



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

**AMENDED AND RESTATED ANNUAL INFORMATION FORM**  
**For the year ended December 31, 2015**

**Dated as of May 6, 2016**

Note: This Amended and Restated Annual Information Form is an amended and restated version of the Annual Information Form of Royal Nickel Corporation dated as of March 31, 2016.

## TABLE OF CONTENTS

	Page
GENERAL MATTERS .....	1
FORWARD LOOKING STATEMENTS .....	1
CORPORATE STRUCTURE .....	3
GENERAL DEVELOPMENT OF THE BUSINESS.....	3
DESCRIPTION OF THE BUSINESS.....	10
THE DUMONT NICKEL PROJECT.....	19
DIVIDEND RECORD AND POLICY.....	68
CAPITAL STRUCTURE .....	68
MARKET FOR SECURITIES .....	70
PRIOR SALES .....	70
DIRECTORS AND OFFICERS.....	71
AUDIT COMMITTEE INFORMATION .....	76
RISK FACTORS .....	76
LEGAL PROCEEDINGS AND REGULATORY ACTIONS .....	86
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS.....	86
REGISTRAR AND TRANSFER AGENT.....	86
EXPERTS.....	86
MATERIAL CONTRACTS .....	86
ADDITIONAL INFORMATION.....	87
EXCHANGE RATE INFORMATION .....	87
METRIC CONVERSION TABLE.....	87
GLOSSARY OF TECHNICAL TERMS .....	88
APPENDIX A SALT LAKE MINING PTY LTD. ACQUISITION .....	A-1
APPENDIX B VMS VENTURES INC. ACQUISITION .....	B-1
APPENDIX C ROYAL NICKEL CORPORATION AUDIT COMMITTEE CHARTER.....	C-1

## GENERAL MATTERS

Unless otherwise noted or the context otherwise indicates, the terms “**Royal Nickel**”, “**Company**”, “**RNC**” and “our” refer to Royal Nickel Corporation and its subsidiaries.

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 amended and restated 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. Certain data is based on Royal Nickel’s good faith estimates derived from its review of internal data and information and its consideration of 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 at December 31, 2015, 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 “guidance”, “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:

- targeted development milestones relating to the 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, expected mine life, anticipated nickel, cobalt, platinum and palladium production, nickel, cobalt, platinum and palladium recovery, development schedule, initial capital costs, cash operating and other costs, projected IRR, sensitivity to, among other inputs, metal prices, projected payback period, availability of capital for development and overall financial analyses,
- financing sources available to continue to ramp up production at the Beta Hunt Mine and develop the Dumont Nickel Project,
- guidance for production, C1 cash cost, all-in sustaining cost and capital expenditures,
- the future financial or operating performance of the Company and its mines and projects,
- the future price of metals,
- the supply and demand for nickel and other metals,
- the estimate of the quantity and quality of mineral resources and mineral reserves,
- the realization of mineral resource and reserve estimates,
- costs of production, capital, operating and exploration expenditures,
- costs and timing of the development of planned production at the Beta Hunt Mine and 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
- 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 mining operations and development activities,
- operating and/or project delays or interruptions 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 mine or project parameters as plans continue to be refined,
- the future cost of capital to the Company,
- possible variations of ore or mineralized material 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 and gold prices,
- availability of financing,
- permitting, development and operations 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.

As at December 31, 2015, all of Royal Nickel's operating activities, other than in respect of its 68% interest in the West Raglan Nickel Project (represented by a 68% interest in True North Nickel Inc.) and its 16% interest in the Aer-Kidd Project (represented by a 16% interest in Sudbury Platinum Corporation), were carried on directly by the Company. See "General Development of the Business - Events Subsequent to December 31, 2015" regarding significant acquisitions made subsequent to December 31, 2015.

Royal Nickel is a reporting issuer in all of the Provinces of Canada. The Company's common shares ("**Common Shares**") and warrants ("**Warrants**") are listed on the Toronto Stock Exchange (the "**TSX**"), trading under the symbols "RNX" and "RNX.WT", respectively.

## GENERAL DEVELOPMENT OF THE BUSINESS

As at December 31, 2015, the Company's principal asset was the Dumont nickel project (the "Dumont Nickel Project"), a development stage nickel mine. Additionally, the Corporation holds interests in certain exploration assets. Subsequent to December 31, 2015, the Company acquired interests in two operating mines and related exploration assets - see "- Events Subsequent to December 31, 2015" for information regarding these acquired assets.

### The Dumont Nickel Project

The Dumont Nickel Project, which is strategically located in the established Abitibi mining camp, 25 km northwest of Amos, Quebec, 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 2015 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.

#### *Orion Royalty*

On July 8 2015, Royal Nickel closed a royalty and private placement transaction with Orion Mine Finance (“Orion”). RNC has received gross proceeds of US\$10 million from Orion in exchange for a 0.75% net smelter return royalty in the Dumont Nickel Project and 10 million RNC common shares (issued at \$0.395 per share, the June 26, 2015 closing price of the RNC common shares on the TSX). RNC has the right to re-purchase 50% of the royalty (0.375%) for a cash payment of US\$15 million on the 3rd, 4th or 5th anniversary of closing.

#### *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 2015, the Company continued its activities in support of the development of the Dumont Nickel Project. The work program focused on supporting the permitting process and advancing the detailed engineering for long lead items. The following were the major activities and accomplishments during the year:

