinization of the rock.

Disseminated nickel mineralization is characterized by disseminated blebs of pentlandite ( $(Ni,Fe)_9S_8$ ), heazlewoodite ( $Ni_3S_2$ ), and the ferronickel alloy, awaruite ( $Ni_{2.5}Fe$ ), occurring in various proportions throughout the sill. These minerals can occur together as coarse agglomerates, predominantly associated with magnetite, up to 10,000  $\mu$ m (10 mm), or as individual disseminated grains ranging from 2 to 1,000  $\mu$ m (0.002 to 1 mm). Nickel can also occur in the crystal structure of several silicate minerals including olivine and serpentine.

The observed mineralogy of the Dumont Nickel Project is a result of the serpentinization of a dunite protolith, which locally hosted a primary disseminated (intercumulus) magmatic sulphide assemblage. The serpentinization process whereby olivine reacts with water to produce serpentine, magnetite and brucite creates a strongly reducing environment where the nickel released from the decomposition of olivine is partitioned into low-sulphur sulphides and newly formed awaruite. Nickel also occurs in remnant olivine and newly formed serpentine with the concentration of nickel in these minerals being dependent on the degree of serpentinization of the rock.

Millerite (NiS) is rare, but can be present in lesser amounts near host rock contact zones and in major fault zones. It typically occurs as fine secondary overgrowths, characteristically overprinting pentlandite and heazlewoodite in intercumulus blebs.

Mineralized zones containing pentlandite, awaruite, and heazlewoodite, are classified as the following mineralization assemblages: sulphide dominant, alloy dominant and mixed. Royal Nickel's mineralogical sampling program provides a quantitative analytical measure of the whole-rock mineralogy on a crushed and homogenized 1.5 m core sample, which is the basis for understanding the combination of nickel mineral phases that constitutes these three assemblages.

- Alloy mineralization is dominantly awaruite  $\pm$  lesser heazlewoodite  $\pm$  lesser pentlandite.
- Mixed mineralization consists of sulphides and alloy in similar proportions. Specific sub-types are heazlewoodite and awaruite in similar proportions; pentlandite and awaruite in similar proportions; or heazlewoodite + pentlandite and awaruite in similar proportions.
- Sulphide mineralization is dominantly heazlewoodite and/or pentlandite, with or without lesser awaruite.

As noted above, nickel in silicates occurs in varying proportions throughout the deposit. In certain portions of the deposit, a very low proportion of the nickel in the rock is contained in sulphide or alloy minerals. In these areas, the nickel in the rock occurs primarily in silicate minerals such as serpentine or olivine. These non-mineralized areas are generally low-grade (< 0.25% Ni), and contain no sulphides. Nickel occurring in this mode would not be

recoverable through the flotation and magnetic separation methods considered by Royal Nickel for Dumont Nickel Project.

#### Controls on Nickel Distribution & Mineralization

The variability in the final mineral assemblage and texture of the disseminated nickel mineralization in the Dumont deposit has been controlled primarily by the variable degree of serpentinization that the host dunite has undergone.

# Contact-type Nickel-Copper-PGE Mineralization

Magmatic nickel-copper-PGE analyses were not performed during the initial drilling program that defined the Dumont deposit in the early seventies. In 1987, a drilling program was conducted to test the sill contacts for platinum and palladium at two locations. The best intersection from this program was drill hole 87-7, located in the east near drill hole E-7, inside and adjacent to the sill contact. This drill hole graded 0.61% nickel, 0.10% copper, 190 ppb palladium and 900 ppb palladium over 6.4 m. Drill holes 87-12 to 14 in the main zone did not reach the contact.

Drilling by Royal Nickel has confirmed the occurrence and grade of the historically identified mineralization at the basal contact at the eastern end of the Dumont sill. Drill hole 08-RN-71 intersected 0.8 m of semi-massive pyrrhotite grading 0.99% nickel, 0.19% copper, 0.3 g/t platinum, 1.0 g/t palladium and 0.07 g/t gold at the contact between the Dumont intrusive and footwall volcanics.

## 2011 Discovery of Massive Sulphides at Basal Contact

In 2011, a hole drilled on section 5500E, passing through the Dumont intrusion and penetrating the footwall contact between the peridotite and the footwall mafic volcanic rock just to the northwest of the FS pit intersected a 1.25 m core-length of massive sulphide mineralization. The massive sulphide was composed of >60% sulphides containing primarily pyrrhotite with up to 10% centimetre-scale pentlandite crystals and trace chalcopyrite. Assuming that this massive sulphide body is coplanar with the footwall contact (dipping 65° toward 025 °azimuth), the true thickness of the mineralization would be 1.07 m.

| From (m) | To (m) | Interval<br>(m) | Palladium<br>(ppm) | Platinum<br>(ppm) | Sulphur<br>(%) | Nickel<br>(%) | Specific<br>Gravity |  |
|----------|--------|-----------------|--------------------|-------------------|----------------|---------------|---------------------|--|
| 572.95   | 573.55 | 0.60            | 3.26               | 1.94              | 38.8           | 4.25          | 4.79                |  |
| 573.55   | 574.20 | 0.65            | 3.75               | 2.15              | 38.1           | 4.49          | 4.80                |  |

This is the first time that such elevated concentrations of sulphides with high metal grades have been encountered anywhere in the Dumont intrusion. This discovery demonstrates that mineralizing processes capable of producing high-grade massive sulphide mineralization have operated, at least locally, within the Dumont setting, particularly at the basal contact of the intrusion. Further work will focus on following up this intersection and on developing exploration vectors to explore the rest of the 7.5 km long basal contact for similar occurrences. Borehole and surface geophysical surveying (electromagnetic) and follow-up drilling have not defined any significant extent to this mineralization to date.

#### Other Types of PGE Mineralization

Royal Nickel's drilling has further delineated three anomalous PGE horizons other than the basal contact type described above. In 2008, a PGE horizon associated with the pyroxenite layer overlying the upper peridotite was identified. This zone varies in thickness from 0.4 to 51 m with grades ranging 0.08 to 1.46 g/t platinum, and 0.04 to 2.39 g/t palladium. The second PGE horizon, which lies under the main sulphide body, was previously identified during research on the historical drilling. This zone ranges from 0.4 to 34.5 m thick with grades ranging from 0.1 to 1.4% nickel, trace to 0.75 g/t platinum, and trace to 0.2 g/t palladium. The third PGE horizon was discovered by Royal Nickel in 2008 and is located approximately 100 m below the lowest sulphide body near the dunite contact with the lower peridotite. This horizon ranges from 1.0 to 140 m thick with grades ranging from 0.1 to 0.5% nickel,

trace to 0.9 g/t platinum, and trace to 2 g/t palladium. These horizons generally are observed to be continuous along strike and dip where drilling is present. Samples from each PGE horizon were sent to Memorial University for analysis using scanning electron microscope. This work identified that the PGE phases are similar in all horizons and consist of three alloys: palladium/tin (Pd/Sn), platinum/copper (Pt/Cu), and platinum/nickel (Pt/Nickel) which are intimately associated with nickel sulphides.

#### Metallurgical Domaining of Nickel Mineralization

Metallurgical test results have shown a clear correlation between mineralogical variations related to degree of serpentinization and metallurgical recovery of nickel. Four metallurgical domains have therefore been established that correspond to these serpentinization domains. They are defined mineralogically on the basis of heazlewoodite to pentlandite ratio (Hz/Pn) and iron-rich serpentine abundance as follows:

- Heazlewoodite Dominant Domain: Samples with heazlewoodite to pentlandite ratios (Hz/Pn) greater than 5, and contain an iron rich serpentine abundance less than 14% are considered to be heazlewoodite dominant.
- Mixed Sulphide Domain: Samples having a heazlewoodite to pentlandite ratio between 1 and 5, and contain an iron rich serpentine abundance less than 14% are considered to be a combination of heazlewoodite and pentlandite.
- Pentlandite Dominant Domains: Samples with heazlewoodite to pentlandite ratios less than 1, and contain an iron rich serpentine abundance less than 14% are considered to be pentlandite dominant.
- High Iron Serpentine Domain: Samples that contain more than 14% iron rich serpentine.

# **Exploration**

Exploration for nickel mineralization on the Dumont Nickel Project has been completed primarily by diamond drilling due to the lack of outcrop over the ultramafic portions of the Dumont intrusive which host the nickel mineralization. This drilling was initially targeted using data from historical drilling and airborne electromagnetic and magnetic surveys. No continuous trench samples were taken from the Dumont deposit. Non-drilling exploration work carried out on the Dumont property is described below.

#### Airborne Geophysics

A helicopter-borne versatile time domain electromagnetic ("VTEM") and magnetometer survey was completed by Geotech Ltd. over the Dumont intrusive and adjacent areas at 100 metre line spacing in 2007 as follow up to an earlier helicopter-borne magnetometer-only survey conducted by Geophysics GPR International Inc. in February 2007.

The magnetic survey has outlined the limits of the Dumont sill which exhibits a strong contrast between its magnetic susceptibility and that of the surrounding country rocks. The survey has also defined stratiform bands of varying magnetic intensity which reflect varying magnetite content within these rocks which is related to the igneous layering within the sill and to varying degrees of serpentinization within a given layer. The magnetic pattern also allows the interpretation of major structures that cross-cut the intrusion.

The VTEM survey detected several weak electromagnetic anomalies along the footwall contact of the Dumont intrusive. Several of these anomalies were drill-tested. Anomalies tested to date were primarily due to barren pyritic interflow sediments within the footwall volcanic.

# **Ground Geophysics**

In February 2013, a ground time-domain electromagnetic survey was completed over a portion of the footwall of the Dumont intrusion. The purpose of this survey was to evaluate the potential for massive sulphide similar to the occurrence intersected in drill hole 11-RN-355 in an orientation subparallel to the basal contact of the intrusion. A 100-metre spaced grid was established between lines 5300E and 7000E and an InfinTEM time-domain electromagnetic survey was completed over the grid. Interpretation of the results indicated weak to moderate large-scale conductive horizons coincident with the footwall contact, but did not indicate discrete conductors consistent with significant accumulations of massive nickel sulphides. These results are consistent with results from drill hole geophysical surveys (UTEM time domain electromagnetics) conducted on several drill holes in the vicinity of hole 11-RN-355 from September to November 2011. Follow-up drilling on these targets is described below.

# Geological Mapping

Surface mapping programs have been carried out over the Dumont Nickel Project, primarily to provide a structural geology framework for the modelling of the Dumont deposit.

Several geological mapping programs have been completed over the Dumont Nickel Project beginning in the summer of 2008. Given the poor exposure over the Dumont sill, the mapping programs have focused on outcrops in the country rocks outside the sill, in order to gain an understanding on the local structural geology. A secondary purpose for these programs has been to identify outcrop in areas of potential mining infrastructure development. Information collected during these programs was interpreted in association with airborne magnetics and LIDAR topography data and was used to update historic geological maps and to provide constraints for subsurface fault modelling. Outcrop locations were also used to assist in modelling of the bedrock surface and overburden thickness.

In 2012, detailed structural mapping of several outcrops, including the 57 m x 27 m exposure of dunite cleared for the purpose of bulk sampling was completed in support of the structural modelling of the deposit.

#### Mineralogical Sampling

Mineralogical sampling of Dumont core began in 2009. The mineralogical sampling program uses the SGS' EXPLOMIN<sup>TM</sup> analysis to provide detailed mineralogical information on mineral assemblages, nickel deportment, liberation, alteration and the variability of these factors. Mineralogical samples were taken for the purpose of metallurgical domain composite characterization and for the purpose of mineralogical mapping of the Dumont deposit.

Mineralogical mapping sample locations were planned so as to provide spatially and compositionally representative data down drill hole traces for holes on even numbered sections along the length of the deposit, with the goal of providing comprehensive representation of the mineralogical variability of the deposit. A total of 1,561 mineralogical mapping samples were collected as of November 25, 2012, 1,420 of which occur within the mineralized envelope and were used for mineralogical modelling of the deposit.

Metallurgical domain composite characterization samples were selected on an ongoing basis to represent the mineralogy of each metallurgical domain composite as defined for testwork. This includes all domain composites described below under the heading "Mineral Resource and Reserves Estimate", as well as all metallurgical composites defined in the mini pilot plant test (PQ) drill holes.

# Outcrop Bulk Sampling

In the spring of 2011 a mineralized serpentinized dunite outcrop located in the eastern portion of the deposit on line 9850E was prepared for bulk sampling. Nickel mineralization in the sampled portion of the outcrop is dominated by heazlewoodite.

A section of the outcrop measuring approximately  $40 \text{ m} \times 55 \text{ m}$  was cleared of glacial overburden with an excavator and power washed. A smaller area within this was identified for sampling and subsequently drilled and blasted to a depth of approximately 1.5 m.

Approximately 100 tonnes of this material was used in the in-situ environmental geochemistry characterization cells as part of Royal Nickel's environmental geochemistry program. Approximately 3 tonnes of this material were used for metallurgical testing as described below.

#### Chrysotile Quantification

A logging program to quantify the bulk chrysotile content of dunite and peridotite from the Dumont deposit was completed from January to March 2013. This program involved relogging a representative sample of 13 holes. Royal Nickel has developed a standard logging procedure for the quantitative visual estimation of chrysotile in drill core. This method has been validated by independent external experts and provides reproducible and quantifiable results. The 95% confidence interval for the average bulk chrysotile content for dunite and peridotite is between 1.6% and 1.9%.

# **Drilling**

Upon acquiring the Dumont property, Royal Nickel conducted an initial exploration drilling program which consisted of 5 twin holes to confirm the historic drilling results in 2007. Results from this drilling campaign confirmed the historical drilling results and encouraged Royal Nickel to embark on an extensive drilling campaign to fully evaluate the Dumont deposit. Royal Nickel has since conducted core diamond drilling on the Dumont Nickel Project for the purposes of exploration, resource definition, metallurgical sampling and bedrock geotechnical investigation. Royal Nickel has also conducted core drilling and cone penetration testing for the purpose of overburden geotechnical characterization. A summary of the drilling conducted on the property since 2007 is shown below.

|  | 2007 to 2010 2011  |                 | 11              | 2012            |                 | 2013            |                 | TOTAL           |                 |                 |
|--|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Purpose of Drilling                                      | Number<br>of Holes | Total<br>Metres | Number of Holes | Total<br>Metres |
| Twin Hole  | 5                  | 1,681           |                 |                 |                 |                 |                 |                 | 5               | 1,681           |
| Sectional Resource Definition                            | 216                | 86,986          | 157             | 56,527          |                 |                 |                 |                 | 373             | 143,513         |
| Structural   | 4                  | 1,359           |                 |                 |                 |                 |                 |                 | 4               | 1,359           |
| Geotechnical (Bedrock)                                   | 3                  | 1,503           | 13              | 6,503           | 35              | 5,387           |                 |                 | 51              | 13,393          |
| Mini pilot plant Test Holes (NQ)                         | 7                  | 1,757           |                 |                 |                 |                 |                 |                 | 7               | 1,757           |
| Total Drilling included in the Current Resource Estimate |                    |                 |                 |                 |                 |                 |                 |                 | 440             | 161,703         |
| Metallurgical Domain Composites                          | 10                 | 3,194           |                 |                 |                 |                 |                 |                 | 10              | 3,194           |
| Crushing Testwork Sample                                 |                    | 406             |                 |                 |                 |                 |                 |                 | 3               | 406             |
| Geotechnical (Overburden)                                | 5                  | 104             | 66              | 1,452           | 64              | 1,055           |                 |                 | 135             | 2,611           |
| Mini Pilot Plant Sample (PQ)                             | 13                 | 2,774           |                 |                 |                 |                 |                 |                 | 13              | 2,774           |
| Regional Exploration                                     |                    |                 |                 |                 |                 |                 | 13              | 3,392           | 13              | 3,392           |
| Total  | 266                | 99,764          | 236             | 64,482          | 99              | 6,442           | 13              | 3,392           | 614             | 174,080         |

Royal Nickel contracted Forages M. Rouillier ("**Rouillier**") of Amos, Quebec to conduct core diamond drilling. Rouillier used custom built diamond drill rigs mounted on skids or self-propelled tracked vehicles with NQ diameter diamond drill coring tools. On occasion, HQ and PQ diameter core was drilled. Rouillier is an independent diamond drilling contractor that holds no interest in Royal Nickel.

For the purpose of establishing sections and for easy location reference in the context of the strike of the deposit, a local grid coordinate system has been established with a baseline approximately parallel to the strike of the Dumont sill and the general trend of the mineralized zones. Grid lines are oriented at an azimuth of 045° and the origin of the grid (grid coordinates 0E, 0N) is located at UTM NAD83 Zone 17 coordinates 678,160E, 5,392,714N. This grid was established for ease of reference and section plotting only. This is a virtual grid and no physical grid lines have been

cut in the field. Drill collar coordinates continue to be recorded and reported in UTM NAD83 Zone 17 coordinates and drill hole directional data are recorded and reported relative to astronomic (true) north.

Drill hole directional surveys were conducted using a Maxibor down-hole survey tool which calculates the spatial coordinates along the drill hole path based on optical measurements of direction changes and gravimetric measurements of dip changes. Drill holes are subsequently subject to a differential global positioning system (DGPS) location and deviation surveys using a north-seeking gyro by a certified surveyor before integration of the drilling data into the resource estimation database. Core recovery is very good and is generally greater than 95% with no statistical difference along strike or by geological or metallurgical domain.

All geological, engineering and supervision portions of the drilling program were overseen by geological staff of Royal Nickel, supervised by Mr. Alger St-Jean, P.Geo., Vice-President Exploration for Royal Nickel.

#### Resource Definition & Exploration Drilling

The sectional resource definition drilling program, initiated in 2007, was designed to maintain a nominal 100 m spacing between holes within the plane of the section and along strike between sections from section 5600E to Section 10000E. Drill spacing was decreased to 50 m by 50 m in two selected variability testing blocks centred on section 8250E and on section 6850E. Outside of the 10000E to 5600E range exploration drilling was conducted along the trend of the Dumont intrusion, usually at wider spacing. Several exploration holes were drilled where conductive anomalies detected by the VTEM airborne geophysical survey conducted in 2007 coincided with the basal contact of the intrusion. The program was designed to define mineralization down to a nominal depth of 500 m from surface (-200 m elevation). In places, drilling has investigated mineralization down to a depth of 700 m (-400 m elevation). In general, the core recovery for the diamond drill holes on the Dumont property has been better than 95% and very little core loss due to poor drilling methods or procedures has been experienced. Core recovery does not vary along strike or by geological or metallurgical domain. Holes drilled in 2011 and 2012 for the dual purpose of geotechnical evaluation and resource characterization were integrated in the Dumont resource model. An additional 3,392 metres of diamond drilling in 13 holes was completed in 2013 to evaluate regional exploration targets that occur within the Dumont property but outside the Dumont resource. No significant mineralization was intersected.

Following completion of the Feasibility Study, further footwall exploration drilling consisting of 1,418 metres in 3 holes was carried out in 2013 to evaluate ground geophysical targets coincident with the footwall of the Dumont intrusion.

#### Structural Drilling

For the purpose of defining major geological structures (faults) in the central portion of the deposit, 1,359 m were drilled in 4 oriented core holes in 2009. These holes were drilled parallel to the strike of the deposit and at high angles to the major structures that cross-cut the deposit. Data from these structural holes were combined with the global drill hole database and surface mapping by John Fedorowich, Ph.D., P.Geo., of Itasca Consulting, to produce a first order structural model for the deposit that was used to delimit structural domains and help constrain the resource block model. Since 2009, several resource definition and exploration holes in zones of structural complexity have also been oriented to augment the structural model.

The structural model has been revised and updated by SRK in 2011 using oriented core data collected during the 2011 geotechnical drilling campaign. Itasca Consulting further updated the structural model using data collected during the 2012 geotechnical drilling campaign, data from detailed surface mapping, and regional geophysical surveys.

#### **Bedrock Geotechnical Drilling**

In order to define rock mass characteristics and evaluate open-pit wall slope angles on an indicative basis, data collection for a preliminary geotechnical study was carried out in 2009. Work associated with this study included the measurement and analysis of 1,503 m of NQ size core from drilling 3 oriented core holes near section 6800E, and a

limited hydrogeological study between sections 6500E and 7500E. This data helped define the open pit wall slope angles used in the preliminary assessment.

Upon initiation of the pre-feasibility study, a geotechnical investigation program was designed by SRK and implemented by Royal Nickel staff under the supervision of SRK in 2011. The program consisted of 5,050 m of oriented HQ size core in 10 drill holes. Data from this drilling program was utilized by SRK in order to complete a pre-feasibility level geotechnical assessment for slope design. The assessed parameters include rock quality designation, fracture frequency per metre, empirical field estimates of intact rock strength, field (point load) and laboratory (uniaxial compressive and triaxial) strength, and RMR89. Hydraulic test data (49 packer tests) were also collected during this drilling program and used to map the distribution of bedrock hydraulic conductivity across the site and define bedrock hydrogeological domains.

An additional combined geological exploration and geotechnical investigation program designed by SRK was implemented by Royal Nickel staff under the supervision of SRK starting in December 2011 and was completed in May 2012. The program consisted of 6,163 m of oriented NQ size core in 11 drill holes. Data from this drilling program has been used by SRK to complete further feasibility study level geotechnical assessment for slope design.

# Overburden Geotechnical Drilling

Overburden geotechnical drilling was carried out in three phases. A limited overburden characterization program was carried as part of the preliminary evaluation in 2010. This was followed by a more extensive program of overburden coring by sonic drilling and cone penetration testing in support of the pre-feasibility study in 2011. Another more detailed program incorporating sonic drilling, cone penetration testing and metasonic probing to support feasibility level design work was completed in 2012. Bedrock data from the sonic drilling program also served to evaluate the regional exploration potential of the Dumont Nickel Project. Following completion of the Feasibility Study, further metasonic probing was completed in 2013.

#### Metallurgical Drilling

Drilling was carried out in 2010 to collect samples for bench-scale metallurgical variability testing and crushing testwork. A total of 2,774 m of drilling in 13 holes was completed for metallurgical domain composite sampling, and 3 holes totalling 406 m were completed for crushing testwork. Additional metallurgical samples were taken from holes drilled as part of the sectional resource drilling program.

The objective of the mini pilot plant sampling drilling was to provide representative mineralogical variability in a larger sample size for testwork at Royal Nickel's mini pilot plant located in Thetford Mines, Quebec. A series of 7 pilot drill holes totalling 1,757 m were completed to characterize the near-surface mineralization in order to select representative mineralization domains for sampling by large diameter drilling for mini pilot plant testing in 2010. On the basis of the results from these pilot holes, four locations were selected for large diameter (PQ-size) diamond drill coring and thirteen holes totalling 2,785 m were completed. Multiple holes were planned on each site in order to acquire a sufficient sample of each metallurgical domain.

# Sampling, Analysis, Security of Samples and Data Verification

Descriptions of the historical sampling methods and approaches at the Dumont Nickel Project have been discussed above. Prior to the initial drilling program conducted in 2007, Royal Nickel did not conduct any sample preparation or analysis, as no samples were collected from the property during the period leading up to the drilling program. Since initiating field exploration work in March 2007, Royal Nickel has maintained strict sample preparation and security procedures and a Quality Assurance/Quality Control (QA/QC) program following industry best practices.

SRK reviewed sample preparation, analyses, and security procedures and discussed the QA/QC program with Royal Nickel staff during the site visit in 2011. SRK also performed independent data analyses verification checks as described below and has also reviewed the results of the QA/QC program for the 2008, 2009, 2010, 2011 and 2012 Technical Reports.

In the opinion of SRK the sampling preparation, security and analytical procedures used by Royal Nickel are consistent with generally accepted industry best practices and are therefore adequate.

The Feasibility Study noted that there had been no change to core drilling assay/geochemical, mineralogical mapping, mini pilot plant sampling methods, electron microprobe determinations, comminution testwork, and geochemical characterization of Dumont rocks and tailings described below since the Technical Report entitled "Technical Report on the Dumont property, Launay and Trécesson Townships, Quebec, Canada" (June 2012). New sampling campaigns for chrysotile quantification has since been initiated and is described below.

#### Drill Core Assay/Geochemical Sampling

#### Sample Collection & Transportation

Diamond drilling sampling controls start after a run has been completed and the rods are pulled out of the drill hole. The core is removed from the core barrel and placed in core boxes. The capacity of each box depends on the diameter of core stored in it (1.5 m for PQ diameter, 3.0 m for HQ diameter or 4.5 m for NQ diameter). This follows standard industry procedures.

Small wooden tags mark the distance drilled in metres at the end of each run. On each filled core box, the drill hole number and sequential box numbers are marked by the drill helper and checked by the geologist. Once the core box is filled at the drill site, the box is covered with a lid to protect the core and the box is sent to the core logging facility in Amos at the end of each shift for further processing. In general, the core recovery for the diamond drill holes on the Dumont Nickel Project has been better than 95% and little core loss due to poor drilling methods or procedures has been experienced. There is no statistical difference on core recovery along strike or by geological or metallurigical domain.

# Core Logging & Sampling

Once the core boxes arrive at the logging facility in Amos, the boxes are laid out in order, the lids are removed and the head of the first box is marked in red to denote the starting point of the drill hole. The core is then laid out on the logging table and cleaned to remove any grease and dirt which may have entered the boxes. The core is stored sequentially hole by hole in racks for logging. Core logging consists of two major parts: geotechnical logging and geological logging.

The diamond drill core sampling is conducted by a team of several staff geologists, all geologists in training (GIT) and geological technicians under the close supervision of the Royal Nickel geologist in charge of the program on site. The Royal Nickel staff geologists are responsible for the integrity of the samples from the time they are taken until they are shipped to the preparation facilities in Rouyn-Noranda or Timmins.

The geotechnical logging is completed first to check the core pieces for best fit and to determine core recovery, rock quality designation, index of rock strength and magnetic susceptibility. The number of open (natural) fractures in the core is counted and the fracture surfaces are evaluated for their joint surface condition.

Geological logging follows and is comprised of recording the lithology, alteration, texture, colour, mineralization, structure and sample intervals. All geotechnical and geological logging and sample data are recorded directly into a computerized database using CAE Mining's (formerly Century Systems) DHLogger data logging software.

During the core logging process the geologists define the sample contacts and designate the axis along which to split the core with special attention paid to the mineralized zones to ensure representative splits. All core which is classified as dunite by the geological logging is marked in 1.5 m intervals for sampling. Any mineralized sections outside the dunite are also marked for sampling. Outside the dunite unit a minimum of one, 1.5 m control sample in every 10 m of core is taken.

Samples are identified by inserting three identical pre-fabricated, sequentially-numbered, weather-resistant sample tags at the end of each sample interval.

Once the core is logged, photographed and the samples are marked, the core boxes are transferred to the cutting room for sampling. Sections marked for sampling are split using a diamond saw. Once the core is split in half, one half is placed into a plastic sample bag and the other half is returned to the core box. The core cutting technicians verify that the interval on the sample tag matches the markings on the core and that the sample tag matches the sample number on the bag. The half of the cut core returned to the core box is then re-marked by the core technician with a grease pencil to indicate the end of the sample interval. The boxes containing the remaining half core are stacked and stored on site in the secure core storage facility.

Duplicate, blank and standard samples are inserted into the sample stream at regular intervals using a sequential numbering scheme set up by Royal Nickel.

Once the sample is placed in its plastic sample bag, the bag is secured with electrical tie wraps and the sample bags are placed into large fabrene sacks. Generally, seven sample bags are placed into each fabrene bag and then the bag is secured with an electrical tie wrap. The fabrene sample bags remain secured in the core shack in Amos until they are shipped to the laboratory by courier. The general shipping rate for the samples is once for every 100 to 150 samples.

After-hours access to the core logging, core cutting and core storage facilities, as well as the project office, is controlled by a zoned alarm system with access restrictions based on employee function.

#### Sample Preparation & Analysis

Since June 1, 2008, Royal Nickel's samples have been prepared at ALS Minerals' (formerly ALS-Chemex) preparation facility in Timmins, Ontario and analyzed at ALS Minerals' laboratory in Vancouver, British Columbia. Both the preparatory facility and assay laboratory have ISO 9001:2000 certification. Expert Laboratories, located in Rouyn-Noranda, Quebec is not ISO certified; however, it does participate in the CANMET round-robin proficiency testing twice yearly. Prior to June 1, 2008, all samples were assayed at Expert Laboratories and then all the pulps were re-assayed at ALS Minerals. 5% of each assay batch returned from ALS Minerals is randomly selected for check assay. Until June 2011 the check assays occurred at Expert Laboratories. Subsequently, Royal Nickel changed the umpire laboratory to AGAT Laboratories in Mississauga. AGAT is ISO 9001:2000 certified and accredited by the Standards Council of Canada (SCC).

Once the samples reach ALS Minerals' Timmins preparation laboratory, each sample is dried as needed, crushed, and split into "reject" and a 250 g aliquot for pulverization. After pulverization the 250 g pulverized sample aliquot is again split into a 150 g master sample and a 100 g analytical sample. The 150 g master sample is stored in the Timmins facility for reference and the 100 g analytical sample is forwarded to the ALS Minerals analytical laboratory for assaying in Vancouver. On receipt in Vancouver, the specific gravity of the analytical sample material is measured by gas pycnometer, and this is followed by a 35-element analysis using an aqua regia digestion and ICP-AES finish. Where reported nickel values exceed 4,000 ppm, a second analysis is completed from the 100 g analytical sample using a four acid total digestion with an ICP-AES finish. This 4,000 ppm threshold reanalysis was raised to 10,000 ppm on June 1, 2008. In addition, all samples are assayed for precious metals (gold, platinum, palladium) using a standard fire assay with an ICP-AES finish.

After a holding period at the laboratories, all pulps and rejects are returned to Royal Nickel in Amos for long-term storage.

All analytical data are reconciled with the drill log sample records and recorded in the project database. For the purpose of geological and resource modelling, the ALS Minerals aqua regia determinations are used for samples under 10,000 ppm nickel and the ALS Minerals total digestion determinations are used for samples over 10,000 ppm nickel.

# Control, Blank and Duplicate Samples

As part of Royal Nickel's QA/QC procedures, a set of control samples comprised of a blank, a field duplicate and a standard reference material sample, are inserted sequentially into the sample stream. The cut core samples, along with the inserted control samples, are then shipped to the ALS Minerals assay preparation facility in Timmins.

# Mineralogical Mapping Sampling

The mineralogical mapping sampling program uses SGS' EXPLOMIN<sup>TM</sup> application of Quantitative Evaluation of Minerals by Scanning electron microscopy (QEMSCAN) methods to provide detailed mineralogical information on mineral assemblages, nickel deportment, liberation, alteration and the variability of these factors. Mineralogical samples were taken for the purpose of metallurgical domain composite characterization and for the purpose of mineralogical mapping of the Dumont deposit.

## Sample Definition & Sampling

The mineralogical mapping sampling program samples a quarter of the NQ core drilled and previously sampled for the resource definition program. In areas of interest, sample length and location are defined to coincide with previous assay sample intervals to ensure that a direct comparison can be made between results obtained from assay/geochemical analyses and mineralogical sampling results.

The selected mineralogical mapping samples are given a unique sample identification number (ID), photographed, and sent to the core cutting area. Mineralogical mapping sampling is usually completed in batches, where multiple samples are selected from each hole, then cut sequentially.

The half-core remaining from the previous assay sampling is quarter-split to produce the mineralogical sample. A portion of the quartered core is cut further to produce a pre-selected portion of rock for thin section field stitch analysis. The selected portion for field stitch analysis and the quartered core are each placed in separate bags, and identified by the same mineralogical mapping sample ID.

For QA/QC purposes, a piece of the quartered core selected for mineralogical particle scan analysis is selected from the sample bag and placed in the Royal Nickel mineralogical mapping sampling library.

Once a sample is placed in its plastic bag, the bag is secured with staples. Typically, seven sample bags are placed into a cardboard box and secured with tape. The sealed boxes remain secured in the Amos core logging facilities until they are shipped to the laboratory using a courier service. Samples are shipped at the rate of 50 to 100 samples per shipment. Blanks and standard samples are inserted into the sample stream at regular intervals using a sequential numbering scheme set up by Royal Nickel.

The sample bag with the thin section slice is sent directly to SGS for thin section preparation and mineralogical analysis. The sample bag containing the quarter core is sent first to ALS Minerals' Timmins preparation laboratory for stage crushing and assaying, with a split shipped to SGS for mineralogical particle scan analysis.

After-hours access to the core logging, core cutting and core storage facilities, as well as the project office, is controlled by a zoned alarm system with access restrictions based on employee function.

#### Sample Preparation & Analysis

Upon receipt at ALS Minerals' Timmins preparation laboratory the mineralogical samples are prepared according to the following procedure: weigh and log received sample; log sample, crush entire sample to > 70% passing 2 mm; riffle split 100g for pulverizing; stage pulverize, two 100g splits to 90% passing 106  $\mu$ m; wash pulverizer; crush to 70% passing 2 mm; and pulverize to 90% passing 150 mesh.

The first 100 g split of pulverized material is sent to SGS where the sample is prepared for EXPLOMIN<sup>TM</sup> particle scan mineralogy and XRF Borate Fusion assay. The results are forwarded to Royal Nickel and imported directly into the database.

The other 100 g split of the pulverized material is retained by ALS Minerals for chemical analyses. The reject material is sent back to Royal Nickel's Amos office for storage. The results are forwarded to Royal Nickel and imported directly into the database.

# Geochemical Preparation & Analysis

Samples are analyzed at the ALS Minerals Laboratory in Vancouver, for specific gravity by gas pycnometer, followed by a 35-element analysis using an aqua regia digestion and ICP-AES finish. Where reported nickel values exceeded 10,000 ppm a second analysis is completed using a four acid total digestion with an ICP-AES finish. In addition, all samples are assayed for precious metals (gold, platinum, palladium) using a standard fire assay with an ICP-AES finish. Analysis results are forwarded to Royal Nickel and imported directly into the project database.

#### Mineralogical Preparation & Analysis

Procedures for EXPLOMIN<sup>TM</sup> mineralogical analysis and sample preparation internal to SGS were provided to Royal Nickel by SGS as a personal communication. Upon sample receipt, the Sample Login technician verifies the received samples according to the sample list provided by Royal Nickel geologists. Any extra sample(s), discrepancies in identification, damage, contamination, unsuitable samples, concerns, or hazards are recorded, and Royal Nickel is notified. Once sample receipt is verified, samples are forwarded to the mineralogist for sample login and laboratory information management system ("LIMS") reporting. The samples are kept in the same order that they appear on the documentation provided by Royal Nickel.

For sample tracking purposes within SGS, LIMS numbers are assigned to incoming samples. The LIMS number reflects the type of work being performed on the samples, the source of the samples, and secondary information such as Reference, Project, Batch, Quote, Link, Note, Category, Supervisor, Priority, Warning, Charge ID, Date Received, Date Requested. When the LIMS log-in has been completed, a project file is created to hold all the paperwork pertaining to the project. The project file is labelled with the project number, LIMS number, and the Client or Company name. A log-in checklist is attached to the project file and completed. A chain of custody is created. LIMS information is recorded on a diamond services/mineralogy project list.

The project file is placed in a red folder and given to the Mineralogy Project Supervisor. Once the folder is checked by the Mineralogy Project Supervisor it is returned to Sample Login. Any additional information is updated in LIMS and the project list. The signed chain of custody is photocopied and the original is mailed to the client.

Active mineralogy samples are stored with labels containing the project number, LIMS number, and test required. All of the samples are placed in one of the LIMS numbered, large plastic bags, placed in the 'To Do' box. A copy of the work order accompanies the samples.

When all requested analyses have been completed, samples are brought to Sample Tracking for storage. Boxes are stored in the Sample Tracking Room in Mineralogical Services for six months. After six months, the box is inventoried and the mineralogist is contacted for further instructions.

## Sample Preparation

Using a binocular microscope, the Mineralogist or Project Mineralogist identifies the areas of interests previously marked by Royal Nickel staff for thin section analysis. One polished section for each sample is prepared for field stitch analysis. Sections are ground and polished then coated with carbon for analysis.

Crushed samples that are received later on from ALS Minerals are first riffle-split into two parts (of ~125 g), one for mineralogy and one for assay. Each sample is potted in moulds and the necessary amount of resin and hardener is added. The moulds are placed into the pressure vessel and left under pressure for five hours. The moulds are then

labelled and backfilled with resin. Then they are placed in the oven. The sections are ground and polished followed by carbon coating.

## **QEMSCAN** Operation

The block holder is loaded with the samples. Measurement parameters (for core samples, field scan mode with 10 µm resolution and for crushed samples, PMA mode with 3 µm resolution) are set up. Stage Set-Up, Focus Calibration, Beam optimization and BSE Calibration are performed at the start of each run. After the runs are completed, the daily quality checks are performed as summarized in the table below. Weekly calibration and checks are also performed to verify the following: Stage Initialization, Tilt Check, Rotation Check, X-Ray Detector Check, Gun Set-up, Brightness and Contrast, Filaments and Vacuum. The detectors are checked every three months.

The QEMSCAN Data Validation report includes a measurement validation table and an assay reconciliation chart. QEMSCAN data are compared to externally measured chemical assay data to ensure measurement accuracy. Minerals are double-checked optically. A technical check is performed on all data by a senior mineralogist.

| Task/Duty   | Operational Purpose  | <b>Management Purpose</b>   |
|---|--|---|
| Checking correctness of PS placement.                           | Statistics will readily show if samples and parameters are mismatched.   | Proper scheduling and quality control protocols.  |
| Check that analyses have been performed successfully.           | Go-, no-go decision to perform sample exchange for next analysis batch.  | Keep track of scheduling, processing and project management.  |
| Keep track of the measurement statistics as a matter of record  | Optimization of analyses is<br>influenced by the<br>interdependence of PS-packing<br>density and point-spacing | If additional statistics are<br>required for particle or modal<br>accuracy, additional PS's may<br>be required. |
| To assist in optimizing analysis parameters and analysis times. | For reviewing parameter selection criteria. Resolution vs. speed.  | Establishing accuracy and precision of measurement.   |

Note: Table supplied by SGS.

Analytical results are forwarded to Royal Nickel and imported directly into the database.

#### Control Samples

As a part of SGS standard QA/QC procedures for QEMSCAN analysis, a standard sample is run every week. There are currently three standard samples from different projects that are cycled each time. One of the standards used is a Royal Nickel data validation sample.

As part of Royal Nickel's QA/QC procedures for geochemical assays, a set of control samples comprised of a blank and standard reference material sample, are inserted sequentially into the sample stream. The cut mineralogical samples along with the inserted control samples are then shipped to ALS Minerals for stage crushing and chemical analysis. The standard reference materials and blanks used are analogous to those described previously with the exception that the frequency of insertion is increased to approximately one in every 15 samples.

#### Mini Pilot Plant Sampling

PQ core metallurgical domain composite samples are selected based on nickel deportment, grade and alteration of the rocks as determined through assays and mineralogical sampling of an NQ pilot hole drilled at the sampling location. A 1.5 m PQ drilling grid was established around each NQ pilot hole to plan multiple PQ holes on the same site in order to accommodate the sample volume required (approximately 1,800 kg per domain sample) while maintaining domain sample uniformity. As a result of the hole proximity and the inherent difficulty and cost of PQ drilling in overburden, a percussion water well-drilling rig was employed to drive casing into bedrock for the multiple holes required on each of the sites. Once casing was seated in bedrock, the diamond drill returned to drill the PQ core domain samples.

The sampling method for PQ core is identical to that described previously up to and including the geotechnical logging, after which the procedure is different. After geotechnical logging, the core is thoroughly cleaned to remove any drilling additives that may interfere with the metallurgical testwork. The PQ core is then checked for comparability to the pilot hole, by comparing lithological contacts, mineralization, alteration, and structural features. The core is then logged for lithology, and metallurgical domain composite samples are delineated which reflect those established in the pilot NQ hole. The core is then photographed and placed in short-term indoor storage to await sampling. After-hours access to the core logging, core cutting and core storage facilities, as well as the project office, is controlled by a zoned alarm system with access restrictions based on employee function.

The PQ sampling program is supervised by an independent qualified engineer provided by Stavibel Inc. to ensure quality control of the sampling method and to certify chain of custody. The rock is weighed and transferred by domain sample from the core boxes directly into 200 litre plastic barrels fitted with Schrader valves. The domain samples are kept separate and barrels are filled in sequential order. A barrel typically holds from 250 to 270 kg of rock. The engineer seals the full barrel and places a numbered tag on the closure to prevent or identify any possible tampering. The barrels are purged with nitrogen to prevent oxidation and degradation of the rock while the sample awaits metallurgical testwork.

When the sample is required by Royal Nickel's metallurgical group, the barrels are shipped directly via road freight to the mini pilot plant in Thetford Mines, Quebec.

## **Electron Microprobe Sampling**

Polished sections from the mineralogical mapping program from locations throughout the Dumont deposit were selected to quantify the variability of nickel content in key minerals of interest by electron microprobe analysis.

Royal Nickel contracted SGS to conduct a detailed electron microprobe analyses on these samples which were already in storage at SGS facilities. SGS subcontracted the analyses to facilities at McGill and Laval University. The McGill University Electron Microprobe Microanalytical Facility is equipped with a JEOL 8900 instrument while the Laval Microanalysis Laboratory is equipped with a CAMECA SX-100. Machine calibrations, replicates and all results passed internal QA/QC procedures used at the facilities and checks as prescribed by SGS.

To further supplement this work in 2012, Royal Nickel contracted the Xstrata Process Support (XPS) Mineral Science Laboratory. XPS completed additional quantitative compositional mineral analysis using a Cameca SX-100 electron microprobe. Electron probe microanalysis produces higher electron beam currents and increased beam stability, coupled with higher resolution wavelength dispersive spectrometry to produce mineral composition data down to ppm levels. All standard calibrations and QA/QC checks were completed in accordance to XPS Standards and Procedures.

# Metallurgical Variability Sample Selection

The metallurgical variability samples were collected from various locations in the deposit.

These metallurgical variability samples were chosen to cover the variability in mineralogy and composition across the deposit. Samples were collected in drill holes distributed to be spatially representative both along strike, and across dip (stratigraphy) of the deposit. The major variables examined were nickel grade, nickel deportment, liberation, grain size, association and fibre content. Testwork was completed on 105 individual metallurgical domain composite samples. Testwork includes both metallurgical lab scale recovery tests as well as mineralogical analysis by QEMSCAN and assay.

Continuous domain samples were assembled along the continuous length of the drill holes. Each of the samples defined a homogeneous domain as characterized by nickel grade, nickel deportment, mineralization grain size and alteration. Any change in these characteristics led to the start of a new sample.

#### **Comminution Sampling**

An extensive grindability study was performed on 102 samples from the Dumont deposit. Two types of samples were provided for the testwork, 92 half-NQ and 10 full PQ core samples, corresponding to variability and JK Drop Weight Test samples, respectively.

Sampling Selection

The 92 half-NQ and 10 full PQ core samples were selected from previously drilled and stored core by Royal Nickel. Samples were selected throughout the feasibility pit shell and considered:

- preliminary hardness domains (as indicated from point load testing corresponding to olivine, serpentine, coalingite and faulted domains),
- nickel deportment, and
- distribution throughout feasibility payback shell.

All selected samples are contained within the mineralization envelope to target mineralized dunite of various grades and mineralization types. Half of the selected 92 half-NQ samples (45) were chosen inside the feasibility payback shell. The remaining 47 samples were evenly distributed through the remaining volume of the mineralized envelope within the feasibility pit shell. Selected drill hole intersections were chosen to represent the range of mineralogical and chemical variations with focus on those factors which seem to affect point load strength index (PLSI).

## Sample Preparation

Several shipments of drill core were shipped to the SGS' Lakefield, Ontario site from January to March 2011. These samples underwent the following tests: bond low-energy impact test (CWi); JK Drop Weight Test (JK DWT); SMC test (SMC); bond rod mill grindability test (RWi); bond ball mill grindability test (BWI); bond abrasion test (Ai); rheological characterization; and mineralogical characterization and assay.

The 92 half-NQ drill core samples were submitted for the same suite of tests with the exception of the Bond low-energy impact test and the JK DWT. Three samples selected by Royal Nickel were submitted for full rheology benchmark testing in order to establish testing criteria that would be applied to the 89 remaining samples. The samples submitted for Bond ball mill grindability testing were also submitted for the ModBond test, in order to establish the ModBond – BWI correlation parameters.

All the remaining minus 6 mesh material, totalling 4,339 kg in 20 drums, was shipped to a warehouse in Quebec at the request of Royal Nickel.

The samples were analysed for nickel, sulphur, iron and major elements (Whole Rock Analysis). The iron determinations were performed using two methods, Borate Fusion-XRF (Whole Rock Analysis) and Pyrosulphate Fusion-XRF.

# **Environmental Geochemistry Sampling**

Sampling for Laboratory Testwork

The objectives of the geochemical characterization program are to: (i) classify mine waste according to Québec Directive 019 sur l'Industrie Minière (Directive 019) for waste management planning, (ii) identify chemicals of potential environmental interest in the framework of future mine site water quality and possible water treatment requirements during mine operation, and (iii) assess the pit lake water quality in an in-pit tailings deposition scenario after mining operations cease.

The phase 1 environmental geochemistry program was completed by Genivar in 2009. Samples were selected by one engineer and one geologist of Genivar with the help of one geologist of Royal Nickel. A total of 21 waste rock samples (three gabbro, ten peridotite, five dunite, two feldspar porphyry and one basalt) were selected for acid-base accounting (ABA) and leaching tests. Six samples from the mineral deposit representing the low (three samples) and the high (three samples) nickel grades were also sent for ABA and leaching tests. In addition, three tailings samples were selected for environmental testing. Five samples of different lithologies and grades (waste: peridotite and dunite, ore: low- and high-grade, tailings) were selected for humidity cell tests. Finally, a composite sample of mineralized rock (low- and high-grade) was created from five different samples for the Meteoric Water Mobility Procedure (MWMP) test.

For the phase 2 environmental geochemistry program in 2011, rock samples were collected by Royal Nickel staff supervised by a Royal Nickel geologist according to a sampling scheme devised by Golder. A total of 93 samples of core from waste rock areas were collected from existing core of previously drilled exploration boreholes. Samples were collected throughout the deposit and mostly outside the ore shell but within or near the anticipated open pit. Each rock sample consisting of 3 to 5 kg of core was collected over an interval of approximately 5 to 10 m, and some sub-samples were collected at regular intervals of approximately 1 m. Each sample was checked against its log description in terms of rock type, alteration, and staining associated with sulphide mineral oxidation. A consistent sample collection procedure was applied for all rock samples. Each sample was bagged individually to avoid cross-contamination and was labelled with the unique sample identification number. Metallurgical processing wastes (equivalent to tailings) generated at an off-site processing facility were retained for geo-environmental analysis. The tailings were generated from composite samples of ore collected by Royal Nickel from each of the main mineralization types including alloy ore, sulphide ore and mixed ore. Three samples of tailings and three samples of associated process water were collected, packaged and shipped to the laboratory by Royal Nickel for analysis.