- On June 22, 2015, the Company appointed Swedbank Norway (“**Swedbank**”) as advisors for the contemplated senior bond financing of approximately US\$600 million with a five year maturity for its Dumont project. Swedbank will work with RNC with respect to arranging the senior project bond finance facility and support RNC’s efforts in international markets to secure the additional equity and other capital required to complete the financing.
- On June 25, 2015, the Company received the Certificate of Authorization for the Dumont project from the Quebec Ministry of Sustainable Development, Environment and the Fight Against Climate Change. This authorization is the most significant permit for mining projects in Quebec and positions Dumont to proceed to construction upon completion of financing. .
- On July 30, 2015, the Company announced the receipt of a positive Environmental Assessment Decision for the Dumont Nickel Project from the Federal Minister of the Environment. The Minister has determined that the project is not likely to cause significant adverse environmental effects with the implementation of the mitigation measures outlined in the Comprehensive Study Report (“CSR”) and has therefore referred the project back to the responsible authorities, Fisheries and Oceans Canada and Natural Resources Canada, for the issuance of permits.
- On August 4, 2015, the Company announced it had executed a memorandum of understanding (“**MOU**”) with a joint venture of Duro Felguera S.A. (“**DF**”) and its strategic alliance partner Ausenco Canada (“**Ausenco**”), pursuant to which DF-Ausenco will perform the work required to complete an EPC Lump Sum Turnkey Proposal (“EPC Proposal”) for the Dumont project. RNC has agreed to award to the DF-Ausenco alliance the engineering, procurement, construction and services agreement for the Dumont Project if certain technical and commercial parameters are met, including delivery of a lump sum turnkey proposal. The EPC Proposal covers 72% of the total capital cost outlined in the Dumont Feasibility Study published July 25, 2013.
- On December 15, 2015, the Company announced that it had successfully completed a large scale bulk test which generated approximately 2 tonnes of nickel concentrate from 300 tonnes of ore from the Dumont Nickel Project. The sample was produced at a pilot plant at SGS Minerals Services in Lakefield, Ontario. The concentrate will be further treated through a roasting process and sent to potential customers in Asia and Europe which will allow RNC to continue to advance its offtake and financing discussions.

## **TNN Exploration Properties**

### **West Raglan Nickel Project**

On June 18, 2014, the Company announced that it had acquired an approximate 56% interest in True North Nickel Inc., a private company whose main asset is a 100% interest in the West Raglan nickel sulphide project located in Quebec. On July 29, 2014, a NI 43-101 compliant technical report for the West Raglan Project was filed under RNC’s profile on SEDAR.

A Net Smelter Royalty of 1.5% is payable to Anglo American Exploration (Canada) Ltd. for mineral production from the West Raglan Property. TNN has the right to repurchase one-third of the Royalty (or 0.5% of Net Smelter Returns) with respect to the Property for a price of \$2.0 million reducing the Royalty from 1.5% to 1% of the Net



Smelter Returns from the Property. There are no other royalties, back-in rights, payments, or other agreements or encumbrances.

West Raglan is a mature nickel sulphide exploration project located in the west central portion of the Cape Smith Belt in northern Quebec, Canada. The Cape Smith Belt is home to prolific, high-grade nickel sulphide deposits, including two producing mines; Glencore's Raglan Mine and Jilin Jien Nickel's Nunavik Mine.

Over \$50 million has been spent in exploration on the 400 square kilometer West Raglan property including the drilling of 229 diamond drill holes totaling over 43,541 metres. Seven zones of Ni-Cu-PGM sulphide mineralization have been found to date on the West Raglan property. One of these zones, the Frontier Zone, includes five key high-grade lens clusters. Highlights from Frontier Zone drilling include:

- Seahawk A: 28.28m grading 3.21% Ni, 1.32% Cu, 2.43g/t Pd and 0.65g/t Pt
- Frontier Central: 10.50m grading 2.78% Ni, 1.21% Cu, 2.78g/t Pd and 0.80g/t Pt.
- Frontier East: 7.62m grading 2.54% Ni, 1.42% Cu, 1.56g/t Pd and 0.39g/t Pt
- Frontier South: 20m grading 2.41% Ni, 0.92% Cu, 2.28g/t Pd and 0.66g/t Pt

These intersections occur in the same geological setting as the Raglan Mine in ultramafic intrusions and flows occurring stratigraphically below the Chukotat Group basalt. The mineralization is also very similar to the typical ores from the Raglan Mine, which are amongst the richest Ni-Cu-PGM mines in the world.

The technical report indicates significant potential to expand the lenses at the Frontier Zone based on the quality of the mineralization identified to date at surface and by drilling, the large volume of fertile ultramafic rocks, the numerous discrete electromagnetic conductors, the strong similarities with other published mineral deposits in the belt, and the fact that the deepest drill intercepts are less than 250 metres below surface, and strong potential has been identified in the next depth slice (250–400 metres).

Six other zones on the property, in addition to the Frontier Area, have good indications of prospectivity as illustrated by the presence of disseminated nickel sulphide mineralization in surface rock samples and in limited reconnaissance drilling.

TNN's exploration model is based on the potential to build a resource out of the mineralized lenses at Frontier, exploring for additional lenses at Frontier, and for new lens clusters across the other zones of the property. The neighbouring Raglan Mine hosts similar clusters of mineralized lenses in 12 distinct zones, four of which are currently in production and feeding a central mill facility.

During 2015, the Company continued its activities in support of exploration activities at the West Raglan Project. The following were the major activities and accomplishments during the year:

- On June 12, 2015, the Company announced it had closed brokered private placements of 8,571,428 flow through shares at a price of \$0.35 per flow through share and 2,391,638 non-flow through units at a price of \$0.275 per unit, for total gross proceeds of \$3.7 million. The proceeds of the Offering were used primarily to continue to advance exploration at West Raglan project in Quebec with respect to FT Shares as well as other development activities and general working capital purposes with respect to Units. Following completion of the related private placements in TNN, RNC's ownership stake in TNN increased to 68%.
- On September 29, 2015, the Company announced the discovery of new high grade Ni-Cu-PGE mineralization at multiple locations during the 2015 exploration season. Prospecting along 29 km of strike length of the North (Raglan) trend has resulted in 3 new high grade mineralization discoveries at surface. Highlight results from individual grab samples from these discoveries include:
  - CDC Zone, 2.86% Ni, 1.40% Cu, 4.80g/t Pd and 1.17g/t Pt

- Boomerang Zone, 1.35% Ni, 0.35% Cu, 1.61 g/t Pd, and 0.70g/t Pt
- Beverly Zone, 1.11% Ni, 0.40% Cu, 1.31 g/t Pd and 0.46 g/t Pt
- In addition to these discoveries, a surface extension of high grade mineralization previously identified at the Red Zone was defined by grab samples with grades up to 1.79% Ni, 1.85% Cu, 2.21 g/t Pd and 0.49g/t Pt.

### **Aer-Kidd Project**

On April 14, 2014, RNC announced that it had gained exposure to the highly prospective Aer-Kidd nickel-copper-platinum group metals project in Sudbury through the acquisition of an approximate 25% interest in Sudbury Platinum Corporation (“**SPC**”) for cash consideration of \$1.5 million. SPC, a private subsidiary of Transition Metals Corp., holds a 100% interest in the mineral rights of the Aer-Kidd property.