For the phase 3 environmental geochemistry program in 2012, five more metallurgical processing wastes (equivalent to tailings) were generated from composite samples collected by Royal Nickel. The five composite tailings samples are representative of the five metallurgical ore types as described in the Revised Pre-Feasibility Study. The composite tailings samples and three samples of associated process water were collected, packaged and shipped to Maxxam Analytics Inc. (Maxxam) in Montréal by Royal Nickel for the similar static analysis complimenting the phase 2 program. In addition to the Maxxam work, three metallurgical processing wastes (equivalent to tailings) were generated from a composite of lowgrade, non-sulphide ore, by the Royal Nickel team, and, packed and shipped by Royal Nickel to SGS for analysis. The purpose of these analyses was to assess the potential pit lake water quality in an in-pit tailings deposition scenario after mining is complete.

#### Analytical Methods for Laboratory Testwork

The static tests completed on mine waste solids are consistent with those recommended by Directive 019 and include acid-base accounting ("ABA"), chemical composition (whole rock and trace element), and leaching tests (TCLP, SPLP, CTEU9).

# Acid Rock Drainage ("ARD") Potential

The potential of geologic materials to generate ARD was evaluated through ABA following Québec Method MA.110-ACISOL 1.0. This test includes the determination of the following parameters: (i) total sulphur by LECO furnace and Acid Potential ("**AP**") calculated based on total sulphur content and (ii) Neutralization Potential ("**NP**") (following Québec Method MA.110-ACISOL 1.0). The values of AP and NP are reported as kg equivalent calcium carbonate (CaCO<sub>3</sub>) per tonne of rock.

# Neutralization Potential ("NP")

NP is a bulk measurement of the acid-buffering capacity of a sample provided by various minerals of different reactivities and effective neutralization capacity. It is measured by digestion of a pulverized portion of the sample using a strong acid. This process consumes all minerals affected by the acid, including minerals that may not normally be reactive under ambient conditions and minerals that would not neutralize to pH-neutral conditions (such as silicate minerals. This method can overestimate effective NP.

# Acid Potential ("AP")

The potential of a material to generate acid (acid potential or AP) is calculated from the total sulphur content of the sample in equivalent calcium carbonate. AP is a theoretical value that represents the maximum potential acidity that can be generated by sulphur-bearing minerals in a rock sample assuming that all sulphur is present as pyrite and is available to oxidize completely. This method is generally found to overestimate the AP because total sulphur includes non-reactive sulphur minerals such as sulphates and certain sulphides.

#### Chemical Composition

The chemical composition of the samples was determined through whole rock and trace element analyses. Major element composition was determined through whole rock analysis by borate fusion and X-ray fluorescence ("XRF"). Trace element composition was determined through the CEAEQ Method MA200 Mét 1.2.

# Metal Leaching Potential

Various short-term leach tests were used to determine the potential of the waste to release readily-soluble metals to the receiving environment. The leach tests performed follow Québec Method MA.100-Lix.com.1.0.

Sampling for In-Situ Experimental Cells

#### In-situ Low-Grade Ore Cell

A bulk sample of mineralized serpentinized dunite weighing 110 tonnes was collected from outcrop for inclusion in an in-situ experimental environmental characterization cell constructed on the Dumont property. The outcrop was cleared of glacial overburden with an excavator and power washed. The area identified for sampling was then drilled and blasted to a depth of approximately 1.5 m.

The sample was loaded into a dump truck and transported immediately to the in-situ cell site and deposited directly into the in-situ cell.

# In-Situ Tailings Cell

A composite sample of tailings produced from the miniplant, weighing 3 tonnes, was prepared for deposition in an in-situ experimental environmental characterization cell constructed on the Dumont property.

The tailings were produced from the miniplant operation from August 2010 to June 2011. The source of the material was from the PQ Domain Composites 218BDF, 218G, 218H, 218I, 222AC, 217B and 216ABC. Both the slimes, fluff and rougher (non-mag) tails produced from the miniplant were used. The slimes had been stored as a low density slurry, the fluff was dry and the rougher tails were a wet filter cake.

The tailings samples was loaded into a cement truck, mixed thoroughly, transported immediately to the in-situ cell site and deposited directly at approximately 50% solids into the in-situ cell.

#### Chrysotile Quantification Sampling

A logging program to quantify the bulk chrysotile content of dunite and peridotite from the Dumont deposit was completed from January to March 2013. The program consisted of detailed drill hole logging using half NQ core drilled and previously sampled for the resource definition program. Thirteen drill holes were selected to represent the dunite and peridotite lithologies based on representative lithological, spatial, structural, and metallurgical characteristics. Royal Nickel geologists created a standard logging procedure specifically for chrysotile to ensure consistency and reproducibility of results. This method has been validated by independent external experts and provides reproducible and quantifiable results.

# Quality Assurance & Quality Control Programs

Quality assurance and quality control programs are typically set in place to ensure the reliability and trustworthiness of exploration data. They include written field procedures and independent verifications of aspects such as drilling, surveying, sampling and assaying, data management and database integrity. Appropriate documentation of quality control measures and regular analysis of quality control data are important as a safeguard for project data and form the basis for the quality assurance program implemented during exploration.

Analytical control measures typically involve internal and external laboratory control measures used to monitor the precision and accuracy of sampling, sample preparation and assaying. They are also important to prevent sample mix-up and to monitor the voluntary or inadvertent contamination of samples. Assaying protocols typically involve regular duplicate and replicate assays and the insertion of quality control samples to monitor the reliability of assaying results throughout the sampling and assaying procedures. Check assaying is typically performed as an additional reliability test of assaying results. Check assaying involves re-assaying a set number of rejects and pulps at a secondary umpire laboratory.

Royal Nickel has implemented external analytical control measures since commencing drilling programs at the Dumont Nickel Project in 2007. Analytical control measures consist of the insertion of quality control samples (field blanks, field duplicates and certified reference material samples) in all sample batches submitted for assaying as well as check assaying. Royal Nickel only began regularly inserting quality control samples beginning with drill hole 07-RN-04.

Field blanks consist of local esker sand and generally range in grade between 0.003 and 0.008 percent nickel, with an acceptable upper limit of 0.01 percent of nickel. Field duplicates consist of quarter core.

Royal Nickel used four certified control samples sourced from Ore Research & Exploration Pty Ltd. of Victoria, Australia: OREAS 13P, OREAS 14P, OREAS 70P and OREAS 72A. OREAS 13P and OREAS 14P were replaced by OREAS 70P and OREAS 72A in 2008, as they were considered to be unrepresentative of the expected rock type and nickel grades.

OREAS 13P and OREAS 14P are both certified for copper, gold, nickel, palladium and platinum values. OREAS 70P is certified for a range of precious and base metals, and major and lithophile trace elements. OREAS 72A is certified for aluminium oxide, arsenic, chromium, cobalt, copper, gold, iron, magnesium oxide, nickel, palladium, platinum, silicon dioxide and sulphur. A certified reference material sample, a blank or a field duplicate sample were inserted into the sample stream at a rate of one every 25 samples.

Prior to June 1, 2008 all pulps prepared by Laboratoire Expert Inc. ("Laboratoire Expert") were re-assayed at ALS Chemex Laboratory. Since June 1, 2008 five percent of the pulps from ALS are randomly selected and re-assayed at Laboratoire Expert. Since June 2011, AGAT in Mississauga has been used as umpire laboratory.

Analytical control measures for magnetite as part of the EXPLOMIN<sup>TM</sup> study involved replicate and duplicate analyses by SGS. Replicate analyses consisted of re-plotting another sub-sample and re-running the analysis by QEMSCAN for each replicate. The results show the reproducibility between sub-samples (including machine reproducibility). Duplicate analyses consisted of analyzing the same block or polished section again, a second time. The results show the reproducibility of the system or equipment used. However, each time a block or polished section is re-analyzed, a different area on the block or polished section is scanned (i.e. not the exact same particles are scanned). Therefore, the original analyses can never be completely duplicated because the particles within the scanned areas may change due to slight movements in the stage and when setting up the analysis. Analytical control measures were performed on five percent of the EXPLOMIN<sup>TM</sup> study.

In 2012, upon recommendation from SRK Consulting, Royal Nickel had SGS Mineral Services complete 153 Satmagan tests to independently validate the magnetite mineral abundances reported as part of the EXPLOMINTM mineral mapping program. Satmagan results of the EXPLOMINTM samples were used to validate the mineral mass percent of magnetite reported by QEMSCAN. Satmagan infers magnetite content by measuring magnetic

susceptibility (Fe3O4 percent). Satmagan values (or recoverable Fe) can be compared and calibrated with Davis Tube Results. Satmagan was performed on 10% of the EXPLOMINTM study.

In the opinion of SRK, the sampling preparation, security and analytical procedures used by Royal Nickel are consistent with and often exceed generally accepted industry best practices.

# Data Verification

Site Visit

In accordance with NI 43-101 guidelines, Sébastien Bernier from SRK visited the Dumont Nickel Project between April 27 and May 2, 2011 accompanied by John Korczak, P.Geo; on May 17 2013 he was accompanied by Robert Cloutier, Geo, OGQ, both of Royal Nickel. The purpose of the site visit was to ascertain the geological setting of the project, witness the extent of exploration work carried out on the property and assess logistical aspects and other constraints relating to conducting exploration work in this area.

All aspects that could materially impact the mineral resource evaluation reported herein were reviewed with Royal Nickel staff. SRK was given full access to all relevant project data. SRK was able to interview exploration staff to ascertain exploration procedures and protocols.

Borehole collars are clearly marked with metal stakes inscribed with the borehole number on a metal plate. No discrepancies were found between the location, numbering or orientation of the boreholes verified in the field plans and the database examined by SRK.

The site visit was undertaken during active drilling and SRK examined core from numerous boreholes being processed in the core facility. SRK examined and relogged the nickel mineralized zone from Borehole 11-RN-242. SRK also collected verification samples from this borehole for independent assaying.

On June 21, 2012, Sébastien Bernier and Oy Leuangthong from SRK accompanied by John Korczak and Michelle Sciortino from Royal Nickel visited the SGS facilities in Lakefield (Ontario) where EXPLOMINTM samples are processed and analysed.

# Database Verifications

Exploration data collected by Royal Nickel is incorporated directly into a CAE Mining Fusion database using electronic files only. Data collected by the logging geologists are recorded electronically into DHLogger, within the Fusion database management system. Samples tags are automatically and electronically generated by DHLogger. Both DHLogger and Fusion software are equipped with a series of rigorous internal checks that prevent entry errors, including duplications and missing intervals that may occur during logging and/or importing of assay data received electronically from the laboratory. During the site visit, SRK reviewed and verified the logging procedures with several logging geologists. SRK also performed a series of statistical tests on the database as part of the mineral resource estimation process. No errors were found.

SRK was of the opinion that the database was acceptable and sufficiently reliable for mineral resource estimation.

#### Verifications of Analytical Quality Control Data

Royal Nickel made available to SRK analytical control data as Microsoft Excel spreadsheets that contained the assay results for the quality control samples (field blanks, field duplicates, certified reference material, check assays and replicate and duplicate analyses for the EXPLOMIN<sup>TM</sup> study).

SRK aggregated the assay results for the external quality control samples for further analysis. Eight variables were examined: calcium, cobalt, chromium, iron, nickel, palladium, platinum and sulphur, and specific gravity. Sample blanks and certified reference materials data were summarized on time series plots to highlight the performance of

the control samples. Field duplicate, check assay, and replicate and duplicate analyses (as part of the EXPLOMIN<sup>TM</sup> study) (paired) data were analyzed using bias charts, quantile-quantile and relative precision plots.

Only cobalt, magnetite, nickel, palladium and platinum are reported in the mineral resource statement below; however, calcium, chromium, iron and sulphur were also modelled because of their correlation with nickel recovery.

The external analytical quality control data produced for the Dumont Nickel Project represents approximately 12% of the total number of samples submitted for assaying. There were a number of field blanks above the acceptable upper limit of 0.01% nickel; however SRK notes that this comprises approximately 2% of the total field blanks. Overall, the average value is approximately 0.0038%, indicating that the esker sand used as a blank is not barren in nickel, but sufficiently low for the purpose they are intended.

Overall, SRK considered that analytical quality control data reviewed by SRK suggest that the assay results delivered by the primary laboratory used by Royal Nickel were sufficiently reliable for the purpose of mineral resource estimation. Other than indicated above, the data sets examined by SRK did not present obvious evidence of analytical bias.

# Independent Verification Sampling

As part of the verification process, SRK collected eighteen verification samples during the site visit completed between April 27 and May 2, 2011. The verification samples replicate Royal Nickel sample intervals from Borehole 11-RN-242 drilled in 2011. The verification samples comprise of NQ quarter core and were sent to AGAT Laboratories in Mississauga in May 2011 for preparation and assaying. AGAT Laboratories is accredited to Standard ISO/IEC 17025:2005 standards for specific testing procedures by the Standards Council of Canada ("SCC") and the Canadian Association for Laboratory Accreditation Inc. ("CALA"), including those used to assay the samples submitted by SRK (four acid digestion using inductively coupled plasma-optical emission spectroscopy).

Comparative assay results for the verification samples were analyzed. The verification samples (paired data) were also analyzed using bias charts, quantile-quantile and relative precision plots. The verification samples show that for nickel, sulphur and specific gravity, ALS results can be reasonably reproduced by AGAT. HARD plots show 89% for nickel, 72% for sulphur and 100% for specific gravity, have HARD below 10%.

Such a small sample collection cannot be considered representative to verify the nickel grades obtained by Royal Nickel. The purpose of the verification sampling was solely to confirm that there is nickel mineralization and verify that SRK could reproduce nickel grades for the sample intervals independently chosen by SRK.

## **Mineral Resource and Reserves Estimate**

The mineral resource estimate for the Dumont Nickel Project was prepared by Mr. Sébastien Bernier, P.Geo, at SRK. The effective date of the current resource estimate is April 30, 2013. The mineral resource estimate considers drilling information available to December 31, 2012 and was evaluated using a geostatistical block modelling approach constrained by seven sulphide mineralization wireframes. The mineral resources were estimated in conformity with the CIM Mineral Resource and Mineral Reserves Estimation Best Practices guidelines and were classified according to CIM Standard Definition for Mineral Resources and Mineral Reserves (November 2010) guidelines. The mineral resources are reported in accordance with NI 43-101.

#### Dumont Nickel Project, Quebec, SRK Consulting (Canada) Inc., April 30, 2013\*

|                      |               |                 | _                 | Contained Nickel |         | Contained Cobalt |         |
|----------------------|---------------|-----------------|-------------------|------------------|---------|------------------|---------|
| Resource Category    | Quantity (kt) | Grade<br>Ni (%) | Grade<br>Co (ppm) | (kt)             | (M lbs) | (kt)             | (M lbs) |
| Measured             | 372,100       | 0.28            | 112               | 1050             | 2,310   | 40               | 92      |
| Indicated            | 1,293,500     | 0.26            | 106               | 3,380            | 7,441   | 140              | 302     |
| Measured + Indicated | 1,665,600     | 0.27            | 107               | 4,430            | 9,750   | 180              | 394     |
| Inferred             | 499,800       | 0.26            | 101               | 1,300            | 2,862   | 50               | 112     |

|                      |                  |                   |                   | Contained Palladium | Contained Platinum |
|----------------------|------------------|-------------------|-------------------|---------------------|--------------------|
| Resource Category    | Quantity<br>(kt) | Grade<br>Pd (g/t) | Grade<br>Pt (g/t) | (koz)               | (koz)              |
| Measured             | 372,100          | 0.024             | 0.011             | 288                 | 126                |
| Indicated            | 1,293,500        | 0.017             | 0.008             | 720                 | 335                |
| Measured + Indicated | 1,665,600        | 0.020             | 0.009             | 1,008               | 461                |
| Inferred             | 499,800          | 0.014             | 0.006             | 220                 | 92                 |

|                      |                  |                           | <b>Contained Magnetite</b> |         |  |
|----------------------|------------------|---------------------------|----------------------------|---------|--|
| Resource Category    | Quantity<br>(kt) | Grade<br>Magnetite<br>(%) | (kt)                       | (M lbs) |  |
| Measured             | -                | -                         | -                          | -       |  |
| Indicated            | 1,114,300        | 4.27                      | 47,580                     | 104,905 |  |
| Measured + Indicated | 1,114,300        | 4.27                      | 47,580                     | 104,905 |  |
| Inferred             | 832,000          | 4.02                      | 33,430                     | 73,702  |  |

Note: \* Reported at a cut-off grade of 0.15% nickel inside conceptual pit shells optimized using nickel price of US\$9.00 per pound, average metallurgical and process recovery of 40%, processing and G&A costs of US\$6.30 per tonne milled, exchange rate of C\$1.00 equal US\$0.90, overall pit slope of 42° to 50° depending on the sector, and a production rate of 105 kt/d. Values of cobalt, palladium, platinum and magnetite are not considered in the cut-off grade calculation as they are byproducts of recovered nickel. All figures are rounded to reflect the relative accuracy of the estimates. Mineral resources are not mineral reserves and do not have demonstrated economic viability. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.

In addition to nickel, SRK modelled the abundance distribution of seven other main elements: calcium, cobalt, chromium, iron, palladium, platinum and sulphur as well as specific gravity.

To facilitate Royal Nickel's ongoing evaluation of metallurgical recovery, SRK also constructed estimation models of mineral abundances. Specifically, SRK modelled the abundance distribution of awaruite, brucite, coalingite, heazlewoodite, serpentine, low-iron serpentine, iron-rich serpentine, magnetite, olivine, and pentlandite. Mineral abundances may affect the metallurgical recovery, and thus may have a direct impact on project economics.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resources will be converted into mineral reserves. SRK was unaware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that may materially affect the mineral resources.

Reserves were prepared under the direction of David A. Warren, Eng., Principle Consultant - Mining with Snowden Mining Industry Consultants, based on the mineral resource block model described above. Reserves are estimated within an engineered pit design which is based upon a Lerchs-Grossmann (LG) optimized pit shell generated using a nickel price of US\$5.58/lb, which is 62% of the long-term forecast of US\$9.00/lb and include mining losses of 0.28% and dilution of 0.49%.'

The proven reserves are based on measured resources included within run of mine (ROM) mill feed. Probable Reserves are based on Measured Resources included within stockpile mill feed plus Indicated Resources included in both ROM and stockpile mill feed. All figures are rounded to reflect the relative accuracy of the estimates.

In addition to Ni, Co, Pt and Pd, Dumont reserves contain 39.9 Mt of potentially economic magnetite.

#### Mineral Reserves Statement\* (Snowden, June 17, 2013)

|          |           | Grades |          |          |          | Contained | Metal     |          |          |
|----------|-----------|--------|----------|----------|----------|-----------|-----------|----------|----------|
| Category | (kt)      | Ni (%) | Co (ppm) | Pt (g/t) | Pd (g/t) | Ni (M lb) | Co (M lb) | Pt (koz) | Pd (koz) |
| Proven   | 179,600   | 0.32   | 114      | 0.013    | 0.029    | 1,274     | 45        | 77       | 166      |
| Probable | 999,000   | 0.26   | 106      | 0.008    | 0.017    | 5,667     | 233       | 250      | 550      |
| Total    | 1,178,600 | 0.27   | 107      | 0.009    | 0.019    | 6,942     | 278       | 328      | 716      |

Notes: \* Reported at a cut-off grade of 0.15% nickel inside an engineered pit design based on a Lerchs-Grossmann (LG) optimized pit shell using a nickel price of US\$5.58 per pound (62% of the long-term forecast of US\$9.00 per pound), average metallurgical recovery of 43%, marginal processing and G&A costs of US\$6.30 per tonne milled, long-term exchange rate of C\$1.00 equal US\$0.90, overall pit slope of 42° to 50° depending on the sector, and a production rate of 105 kt/d. Mineral Reserves include mining losses of 0.28% and dilution of 0.49% that will be incurred at the bedrock overburden interface (which corresponds to mining losses of 1 metre and 2 metres of dilution along this contact). The Proven Reserves are based on Measured Resources included within run-of-mine (ROM) mill feed. Probable Reserves are based on Measured Resources included within stockpile mill feed plus Indicated Resources included in both ROM and stockpile mill feed. All figures are rounded to reflect the relative accuracy of the estimates.

# **Mining Operations**

The open pit mine has been designed to provide ore to the plant in a manner that optimises net present value. The initial plant throughput is 52.5 kt/d, with expansion in Year 5 to 105 kt/d.

## Open Pit Mine Plan

The mining sequence was developed based on nested LG shells. Five intermediate nested shells spaced by the target 100 m minimum mining width and the final pit shell were selected for the phase designs. All shells were then bisected by an approximate mid-point along the long axis of the pit so that the tonnage of individual pushbacks and associated instantaneous stripping rates could be minimized. Splitting the shell increased the number of LG stages to 11 (including 10 in the main pit and the southeast pit as a separate stage). The optimal sequence for mining these was determined by iteration, based on post-tax net present value. Of the 15 different permutations tested, the sequence pictured in Figure 2 (Sequence 'O') was determined to be optimal.

LG Stages

Outline of final engineered pit shells

Final Stages

Outline of final engineered pit shells

Southeast Extension Southeast

Pillar Pit

Saginor

1 kilometre

Figure 2: General Mining Sequence from LG Stages

A high level summary of the mining sequence is as follows:

- Mining initiates at the southeast pit, which is at the extreme south-east of the deposit and separated from the main pit by a pillar. The primary focus of the pre-strip plan is to excavate the entire 37 Mt (of which 95% is ore or waste rock, with overburden only 5%) contained within the southeast pit prior to mill start-up, in order to provide a water reservoir of 10 Mm³ capacity and supply rock for construction. This will be achieved by employing both production excavators from the outset.
- As mining in the southeast pit nears completion, one excavator will be re-allocated to the Main Zone Southeast Extension ("SEE") and primarily target waste rock that will be used for construction. This unit will be active in the SEE until the end of the Year 1 of mill production.
- Upon completion of the southeast pit, the second excavator will be re-allocated to Phase 1 of the main pit, which will have been stripped of clay by the contractor while the southeast pit was being mined.
- At the end of Year 1 (of mill production), both excavators will be active in Phase 1, where they will be joined by the first rope shovel. A second rope shovel will be added one year later. The average daily production rate for this fleet will be approximately 200 kt/d. This production rate will be maintained until the end of Year 6.
- In Year 7, a third rope shovel is added, followed by a fourth in Year 10. With the increased fleet, daily production increases to average approximately 375 kt/d. The excavators will be reserved mainly for loading sand and gravel, as well as sinking new benches and more cost effective rope shovels will be used for the bulk of rock mining. Clay will be mined using much smaller equipment.
- Mining is intermittently active in the SEE from Years 6 to 17. With the completion of mining during Year 18, the void will be backfilled with waste rock from the final phases of mining to the north. The tonnage of waste rock planned to be tipped in the SEE is 114 Mt, compared to 189 Mt of waste rock that will be mined after this dump becomes available for tipping.