Aer-Kidd is a 280 hectare property covering approximately 1.3 kilometres of the Worthington Offset Dyke located near Worthington, Ontario in the Sudbury Basin area. Past production on the Aer-Kidd property has come from numerous shallow underground and surface workings (Howland Pit, Rosen and Robinson Deposits). The Aer-Kidd property is located centrally between two significant known resources also on the Worthington offset, Vale’s Totten mine and KGHM’s Victoria project. At Aer-Kidd, there has not been any significant testing of mineralization at depth.

In March of 2015 SPC disclosed results from the first three holes completed on the property, two of which included encouraging intersections of elevated copper, nickel and platinum group (Ni-Cu-PGM) mineralization.

On May 25, 2015, SPC announced that it has continued to intersect Ni-Cu-PGM mineralization at its Aer-Kidd Project.

### ***RNC’s Investment in SPC***

RNC owns 6,446,367 common shares of SPC, representing 16% of SPC’s issued and outstanding equity. Currently, SPC’s main asset is a 100% interest in Aer-Kidd. Provided it holds more than 15% of the equity of SPC, RNC is entitled to appoint one director to the SPC board.

### **Marbridge Mine Property**

On June 1, 2015, the Company executed an agreement to sell its 100% interest in the Marbridge property to Sphinx Resources Ltd. (“**Sphinx**”). This property is located 40 km northwest of Val d’Or, Quebec, and consists of two mining concessions totalling 240 ha in La Motte Township. The deposits are komatiite hosted and lie within the broad La Motte ultramafic belt within the eastern Abitibi Greenstone Belt. Sphinx acquired 100% of RNC’s interest in Marbridge by issuing 2,000,000 common shares to RNC at \$0.035 per share. RNC also received a 2% net smelter return royalty on the Marbridge mining concessions, which will be subject to a re-purchase right (at a cost of \$2,000,000). No cash payments or exploration expenditure commitments were made in this transaction.

### **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.

In the fourth quarter of 2014, the Company assessed its mineral property interests for impairment and determined that the Jefmar Property was fully impaired as the Company considered that substantive exploration and evaluation expenditures were neither budgeted nor planned.

#### **Events Subsequent to December 31, 2015**

On March 16, 2016, the Company announced that it had completed the acquisition of an additional 46% of Salt Lake Mining Pty Ltd. (“**SLM**”), increasing its ownership interest to 66% (the Company announced on February 1, 2016 that it had acquired 20% of SLM for \$2.5 million in cash). SLM is a private company based in Western Australia whose main asset is the Beta-Hunt nickel-gold mine. Reference is made to Appendix A hereto for further information on this acquisition and the Beta-Hunt mine.

On February 1, 2016, the Company announced it had entered into a definitive agreement dated January 30, 2016 to acquire a 100% interest in VMS Ventures Inc. (“**VMS**”) by way of a plan of arrangement. VMS was a TSX Venture Exchange listed company whose main asset is a 30% interest in the Reed Mine in Flin Flon, Manitoba. This transaction, closed on April 27, 2016. Reference is made to Appendix B hereto for further information on this acquisition and the Reed Mine.

On March 2, 2016 the Company announced that it had discovered a new high grade gold, silver, copper and zinc mineralized trend at its newly consolidated Qiqavik Project in Northern Quebec. High grade gold mineralization was found during the 2015 exploration season with several grab samples ranging from 5 g/tonne up to 198 g/tonne over 15km of strike length, with several outcropping areas also containing high grade silver, copper and zinc, representing a potentially important new discovery in an underexplored volcano-sedimentary belt within the Cape Smith Belt.

The TNN Qiqavik Property is comprised of claims held by TNN, Les Ressources Tectonic (“**LRT**”) and Wayne Holmstead (“**Holmstead**”). In July 2015, TNN entered into an option agreement to acquire 100% interest in 93 LRT claims by completing certain exploration and other expenditures in the amount of \$710,000 over a five year period. Claims held by LRT are subject to 1.5% NSR, 1% of which can be purchased by TNN for \$1 million. TNN fulfilled the initial exploration expenditures requirement during 2015 exploration season by funding a program in excess of \$35,000. In December 2015 TNN entered into an option agreement to earn 100% of the Goshawk property (5 claims) from Holmstead by completing certain exploration and other expenditures in the amount of \$215,000 over 3 years. Claims held by Holmstead are subject to 1.5% NSR, 1% of which can be purchased by TNN for \$1 million.

## DESCRIPTION OF THE BUSINESS

Royal Nickel is a mineral resource company primarily focused on the acquisition, exploration, evaluation and development of mineral properties. As at December 31, 2015, the Company's principal asset was the Dumont nickel project (the "Dumont Nickel Project"), a development stage nickel mine. Additionally, the Company has other exploration assets (all of which are detailed further below), consisting of: (i) the Jefmar property; (ii) a 16% interest in Sudbury Platinum Corporation, which holds a 100% interest in the mineral rights of the Aer-Kidd property; and (iv) a 68% interest in True North Nickel Inc., whose main asset is a 100% interest in the West Raglan property.

Subsequent to December 31, 2015, the Company acquired interests in two operating mines and related exploration assets - see "General Development of the Business - Events Subsequent to December 31, 2015" for information regarding these acquired assets.

### 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

RNC is a multi-asset mineral resource company focused primarily on the acquisition, exploration, evaluation and development of base and precious metal properties. While we will continue to focus on the development of the large ultramafic Dumont Nickel Project, RNC has also had a long stated strategy to acquire cash flow producing mining operations in nickel and other related metals. RNC believes that current market conditions present an excellent opportunity to build a portfolio of diversified assets whose financial results and valuations will improve as commodity prices recover. In line with this long held strategy, RNC has announced completions of the acquisitions of SLM and VMS that have transformed the Company into a cash generating low-cost nickel, copper and gold producer. See “General Development of the Business - Events Subsequent to December 31, 2015”. These transactions will provide ownership in two operating mines: SLM’s 100%-owned Beta Hunt Mine in Western Australia and VMS’ 30%-owned Reed Mine in Manitoba. In 2016, production from these two operations (100% basis for Beta Hunt and 30% basis for Reed) is expected to be approximately 3.5-4.5 kt of nickel, 4.0-4.5 kt of copper, and 35 - 45 koz of gold as production at Beta Hunt ramps up during 2016. See Appendices A and B of this AIF for further details, including cautionary statements.

With the completion of the Company’s positive feasibility study for the Dumont Nickel Project in 2013, and the receipt of the main environmental permit earlier in 2015, the focus has shifted to accelerating financing discussions with potential strategic or financial partners. RNC continues to work with its financial advisor, Rothschild, and its senior project bond advisor, Swedbank, to arrange financing to fund all stages of the development of the Dumont Nickel Project. RNC continues active discussions for financing through a combination of strategic partnerships, joint venture arrangements, project debt finance, offtake financing, royalty financing and other capital markets alternatives. However, current economic conditions are impacting the timing of the financing process and, while RNC 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. Ongoing efforts and resources are being concentrated on arranging financing, advancing concentrate testwork to provide additional support for RNC’s alternate nickel processing for Dumong concentrate and working with DF-Ausenco to support their work on preparing an engineering, procurement and construction lump sum turnkey proposal. RNC has the following targeted key milestones to achieve the development of the Dumont Nickel Project:

- Completion of partnership and financing arrangements;
- Estimated construction schedule of 24 months post securing of financing and completion of detailed engineering;
- Project commissioning is expected to begin in ten to eleven quarters after financing is in place.

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

The Company is also actively analyzing geophysical data generated by the successful 2015 exploration program at its 68%-owned West Raglan nickel sulphide project to assist in preparation for the next steps to advance the project. TNN announced on March 2, 2016 that it had discovered a new high grade gold, silver, copper and zinc mineralized trend at its newly consolidated Qiqavik Project in Northern Quebec. The Qiqavik property is comprised of claims held by TNN, Les Ressources Tectonic (“**LRT**”) and Wayne Holmstead (“**Holmstead**”). In July 2015, TNN entered into an option agreement to acquire 100% interest in 93 LRT claims by completing certain exploration and other expenditures in the amount of \$710,000 over a five year period. Claims held by LRT are subject to 1.5% NSR, 1% of which can be purchased by TNN for \$1 million. TNN fulfilled the initial exploration expenditures requirement during 2015 exploration season by funding a program in excess of \$35,000. In December 2015, TNN entered into an option agreement to earn 100% of the Goshawk property (5 claims) from Holmstead by completing certain exploration and other expenditures in the amount of \$215,000 over 3 years. Claims held by Holmstead are subject to 1.5% NSR, 1% of which can be purchased by TNN for \$1 million.

In addition to the work to integrate the SLM and VMS acquisitions and advance the Dumont and West Raglan projects, the Company will continue to investigate acquisition opportunities of highly prospective assets, preferably cash-producing, to grow the business. The Company will focus on jurisdictions where it believes the risk is manageable. RNC believes it can successfully implement its corporate strategy because of its unique strengths, depth of management experience and well- developed relationships in the minerals industry.

### *Liquidity*

As at December 31, 2015 the Company had cash and cash equivalents of \$9.6 million. Management estimates that these funds less the \$2.5 million acquisition payment made subsequent to December 31, 2015, will not be sufficient to fund the advancement of the Dumont Nickel Project, meet obligations and cover general and administrative expenses for the ensuing twelve months. Until such time that financing becomes available on acceptable terms, the Company has taken action to limit the ongoing exploration and evaluation work and reduce its operating costs. Accordingly, these conditions indicate the existence of material uncertainties that cast significant doubt upon the Company’s ability to continue as a going concern. The Company’s ability to continue future operations and fund its exploration, evaluation, development and acquisition activities is dependent on management’s ability to secure additional financing in the future, which may be completed in a number of ways including, but not limited to, the issuance of debt or equity instruments, expenditure reductions, or a combination of strategic partnerships, joint venture arrangements, project debt finance, offtake financing, royalty financing and other capital markets alternatives. While management 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 on terms which are acceptable to the Company.

### **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).

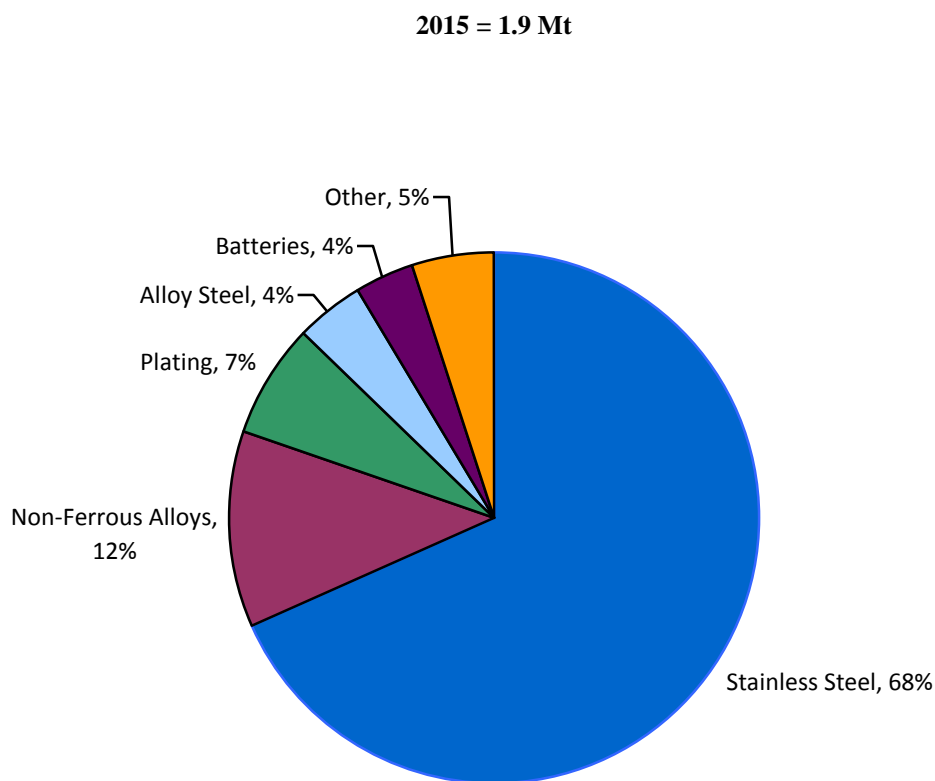
Austenitic grades represent around 70-75% of total world stainless steel production. The most commonly used austenitic grade of stainless steel is grade 304, which contains in the range of 8-10.5% nickel and 18-20% chromium. It is frequently referred to as 18/8 grade. There are a variety of variations 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 2015 estimated first use nickel consumption breakdown:




---

Source: CRU

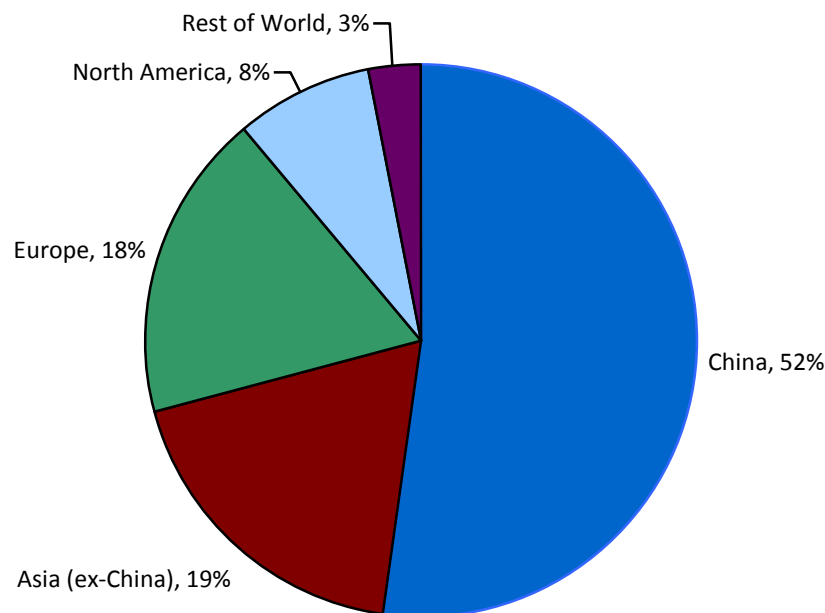
Aside from stainless steel, nickel finds applications in extremely diverse areas, from alloys, to plating, to catalysts. Superalloys are defined as those alloys, usually based on a combination of iron, nickel, cobalt and chromium, but with less than 50% iron, that have been developed for use at high 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 50% between 2005 and 2015 according to the International Nickel Study Group (INSG). Chinese consumption increased more than five-fold from 2005 to 2015 with China's share of global consumption increasing from 15% in 2005 to 52% in 2015. In 2015, total global nickel consumption was 1.9 Mt according to CRU.

**Nickel Consumption by Geography — 2015**



---

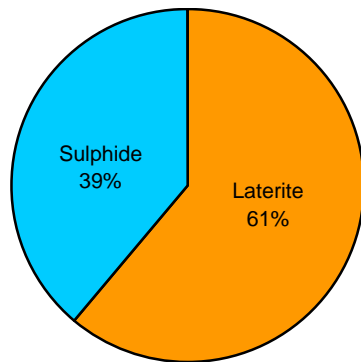
Source: INSG

### ***Supply***

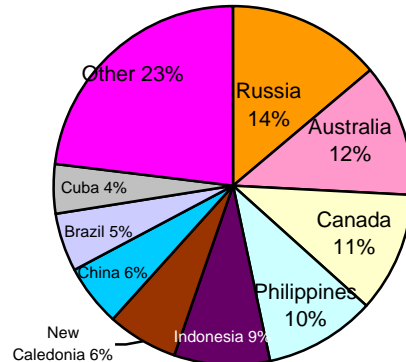
Nickel ore primarily occurs in two forms: sulphide and laterite. Historically, a majority of the world's nickel production has come from sulphide deposits due to the general preference for simple processing technology, whereas nickel mined from laterite ores has faced technical issues in processing which 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 2015, estimated global refined nickel production was 1.94Mt, according to CRU, with over 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 60% of global mined nickel production according to Wood Mackenzie.



**Mined Nickel Production by Ore Type — 2015**



**Mined Nickel Production by Country — 2015**

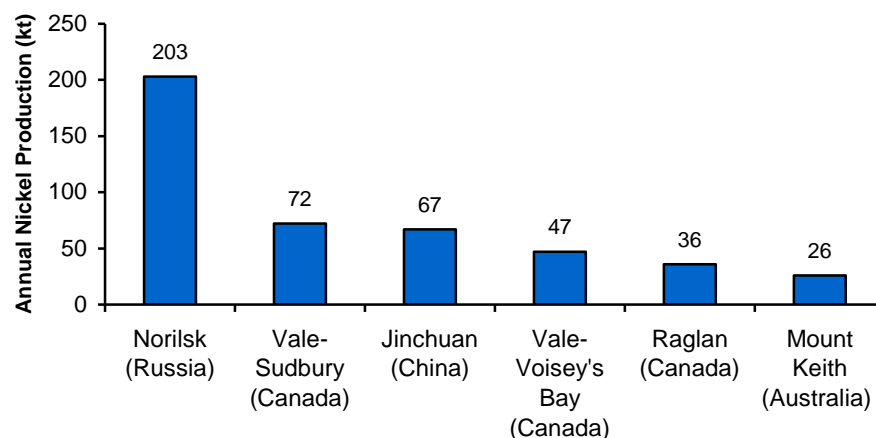


Source: Wood Mackenzie, CRU

### ***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, historically sulphide nickel deposits had 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 such that laterite deposits are now the source of the majority of nickel production globally. On the sulphide front, few world class deposits remain undeveloped. The world's largest nickel sulphide operations are displayed as follows:

**Mined Nickel Sulphide Production — 2015**



Source: Wood Mackenzie

### ***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).

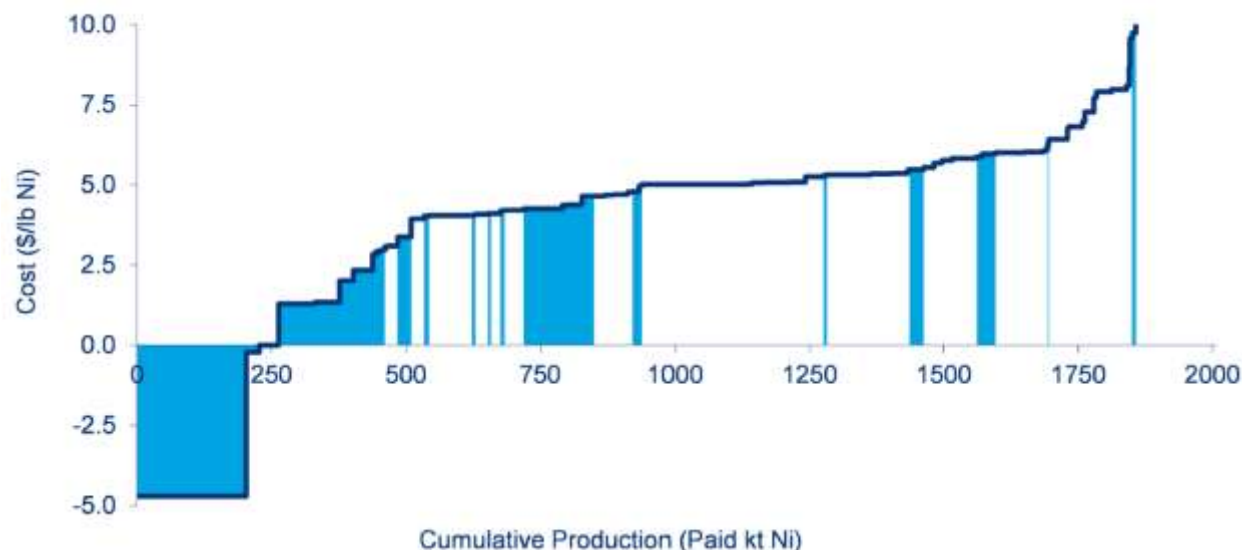
HPAL projects generally require higher capital cost than ferronickel smelter projects, but, as noted above, the operating costs of running HPAL projects can potentially be lower than ferronickel smelter projects. HPAL operations are also highly sensitive to the cost of sulphur and/or sulphuric acid.