# Mining Process Description

Mining operations at the Dumont Nickel Project will be conducted by the following fleets of production mining equipment:

- Clay will be mined using small hydraulic excavators with 7 m<sup>3</sup> dippers (nominal 12 t payload) and 55 t payload rigid body haul trucks. No drilling and blasting will be required.
- The bulk of sand and gravel below the clay layer will be mined using large diesel-powered hydraulic excavators with 34 m<sup>3</sup> dippers (nominal 60 t payload) and 230 t payload rigid body haul trucks. No drilling and blasting will be required. The bench height will be 10 m.
- At the interface between rock and sand and gavel, rock will be loaded and hauled using the same size equipment as will be used for clay. Rock will be drilled using percussion drills with a nominal hole diameter of 102 mm on a bench height of up to 5 m.
- Below the sand and gravel interface, rock will be drilled using rotary blast hole units with holes measuring 270 to 311 mm in diameter. The bulk of rock will be loaded using large electric rope shovels with 43 m³ dippers (nominal 75 t payload) though some rock will be mined using the 34 m³ hydraulic excavators. All rock will be hauled using 230 t payload rigid body haul trucks. A bench height of 10m will be used on any bench within some occurrence of sand and gavel. Below this horizon, benches will have a height of 15 m as per the pit design.

Production equipment would be supported by various units of support equipment, including tracked dozers, wheel dozers, front end loaders, graders, water tankers and utility excavators.

The bulk of the mining fleet will be purchased and operated by the owner. The duty cycle for production units was estimated by first principles, based on the production plan.

Approximately 20% of total waste rock will be used for construction of the tailings storage facility ("TSF") and roads, including roadstone that will be used to continually re-surface roads. Of the remaining 940 Mt waste rock, approximately 103 Mt will be impounded along with sand and gravel and clay in overburden dump 1. The combined tonnage of clay, sand and gravel, and rock for this impoundment will be 225 Mt and it will extend approximately 3.4 km along strike and to an approximate height of 40m (as with overburden dump 2, it will be constructed in 6 lifts of either 5 m or 10 m). To minimize haulage distances, overburden dump 1 will be accessed by 4 separate ramps. The northern and southernmost will be aligned with the hanging wall north (HW-N) and hanging wall south (HW-S) pit exits, with the remaining two spaced evenly between.

The following infrastructure would be provided to support mining activities:

- workshop and associated warehouse; equipment would be maintained under a maintenance contract initially, with a phased hand-over to in-house personnel as experience was gained;
- fuel farm and associated fuelling bays;
- explosives manufacture facility and magazine; as is the norm in Canada, this would be operated by the explosives supplier;
- in-pit sump and associated dewatering system; and
- electrical reticulation system.

The labour complement in the mine will average 331 persons during the life of the project, reaching a peak of 650 persons while the pit is active then dropping to an average of 116 while the low-grade stockpile is being reclaimed. The mining contractor workforce will average 95 persons over the eight years that the contractor will be active, with a peak of 178 persons in the early years.

Mining Fleet

Fleet sizes were based on the following assumptions:

- The mine would operate 24 hours per day, 365 days per year.
- The mechanical availability and operator utilization of equipment would vary according to the particular unit of equipment. Average annual engine hours (product of availability and utilization) for the main production equipment would range from a high of 7,000 (cable shovels) to 6,300 (230 t haul trucks) to 4,900 (diesel-powered percussion drill).
- An efficiency factor of 90% was applied to utilized time, meaning that 10% of total engine hours (incurring costs) would not be directed towards completing useful work.

#### **Opportunities**

The trolley assist option was not included in the Feasibility Study but Royal Nickel will continue to monitor the opportunity of implementing trolley-assisted truck haulage.

Savings realized from trolley assist can be categorized as follows:

- Energy cost savings which occur as power is supplied to wheelmotors from an overhead line (and thus from the electrical grid) rather than being generated using the on-board diesel engine. The value of savings is a function of the kilometers traveled on trolley and the relative prices for fuel and electricity.
- Productivity savings which result from the increased speed of haul trucks traveling uphill on trolley, with improvements of almost 100% being possible. This allows the mine plan to be achieved with fewer trucks and an associated reduction in labour.
- Reduced maintenance costs the maintenance interval for diesel engines can best be modelled as a function of fuel consumption. With the lower consumption rate for a truck traveling on trolley, the interval between overhauls / replacements can be extended.

In addition to the cost benefits listed above, trolley assist also has significant environmental benefits, resulting from the reduction in particulate matter and greenhouse gases associated with generating energy from hydro-carbons.

The savings associated with trolley-assist are partially offset by costs associated with operating the system that include:

- Fixed infrastructure including the trolley line, pole and substation.
- Truck infrastructure including the pantograph and associated on-board control devices.
- Ongoing maintenance of fixed and truck-based infrastructure.
- Wider ramps to accommodate trolley-assist infrastructure (primarily the sub stations), the width of equipped ramps would be increased by 5 m. This could result in flatter overall slopes and increased waste stripping.

# Metallurgical Study

The objective of the feasibility metallurgical study was to quantify the metallurgical response of the Dumont ultramafic nickel mineralization. The program was designed to develop the parameters for process design criteria for ore flow characteristics, comminution, desliming, flotation and dewatering in the processing plant. Data from the metallurgical studies was integrated into the geological and resource model for the Dumont deposit in order to evaluate the quality of the resource.

The metallurgical program was performed on the following composites and samples:

- metallurgical variability samples;
- mineralization composites (sulphide, alloy and mixed);
- metallurgical domain composite samples;
- outcrop sample; and
- grindability samples.

Ninety-two grindability samples were submitted to SGS to complete a suite of grinding characterization tests including Bond ball work index, Bond rod work index, SMC test, and abrasion index. In addition to these 92

samples, 10 additional samples were added from the PQ variability samples to complete crusher work index and JK Drop Weight Tests (JK DWT).

Overall, the ore depicted an increase in hardness with finer size, which is typical for many ores. The majority of the test results (percentile 10th to 90th), for the tests performed at coarse size (JK DWT and the SMC test) ranged from moderately soft to medium. At medium size (Bond rod mill test), the majority of the samples fell in the medium to moderately hard range. At fine size (Bond ball mill work index and modified Bond tests), the bulk of the test results fall within the hard to very hard range. The Bond low-energy impact test is the exception; the test uses the coarsest rocks, but the sample tested were categorized as moderately hard to hard. The relative standard deviation of test results within each series ranged from 5% to 19%, which is considered narrow in comparison to other deposits.

The original standard test procedure ("STP") was applied to the first 83 metallurgical domain samples, and the updated procedure was applied to the additional 22 samples. A representative sample from each of the 105 metallurgical domain samples was sent to SGS for QEMSCAN quantitative mineralogical analysis.

The 105 STP tests formed the basis for the rougher nickel recovery equations. The 105 STP samples were divided into four metallurgical domains based on their mineralogy. Metallurgical test results show a clear correlation between mineralogical variations related to degree of serpentinization and metallurgical recovery of nickel. Four metallurgical domains have therefore been established that correspond to these serpentinization domains. They are defined mineralogically on the basis of heazlewoodite to pentlandite ratio (Hz/Pn) and iron-rich serpentine abundance. These are Heazlewoodite Dominant, Mixed Sulphide, Pentlandite Dominant, and High Iron Serpentine.

In all cases the recovery was largely driven by the amount of sulphur in the feed, even for the very low sulphur samples where the main recoverable mineral is awaruite. This may correlate with the amount of nickel present as unrecoverable nickel in silicate minerals, which is variable within known limits throughout the deposit, and is generally higher in the lower sulphide samples.

Seventeen locked cycle tests were completed on different samples to assess the cleaner performance across a variety of feed characteristics. The locked cycle tests showed a wide variation in cleaner recovery. The cleaner recovery was found to be strongly correlated to the sulphur in the ore.

Overall, once the rougher and cleaner recovery equations were applied, the average nickel recovery over the life of the project is 43%.

An additional five locked cycle tests were performed to provide confirmation of the feasibility design and the recovery equations. Although there is some variability around the model, the overall recovery from the locked cycle tests is shown in Figure 3 compared to the recovery model used in the feasibility study. Overall the FS recovery model is predicting the Ni recovery demonstrated in the locked cycle tests. The red squares are the 2013 confirmation tests, the blue diamonds are from previous locked cycle tests performed under similar conditions.

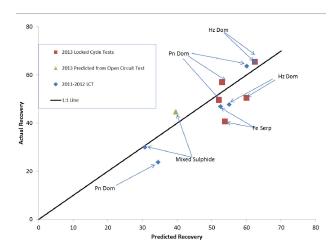


Figure 3: Locked Cycle Test Recovery Performance vs. Model

Byproduct credits for cobalt (Co), platinum (Pt) and palladium (Pd) were included in the financial analysis. The cobalt recovery is 42% over the life of the project. The calculated Pt + Pd grade in concentrate over the life of the project is 4.3 g/t, based on an average PGE recovery of 61%.

Based on the concentrate assays from the locked cycle test results and the nickel tenor of the recoverable minerals within each metallurgical domain, the concentrate grade has been estimated to be 29% Ni over the life of the project, with a range of 22 to 33%. Other impurities, such as arsenic (As), lead (Pb), chlorine (Cl) and phosphorus (P), were all near or below detection limits in the measured samples. The main impurities in the concentrate are MgO and SiO2. The measured MgO levels range from 3 to 13% and the average concentrate is expected to be between 7% and 10%, which is in line with the MgO content in concentrates produced by other ultramafic operations.

## Mineral Recovery

The process plant and associated service facilities will process ore delivered to primary crushers to produce nickel concentrate and tailings. The proposed process encompasses crushing and grinding of the ore (run of mine or stockpiled), desliming via hydrocyclone circuit, slimes rougher flotation, slimes cleaner flotation, nickel sulphide rougher flotation, nickel sulphide cleaning flotation, magnetic recovery of sulphide rougher and cleaner tailings, regrinding of magnetic concentrate and an awaruite recovery circuit (consisting of rougher and cleaner flotation stages).

Concentrate will be thickened, filtered and stockpiled on site prior to being loaded onto railcars or trucks for transport to third-party smelters. The slimes flotation tailings, magnetic separation tailings and awaruite rougher tailings will be combined and thickened before TSF placement.

The process plant will be built in two phases. Initially, the plant will be designed to process 52.5 kt/d with allowances for a duplicate process expansion to increase plant capacity to 105 kt/d. Common facilities will include concentrate thickening and handling and sulphuric acid off-loading and containment.

The key criteria selected for the base and expansion plant designs are:

- nominal base plant treatment rate of 52.5 kt/d and a nominal expansion plant treatment rate 52.5 kt/d for a combined 105 kt/d treatment rate;
- design availability of 92% (after ramp-up), which equates to 8,059 operating hours per year, with standby equipment in critical areas; and
- sufficient plant design flexibility for treatment of all ore types at design throughput.

A schematic of the process plant is shown as Figure 4 below.

The process plant design is based on a flowsheet with unit process operations that are well proven in the minerals processing industry. The Dumont flowsheet incorporates the following unit process operations (52.5 kt/d plant discussed below):

- Ore from the open pit is crushed using a primary gyratory crusher (assisted with a rock breaker) to a crushed product size of nominally 80% passing (P<sub>80</sub>) 90 mm. Crushed ore is fed onto the covered stockpile feed conveyor.
- A covered conical stockpile of crushed ore with a live capacity of 12 h, with three apron feeders, each capable of feeding 60% of the full mill throughput.
- A 21 MW SAG mill, 11.6m diameter (38 ft) with 6.7m effective grinding length (EGL) (22 ft), utilizing a trommel screen for classification and oversize recirculation.
- Two 16 MW ball mills, 7.9 m diameter (26 ft) with 12.2 m EGL (40 ft), in closed circuit with hydrocyclones, grinding to a product size of nominally 80% passing (P<sub>80</sub>) 180 μm.
- Two-stage desliming circuit via hydrocyclones. First stage to split mass with a cut size (D50c) of 50 μm. Second stage to split mass with a cut size (D50c) of 1 to 15 μm. Hydrocyclone sizes for each stage are 400 and 100 mm, respectively.
- Slimes rougher flotation consisting of one train of eleven 300 m<sup>3</sup> forced air tank flotation cells to provide 33 minutes of retention time.
- Slimes 1<sup>st</sup> cleaner, 2<sup>nd</sup> cleaner and 3<sup>rd</sup> cleaner flotation consisting of four 50 m<sup>3</sup>, three 5 m<sup>3</sup> and three 1.5 m<sup>3</sup> forced air tank flotation cells to provide 30 minutes, 14 minutes and 10.5 minutes of retention time, respectively.
- Nickel sulphide rougher flotation consisting of three trains of nine (27 total cells) 300 m<sup>3</sup> forced air tank flotation cells per train to provide 90 minutes of retention time.
- Nickel sulphide 1st cleaner, 2nd cleaner, and 3rd cleaner flotation consisting of seven 200 m<sup>3</sup>, six 20 m<sup>3</sup> and five 5 m<sup>3</sup> forced air tank flotation cells to provide 45 minutes, 14 minutes, and 9 minutes of retention time, respectively.
- Magnetic separation on nickel sulphide rougher and sulphide cleaner flotation tailings, consisting
  of two trains of seven 3.6 m long low intensity magnetic separators (LIMS) for a nominal mass
  recovery of approximately 12-15% of sulphide rougher and cleaner flotation feed.
- Magnetic concentrate regrind stage in a 8 MW ball mill, 6.7 m diameter (22.0 ft) with 10.8 m EGL (35.4 ft), operating in closed circuit with hydrocyclones, grinding to a product size of nominally 80% passing (P<sub>80</sub>) of 46 μm.
- Magnetic sulphide scavenger flotation consisting of seven 200 m<sup>3</sup> forced air tank flotation cells to provide 66 minutes of retention time.
- Magnetic separation on magnetic sulphide flotation tailings, consisting of five 3.6 m long LIMS magnetic separators for a nominal stage mass recovery of approximately 50%.
- Awaruite rougher flotation consisting of six 70 m<sup>3</sup> forced air tank flotation cells per train to provide 70 minutes of retention time.

- Awaruite cleaner flotation consisting of five 1.5 m<sup>3</sup> forced air tank flotation cells to provide 21 minutes of retention time.
- Nickel concentrate thickening in a 14 m diameter high-rate thickener followed by dewatering in a vertical pressure filter.
- Thickening of deslime tailings, combined magnetic separation tailings and awaruite rougher tailings in an 88 m diameter high-rate thickener to an underflow density of 40% solids.
- TSF for process tailings deposition in a conventional dam.
- Reagent mixing facilities for KAX51 (collector), Calgon (depressant), CMC (depressant) and both concentrate and tailings flocculant.
- Reagent off-loading facilities for MIBC and Cytec 65 (frothers) and sulphuric acid.
- Process water and distribution system for reticulation of process water throughout the plant as required. Process water is collected in a process water pond that is predominantly supplied from the tailings thickener overflow and tailings storage facility. Other sources include concentrate thickener overflow and pit de-watering operations.
- Potable water is generated by treatment water from the freshwater tank in a reverse osmosis (RO) unit at the site. Potable water is distributed to the plant and for miscellaneous purposes around the site.
- Raw water distribution services to supply cooling water, gland water, a portion of the reagent mixing water, firewater, etc.
- Plant, instrument and flotation air services and associated infrastructure.

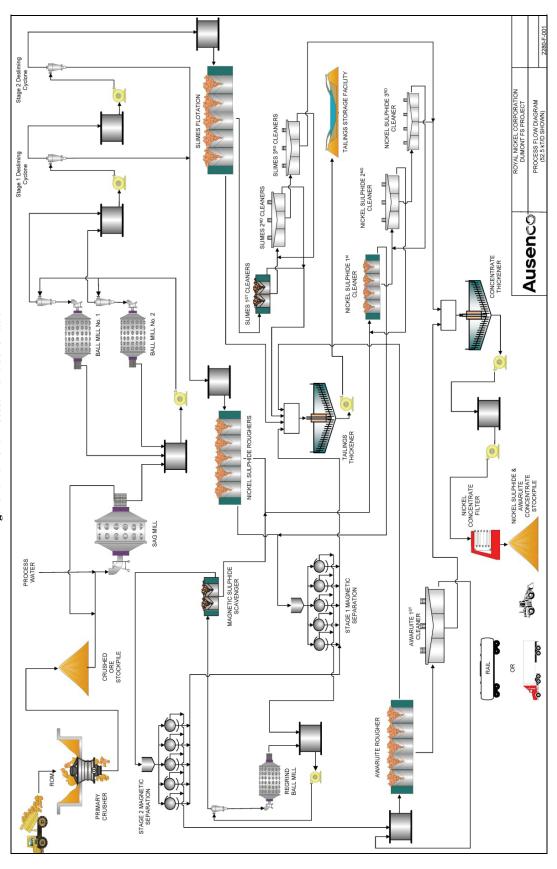


Figure 4: Dumont Process Plant Schematic

# Opportunity - Magnetite Concentrate Production

Pre-feasibility testwork assays indicated that there are significant quantities of magnetite in the tailings of the awaruite circuit. As a result, Royal Nickel requested that Ausenco complete a conceptual study to investigate the flowsheet amendments required and potential economic benefits of implementing a magnetite separation circuit. Some of the testwork undertaken also investigated the process requirements to produce a saleable magnetite product.

The figures contained in this section are based on Canadian dollar costs as of 2012. The magnetite testwork and study were completed at a conceptual study level only (+/- 40%) and were not updated or included as part of the Feasibility Study.

The additional capital required to build the 100 ktpd circuit (based on pre-feasibility flowsheet) to recover the magnetite concentrate was estimated to be \$108.6 million including a \$24.2 million contingency. Additional operating costs to produce the magnetite concentrate were estimated to be \$0.23 per tonne of ore milled. Transport costs to deliver the magnetite concentrate to a ship at the port in Quebec City are estimated to be \$47 per tonne.

#### Infrastructure

The project site is well serviced with respect to other infrastructure, including:

- Road Provincial Highway 111 runs along the southern boundary of the property.
- Rail The Canadian National Railway (CNR) runs through the property, slightly to the north of Highway 111 but south of the engineered pit.
- Power The provincial utility, Hydro-Québec, has indicated that it would be feasible to provide
  electrical power to the mine site via a 10.5 km long 120 kV overhead powerline to be constructed,
  which would be connected as a tee-off to an existing line. The line will enter the property from the
  south near the security entrance gate, and runs up to the process plant main 120 kV substation.
- Water Water for start-up will be provided by surface water storage at the Southeast Reservoir and, possibly, local groundwater wells. During operations, water demand will largely be met by recycling water from the TSF. Make-up water and freshwater requirements will be provided by the Southeast Reservoir. A water treatment plant will be constructed to treat excess water from the TSF prior to its discharge to the Villemontel River.
- Natural Gas Although the use of natural gas is not considered in this study, an existing pipeline extends to within approximately 25 km to the south of the property.
- Both the initial and expansion phases of the Dumont project will require three 120:13.8 kV 60/80 MVA main transformers. The new 120 kV substation and six main transformers will be installed near the SAG Mill Feed Conveyor. The 13.8 kV medium voltage network will be used for the primary electrical distribution and for feeding large loads such as the SAG mill and ball mills.
- A rail spur that services the process plant is proposed for the project. The total length of the rail spur is approximately 5 km. The rail spur initially consists of a fuel delivery track near the mining truckshop and a freight delivery track north of the process plant. The process plant area consists of the crushing facility, covered stockpile and process plant building. The overall process plant enclosed structure is approximately 350 m long, and consists of four connected buildings: grinding, flotation, cleaning, and filtration.
- The TSF will be situated approximately 400 m west of the process plant and consists of two cells. Cell 1 will be constructed initially, followed by Cell 2 during Year 6 of operations.

• The TSF is designed to store approximately 680 Mt of tailings produced over a period of approximately 20 years. Once mining has ceased at the open pit, stockpiled ore will be processed for approximately 13 years and those tailings, approximately 498 Mt, will report to the open pit.

#### **Market Studies and Contracts**

Pricing assumptions were developed for nickel and the cobalt, platinum, and palladium byproducts contained in the Dumont concentrate based on forecasts as of May 31, 2013 from the four analysts, of the five analysts who cover Royal Nickel, who publish commodity price forecasts. A long-term nickel price assumption of US\$9.00 per pound was utilized in the study which is consistent with the average long-term nickel price of US\$9.30 per pound forecast by the four analysts and the three-year trailing average nickel price to May 31, 2013 which averaged US\$9.08 per pound.

The metal price assumption for platinum of US\$1,800 per ounce was consistent with the average Royal Nickel analyst forecasts for the long-term of US\$1,793 per ounce and a 2015-2017 range of US\$1,853 to US\$1.877 per ounce. The metal price assumption for palladium of US\$700 per ounce for palladium was consistent with the average Royal Nickel analyst forecast for the long-term of US\$667 per ounce and a 2015-2017 range of US\$712 to US\$775 per ounce. The metal price assumption for cobalt of US\$14 per pound was consistent with the average Royal Nickel analyst forecasts for the long-term of US\$13.88 per pound and a 2015-2017 range of US\$14.17 to US\$14.29 per pound.

The Dumont concentrate, which will have an average nickel content of 29% nickel over the life of project and recoverable quantities of cobalt, platinum, and palladium, is expected to be among the highest grade nickel concentrates in the world which should make it a desirable product to nickel smelters globally. The MgO content of this concentrate is expected to be between 7% and 10%, which is in line with the MgO content in concentrates produced by other ultramafic operations.

Assumptions regarding commercial terms for this concentrate have been based on benchmark rates and include:

- percentage payable of 93% nickel
- base treatment charge of US\$150/t, with an additional penalty of US\$25/t of concentrate for the MgO content
- base refining charge of US\$0.70/lb of nickel
- price participation of 10% with a base price of US\$8.00/lb
- payable percentage on contained cobalt of 50% and a refining charge of US\$3/lb
- payable percentage on contained platinum and palladium based on a 1 g/t deduction, and average 77% for the concentrate grade of 4.3 g/t PGE over the over the life of project with a refining charge of \$50/oz.

The concentrate will be transported by existing road, rail and port facilities to the smelters. In the feasibility study, 50% of the concentrate is assumed to be processed by the Sudbury smelters at a transportation cost of \$41/t. The remaining 50% of the concentrate will be transported to Quebec City at a cost of \$36/t with half of the concentrate (25% of total) shipped to a smelter in Finland at a transportation cost of US\$40/t, and the remaining half of the concentrate (25% of the total) shipped to smelters in China at a transportation cost of US\$79/t. Sensitivities for these pricing assumptions are provided below.

There are currently 11 nickel smelters globally, while a twelfth unit that will also treat sulphide concentrates is under construction (the Vale facility in Newfoundland).

#### Alternative Processing Options

The Feasibility Study economics assume selling nickel concentrate to a third party, but an alternate downstream processing option of roasting Dumont concentrate and/or producing nickel oxide or ferronickel could be utilized as well. This product could be used directly as a feed source by the stainless steel industry, including the nickel pig iron industry. The alternative processing option has the potential provide higher recoveries due to a greater percentage of payable nickel, lower units costs and a larger customer base than traditional smelting and refining.

#### **Environmental**

The assessment of environmental risks and potential impacts conducted to date originates principally from the Environmental and Social Impact Assessment (ESIA) performed as part as the Dumont project permitting process and integrates a number of studies performed by Royal Nickel and its consultants over the past five years. Biophysical data came mainly from three distinct fieldwork programs performed from 2007 to 2009, with some complementary information extracted from the ongoing baseline studies designed to support the ESIA in 2011 and 2012. The table below summarizes the sources of information for the various biophysical and social components described in the Feasibility Study.