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 2015 C1 Cost Profile (Sulphide Operations Highlighted)



Source: Wood Mackenzie

### Pricing and Outlook

Nickel primarily trades on the LME and all references in this document 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, 2015, 2014 and 2013 were as follows.

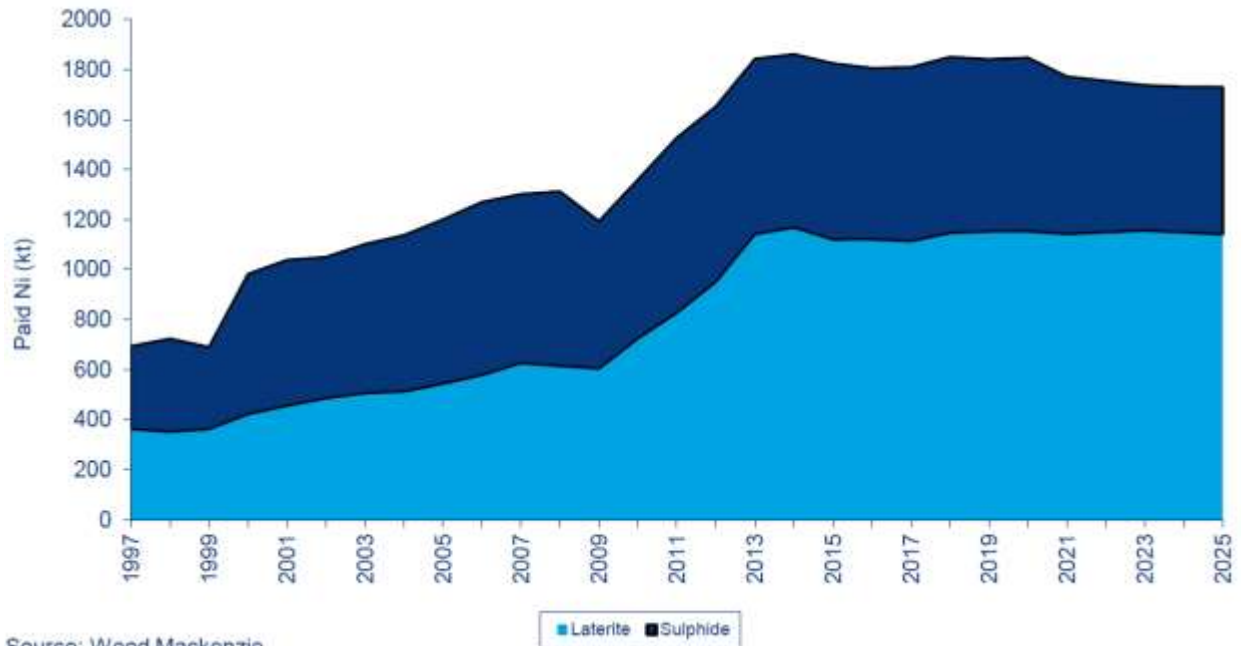
	2015 (US\$/lbs Ni)	2014 (US\$/lbs Ni)	2013 (US\$/lbs Ni)
Closing.....	3.93	6.77	6.34
High.....	7.01	9.62	8.44
Low.....	3.70	6.06	5.97
Average.....	5.36	7.65	6.81

As of March 31, 2016, the price per pound of nickel was US\$3.76.

Source: metalprices.com

Longer-term nickel supply and demand fundamentals remain strong and favourable in the context of the expected Dumont Nickel Project start-up. 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.

### Nickel Production by Ore Type



A key supply constraint was confirmed on January 12, 2014 when the Indonesian government implemented a full export ban on unprocessed nickel ore, which was the primary driver for a 23% reduction in mined nickel supply in 2014. NPI output in China remained at similar levels in 2014 compared to 2013. However, Chinese NPI output contracted in 2015 as Indonesia is no longer an exporter of nickel ore to China as a result of the ban on exports of unprocessed nickel ore. Large quantities of ore stockpiled in China in advance of the Indonesian ore export ban were largely consumed by the end of 2015 which, along with nickel price sensitivities, are expected to lead to constrained NPI production, according to CRU. Royal Nickel believes that the Indonesian government will continue to strictly enforce the ban on unprocessed nickel ore exports, resulting in an ongoing constraint in world mined nickel supply and, with only partial replacement by ore from the Philippines, nickel is expected to enter a multi-year period of structural nickel supply shortages.

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.

RNC remains positive on the outlook for the nickel market beyond 2016. Dumont is one of only a few projects in the pipeline with expected production of greater than 20 ktpa and RNC's expectation is that it will be required to meet ongoing growth in nickel demand in the latter half of this decade. RNC believes nickel prices will have to rise substantially in the second half of the decade to force demand in line with available supply.

## **Competitive Conditions**

Nickel exploration and mining is a competitive business. The Company competes with numerous other companies and individuals seeking to: (i) acquire attractive nickel and other properties, such as copper, platinum group metal, molybdenum and chromium properties; (ii) engage qualified service providers and labour; and (iii) source equipment and suppliers. The ability of the Company to successfully acquire and develop 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, 2015, the Company had a total of 19 employees.

## **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, remediation 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 below disclosure regarding environmental matters under the description of the Dumont Nickel Project.

## **THE DUMONT NICKEL PROJECT**

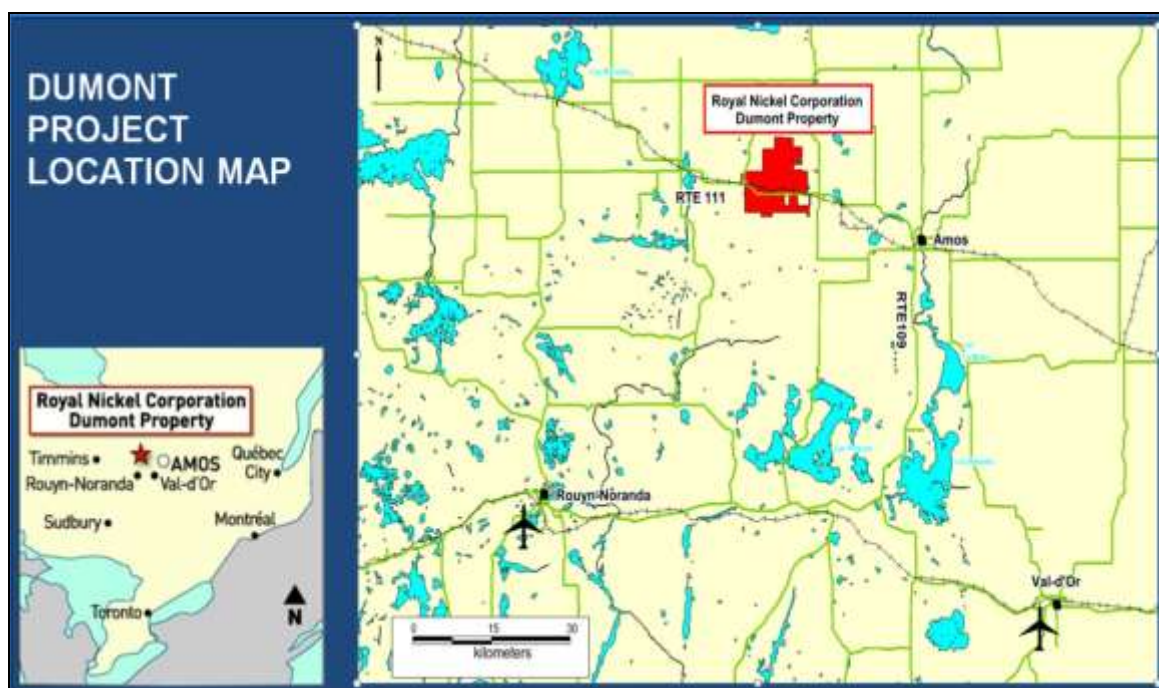
Unless otherwise indicated, information in this section is summarized or extracted from the Feasibility Study entitled “Technical Report on the Dumont Ni Project, Launay and Trécesson Townships, Quebec, Canada” dated July 25, 2013 (which is not incorporated by reference). The authors of the Feasibility 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](http://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 northeast 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). 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. 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 ("MNR") 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 MNR, CPTAQ, and the Quebec Ministry of Sustainable Development, Environment and Parks ("MDDEP"). On June 25, 2015, the Company received the Certificate of Authorization for the Dumont Nickel Project from MDDEP. This authorization is the most significant permit for mining projects in Quebec and positions Dumont to proceed to construction upon completion of financing. .

On July 30, 2015, the Company announced the receipt of a positive Environmental Assessment Decision for the Dumont Nickel Project from the Federal Minister of the Environment. The Minister has determined that the project is not likely to cause significant adverse environmental effects with the implementation of the mitigation measures outlined in the Comprehensive Study Report and has therefore referred the project back to the responsible authorities, Fisheries and Oceans Canada and Natural Resources Canada, for the issuance of permits.

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 Abitibiwinini and on April 5, 2013 entered into a memorandum of understanding for cooperation regarding the development of the Dumont Nickel Project. On the basis of this MOU, an Impact and Benefits Agreement (“IBA”) is currently being negotiated with the Abitibiwinini First Nation.

### ***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 surface 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. To date, RNC has purchased or acquired options to purchase 100% of the private surface rights required for the development of the Dumont Nickel Project. The remainder of the surface rights are public land (Crown land).

A portion of the Dumont Nickel Project claims underlie surface rights that are classified as an agricultural zone within the meaning of the Act respecting the preservation of agricultural land and agricultural activities, RSQ, c P-41.1. Exclusion of these lands from the agricultural zone, which is required to conduct mining activity on these lands, has been granted by the CPTAQ. Exclusion of adjacent lands that form a buffer zone to the project is pending. 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<sub>2</sub>SO<sub>3</sub> leaching test on samples of “rejects from the Dumont mine” to evaluate the possibility of scrubbing the Noranda smelter SO<sub>2</sub>-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 m (X) x 25 m (Y) x 10 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 volcanoclastic 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 tholeiitic 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 ± chrysotile ± pentlandite ± awaruite ± 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 ± 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)<sub>9</sub>S<sub>8</sub>), heazlewoodite (Ni<sub>3</sub>S<sub>2</sub>), and the ferronickel alloy, awaruite (Ni<sub>2.5</sub>Fe), occurring in various proportions throughout the sill. These minerals can occur together as coarse agglomerates, predominantly associated with magnetite, up to 10,000 µm (10 mm), or as individual disseminated grains ranging from 2 to 1,000 µm (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 ± lesser heazlewoodite ± 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.

<b>From (m)</b>	<b>To (m)</b>	<b>Interval (m)</b>	<b>Palladium (ppm)</b>	<b>Platinum (ppm)</b>	<b>Sulphur (%)</b>	<b>Nickel (%)</b>	<b>Specific Gravity</b>
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' EXPLORIM<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 m x 55 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.

Purpose of Drilling	2007 to 2010		2011		2012		2013		TOTAL	
	Number of Holes	Total Metres	Number of Holes	Total Metres	Number of Holes	Total Metres	Number of Holes	Total Metres	Number of Holes	Total 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
<b>Total Drilling included in the Current Resource Estimate .....</b>									<b>440</b>	<b>161,703</b>
Metallurgical Domain										
Composites .....	10	3,194							10	3,194
Crushing Testwork Sample .....	3	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
<b>Total .....</b>	<b>266</b>	<b>99,764</b>	<b>236</b>	<b>64,482</b>	<b>99</b>	<b>6,442</b>	<b>13</b>	<b>3,392</b>	<b>614</b>	<b>174,080</b>

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 Trécession 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 metallurgical 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™ 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 µm; 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™ 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™ 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.