The table below summarizes the sources of information for the various biophysical and social components described in the Feasibility Study.

| Type of Study              | 2007 <sup>1</sup> | $2008^{2}$ | $2009^{3}$ | 20114                 | 2012                  |
|----------------------------|-------------------|------------|------------|-----------------------|-----------------------|
| Water and sediment quality | ✓                 | <b>√</b>   | ✓          | ✓                     |                       |
| Groundwater quality        |                   |            |            |                       | ✓6                    |
| Vegetation and wetlands    |                   | ✓          |            | ✓                     |                       |
| Wildlife                   | ✓                 | ✓          | ✓          |                       |                       |
| Small mammals              |                   |            |            | ✓                     |                       |
| Fish                       | ✓                 | ✓          | ✓          | ✓                     | <b>√</b> <sup>6</sup> |
| Benthic invertebrates      | ✓                 | ✓          | ✓          |                       |                       |
| Birds                      |                   | ✓          |            | ✓                     |                       |
| Reptiles and amphibians    |                   |            |            | ✓                     |                       |
| Archaeology                |                   | ✓          |            |                       |                       |
| Stakeholders consultation  |                   |            |            | <b>√</b> <sup>5</sup> | <b>√</b> <sup>7</sup> |
|                            |                   |            |            |                       |                       |

Notes: 1. Ménard et Coppola (2008). 2. GENIVAR (2009). 3. GENIVAR (2010). 4. Unpublished data. 5. Transfert Environnement (2011). 6. ESIA (2012) 7. Transfert Environnement (2013).

These environmental baseline studies have not identified any specific inordinate environmental risk to project development. Environmental sensitivities are primarily related to potential impacts associated with the scale and footprint of the proposed operation, and the composition of materials being handled and impounded on the site. Principal impacts anticipated at this stage relate to air quality, wetlands, fish habitat, water resources (surface and groundwater), and the social environment.

To limit environmental impact to one drainage basin, Royal Nickel has elected to limit project infrastructure to within the St. Lawrence drainage basin. Royal Nickel has also observed a one-kilometre buffer zone between surrounding esker aquifers and project infrastructure.

Although three "at risk" plant species were found within the study area defined for the Dumont ESIA, the current project development plans would not affect the locations where these species were observed. The environmental characterization underlined the presence of rock vole, a small mammal species likely to be listed on Quebec's threatened or vulnerable species list. Mitigation measures aiming at promoting rock vole habitat were introduced in the ESIA. The presence of three "at risk" bird species was noted during the ESIA: olive-sided flycatcher, rusty blackbird, and common nighthawk. A mitigation measure intended to protect nests during the nesting period was implemented in the ESIA to reduce direct impact on these species.

Results of the ESIA demonstrates that most of the impacts anticipated from the Dumont project are qualified as low or very low once general and specific mitigation measures are applied. Only one impact is qualified as very important or important, namely the risk of nitrogen dioxide formation due to blasting at concentrations likely to affect health as this phenomenon has not yet been modelled and precise impacts could not be evaluated. Atmospheric dispersion modelling studies of airborne nitrogen dioxide concentrations during blasting will allow a more precise assessment of the health risks and whether specific preventive measures are required within the framework of the emergency response plan. These types of emissions are not unique to the Dumont project but are common to all open pit operations.

Environmental geochemistry characterization of tailings, waste and ore indicate that these materials will be non-acid-generating due to their low sulphur content and high neutralization potential. Static tests indicate that waste rock and ore are leachable under the conditions of the tests, but kinetic tests that are more representative of anticipated site conditions showed that leachability is very low, meets Quebec effluent criteria and meets Quebec groundwater quality criteria in the long-term. The waste rock and tailings also demonstrate significant potential for permanent carbon sequestration through spontaneous mineral carbonation.

# Permitting Timeline – Major Milestones

The proposed timeline for environmental permitting was developed under the assumptions that the two levels of governments, federal and provincial, will establish a good collaborative process under the Canada-Quebec Agreement on Environmental Assessment Cooperation.

The permitting process is initiated with the submission of the Project Notice to the MDDEFP. The Project Notice describes the scope of the project and provides a summary of potential environmental impact based on the prefeasibility study design. The Project Notice is assessed jointly at the federal and provincial levels and instructions on the scope and requirement for the EISA are forwarded to the developer.

Once the ESIA is completed and considered receivable by the authorities, the Quebec public hearing process is triggered by the BAPE. The BAPE then submits its recommendations to the MDDEFP and eventually to other governmental authorities for decision concerning the issuance of a global Certificate of Authorization.

# Community Consultation

Royal Nickel has voluntarily initiated a public information and consultation process during the exploration phase. The process aims to ensure effective communication and dissemination of information about the project, and to document the concerns, comments and suggestions of the host communities to refine the technical and economic studies and has helped to define the content of the environmental impact study.

## Capital Cost Estimate

The capital cost of the Dumont Nickel Project, for both the 52.5 kt/d production rate, expansion to 105 kt/d, and sustaining expenditures over the 33 year life, has been estimated.

The table below shows a summary of the capital costs estimate, including initial capital, expansion capital, and sustaining capital. The costs are expressed in real, Q2 2013 Canadian dollars. Items that would be denominated in foreign currency take account of the forecast exchange rate at the time of purchase. Indirect costs include first fills of consumable items for the initial and expansion estimates, and the release of these under the sustaining estimate.

# **Summary of Capital Costs (C\$ M)**

| Description                 | Initial Capital<br>(\$ M) | Expansion Capital (\$ M) | Sustaining Capital<br>(\$ M) | LOM Total<br>Capital<br>(\$ M) |
|-----------------------------|---------------------------|--------------------------|------------------------------|--------------------------------|
| Mine                        | 320                       | 216                      | 419                          | 955                            |
| Process Plant               | 550                       | 523                      | 254                          | 1,327                          |
| Tailings                    | 34                        | 61                       | 172                          | 267                            |
| Infrastructure              | 87                        | 27                       | =                            | 114                            |
| Indirect Costs <sup>1</sup> | 172                       | 89                       | (22)                         | 239                            |
| Contingency <sup>2</sup>    | 105                       | 81                       | 0                            | 186                            |
| Total                       | 1,268                     | 997                      | 823                          | 3,088                          |

Notes:

# Capital Costs by Area (C\$ M) - Not Including Sustaining Capital

| Area     | Direct Costs                 | Initial Capital | Expansion Capital | Total Cost |
|----------|------------------------------|-----------------|-------------------|------------|
| 01       | Mining                       | 320             | 216               | 536        |
| 02       | Crushing                     | 55              | 55                | 110        |
| 03       | Process                      | 372             | 369               | 741        |
| 04       | Concentrate Loadout          | 0.3             | 0.0               | 0.3        |
| 05       | Tailings                     | 34              | 61                | 95         |
| 06       | Utilities                    | 123             | 99                | 222        |
| 07       | Onsite Infrastructure        | 80              | 22                | 102        |
| 08       | Off-site Infrastructure      | 7               | 5                 | 12         |
| Total Di | irect Costs                  | 991             | 827               | 1,818      |
| 09       | Indirect Costs               | 125             | 80                | 205        |
| 10       | Owner's Costs                | 47              | 9                 | 56         |
| Total In | direct Costs                 | 172             | 89                | 261        |
| Total Di | rect & Indirect Costs        | 1,163           | 916               | 2,079      |
| 11       | Escalation                   |                 | Not Included      |            |
| 11       | Contingency <sup>1</sup>     | 105             | 81                | 186        |
| Total Pi | roject Costs (as of Q2 2013) | 1,268           | 997               | 2,265      |

Notes:

The estimates are considered to have an overall accuracy of  $\pm 15\%$  and assume the project will be developed on an EPCM basis.

The following parameters and qualifications are made:

- The estimate is based on Q2 2013 prices and costs (Canadian dollars) and exchange rates.
- Financing related charges (e.g., fees, consultants, etc.) are excluded.
- There is no escalation added to the estimate, other than the contingency.

Data for these estimates have been obtained from numerous sources, including:

- feasibility level engineering design;
- mine schedules;

<sup>1.</sup> Negative value represents release of first fills at end of project life. 2. Initial capital contingency of US\$100 million plus growth component of US\$29 million for an initial contingency of US\$129 million representing 12% of costs at risk in the initial capital figure.

<sup>1.</sup> Initial capital contingency of US\$100 million plus growth component of US\$29 million for an initial contingency of US\$129 million representing 12% of costs at risk in the initial capital figure.

- topographical information obtained from site survey;
- geotechnical investigation;
- budgetary equipment quotes from multiple potential OEMs;
- budgetary unit costs from local contractors for civil, concrete, steel, electrical and mechanical works;
- data from recently completed similar studies and projects; and
- information provided by Royal Nickel, SRK, Snowden, and Norascon.

Major cost categories (permanent equipment, material purchase, installation, subcontracts, indirect costs and Owner's costs) were identified and analyzed. To each of these categories, a percentage of contingency was allocated based on the accuracy of the data, and an overall contingency amount was derived in this fashion.

## **Operating Cost Estimate**

Estimated operating costs for mining, process plant and general and administration (G&A) for the Dumont Nickel Project are set out below. Costs are presented in Q2 2013 Canadian dollars, unless stated otherwise. The estimate is considered pre-feasibility study level with an accuracy of  $\pm 15\%$ .

Operating costs were estimated in the following manner:

- Operating costs for the open pit were based on the production schedule, performance parameters for mining equipment as recommended by OEMs, and the current cost of commodities and labour rates for the Abitibi region, as determined from two different salary surveys.
- Operating costs for the concentrator were based on rates of consumption for reagents and other consumables determined from metallurgical testwork and a labour structure that is appropriate for the current flowsheet.
- The operating cost estimate for the concentrator includes those costs associated with operating the TSF.
- G&A costs were based on the level of support required for the operation.
- Costs for treatment and refining of concentrate were based on the commercial terms discussed in the section of the Feasibility Study relating to project infrastructure and the scheduled production of concentrate.
- Processing operating costs were calculated exclusive of variability from design throughputs (e.g., neglects ramp-up period, etc.).

A summary of life-of-mine (LOM) operating costs is provided in the table below.

| Item               | Units                      | 52.5 kt/d<br>2016-2020 | 105 kt/d<br>2021-2036 | Stockpile<br>2036-2049 | LOM<br>Average |
|--------------------|----------------------------|------------------------|-----------------------|------------------------|----------------|
| Mine               | \$/t ore milled            | \$6.61                 | \$6.15                | \$0.77                 | \$3.89         |
| Mine <sup>1</sup>  | \$/t ex-pit material mined | \$1.63                 | \$1.69                | \$0.00                 | \$1.68         |
| Process            | \$/t ore                   | \$5.04                 | \$4.76                | \$4.76                 | \$4.78         |
| G&A                | \$/t ore                   | \$0.94                 | \$0.56                | \$0.41                 | \$0.52         |
| Site Costs         | \$/t ore                   | \$12.60                | \$11.46               | \$5.94                 | \$9.18         |
|                    | \$/lb                      | \$3.45                 | \$4.15                | \$3.59                 | \$3.90         |
| TC/RC              | \$/lb                      | \$1.45                 | \$1.40                | \$1.43                 | \$1.42         |
| Gross C1 Cash Cost | \$/lb                      | \$4.90                 | \$5.55                | \$5.02                 | \$5.32         |
| Byproduct Credits  | \$/lb                      | (\$0.46)               | (\$0.51)              | (\$0.61)               | (\$0.53)       |
| Net C1 Cash Cost   | \$/lb                      | \$4.44                 | \$5.04                | \$4.41                 | \$4.79         |
|                    | US\$/lb                    | US\$4.01               | US\$4.54              | US\$3.97               | US\$4.31       |

Notes: 1. To give a true reflection of expit mining costs, excludes \$61 M for rehandle of 103 Mt stockpile ore during ex-pit mine life.

Key assumptions used in generating the operating cost estimates are given below.

- C\$ prices for goods and services obtained prior to the cost basis date of Q2 2013 have been escalated to this date using average Canadian producer price index (PPI) for the period January 2010 to December 2012 of 2.57% per annum.
- US\$ denominated prices for goods and services obtained prior to the cost basis date of Q2 2013 have been escalated to this date using average Canadian producer price index (PPI) for the period January 2010 to December 2012 of 2.85% per annum.
- Labour costs were estimated based on the organizational structure developed for each area and the
  rates of pay are based on wages and benefits at existing mining operations in the Abitibi region of
  Quebec and salary survey data collected by Coopers Consulting and PWC.
- Based on discussions with Hydro-Québec, it has been assumed that the project would qualify for the "L Tariff." The forecast price of \$44.45/MWh based on Hydro-Québec pricing effective April 2013.
- The forecast long-term diesel price of \$0.94/litre is based on forecast long-term oil prices of US\$90/bbl and a C\$ F/X rate of US\$0.90.

## **Economic Analysis**

This economic analysis of the Feasibility Study focuses on the base case, which includes use of conventional (diesel powered) truck haulage and does not include the use of trolley-assisted trucks. The base case also assumes production of a nickel concentrate that would be sold to third parties, and does not include the potential benefits from magnetite as a byproduct.

The Dumont Nickel Project is expected to produce 2.8 billion pounds payable Ni over 33 years of operation. The table below summarizes key metrics for the current feasibility study design. The costs and returns for the feasibility study assume a long-term nickel price of US\$9.00/lb Ni and a Canadian dollar exchange rate of US\$0.90.

|                           | Unit     | C\$   | US\$  |
|---------------------------|----------|-------|-------|
| Ore Mined                 | Mt       | 1,179 | 1,179 |
| Payable Ni                | Mlbs     | 2,774 | 2,774 |
| Payable NiEq <sup>1</sup> | Mlbs     | 2,922 | 2,922 |
| Gross Revenue             | \$/t ore | 24.88 | 22.40 |
| TC/RC                     | \$/t ore | 3.33  | 3.00  |
| Net Smelter Return        | \$/t ore | 21.54 | 19.40 |

|                            | Unit       | C\$   | US\$  |
|----------------------------|------------|-------|-------|
| Site Operating Costs       | \$/t ore   | 9.18  | 8.27  |
| Gross C1 Costs             | \$/lb Ni   | 5.32  | 4.79  |
| Net C1 Costs               | \$/lb Ni   | 4.79  | 4.31  |
| Initial Capital            | \$M        | 1,268 | 1,205 |
| Expansion Capital          | \$M        | 997   | 898   |
| Sustaining Capital         | \$M        | 823   | 741   |
| Total Capital              | \$M        | 3,088 | 2,844 |
| Pre-Tax NPV <sub>8%</sub>  | \$M        | 2,293 | 2,003 |
| Pre-Tax IRR                |            | 19.5% | 18.7% |
| Post-Tax NPV <sub>8%</sub> | <b>\$M</b> | 1,330 | 1,137 |
| Post-Tax IRR               |            | 15.9% | 15.2% |

Notes: 1. Based on the production profile and price profiles in the Feasibility Study.

In the Feasibility Study, the total life of project was subdivided into the following periods:

- Construction for a period of 22 months, starting in September 2014;
- Initial production at a concentrator throughput rate of 52.5 kt/d for 54 months to the end of 2020;
- Expanded production from the open pit, at a concentrator throughput of 105 kt/d, for 186 months (14.5 years) to the end of 2036; and
- Production from stockpiles following the completion of open pit mining. The concentrator continues to operate at a rate of 105 kt/d for an additional 158 months (12 years, 2 months) to the end of 2049.

Summary metrics for each of these periods are presented in the table below. It can be seen that the cumulative NPV to the end of pit life is \$930 M or 70% of the project total. The remaining 30% of project NPV (\$399 M) is realized during the period that the low-grade stockpile is reclaimed, with the benefits of lower costs offsetting lower grade and recovery.

| Item                            | Construct | '16 – '20<br>52.5kt/d Pit | '21 – '36<br>105kt/d Pit | '36 – '49<br>105k Stockpile | Total |
|---------------------------------|-----------|---------------------------|--------------------------|-----------------------------|-------|
| Ore Mined (Mt)                  | 21        | 204                       | 954                      | 0                           | 1,179 |
| Total Mined (Mt)                | 55        | 338                       | 2122                     | 0                           | 2,514 |
| Stripping Ratio (waste:ore)     | 1.62      | 0.66                      | 1.22                     | 0                           | 1.13  |
| Ore Milled (Mt)                 | 0         | 84                        | 592                      | 503                         | 1,179 |
| Grade (% Ni)                    | 0.25      | 0.34                      | 0.28                     | 0.24                        | 0.27  |
| Concentrator Recovery (% of Ni) | 0         | 52.7                      | 47.8                     | 33.9                        | 43.0  |
| Payable Ni (Mlbs)               | 0         | 307                       | 1,634                    | 833                         | 2,774 |
| Annual Payable Ni (Mlbs)        | 0         | 68                        | 105                      | 63                          | 84    |
| Annual Payable NiEq (Mlbs)      | 0         | 71                        | 111                      | 67                          | 88    |
| Net C1 Cash Costs (/lb Ni)      | 0         | 4.44                      | 5.04                     | 4.41                        | 4.79  |
| Initial Capital (M)             | 1,243     | 25                        | 0                        | 0                           | 1,268 |
| Expansion Capital (M)           | 0         | 997                       | 0                        | 0                           | 997   |
| Sustaining Capital (M)          | 0         | 12                        | 725                      | 86                          | 823   |
| Total Capital (M)               | 1,243     | 1,034                     | 725                      | 86                          | 3,088 |
| Closure + Working Capital (M)   | 20        | 51                        | 47                       | (73)                        | 45    |
| Post-Tax NPV 8% (M)             | (1,183)   | 424                       | 1,690                    | 399                         | 1,330 |
| Post-Tax IRR                    |           |                           |                          |                             | 15.9% |

#### Key Assumptions

The evaluation included the following key assumptions:

**Price & Exchange Rate Assumptions** 

| Item    | Units         | 2016    | 2017    | 2018+     |
|---------|---------------|---------|---------|-----------|
| Ni      | US\$/lb       | \$10.00 | \$10.50 | \$9.00    |
| Co      | US\$/lb       | \$14.00 | \$14.00 | \$14.00   |
| Pt      | US\$/oz       | \$1,800 | \$1,800 | \$1,800   |
| Pd      | US\$/oz       | \$700   | \$700   | \$700     |
| Oil     | US\$/bbl      | \$90.00 | \$90.00 | \$90.00   |
| Acid    | US\$/t        | \$76.80 | \$79.28 | see below |
| C\$ F/X | C\$ = $US$ \$ | \$0.95  | \$0.90  | \$0.90    |

Other key assumptions included in the base case analysis are as follows:

- Each of the two process plant lines would ramp up to nameplate production of 52.5 kt/d over six months.
- The metallurgical recovery for Ni as forecast by the model is based on the Standard Test Program (STP) of 105 samples. LOM recovery is forecast to average 43.0%. The average metallurgical recovery for Co is assumed to be 42.0%, almost equal that for Ni, which is based on the understanding of Co deportment to recoverable minerals and associated approximate recoveries for these minerals. The average recovery of Pt and Pd is based on the results of lock-cycle testwork, with recovery expected to average 62.5% and 60.7% for Pt and Pd, respectively.
- Off-site costs are US\$64/t concentrate for transport (average based on shipment to a variety of destinations).
- Long-term electricity prices of \$44.45/MWh, which is based on the current L-rate tariff for Quebec and Dumont's expected demand profile.
- Long-term prices for acid of US\$72/t in 2018, US\$71/t from 2019-2024 and US\$70 from 2025 onward that were based on a market study performed by the consulting group CRU Strategies.
- The following assumptions are based on the prior experience of Royal Nickel management:
  - US\$175/t concentrate for smelter treatment and US\$0.80/lb for nickel refining inclusive of price participation. This equate to US\$1.20/lb over the project life.
  - The cost of refining byproduct cobalt and PGE was assumed to equate to a further US\$0.07/lb Ni over the project life (US\$3.00/lb for Co and US\$50/oz for PGE).
  - Payable metal for nickel and cobalt are assumed to be 93% and 50%, respectively. Deductions for PGE are assumed to be 1 g/t, with the average concentrate grade of 4.3 g/t resulting in life-of-project payables of 77%.
- Working capital has been calculated based on the following (based on the prior experience of Royal Nickel management unless otherwise noted):
  - Contractual terms for the sale of concentrate would make provision for payment for 90% of concentrate value within 30 days and the remaining 10% in 60 days.
  - Accounts payable would be settled within 30 days.

• First fills for the mine and G&A areas have been calculated based on a stores holding of one month for all consumable items with the exception of tires (four months), diesel (five days) and electricity (no holding). No advance purchase of mine maintenance items would be required as these would be held on a consignment basis. First fills for the process plant have been calculated by Ausenco from first principles.

NPV is reported using a discount rate of 8%. NPV is expressed in real, Q2 2013 terms with the start date for discounting being the commencement of project construction in September 2014. No material expenditures are included in the economic analysis prior to this date.

Results were calculated on a pre-tax and post-tax basis. The post-tax results included the following assumptions regarding the fiscal regime:

- Planned changes to income taxes announced in the 2013 federal budget have been included, specifically:
  - The 41A category, which allows for accelerated depreciation of a portion of initial capital plant purchases, will be phased out by 2020.
  - The CEE category, which provides for accelerated depreciation of all initial development expenditures, will be phased out by 2018.
  - The investment tax credit will be phased out by 2016.
- Planned changes to the Quebec Mining Tax Code announced in March 2013 will be in place by the time the project commences production. These include:
  - Application of a minimum tax ranging from 1-4% depending on profitability. The methodology used to calculate pre-tax income for this minimum tax is new, and does not allow for accelerated depreciation of pre-production capital expenditures, so the minimum tax is incurred soon after the start of commercial production.
  - A variable tax that is applied to pre-tax income calculated in a manner similar to the previous legislation. The rate varies from 16% for a pre-tax profit margin of  $\Box$  35% to 28% for a pre-tax margin of 50% or more.

The calculated royalty payments include the assumption that the historic 2% and 3% NSR royalties will be bought down to 1% and 1.5%, respectively, as is provided for in the contracts. The buy-down would occur when the mine achieves commercial production. The calculated royalty payments include the Red Kite 1% NSR and assume that the 0.8% NSR royalty owned by Ressources Québec will be bought out in August 2017, as provided for in the contract.

Base Case Results

Cash flow was determined for the life of the Dumont Nickel Project. Noteworthy aspects include the following:

- The peak funding requirement of \$1,320 M (in 2013 real dollar terms) is reached three months after the start-up of commercial operations (the operation is forecast to be operating cash flow positive during the first quarter of operation and free cash flow positive from the second quarter of operation).
- The financial returns are unlevered and assume 100% of the initial capital will be provided from equity. Approximately 80% of the investment required for the expansion to 105 kt/d would be generated from internal free cash flows during the construction period, with additional capital of approximately \$210 M required. The expansion is commissioned after month 54. Following

expansion to 105 kt/d, annual post-tax free cash flow averages approximately \$312 M/a for the period that the pit is operational (or \$457 M/a on a pre-tax basis).

- Payback of all invested capital (including the expansion) is achieved approximately six years after initial start-up.
- The project generates in excess of \$218 M post-tax free cash flow annually, while the low-grade stockpiles are being treated (\$318 M/a on a pre-tax basis).

Sensitivity Analysis

The project is most sensitive to factors impacting on revenue as well as the Canadian vs. US dollar exchange rate. A  $\pm 10\%$  variation in any of the factors impacting revenue (Ni Price, Ni Recovery) is 37% and symmetric, with the percentage increase in NPV for higher revenue equal to the percentage decrease for lower revenue. Note that variation in recovery is on a relative and not an absolute basis. A change in exchange rate produces asymmetric outcomes, with the upside from a 10% decrease in the exchange rate (a 36% improvement in NPV) is greater than the reduction in NPV resulting from a 10% strengthening in exchange rate (30% decrease in NPV). Payables represents a  $\pm 10\%$  change to the smelter deduction (base case assumption is 7%), with a 10% change resulting in a symmetric variation in NPV of 3%.

The project returns are less sensitive to the variation of other parameters – with a 10% variation in site operating costs having a 17% impact on project NPV. With the staged development plan, returns are less sensitive to capital costs and a 10% change in total capital cost has a lower impact, at only 11% of NPV. The impact of a 10% variation in TC/RCs is approximately half that of capital cost, at 6% of base case NPV. The project is less sensitive to variation in the cost of energy, with a 10% change in the price of either power or oil (diesel fuel) having only a 3% impact on project NPV. Project returns are insensitive to changes in byproduct prices (2% impact) or the cost of acid (<1% impact).

Several other sensitivity analyses were prepared in respect of the economic analysis, including with respect to NPV, IRR, cash flow, EBITDA and cash costs. Based on these analyses, the following observations are noteworthy:

- At higher discount rates, the importance of capital cost and exchange rate increases relative to all other parameters.
- The post-tax breakeven Ni prices (NPV = \$0) are as follows:
  - 8% = US\$7.00/lb (22% lower than base case forecast);
  - 9% = US\$7.25/lb (19% lower than base case forecast); and
  - 10% = US\$7.50/lb (17% less than base case forecast)
- Cash costs are relatively insensitive to variation in the price of key consumables, with a 10% change in the prices of power and diesel (oil) having an impact of ~1% on gross cash costs.

# Project Implementation

A simplified set of key milestone dates contemplated by the Feasibility Study were as follows.

| Criteria                      | Date    |
|-------------------------------|---------|
| C of A Approval               | Q3 2014 |
| Construction Permit Approval. | Q3 2014 |
| Start of Commissioning        | Q3 2015 |
| Plant Operational             | Q3 2016 |

Since completion of the Feasibility Study, economic conditions have impacted and are continuing to impact the timing of the financing process as well are the foregoing milestones. Taking such delays into consideration, Royal Nickel has targeted the following key milestones to achieve the development of the Dumont Nickel Project:

- completion of partnership and financing arrangements;
- receipt of main permit during the second half of 2014;
- estimated construction schedule of 22 months post successful permitting and securing financing;
   and
- assuming permits and financing in place by the end of 2014, project commissioning is targeted to begin in the second half of 2016 followed by production ramp-up.

These milestones reflect the best estimate of permitting timelines based on government review of the ESIA and public hearings. The actual commissioning date and production ramp-up would be approximately 22 months after these items are secured.

See also "Risk Factors", generally and "Risk Factors – Funding Needs, Financing Risks and Dilution" and "Risk Factors – Permitting Risks", specifically.

#### Recommendations

The Feasibility Study recommended that the following future work be completed:

- Complete detailed design that considers the following points:
  - Evaluate opportunities for pit optimization, including:
    - Alternative mining sequences that may allow access to higher value ore to be accelerated and/or deferral of waste stripping.
    - Evaluate alternative ramp locations in the pit stages taking advantage of changes in wall slopes.
  - Re-evaluate use of trolley assisted truck haulage as an option based on fuel and electricity market rates.
  - Begin detailed engineering in Q3 2013 to procure long lead equipment in order to maintain the Q3 2016 plant operational date.
  - Undertake detailed geotechnical evaluations of the early rock exposures, throughout the open pit areas, to assess the reliability of structural and geotechnical models. Optimize design based on field performance of pit slopes in the various geotechnical domains.
  - Continue to evaluate pore pressures within the pit slope areas to verify the assumption that these will have a limited impact on slope stability.
  - Conduct further geotechnical investigations in order to complete detailed engineering
    design of all surface infrastructure, including the plant site and related facilities, rail lines,
    TSF Cell 1, the low-grade ore stockpile within the pit limits, and water management
    features that have a significant earthworks component to them and are required within the
    first two years of operation.
  - Implement a metallurgy testwork program that will include:

- Trade-off study to evaluate removal of slimes circuit
- Reagent optimization testwork
- Concentrate thickening and filtration testwork
- Slimes cyclone pilot scale testing for detailed engineering design
- Awaruite recovery circuit optimization
- Recovery opportunities from scavenger non-magnetic stream
- Complete testwork to quantify grindability characteristics of regrind mill feed
- Specific high voltage power studies as recommended for confirmation of high voltage supply by Hydro-Québec.
- Continue mining lease process.
- Initiate surface lease process.
- Continue environmental baseline studies.
- Continue environmental permitting process.
- Continue to investigate the natural cementation of tailings and waste fines and its impact on reducing the potential for these project components to act as dust sources.
- Continue stakeholder consultation during detailed engineering as well as during mine operations to minimize and/or mitigate the impact of the project and foster acceptance. Define the structure of stakeholder committees that will be created during mine construction and operations.
- Continue to assess the carbon sequestration potential of spontaneous mineral carbonation of tailings and waste rock on an operational basis and its impact on the carbon footprint of the project.

#### DIVIDEND RECORD AND POLICY

Royal Nickel has not, since the date of its incorporation, declared or paid any dividends on its Common Shares. For the foreseeable future, Royal Nickel anticipates that it will retain future earnings and other cash resources for the operation and development of its business. The payment of dividends in the future will depend on Royal Nickel's earnings, if any, and financial condition and such other factors as the directors of Royal Nickel consider appropriate.

# **CAPITAL STRUCTURE**

#### **General Description of Share Capital**

## **Common Shares**

Royal Nickel is authorized to issue an unlimited number of Common Shares without par value. At the date of this AIF, 94,212,311 Common Shares of Royal Nickel were issued and outstanding as fully paid and non-assessable.

The holders of Common Shares are entitled to receive notice of and to attend and vote at all meetings of shareholders of the Company, except meetings of holders of another class of shares, and at all such meetings shall be entitled to one vote for each Common Share held. Subject to the preferences accorded to holders of any other shares of the Company ranking senior to the Common Shares with respect to the payment of dividends, holders of Common Shares are entitled to receive, if and when declared by the Board, such dividends as may be declared

thereon by the Board on a pro rata basis. In the event of the voluntary or involuntary liquidation, dissolution or winding-up of the Company, or any other distribution of its assets among its shareholders for the purpose of winding-up its affairs (a "**Distribution**"), holders of Common Shares are entitled, subject to the preferences accorded to the holders of any other shares of the Company ranking senior to the Common Shares, to a pro rata share of the remaining property of the Company. The Common Shares carry no pre-emptive, conversion, redemption or retraction rights. The Common Shares carry no other special rights and restrictions other than as described in this AIF.

#### Special Shares

Royal Nickel is authorized to issue an unlimited number of special shares ("**Special Shares**") without par value. As of the date of this AIF, no Special Shares of Royal Nickel have been issued.

The Special Shares will be issuable at any time and from time to time in one or more series. The Board will be authorized to fix before issue the number of, the consideration per share of, the designation of, and the rights, privileges, restrictions and conditions attaching to, the Special Shares of each series, which may include voting rights, the whole subject to the issue of a certificate of amendment setting forth the designation of, and the rights, privileges, restrictions and conditions attaching to, shares of the series. The Special Shares of each series will rank on a parity with the Special Shares of every other series and will be entitled to preference over any other shares ranking junior to the Special Shares with respect to payment of dividends or a Distribution. If any cumulative dividends or amounts payable on a return of capital are not paid in full, the Special Shares of all series will participate rateably in respect of such dividends and return on capital.

# Rights Plan

On June 22, 2011, the shareholders of the Company ratified Royal Nickel's shareholder rights plan agreement dated May 13, 2011 between Royal Nickel and Computershare Investor Services Inc., as the rights agent (the "**Rights Plan**"). The fundamental objectives of the Rights Plan are to provide adequate time for the Board and the shareholders of the Company to assess an unsolicited take-over bid for the Company, to provide the Board with sufficient time to explore and develop alternatives for maximizing shareholder value if a take-over bid is made and to provide shareholders with an equal opportunity to participate in a take-over bid. The Rights Plan was not adopted in response to any proposal to acquire control of the Company. The Plan will expire at the end of the Company's 2014 general meeting of shareholders, unless renewed by the shareholders. A copy of the Plan may be viewed in electronic format at www.sedar.com.

#### MARKET FOR SECURITIES

The Common Shares are listed and posted for trading on the TSX under the symbol "RNX". The following table sets forth the price range (high and low) of the Common Shares and volumes traded on the TSX for the periods indicated:

|           | Common Shares |         |           |
|-----------|---------------|---------|-----------|
| 2013      | High          | Low     | Volume    |
| January   | \$0.490       | \$0.395 | 1,596,591 |
| February  | \$0.455       | \$0.365 | 2,084,798 |
| March     | \$0.430       | \$0.315 | 3,118,909 |
| April     | \$0.390       | \$0.320 | 1,034,638 |
| May       | \$0.630       | \$0.330 | 2,027,316 |
| June      | \$0.550       | \$0.345 | 2,237,926 |
| July      | \$0.400       | \$0.330 | 1,013,058 |
| August    | \$0.430       | \$0.350 | 711,306   |
| September | \$0.380       | \$0.315 | 1,093,284 |
| October   | \$0.345       | \$0.260 | 2,266,798 |
| November  | \$0.310       | \$0.260 | 922,166   |

|          | C       |         |           |
|----------|---------|---------|-----------|
| 2013     | High    | Low     | Volume    |
| December | \$0.295 | \$0.250 | 1,380,239 |

# PRIOR SALES

Pursuant to the 2013 financing of flow-through shares described above, on March 7, 2013 the Company issued 240,000 broker warrants, with each broker warrant exercisable to acquire one Common Share at a price of \$0.50 per share until March 7, 2014.

# **DIRECTORS AND OFFICERS**

# **Directors and Officers**

The following table sets forth information regarding the Company's directors and officers as of the date of this AIF. All directors are appointed for a one year term and directors are re-elected annually at the general meeting of the Company's shareholders.

| Name and Municipality of<br>Residence and Date first became a<br>Director/Officer | Position with the Company       | Principal Occupation(s)  |
|---|---------------------------------|--|
| DIRECTORS   | · ·                             |  |
| Peter Goudie <sup>(1)(2)</sup><br>Seaforth, NSW, Australia<br>July 17, 2008       | Director                        | Corporate Director   |
| Scott M. Hand <sup>(3)</sup> Toronto, Ontario June 27, 2008                       | Executive Chairman of the Board | Corporate Director   |
| Peter C. Jones <sup>(1)(3)(4)</sup><br>Canmore, Alberta<br>November 17, 2008      | Director                        | Corporate Director   |
| Frank Marzoli <sup>(3)(4)</sup><br>Cornwall, Ontario<br>May 11, 2007              | Director                        | President, CEO and Chairman,<br>Marbaw   |
| Gilles Masson <sup>(1)(2)</sup><br>Laval, Quebec<br>August 15, 2007               | Director                        | Corporate Director   |
| <b>Tyler Mitchelson</b> Oakville, Ontario September 17, 2009                      | Director                        | Senior role at Anglo American<br>Corporation effective March 10, 2014<br>and former President and Chief<br>Executive Officer of Royal Nickel |

# Name and Municipality of Residence and Date first became a

| Director/Officer   | Position with the Company                          | Principal Occupation(s)  |  |
|--|--|--|--|
| Darryl Sittler <sup>(2)(4)</sup> Toronto, Ontario May 11, 2007 | Director   | Self-employed businessman and<br>consultant to Toronto Maple Leafs<br>Hockey Club in areas of community<br>relations and marketing |  |
| OFFICERS   |  |  |  |
| Mark Selby<br>Toronto, Ontario<br>September 30, 2010           | Interim President and Chief Executive Officer      | Interim President and Chief Executive<br>Officer, Royal Nickel   |  |
| Fraser Sinclair<br>Oakville, Ontario<br>October 18, 2010       | Chief Financial Officer and Corporate<br>Secretary | Chief Financial Officer and Corporate<br>Secretary, Royal Nickel   |  |
| Alger St. Jean<br>Sudbury, Ontario<br>April 30, 2007           | Vice President, Exploration                        | Vice President, Exploration, Royal<br>Nickel   |  |
| Johnna Muinonen<br>Sudbury, Ontario<br>August 9, 2010          | Vice President, Operations                         | Vice President, Operations, Royal<br>Nickel  |  |

<sup>(1)</sup> Member of the audit committee of the Company (the "Audit Committee").

As of the date of this AIF, the directors and executive officers of the Company collectively beneficially own, directly or indirectly, or exercise control and direction over 9,063,223 Common Shares representing, in the aggregate approximately 9.6% of the issued and outstanding Common Shares.

# **Biographies**

Biographical information for each member of Royal Nickel's Board and management team is set forth below.

Mr. Goudie was Executive Vice President (Marketing) of Inco Limited and then Vale (formerly Vale Inco) from January 1997 to February 2008. Mr. Goudie was also responsible for the strategy, negotiation, construction and operation of Inco's joint venture production projects in Asia. He has been employed with Inco since 1970 in increasingly more senior Accounting and Financial roles in Australia, Indonesia, Singapore and Hong Kong, before becoming Managing Director (later President and Managing Director) of Inco Pacific Ltd. in Hong Kong in 1988. He is an Australian CPA.

Mr. Hand has been Executive Chairman of the Board since November 2009. He was elected to the Board in 2008. Mr. Hand was the Chairman and Chief Executive Officer of Inco Limited from April 2002 until he retired from Inco

<sup>(2)</sup> Member of the compensation committee of the Company (the "Compensation Committee").

<sup>(3)</sup> Member of the corporate governance and nominating committee of the Company (the "Corporate Governance and Nominating Committee").

<sup>(4)</sup> Member of the health, safety and environment committee of the Company (the "HS&E Committee").

in January 2007. Prior to that, Mr. Hand was President of Inco and held positions in Strategic Planning, Business Development and Law. Inco has been a major global Canadian-based resources enterprise and a leading producer and marketer of nickel and other metals. Mr. Hand is currently a member of the board of directors of Manulife Financial Corporation, Legend Gold Corp. and Chinalco Mining Corporation International. Mr. Hand also serves on the boards of Boyd Technologies LLC (non-woven materials), the World Wildlife Fund Canada, the Massachusetts Museum of Contemporary Art and a number of private companies in the mineral resource sector. Mr. Hand received a Bachelor of Arts from Hamilton College and a Juris Doctorate from Cornell University.

Mr. Jones has over 40 years of international mining experience. He is a director of a number of companies including Century Aluminum Company and Lundin Mining Corporation. Prior to 2007 he was President, Chief Operating Officer and a director of Inco Limited, and before that President and Chief Executive Officer of Hudson Bay Mining and Smelting Co. Ltd.

Mr. Marzoli has been the President, Chief Executive Officer and sole director of Marzcorp Oil & Gas Inc. since July 4, 2008. Mr. Marzoli has also been the President of Marbaw International Nickel Corporation since December 20, 2006. Marbaw held a 100% interest in the Marbaw Claims which were sold to Royal Nickel in February 2007. Mr. Marzoli has been a director of Royal Nickel since May 2007. In 1971, Mr. Marzoli joined the import business specializing in Asian countries. In 2004, Mr. Marzoli left the import business to pursue the resource sector full time.

Mr. Masson worked for PricewaterhouseCoopers LLP from June 1969 until December 2005 when he retired as a partner in the auditing department. Over the course of his 36 year career, his clientele consisted of large national and international corporations operating in diverse fields. He has vast experience in the auditing of public corporations as well as in-depth knowledge of GAAP. His knowledge and experience also extend to regulations applicable to the presentation of financial information by public corporations. Mr. Masson has been a director of Semafo Inc. since January 2006. From November 2009 until June 2013, he was also a director of Malaga Inc. and from June 2011 until June 2013 he was a director of EACOM Timber Corporation. In October 2005, he was awarded the title of certified director by the Institute of Corporate Directors after having completed the required training program. He obtained a Bachelor in Commerce in 1969 and a diploma in General Accounting in 1971 from the École des hautes études commerciales de Montréal. He has been a member of the Ordre des comptables agréés due Québec since 1972.

Mr. Mitchelson was the President and Chief Executive Officer of the Company from October 13, 2009 until February 11, 2014, when he resigned as an officer to assume a senior role at Anglo American Corporation. Mr. Mitchelson remains a director of the Company. Mr. Mitchelson was previously Vice President, Strategy, Business Planning and Brownfield Exploration with Vale (formerly Vale Inco). From 1995 to 2006, he worked for Inco Limited in various financial and planning roles in the operations in Thompson, Manitoba, Sorowako, Indonesia and Sudbury, Ontario. Mr. Mitchelson earned his Chartered Accountant designation while working for PricewaterhouseCoopers LLP (formerly Price Waterhouse) from 1991 to 1995. He is a member of the Chartered Professional Accountants of Ontario and holds a Bachelor of Commerce (honours) degree from the University of Manitoba.

Mr. Sittler is a former National Hockey League player and a 1989 inductee to the Hockey Hall of Fame. Mr. Sittler is a self-employed business person in the areas of public relations, community relations and team building. Mr. Sittler is an Ambassador of Maple Leaf Sports and Entertainment and a director of Wallbridge Mining Company Limited, Miocene Metals Ltd. and Frontline Gold Corporation. Mr. Sittler is a certified director by the Institute of Corporate Directors.

Mr. Selby is the interim President and Chief Executive Officer of the Company. Prior to joining the Company in 2010, Mr. Selby was Vice President Business Planning & Market Research with Quadra Mining Inc. Prior to joining Quadra in 2008, Mr. Selby founded Selby & Co. in 2006 to provide consulting advice to mining companies, private equity and hedge fund clients on commodities and business issues. From 2001 until 2007, Mr. Selby held a series of senior roles with Inco Limited culminating with his role as Assistant Vice President Strategic Planning and Corporate Development. Before joining Inco, he was a partner at Mercer Management Consulting from 1994 until 2001 where he consulted to clients in the transportation and resource sectors. Mr. Selby graduated from Queen's University with a Bachelor of Commerce (Honours). Mr. Selby is also a director of Kiska Metals, Minfocus Exploration Corp., NWM Mining Corp and Virgin Metals Inc.

Fraser Sinclair, B. Comm, CPA, CA, CA(SA) — Chief Financial Officer and Corporate Secretary

Mr. Sinclair is the Chief Financial Officer and Corporate Secretary of the Company. Mr. Sinclair was Senior Vice President and Chief Financial Officer of Romarco Minerals Inc. (2009 - 2010). Prior thereto he was Vice President Finance and Chief Financial Officer of North American Palladium Ltd (2007 - 2009). Prior to his work at North American Palladium Ltd., Mr. Sinclair ran his own independent consulting practice providing senior level financial and business advisory services (2004 - 2007). Mr. Sinclair is a Chartered Accountant and earned his designation with Arthur Young & Company (now Ernst & Young LLP). Mr. Sinclair is a member of the Chartered Professional Accountants of Ontario and the South African Institute of Chartered Accountants and holds a Bachelor of Commerce degree from the University of Witwatersrand in South Africa.

Alger St-Jean, P. Geo, M.Sc., B.Sc. — Vice President, Exploration

Mr. St-Jean is the Vice President Exploration of the Company, a position held since April 2007. Prior to joining Royal Nickel, Mr. St-Jean was Senior Geologist for Xstrata Nickel (previously Falconbridge Limited) and was responsible for the management, design and implementation of nickel exploration programs at Falconbridge Limited. Mr. St-Jean is a Professional Geologist registered with the Association of Professional Geologists of Ontario and holds a Master of Science degree from McGill University and a Bachelor of Science degree from St. Francis Xavier University.

Johnna Muinonen, P. Eng. — Vice President, Operations

Ms. Muinonen is the Vice-President, Operations of the Company. Prior to joining Royal Nickel, Ms. Muinonen was employed by Vale (formerly Vale Inco) for 9 years. While with Vale, she spent 5 years in Thompson, Manitoba working in the concentrator in various positions of increasing responsibility which culminated in an appointment to Mill Manager from 2005-2007. For the past three years, immediately prior to joining Royal Nickel, she was a Project Manager in Vale's Corporate Business Development Group leading studies at both the scoping and prefeasibility level for Vale's ultramafic nickel deposits in Canada. Ms. Muinonen is a Professional Engineer registered with the Professional Engineers of Ontario. She holds a Bachelor of Science in Mining Engineering from Queen's University.

# **Corporate Cease Trade Orders**

Except as disclosed below, none of the directors or executive officers of Royal Nickel is, or has been within the 10 years before the date of this AIF, a director, chief executive officer or chief financial officer of any company that (i) while such person was acting in that capacity was the subject of a cease trade order, an order similar to a cease trade order or an order that denied the company access to any statutory exemptions under Canadian securities legislation, in each case for a period of more than 30 consecutive days (each, an "**Order**") or (ii) was subject to an Order that was issued after such person ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while such person was acting in the capacity as director, chief executive officer or chief financial officer.

- Scott M. Hand was a director of Royal Coal Corp. during the period from August 2010 until May 2012. On May 3, 2012, a cease trade order was issued against Royal Coal Corp. by the Ontario Securities Commission for failure to file annual financial statements. On May 17, 2012, Royal Coal Corp. announced that it received notice from the TSX Venture Exchange that the TSX Venture Exchange had suspended trading in Royal Coal Corp.'s securities as a result of the cease trade order.
- Darryl Sittler was a director of Randsburg International Gold Corp. On August 9, 2006, a cease trade order was issued for Randsburg International Gold Corp. for failure to file a technical report in the required form. The cease trade order was revoked on April 25, 2007.

# **Bankruptcies**

Except as disclosed below, none of the directors or executive officers of Royal Nickel or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, is or has been within the 10 years before the date of this AIF, a director or executive officer of any company that while such person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets:

• Gilles Masson has been a director of Malaga Inc. since 2009. In June 2013, Malaga filed a notice of intention to make a proposal pursuant to the provisions of Part III of the *Bankruptcy and Insolvency Act* (Canada). Pursuant to the notice of intention, Raymond Chabot Inc. has been appointed as the trustee in Malaga's proposal proceedings and in that capacity is monitoring and assisting Malaga in its restructuring efforts. These proceedings have the effect of imposing an automatic stay of proceedings that will protect Malaga and its assets from the claims of creditors and others while Malaga pursues its restructuring efforts. Malaga submitted a proposal dated October 4, 2013 to its creditors; such proposal was accepted by the creditors pursuant to a vote held on December 13, 2013 and approved by judgment of the Superior Court rendered on January 7, 2014.

# **Personal Bankruptcies**

None of the directors or executive officers of Royal Nickel or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of such person.

#### **Penalties and Sanctions**

None of the directors or executive officers of Royal Nickel or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority or been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

# **Conflicts of Interest**

The directors of the Company are required by law to act honestly and in good faith with a view to the best interest of the Company and to disclose any interests which they may have in any project or opportunity of the Company. However, the Company's directors and officers may serve on the boards and/or as officers of other companies which may compete in the same industry as the Company, giving rise to potential conflicts of interest. To the extent that such other companies may participate in ventures in which the Company may participate or enter into contracts with

the Company, they may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that a conflict of interest arises at a meeting of the directors of the Company, such conflict of interest must be declared and the declaring parties must abstain from participating and voting for or against the approval of any project or opportunity in which they may have an interest. Provided such steps are followed and subject to any limitations in the Company's constating documents, a transaction would not be void or voidable because it was made between the Company and one or more of its directors or by reason of such director being present at the meeting at which such agreement or transaction was approved. The remaining directors will determine whether or not the Company will participate in any such project or opportunity.

To the best of the Company's knowledge, other than as set forth in this AIF, there are no known existing or potential conflicts of interest among the Company, directors, officers or other members of management of the Company as a result of their outside business interests.

The directors and officers of the Company are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest, and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers.

#### **AUDIT COMMITTEE INFORMATION**

The primary function of the audit committee of the Board (the "Audit Committee") is to assist the Board in fulfilling its financial reporting and controls responsibilities to the shareholders of the Company. In accordance with NI 52-110, information with respect to the Company's audit committee is contained below.

#### **Audit Committee Charter**

A copy of the Audit Committee Charter is attached hereto as Appendix A.

# **Composition of Audit Committee**

The Audit Committee is composed of Gilles Masson (Chairman), Peter Goudie and Peter Jones, all of whom are "independent" directors and financially literate within the meaning of NI 52-110.

#### **Relevant Education and Experience**

For details regarding the relevant education and experience of each member of the Audit Committee relevant to the performance of his duties as a member of the Audit Committee, see "Directors and Officers".

#### **Pre-Approval Policies and Procedures**

The Audit Committee has adopted policies and procedures for the pre-approval of non-audit services to be provided by the Company's independent auditors. As a general policy, all services provided by the independent auditors must be pre-approved by the Audit Committee. Unless a service has received general pre-approval from the Audit Committee, it will require specific pre-approval by the Audit Committee. When specific pre-approval is required, the Audit Committee has delegated the authority to the Chair of the Audit Committee.

#### **External Audit Fees**

The fees billed by the Company's external auditors for the last two fiscal years are as follows:

| Financial Year Ending | Audit Fees | Audit Related Fees(1) | Tax Fees(2) | All Other Fees <sup>(3)</sup> |  |
|-----------------------|------------|-----------------------|-------------|-------------------------------|--|
| 2013                  | \$105,634  | \$109,736             | \$44,667    | \$25,750                      |  |
| 2012                  | \$104,560  | \$110,505             | \$40,786    | \$40,500                      |  |

- (1) Fees charged for review and French translation of interim financial statements
- (2) Fees charged for preparation of income tax and mining duties returns and audit support
- (3) Fees for services related to NI 52-109 compliance

#### RISK FACTORS

#### Overview

The Company's business consists of the exploration and development of mineral properties and is subject to certain risks. The risks described below are not the only risks facing the Company and other risks now unknown to the Company may arise or risks now thought to be immaterial may become material. No guarantee is provided that other factors will not affect the Company in the future. Many of these risks are beyond the control of the Company.

# Overview of Exploration, Development and Operating Risk

The Company is engaged in mineral exploration and development. Mineral exploration and development is highly speculative in nature, involves many risks and is frequently not economically successful. Increasing mineral resources or reserves depends on a number of factors including, among others, the quality of a company's management and their geological and technical expertise and the quality of land available for exploration. Once mineralization is discovered it may take several years of additional exploration and development until production is possible, during which time the economic feasibility of production may change. Substantial expenditures are required to establish proven and probable reserves through drilling or drifting to determine the optimal metallurgical process and to finance and construct mining and processing facilities. At each stage of exploration, development, construction and mine operation, various permits and authorizations are required. Applications for many permits require significant amounts of management time and the expenditure of substantial capital for engineering, legal, environmental, social and other activities. At each stage of a project's life, delays may be encountered because of permitting difficulties. Such delays add to the overall cost of a project and may reduce its economic feasibility. As a result of these uncertainties, there can be no assurance that a mineral exploration and development company's programs will result in profitable commercial production. There is no assurance that any of the projects can be mined profitably. Accordingly, it is not assured that the Company will realize any profits in the short to medium term, if at all. Any profitability in the future from the business of the Company will be dependent upon developing and commercially mining an economic deposit of minerals.

Companies engaged in mining activities are subject to all of the hazards and risks inherent in exploring for and developing natural resource projects. These risks and uncertainties include, but are not limited to, environmental hazards, industrial accidents, labour disputes, social unrest, encountering unusual or unexpected geological formations or other geological or grade problems, unanticipated metallurgical characteristics or less than expected mineral recovery, encountering unanticipated ground or water conditions, cave-ins, pit wall failures, flooding, rock bursts, periodic interruptions due to inclement or hazardous weather conditions and other acts of God or unfavourable operating conditions and losses. Should any of these risks or hazards affect the Company's exploration, development or mining activities it may: cause the cost of exploration, development or production to increase to a point where it would no longer be economic to produce metal from the Company's mineral resources or reserves; result in a write down or write-off of the carrying value of one or more mineral projects; cause delays or stoppage of mining or processing; result in the destruction of mineral properties, processing facilities or third party facilities necessary to the Company's operations; cause personal injury or death and related legal liability; or result in the loss of insurance coverage — any or all of which could have a material adverse effect on the financial condition, results of operations or cash flows of the Company.

# **Project Delay**

The Company has targeted the following key milestones to achieve development of the Dumont Nickel Project: (i) completion of partnership and financing arrangements; (ii) receipt of main permit during the second half of 2014; (iii) estimated construction schedule of 22 months post successful permitting and securing financing; and (iv) assuming permits and financing in place by the end of 2014, project commissioning is targeted to begin in the second half of 2016 followed by production ramp-up. However, there are significant risks that the development and completion of construction of a mine at the Dumont Nickel Project could be delayed due to circumstances beyond the Company's control. The Company will need to obtain further financing from external sources in order to achieve the milestones and to fund the development of the Dumont Nickel Project. There is no assurance that the Company will be able to obtain financing on favourable terms, or at all. Failure to obtain sufficient financing will result in delaying or indefinite postponement of development of the Dumont Nickel Project (in which case, among other things, the Company's contract with Hydro-Québec will be suspended or terminated), or even a loss of property interests.

# Funding Needs, Financing Risks and Dilution

Royal Nickel has no history of earnings from operations and, due to the nature of its business, there can be no assurance that Royal Nickel will be profitable. Development of the Dumont Nickel Project will require substantial financing. There is no assurance that such funding will be available to the Company, that it will be obtained on terms favourable to the Company or that it will provide the Company with sufficient funds to meet its objectives, which may adversely affect the Company's business and financial position. While Royal Nickel may generate additional working capital through fund raising or through the sale or joint venture of its mineral properties, there is no assurance that any such funds will be available. If available, future equity financing may result in substantial dilution to existing shareholders of Royal Nickel and reduce the value of their investment. Additionally, initial capital costs for the development of the Dumont Nickel Project, for the base case, could be in excess of US\$1.191 billion, with additional expansion capital of US\$891 million. Failure to obtain sufficient financing will result in delaying or indefinite postponement of development of the Dumont Nickel Project (in which case, among other things, the Company's contract with Hydro-Québec will be suspended or terminated), or even a loss of property interests.

#### **Limited Operating History**

The Company is an exploration stage company with no history of profitability, and a limited operating history in the mineral exploration and development business. The Company has no history of producing metals from its current mineral property. As a result, the Company is subject to all of the risks associated with establishing new mining operations and business enterprises including:

- the timing and cost, which can be considerable, of the construction of mining and processing facilities:
- the availability and costs of skilled labour and mining equipment;
- the availability and cost of appropriate smelting and/or refining arrangements;
- the need to obtain necessary environmental and other governmental approvals and permits, and the timing of those approvals and permits; and
- the availability of funds to finance construction and development activities.

It is common in new mining operations to experience unexpected problems and delays during construction, development and mine start-up. In addition, delays in the commencement of mineral production often occur. Accordingly, there are no assurances that the Company's activities will result in profitable mining operations or that the Company will successfully establish mining operations or profitably produce metals at the Dumont Nickel Project, at any of its other properties, or at all.

The Company believes that it has sufficient funds to meet its obligations and planned expenditures for the ensuing twelve months as they fall due. In assessing whether the going concern assumption contained in the Company's financial statements for the year ended December 31, 2013 is appropriate, the Company takes into account all available information about the future, which is at least, but not limited to, twelve months from the end of the reporting period. The Company's ability to continue future operations beyond December 31, 2014 is dependent on the Company's ability to secure additional financing, which may be completed in a number of ways including but not limited to, a combination of strategic partnerships, joint venture arrangements, project debt finance, offtake financing, royalty financing and other capital markets alternatives. The Company will pursue such additional sources of financing, and while the Company has been successful in securing financing in the past, there can be no assurance it will be able to do so in the future or that these sources of funding or initiatives will be available to the Company or that they will be available on terms which are acceptable to the Company.

# **Drilling and Production Risks Could Adversely Affect the Mining Process**

Once mineral deposits are discovered, it can take a number of years from the initial phases of drilling until production is possible, during which the economic feasibility of production may change. Substantial time and expenditures are required to:

- obtain environmental and other licenses;
- construct mining, processing facilities and infrastructure; and
- obtain the nickel or extract the minerals from the nickel.

If a project proves not to be economically feasible by the time the Company is able to exploit it, the Company may incur substantial write-offs. In addition, potential changes or complications involving metallurgical and other technological processes arising during the life of a project may result in cost overruns that may render the project not economically feasible.

# The Price of Nickel, Which is Actively Traded on World Commodity Exchanges, is Subject to Significant Volatility

The ability of the Company to develop the Dumont Nickel Project and the future profitability of the Company is directly related to the market price of nickel. Nickel is sold in an active global market and traded on commodity exchanges, such as the LME and the New York Mercantile Exchange. Nickel prices are subject to significant fluctuations and are affected by many factors, including actual and expected macroeconomic and political conditions, levels of supply and demand, the availability and costs of substitutes, inventory levels, investments by commodity funds and other actions of participants in the commodity markets. Nickel prices have fluctuated widely, particularly in recent years. Consequently, the economic viability of any of Royal Nickel's projects cannot be accurately predicted and may be adversely affected by fluctuations in nickel prices.

# Increased Availability of Alternative Nickel Sources or Substitution of Nickel from End Use Applications Could Adversely Affect the Company's Nickel Project

Demand for primary nickel may be negatively affected by the direct substitution of primary nickel with other materials in current applications. In response to high nickel prices or other factors, producers and consumers of stainless steel may partially shift from stainless steel with high nickel content to stainless steels with either lower nickel content or no nickel content, which would adversely affect demand for nickel.

# Limited Mining Properties and Acquisition of Additional Commercially Mineable Mineral Rights

The Dumont Nickel Project accounts for all of the Company's mineral resources and reserves and the potential for the future generation of revenue. Any adverse development affecting the progress of the Dumont Nickel Project such as, but not limited to, obtaining financing on commercially suitable terms, hiring suitable personnel and mining contractors or securing supply agreements on commercially suitable terms, may have a material adverse effect on the Company's financial performance and results of operations.

# **Uncertainty in the Estimation of Mineral Reserves and Mineral Resources**

The figures for mineral reserves and mineral resources contained in this AIF are estimates only and no assurance can be given that the anticipated tonnages and grades will be achieved, that the indicated level of recovery will be realized or that mineral reserves could be mined or processed profitably. Actual reserves may not conform to geological, metallurgical or other expectations, and the volume and grade of ore recovered may be below the estimated levels. There are numerous uncertainties inherent in estimating mineral reserves and mineral resources, including many factors beyond the Company's control. Such estimation is a subjective process, and the accuracy of any reserve or resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. In addition, there can be no assurance that nickel recoveries in small scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production. Lower market prices, increased production costs, reduced recovery rates and other factors may result in a revision of its reserve estimates from time to time or may render the Company's reserves uneconomic to exploit. Reserve data are not indicative of future results of operations. If the Company's actual mineral reserves and mineral resources are less than current estimates or if the Company fails to develop its resource base through the realization of identified mineralized potential, its results of operations or financial condition may be materially and adversely affected. Evaluation of reserves and resources occurs from time to time and they may change depending on further geological interpretation, drilling results and metal prices. The category of inferred resource is the least reliable resource category and is subject to the most variability.

# **Uncertainty Relating to Mineral Resources**

Mineral resources that are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty which may attach to inferred mineral resources, there is no assurance that inferred mineral resources will be upgraded to proven and probable mineral reserves as a result of continued exploration.

# Mining Involves a High Degree of Risk

Mining operations involve a high degree of risk. The Company's operations will be subject to all the hazards and risks normally encountered in the exploration, development and production of base or precious metals, including, without limitation, environmental hazards, unusual and unexpected geologic formations, seismic activity, rock bursts, pit-wall failures, cave-ins, flooding, fires, hazardous weather conditions and other conditions involved in the drilling and removal of material, any of which could result in damage to, or destruction of, mines and other producing facilities, damage to life or property, environmental damage and legal liability. The Company's development activities may be further hampered by additional hazards, including, without limitation, equipment failure, which may result in environmental pollution and legal liability.

#### **Uninsurable Risks**

In the course of development of mineral properties, certain risks, and in particular, unexpected or unusual geological operating conditions including rock bursts, cave-ins, fires, flooding and earthquakes may occur. It is not always possible to fully insure against such risks and the Company may decide not to take out insurance against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate the funds available for acquisition of mineral prospects or exploration, increase costs to the Company, reduce future profitability, if any, and/or lead to a decline in the value of the Common Shares.

# **Environmental and Safety Regulations and Risks**

Environmental laws and regulations may affect the operations of the Company. These laws and regulations set various standards regulating certain aspects of health and environmental quality, including air and water quality, mine reclamation, solid and hazardous waste handling and disposal and the promotion of occupational health and safety. These laws provide for penalties and other liabilities for the violation of such standards and establish, in

certain circumstances, obligations to rehabilitate current and former facilities and locations where operations are or were conducted. The permission to operate can be withdrawn temporarily where there is evidence of serious breaches of health and safety standards, or even permanently in the case of extreme breaches. Significant liabilities could be imposed on Royal Nickel for damages, clean-up costs or penalties in the event of certain discharges into the environment, environmental damage caused by previous owners of acquired properties or noncompliance with environmental laws or regulations. To the extent that the Company becomes subject to environmental liabilities, the satisfaction of any such liabilities would reduce funds otherwise available to the Company and could have a material adverse effect on the Company. The Company intends to minimize risks by taking steps to ensure compliance with environmental, health and safety laws and regulations and operating to applicable environmental standards. There is a risk that environmental laws and regulations may become more onerous, making the Company's operations more expensive.

#### **Mineral Titles**

Although Royal Nickel has obtained a title opinion for the Dumont Nickel Project, there is no guarantee that title to such mineral property interests will not be challenged or impugned and no assurances can be given that there are no title defects affecting its mineral properties. Royal Nickel's mineral property interests may be subject to prior unregistered agreements or transfers and title may be affected by undetected defects. The Company has not conducted surveys of the claims in which it holds direct or indirect interests; therefore, the precise area and location of such items may be in doubt. There may be valid challenges to the title of the mineral property interests which, if successful, could impair the exploration, development and/or operations of the Dumont Nickel Project.

# **Permitting Risks**

The Company has yet to apply for all of the permits and related authorizations required to exploit, develop and operate the Dumont Nickel Project. The process of permitting will involve the filing of a number of studies and applications with federal and provincial authorities relating to, amongst other things, the construction and operation of a plant and related facilities, a water pipeline and a power line. The Company is still in the preliminary stages of the permitting process and there can be no assurance that all of the necessary permits and approvals will be forthcoming.

#### Land Reclamation

Although they vary, depending on location and the governing authority, land reclamation requirements are generally imposed on mineral exploration companies, as well as companies with mining operations, in order to minimize long term effects of land disturbance. Reclamation may include requirements to control dispersion of potentially deleterious effluents and to reasonably re-establish pre-disturbance land forms and vegetation. In order to carry out reclamation obligations imposed on the Company, the Company must allocate financial resources that might otherwise be spent on other programs.

#### **First Nations**

Royal Nickel is committed to working in partnership with our local communities and First Nations in a manner which fosters active participation and mutual respect. The Company regularly consults with communities proximal to the Company's exploration and development activities to advise them of plans and answer any questions they may have about current and future activities. In fact, Royal Nickel has entered into a memorandum of understanding with the local Algonquin Conseil de la Première Nation Abitibiwinni, which will serve as a framework to govern the relationship between the Company and the Abitibiwinni group in relation to the Dumont Nickel Project. However, First Nations in Quebec are increasingly making lands and rights claims in respect of existing and prospective resource projects on lands asserted to be First Nation traditional or treaty lands. Should a First Nation make such a claim in respect of the Dumont Nickel Project and should such claim be resolved by government or the courts in favour of the First Nation, it could materially adversely affect the business of Royal Nickel.

#### Competition

The mining industry is intensely competitive in all its phases. There is a high degree of competition for the discovery and acquisition of properties considered to have commercial potential. Royal Nickel competes for the acquisition of mineral properties, claims, leases and other mineral interests as well as for the recruitment and retention of qualified employees with many companies possessing greater financial resources and technical facilities than Royal Nickel. The competition in the mineral exploration and development business could have an adverse effect on Royal Nickel's ability to acquire suitable properties or prospects for mineral exploration and development in the future.

# Management

The Company's prospects depend in part on the ability of its executive officers and senior management to operate effectively, both independently and as a group. Investors must be willing to rely to a significant extent on management's discretion and judgment. The success of Royal Nickel depends to a large extent upon its ability to retain the services of its senior management and key personnel. The loss of the services of any of these persons could have a materially adverse effect on Royal Nickel's business and prospects. There is no assurance Royal Nickel can maintain the services of its directors, officers or other qualified personnel required to operate its business.

#### **Government Regulations**

Exploration and development activities and mining operations are subject to laws and regulations governing health and worker safety, employment standards, environmental matters, mine development, prospecting, mineral production, exports, taxes, labour standards, reclamation obligations and other matters. It is possible that future changes in applicable laws, regulations, agreements or changes in their enforcement or regulatory interpretation could result in changes in legal requirements or in the terms of permits and agreements applicable to the Company or its properties which could have a material adverse impact on the Company's current objectives. Where required, obtaining necessary permits and licences can be a complex, time consuming process and there can be no assurance that required permits will be obtainable on acceptable terms, in a timely manner, or at all. The costs and delays associated with obtaining permits and complying with these permits and applicable laws and regulations could stop or materially delay or restrict the Company from proceeding with the development of a mine.

Any failure to comply with applicable laws and regulations or permits, even if inadvertent, could result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing interruption or closure of exploration, development or mining operations or material fines and penalties, including, but not limited to, corrective measures requiring capital expenditures, installation of additional equipment, remedial actions or other liabilities. Parties engaged in mining operations or in the exploration or development of mineral properties may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

In addition, amendments to current laws and regulations governing operations or more stringent implementation thereof could have a substantial adverse impact on the Company and cause increases in exploration expenses, capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties. Recent increases to mining duties/ royalties by the Quebec Minister of Natural Resources are reflected in the Feasibility Study.

# Flow-Through Share Tax Issues

From time to time, the Company agrees to incur, in respect of Common Shares issued by it from treasury and designated as "flow-through shares" ("Flow-Through Shares") under the *Income Tax Act* (Canada) (the "Tax Act"), Canadian exploration expenses ("CEE") in an amount usually equal to the gross proceeds raised by the Company from such issuance and to renounce CEE in accordance with the Tax Act. For certain purchasers of Flow-Through Shares said CEE are also partially included under the *Taxation Act* (Québec) (the "Québec Tax Act") in the exploration base relating to "certain Québec exploration expenses" and the exploration base relating to "certain Québec surface mining or oil and gas exploration expenses" (the "Eligible Québec Expenses") and the Company

agrees to renounce the Eligible Québec Expenses to such purchasers of Flow-Through Shares in accordance with the Québec Tax Act. No assurance can be given that the Minister of National Revenue (Canada) and the ministre du Revenu (Québec) will agree with the Company's characterization of the expenditures incurred. A change in the characterization of the expenditures may affect the Company's ability to renounce CEE and, where applicable, Eligible Québec Expenses to the holders of Flow-Through Shares or the holders' ability to claim tax deductions.

#### Other Tax Issues

The Company is subject to income and mining taxes in some jurisdictions. Significant judgement is required in determining the total provision for income taxes. Refundable tax credits for mining exploration expenses for the current and prior periods are measured at the amount expected to be recovered from the tax authorities as at the balance sheet date. Uncertainties exist with respect to the interpretation of tax regulations, including mining duties for losses and refundable tax credits, and the amount and timing of collection. The determination of whether expenditures qualify for exploration tax credits requires significant judgment involving complex technical matters which makes the ultimate tax collection uncertain. As a result, there can be a material difference between the actual tax credits received following final resolution of these uncertain interpretation matters with the relevant tax authority and the recorded amount of tax credits. This difference would necessitate an adjustment to tax credits for mining exploration expenses in future periods. The resolution of issues with the relevant tax authority can be lengthy to resolve. As a result, there can be a significant delay in collecting tax credits for mining exploration expenses. Tax credits for mining exploration expenses that are expected to be recovered beyond one year are classified as noncurrent assets. The amounts recognized in the financial statements are derived from the Company's best estimation and judgment as described above. However, the inherent uncertainty regarding the ultimate approval by the relevant tax authority means that the ultimate amount collected in tax credits and timing thereof could differ materially from the accounting estimates and therefore impact the Company's balance sheet and cash flow.

#### **Conflicts of Interest**

Certain of the directors and officers of Royal Nickel may also serve as directors and/or officers of other companies involved in natural resource exploration and development and consequently there exists the possibility for such directors and officers to be in a position of conflict.

#### **Currency Fluctuations**

The operations of the Company will be subject to currency fluctuations and such fluctuations may materially affect the financial position and results of the Company. The Company is subject to the risks associated with the fluctuation of the rate of exchange of the Canadian dollar and the United States dollar. The Company does not currently take any steps to hedge against currency fluctuations although it may elect to hedge against the risk of currency fluctuations in the future. There can be no assurance that steps taken by the Company to address such currency fluctuations will eliminate all adverse effects of currency fluctuations and, accordingly, the Company may suffer losses due to adverse foreign currency fluctuations.

# **Dividend History or Policy**

No dividends on the Common Shares have been paid by Royal Nickel to date. Royal Nickel anticipates that for the foreseeable future it will retain future earnings and other cash resources for the operation and development of its business. Payment of any future dividends will be at the discretion of Royal Nickel's Board after taking into account many factors, including Royal Nickel's operating results, financial condition and current and anticipated cash needs.

#### **Independent Contractors**

Royal Nickel's success also depends, to a significant extent, on the performance and continued service of independent contractors. Royal Nickel will contract the services of professional drillers and others for exploration, environmental, construction and engineering services. Poor performance by such contractors or the loss of such services could have a material and adverse effect on Royal Nickel and its business and results of operations and could result in failure to meet business objectives.

#### **Global Economic Conditions**

Global economic conditions in recent years have been characterized by volatility and market turmoil and access to financing has been negatively impacted. This may impact the Company's ability to obtain financing on terms acceptable to the Company. In addition, global economic conditions may cause decreases in asset values, which may result in impairment losses. If such volatility and market turmoil continue, the Company's business and financial condition could be adversely affected.

#### **Risks Relating to Common Shares**

#### Liquidity of Common Shares

The Company's ability to put the Dumont Nickel Project into commercial production will be dependent upon a number of factors including the ability to obtain financing. If the Company is unable to put the Dumont Nickel Project into commercial production, any investment in the Company may be lost. In such event, the probability of resale of the Common Shares would be diminished.

# The Company's Shares May Experience Price Volatility

Securities markets have a high level of price and volume volatility, and the market price of securities of many companies have experienced wide fluctuations in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. Factors unrelated to the financial performance or prospects of the Company include macroeconomic developments in North America and globally, and market perceptions of the attractiveness of particular industries. The Company's Common Share price, financial condition and results of operations are all also likely to be significantly affected by short-term changes in the nickel market. There can be no assurance that continual fluctuations in metal prices will not occur. As a result of any of these factors, the market price of the Common Shares at any given point in time may not accurately reflect the Company's long-term value.

#### LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Royal Nickel is not a party to any legal proceedings material to it, or of which any of its property is the subject matter, and no such proceedings are known to be contemplated. Royal Nickel was not subject to any regulatory actions during the preceding financial year.

# INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as disclosed in this AIF, no director or officer of Royal Nickel or any shareholder holding, of record or beneficially, directly or indirectly, more than 10% of the issued Common Shares, or any of their respective associates or affiliates, had any material interest, directly or indirectly, in any material transaction with Royal Nickel within the three most recently completed financial years or in any proposed transaction which has materially affected or would materially affect Royal Nickel.

# REGISTRAR AND TRANSFER AGENT

Royal Nickel's registrar and transfer agent for its Common Shares is Computershare Investor Services Inc. at 100 University Avenue, 8th Floor, Toronto, Ontario M5J 2Y1.

# **EXPERTS**

Information of an economic (including economic analysis), scientific or technical nature regarding the Dumont Nickel Project included in this AIF is based upon the Feasibility Study prepared by Ausenco Solutions Canada Inc., Ausenco Services Pty Ltd., SRK Consulting (Canada) Inc., Snowden Mining Industry Consultants Inc., Golder Associates Ltd. and GENIVAR Inc. (now, WSP Global Inc.) and their respective employees, and an independent consultant. The authors of the Feasibility Study are L.P. Staples, P. Eng., J.M. Bowen, MAusIMM (CP), K.C. Scott,

P. Eng. S.B. Bernier, P.Geo., C.C. Scott, P. Eng., J.F. Duncan, P. Eng., B.A. Murphy, FSAIMM, D.A. Warren, Eng., V.J. Bertrand, géo. and S. Latulippe, Eng., each of whom is "independent" of Royal Nickel and a "Qualified Person", as defined in NI 43-101.

As of the date of this AIF, the aforementioned individuals, beneficially owned, directly or indirectly, less than 1% of the outstanding Common Shares.

The auditors of Royal Nickel are PricewaterhouseCoopers LLP, Chartered Accountants, 1250, Blvd. René-Lévesque Ouest Suite 2800 Montréal, Quebec H3B 2G4 . PricewaterhouseCoopers LLP reports that they are independent from Royal Nickel within the meaning of the Code of Ethics of the *Ordre des comptables agréés du Quebec*.

#### MATERIAL CONTRACTS

Except for contracts made in the ordinary course of business, the following are the only material contracts entered into by the Company which are currently in effect and considered to be currently material:

- 1. the Rights Plan (see "Capital Structure Rights Plan"),
- 2. the RQ Investment Agreement,
- 3. the Red Kite NSR Agreement, and
- 4. the HQ Agreement.

#### ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com.

Additional information, including officers' remuneration and indebtedness, and principal holders of the Company's securities will be contained in the Company's information circular for its most recent annual meeting of shareholders involving the election of directors. Additional financial information is provided in the Company's financial statements and management's discussion and analysis for the 12-month period ended December 31, 2013.

# **EXCHANGE RATE INFORMATION**

The closing, high, low and average exchange rates for one U.S. dollar (based on the noon rates) expressed in Canadian dollars for each of the three years ended December 31, 2013, 2012 and 2011, as reported by the Bank of Canada, were as follows.

|         |        | 2012<br>(\$) | 2011<br>(\$) |
|---------|--------|--------------|--------------|
| Closing | 1.0636 | 0.9949       | 1.0170       |
| High    | 1.0697 | 1.0418       | 1.0604       |
| Low     | 0.9839 | 0.9710       | 0.9449       |
| Average | 1.0299 | 0.9996       | 0.9891       |

As of the date of this AIF, the exchange rate for one US\$ expressed in Canadian dollars, based upon noon rates provided by the Bank of Canada was \$1.1140.

# METRIC CONVERSION TABLE

For ease of reference, the following conversion factors are provided:

| Metric Unit  | U.S. Measure          | U.S. Measure     | Metric Unit       |
|--------------|-----------------------|------------------|-------------------|
| 1 hectare    | 2.471 acres           | 1 acre           | 0.4047 hectares   |
| 1 metre      | 3.2881 feet           | 1 foot           | 0.3048 metres     |
| 1 kilometre  | 0.621 miles           | 1 mile           | 1.609 kilometres  |
| 1 gram       | 0.032 troy ounces     | 1 troy ounce     | 31.1 grams        |
| 1 kilogram   | 2.205 pounds          | 1 pound          | 0.4541 kilograms  |
| 1 tonne      | 1.102 short tons      | 1 short ton      | 907 tonnes        |
| 1 gram/tonne | 0.029 troy ounces/ton | 1 troy ounce/ton | 34.28 grams/tonne |

#### GLOSSARY OF TECHNICAL TERMS

In this AIF, the following terms will have the meanings set forth below, unless otherwise indicated. Words importing the singular include the plural and vice versa and words importing any gender include all genders:

"assay" is an analysis to determine the presence, absence and quantity of one or more elements.

"awaruite" is a naturally occurring alloy of nickel and iron with a composition from Ni<sub>2</sub>Fe to Ni<sub>3</sub>Fe. The formula Ni<sub>2</sub>Fe is used to represent this natural variability.

"basalt" is dark-colored mafic igneous rocks, commonly extrusive but locally intrusive (i.e. as dikes), composed chiefly of calcic plagioclase and clinopyroxene.

"brucite" is the mineral form of magnesium hydroxide with a composition of Mg(OH)<sub>2</sub>.

"cash costs" are the cash costs for mining, milling and concentrating, leaching, solution pumping, solvent extraction and electrowinning, on-site administration and general expenses, any off-site services which are essential to the operation, smelting (including toll smelting charges if applicable), refining (including toll refining charges if applicable), concentrate freight costs, marketing costs, and property and severance taxes paid to state/federal agencies that are not profit related.

"chrysotile" is an asbestiform sub-group within the serpentine group of minerals.

"clinopyroxene" is a group name for a number of pyroxene minerals that have similar crystal forms. They are silicates commonly containing aluminum, magnesium, calcium, and iron in their crystal structures.

"CIM" means the Canadian Institute of Mining, Metallurgy and Petroleum.

"CIM Standards" are the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM from time to time.

"cm" means centimetre.

"Co" is the chemical symbol for cobalt.

"coalingite" is a mineral weathering product of brucite with a composition of Mg<sub>10</sub>Fe<sub>23</sub>+[(OH)<sub>24</sub>|CO<sub>3</sub>]<sub>2</sub>H<sub>2</sub>O

"core" is the long cylindrical piece of rock brought to surface by diamond drilling.

"core sample" is one or several pieces of whole or split parts of core selected as a sample for analysis or assay.

"Cu" is the chemical symbol for copper.

"cut-off" means the grade above which material is considered significant and below which material is not considered significant and is excluded from resource and reserve estimates.

"dilution" means non-ore material included by mining process and fed to mill.

"disseminated sulphide" is a sulphide deposit, in which the sulphide is non-contiguous and may range from less than 1% up to about 10% of the total rock. The sulphide occurs as individual crystals or small crystalline masses in the interstices of other non-sulphide minerals composing the rock.

"dunite" is an igneous, plutonic rock, of ultramafic composition, with coarse grained or phaneritic texture. The mineral assemblage is typically greater than 90% olivine with minor pyroxene and chromite. Dunite is the olivine-rich end-member of the peridotite group of mantle derived rocks.

"fault" means a break in the Earth's crust caused by tectonic forces which have moved the rock on one side with respect to the other.

"feasibility study" means a comprehensive study of a mineral deposit in which all geological, engineering, legal, operating, economic, social, environmental and other relevant factors are considered in sufficient detail that it could reasonably serve as the basis for a final decision by a financial institution to finance the development of the deposit for mineral production.

"footwall" means the rock on the underside of a vein or mineral deposit.

"g/t" is grams per metric tonne.

"gabbro" is a coarse grained intrusive igneous rock composed of greenish white feldspar and pyroxene.

"geochemical" means prospecting techniques which measure the content of specified metals in soils and rocks for the purpose of defining anomalies for further testing.

"geophysical" means prospecting techniques which measure the physical properties (magnetism, conductivity, density, etc.) of rocks and define anomalies for further testing.

"ha" is hectare.

"hanging wall" is the rock on the upper side of a vein or mineral deposit.

"heazlewoodite" is a nickel sulphide mineral found in serpentinized dunite with the composition Ni<sub>3</sub>S<sub>2</sub>.

"host rock" means the rock surrounding an ore deposit.

"HPAL" means high pressure acid leach.

"igneous rock" means a rock formed by volcanic or magmatic processes.

"indicated mineral resource" means that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

"inferred mineral resource" means that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

"IRR" means internal rate of return.

"**km**" means kilometre.

"kt" mean kilo-tonne.

"kWh" means kilowatt-hour.

"LIDAR" means a light detection and tanging and optical remote sensing technology that measures properties of scattered light to find range and/or other information of a distant target. The prevalent method to determine distance to an object or surface is to use laser pulses. Like the similar radar technology, which uses radio waves, the range to

an object is determined by measuring the time delay between transmission of a pulse and detection of the reflected signal.

"lbs" means pounds.

"LOM" means life of mine.

"m" means metre.

"magmatic" means of or related to magma, which is a subterranean molten rock, capable of being extruded at the surface as lava or intruded into rocks in the earth's crust.

"magnetite" is a ferrimagnetic mineral with composition Fe<sub>3</sub>O<sub>4</sub>.

"massive sulphide" means a sulphide deposit in which the sulphide is contiguous and usually forms more than 80% of the rock mass which may contain non-sulphidic rock inclusions.

"measured mineral resource" is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

"millerite" is a nickel sulphide mineral, NiS. It is brassy in colour and has an acicular habit, often forming radiating masses and furry aggregates.

"mineral resource" means a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge.

"mineral reserve" means the economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes diluting materials and allowances for losses that may occur when the material is mined.

"MgO" is the chemical symbol for magnesium oxide.

"Mt" means million tonnes.

"MW" means megawatt.

"NSR" or "net smelter returns" means a payment made by a producer of metals based on the value of the gross metal production from the property, less deduction of certain limited costs including smelting, refining, transportation and insurance costs.

"Ni" is the chemical symbol for nickel.

"NPV" means net present value.

"NQ" is a diamond core drill with diametre of 47.6 mm.

"olivine" is an olive green magnesium iron silicate mineral common in mafic and ultramafic rocks with a composition of (Mg,Fe)<sub>2</sub>SiO<sub>4</sub>.

"**Pd**" is the chemical symbol for palladium.

"Pt" is the chemical symbol for platinum.

"pentlandite" is a common iron-nickel sulphide mineral with the composition (Fe,Ni)<sub>9</sub>S<sub>8</sub>.

"peridotite" means a general term for intrusive ultramafic igneous rocks consisting of olivine and lacking felspar.

"**PGE**" is platinum group element.

"ppb" means parts per billion.

"ppm" means parts per million.

"PO" is a diamond core drill with diameter of 85 mm.

"preliminary feasibility study" means a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established, and which, if an effective method of mineral processing has been determined, includes a financial analysis based on reasonable assumptions of technical, engineering, operating, economic factors and the evaluation of other relevant factors which are sufficient for a qualified person, acting reasonably, to determine if all or part of the mineral resource may be classified as a mineral reserve.

"probable mineral reserve" means the economically mineable part of an indicated and, in some circumstances, a measured mineral resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

"proven mineral reserve" means the economically mineable part of a measured mineral resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

"pyrite" is a common iron sulphide mineral FeS<sub>2</sub>.

"pyroxene" is a group of chiefly magnesium-iron minerals including diopside, hexenbergite, augite pigeonite, and many other rock-forming minerals.

"pyroxenite" is an ultramafic igneous rock consisting essentially of minerals of the pyroxene group, such as augite and diopside, hypersthene, bronzite or enstatite.

"pyrrhotite" is an iron sulphide FeS.

"Qualified Person" means an individual who: (a) is an engineer or geoscientist with a university degree, or equivalent accreditation, in an area of geoscience, or engineering, relating to mineral exploration or mining; (b) has at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice; (c) has experience relevant to the subject matter of the mineral project and the technical report; (d) is in good standing with a professional association; and (e) in the case of a professional association in a foreign jurisdiction, has a membership designation that (i) requires attainment of a position of responsibility in their profession that requires the exercise of independent judgment; and (ii) requires (A) a favourable confidential peer evaluation of the individual's character, professional judgement, experience, and ethical fitness; or (B) a recommendation for

membership by at least two peers, and demonstrated prominence or expertise in the field of mineral exploration or mining.

"S" is the chemical symbol for sulphur.

"serpentine" is a group of minerals the composition of which includes magnesium, iron, hydroxide and silicate.

"serpentinized" is a product of hydrated olivine.

"SRMS" means standard reference materials samples.

"STP" means standard test procedures.

"sulphides" means minerals that are compounds of sulphur together with another element (such as iron, copper, lead and zinc).

"tailings" means finely ground material remaining from ore when metal is removed.

"tailings dam" means an enclosed area to which slurry is transported and in which the solids settle while the liquids may be withdrawn.

"tpd" means tonnes per day.

"ultramafic" is igneous rocks consisting essentially of ferro magnesian minerals with trace quartz and feldspar.

"veins" means a fissure, faults or crack in rock filled by minerals that have travelled upwards from some deep source.

"VTEM" means Versatile Time Domain Electromagnetics — a type of geophysical survey used to explore for massive sulphide deposits.

# APPENDIX A ROYAL NICKEL CORPORATION AUDIT COMMITTEE CHARTER

#### 1.0 PURPOSE

The Audit Committee (the "Committee") of Royal Nickel Corporation (the "Company") has been established by the Board of Directors of the Company (the "Board") for the purposes of assisting the Board in its oversight and evaluation of:

1.1 Auditor Qualification and Independence

The external auditor's qualifications and independence.

1.2 Auditor Performance and Audit Functions

The external auditor's performance and external audit functions.

1.3 Financial Statements and Related Disclosure

The quality and integrity of the Company's financial statements and related disclosure.

1.4 Internal and Disclosure Controls and Reporting

The Company's internal controls over financial reporting, and disclosure controls and procedures and public disclosure with respect to financial information.

1.5 Legal and Regulatory Compliance

The Company's compliance with legal and regulatory requirements with respect to financial reporting.

#### 2.0 COMPOSITION

# 2.1 Members

The Committee shall consist of as many members as the Board shall determine, but in any event, not fewer than three (3) members. The Board shall appoint the members of the Committee annually.

# 2.2 Qualifications

- 2.2.1 Each member of the Committee shall be an independent director of the Company within the meaning of National Instrument 52-110 *Audit Committees*.
- 2.2.2 Each member of the Committee shall be financially literate, meaning each member, at the time of his/her appointment, must be able to read and understand financial statements that represent a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements.

#### 2.3 Chair

Unless a Chair is elected by the full Board, the members of the Committee may designate a Chair by majority vote of the full Committee.

# 2.4 Removal and Replacement

Any member of the Committee may be removed or replaced at any time by the Board and shall cease to be a member of the Committee on ceasing to be an independent director. The Board may fill vacancies on the Committee by election from among the Board. If, and whenever, vacancies shall exist on the Committee, the remaining members may exercise all its powers so long as a quorum remains.

#### 3.0 OPERATIONS

# 3.1 Meetings

The Chair of the Committee, in consultation with the Committee members, shall determine the schedule and frequency of the Committee meetings, provided that the Committee shall meet at least four (4) times per year. The Committee shall meet within forty-five (45) days following the end of each of the first three financial quarters and shall meet within ninety (90) days following the end of the financial year.

#### 3.2 Independent Meetings

At each meeting of the Committee, the Committee members shall meet independently, with only members of the Committee, for at least a portion of the meeting. The Committee shall meet separately with the external auditor, at least annually. The Committee shall meet separately with management quarterly or as frequently as necessary or desirable.

# 3.3 Quorum

Quorum for the transaction of business at any meeting of the Committee shall be a majority of the number of members of the Committee.

#### 3.4 Notice

Meetings of the Committee may be called by any member of the Committee, the Chairman of the Board, the CEO or CFO of the Company. Not less than twenty-four (24) hours notice shall be given, provided that notice may be waived by all members of the Committee.

#### 3.5 Agenda

The Chair of the Committee, with the assistance of the CFO, shall develop and set the Committee's agenda, in consultation with other members of the Committee, the Board and management. The agenda and information concerning the business to be conducted at each Committee meeting shall be, to the extent practical, communicated to members of the Committee sufficiently in advance of each meeting to permit meaningful review.

# 3.6 Report to the Board

The Committee shall report regularly, which shall be at least quarterly, to the entire Board. The Chair of the Committee shall prepare and deliver the report to the Board. The Committee's report by the Chair may be a verbal report delivered to the Board at a duly called Board meeting.

#### 3.7 Assessment of Charter

The Committee shall review and reassess the adequacy of this Charter as required and recommend any proposed changes to the Board for approval.

#### 4.0 RESPONSIBILITIES

- 4.1 Auditor Qualification and Independence
  - 4.1.1 The Committee shall be directly responsible for overseeing the work of the external auditor for the purpose of issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting.
  - 4.1.2 The Committee shall review and evaluate the external auditor's independence, experience, qualification and performance and determine whether the external auditor should be appointed or re-appointed and make a recommendation to the Board of the external auditor to be nominated for appointment or re-appointment by the shareholders.
  - 4.1.3 The Committee shall pre-approve or approve, if permitted by law, the appointment of the external auditor to provide any audit and audit-related services or non-prohibited non-audit services and, if desired, establish detailed policies and procedures for the pre-approval of audit and audit-related services and non-prohibited non-audit services by the external auditor, including procedures for the delegation of authority to provide such approval to one or more members of the Committee.
  - 4.1.4 The Committee shall review the terms of the external auditor's engagement and the appropriateness and reasonableness of the proposed audit fees.
  - 4.1.5 The Committee shall obtain and review with the lead audit partner of the external auditor, annually or more frequently as the Committee considers appropriate, a report by the external auditor:
    - (a) describing the external auditor's internal quality control procedures;
    - (b) describing any material issues raised by the most recent internal quality control review, or peer review, of the external auditor, or by any inquiry, review or investigation by governmental, regulatory or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the external auditor, and any steps taken to deal with any issues raised in any such review;
    - (c) describing all relationships between the external auditor and the Company in order to assess the external auditor's independence; and
    - (d) confirming that the external auditor has complied with applicable laws with respect to the rotation of members of the audit engagement team.
  - 4.1.6 The Committee shall review and evaluate the lead audit partner of the external auditor.
  - 4.1.7 The Committee shall pre-approve the hiring of any partner, employee or former partner and employee of the external auditor who was a member of the Company's audit team during the preceding two fiscal years. In addition, the Committee shall pre-approve the hiring of any partner, employee or former partner or employee of the external auditor within the preceding two fiscal years for senior positions within the Company, regardless of whether that person was a member of the Company's audit team.

#### 4.2 Financial Statements and Related Disclosure

- 4.2.1 The Committee shall meet with the external auditor as frequently as the Committee feels is appropriate to fulfill its responsibilities, which will not be less frequently than annually, to discuss any items of concern to the Committee or the external auditor, including:
  - (a) planning and staffing of the audit;
  - (b) any material written communication between the external auditor and management;
  - (c) whether or not the auditor is satisfied with the quality and effectiveness of financial reporting procedures and systems;
  - (d) whether or not the external auditor has received the full co-operation of management;
  - (e) the external auditor's views as to management's competency in preparing the Company's financial statements;
  - (f) the items required to be communicated to the Committee in accordance with the generally accepted auditing standards;
  - (g) all critical accounting policies and practices to be used by the Company;
  - (h) all material alternative treatments of financial information within International Financial Reporting Standards (IFRS) that have been discussed with management, ramifications of the use of these alternative disclosures and treatments and the treatment preferred by the external auditor; and
  - (i) any difficulties encountered in the course of the audit work, any restrictions imposed on the scope of activities or access to requested information, any significant disagreements with management and management's response.
- 4.2.2 The Committee shall review and, where appropriate, recommend for approval by the Board, the following:
  - (a) audited annual financial statements;
  - (b) interim financial statements;
  - (c) annual and interim management discussion and analysis of financial condition and results of operation;
  - (d) annual and interim news releases respecting financial condition and results of operation;
  - (e) all other audited or unaudited financial information contained in public disclosure documents;
- 4.2.3 The Committee shall review the effect of regulatory and accounting initiatives as well as off-balance sheet structures on the Company's financial statements.
- 4.2.4 The Committee shall review the effectiveness of management's policies and practices concerning financial reporting and any proposed changes in major accounting policies.

- 4.2.5 The Committee shall review with management, and any outside professionals as the Committee considers appropriate, important trends and developments in financial reporting practices and requirements and their effect on the Company's financial statements.
- 4.2.6 The Committee shall review with management any related party transactions and ensure such related party transactions are appropriately disclosed.

#### 4.3 Internal and Disclosure Controls and Reporting

- 4.3.1 The Committee shall review the adequacy of the internal controls over financial reporting that has been adopted by the Company and any special steps adopted in light of significant deficiencies or material weaknesses.
- 4.3.2 The Committee shall review disclosures made to the Committee by the Company's CEO and CFO during their certification process for quarterly and annual securities law filings about any significant deficiencies or material weaknesses in the design or operation of the Company's internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information or disclosure controls, and any fraud involving management or other employees who have a significant role in the Company's internal control over financial reporting or disclosure controls.
- 4.3.3 The Committee shall review and confirm with management that material financial information about the Company that is required to be disclosed under applicable law and stock exchange rules is disclosed, and review the public disclosure of financial information extracted or derived from the Company's financial statements.
- 4.3.4 The Committee shall review and discuss with management the Company's major financial risk exposures and the steps management has taken to monitor and control such exposures.

#### 4.4 Legal and Regulatory Compliance

- 4.4.1 The Committee shall, as it determines appropriate, obtain reports from management that the Company is in compliance with applicable legal requirements and shall review with management any correspondence with regulators or governmental agencies and any published reports which raise material issues regarding the Company's financial reporting of which the Committee is made aware.
- 4.4.2 The Committee shall establish procedures for:
  - (a) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters; and
  - (b) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.
- 4.4.3 The Committee shall review any required disclosure in public documents with respect to the Committee and its functions, including the disclosure required in the Annual Information Form under National Instrument 52-110.

The foregoing list of duties is not exhaustive, and the Committee may, in addition, perform such other functions as may be necessary or appropriate for the performance of its oversight function.

# 5.0 AUTHORITY

# 5.1 Delegation

The Committee has the power to delegate its authority and duties to a subcommittee or individual members of the Committee, as it deems appropriate.

#### 5.2 Advisors

The Committee may retain, and determine the fees of, independent counsel and other advisors, in its sole discretion.

#### 5.3 Access to Records and Personnel

In discharging its oversight role, the Committee shall have full access to all Company books, records, facilities and personnel.

# 5.4 Clarification of Audit Committee's Role

The Committee's responsibility is one of oversight. It is the responsibility of the Company's management to prepare financial statements in accordance with applicable law and regulations and of the Company's external auditor to audit those financial statements. Therefore, each member of the Committee shall be entitled to rely, to the fullest extent permitted by law, on the integrity of those persons and organizations within and outside the Company from whom he or she receives information, and the accuracy of the financial and other information provided to the Committee by such persons or organizations.

This Audit Committee Charter was reviewed and approved by the Board of the Company on November 8, 2013.