<b>Task/Duty</b>	<b>Operational Purpose</b>	<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 influenced by the interdependence of PS-packing density and point-spacing	If additional statistics are required for particle or modal accuracy, additional PS's may 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 ( $\text{CaCO}_3$ ) 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 EXPLOMIN<sup>TM</sup> mineral mapping program. Satmagan results of the EXPLOMIN<sup>TM</sup> samples were used to validate the mineral mass percent of magnetite reported by QEMSCAN. Satmagan infers magnetite content by measuring magnetic susceptibility (Fe<sub>3</sub>O<sub>4</sub> percent). Satmagan values (or recoverable Fe) can be compared and calibrated with Davis Tube Results. Satmagan was performed on 10% of the EXPLOMIN<sup>TM</sup> study.

### ***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\*

Resource Category	Quantity (kt)	Grade Ni (%)	Grade Co (ppm)	Contained Nickel		Contained Cobalt	
				(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
<b>Measured + Indicated.....</b>	<b>1,665,600</b>	<b>0.27</b>	<b>107</b>	<b>4,430</b>	<b>9,750</b>	<b>180</b>	<b>394</b>
Inferred .....	499,800	0.26	101	1,300	2,862	50	112
Resource Category	Quantity (kt)	Grade Pd (g/t)	Grade Pt (g/t)	Contained Palladium		Contained Platinum	
				(koz)		(koz)	
Measured .....	372,100	0.024	0.011	288		126	
Indicated .....	1,293,500	0.017	0.008	720		335	
<b>Measured + Indicated.....</b>	<b>1,665,600</b>	<b>0.020</b>	<b>0.009</b>	<b>1,008</b>		<b>461</b>	
Inferred .....	499,800	0.014	0.006	220		92	

Resource Category	Quantity (kt)	Grade Magnetite (%)	Contained Magnetite	
			(kt)	(M lbs)
Measured.....	-	-	-	-
Indicated .....	1,114,300	4.27	47,580	104,905
<b>Measured + Indicated .....</b>	<b>1,114,300</b>	<b>4.27</b>	<b>47,580</b>	<b>104,905</b>
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)**

Category	(kt)	Grades				Contained Metal			
		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
<b>Total .....</b>	<b>1,178,600</b>	<b>0.27</b>	<b>107</b>	<b>0.009</b>	<b>0.019</b>	<b>6,942</b>	<b>278</b>	<b>328</b>	<b>716</b>

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**

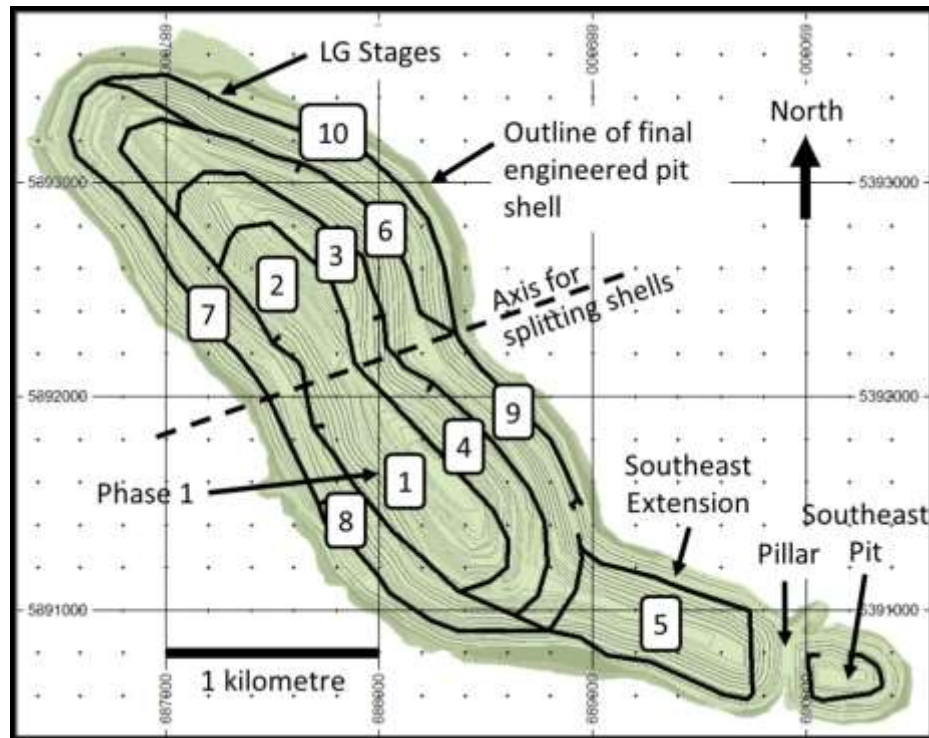
The open pit mine has been designed to provide ore to the plant in a manner that optimises net present value. The initial plant throughput is 52.5 kt/d, with expansion in Year 5 to 105 kt/d.

### ***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.

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 Mm<sup>3</sup> 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 gravel, 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 m<sup>3</sup> dippers (nominal 75 t payload) though some rock will be mined using the 34 m<sup>3</sup> 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 gravel. 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.

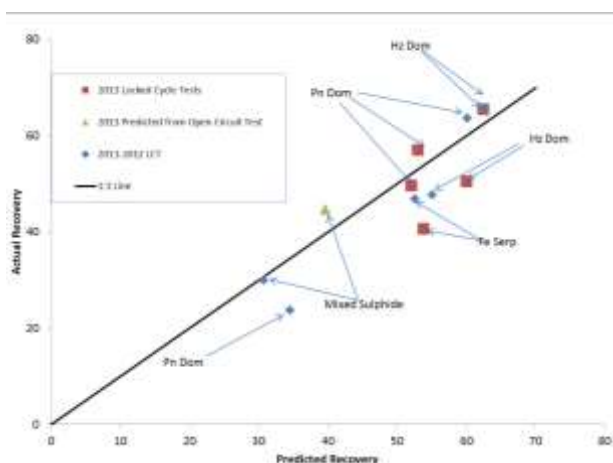
In all cases the recovery was largely driven by the amount of sulphur in the feed, even for the very low sulphur samples where the main recoverable mineral is awaruite. This may correlate with the amount of nickel present as

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 SiO<sub>2</sub>. 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.

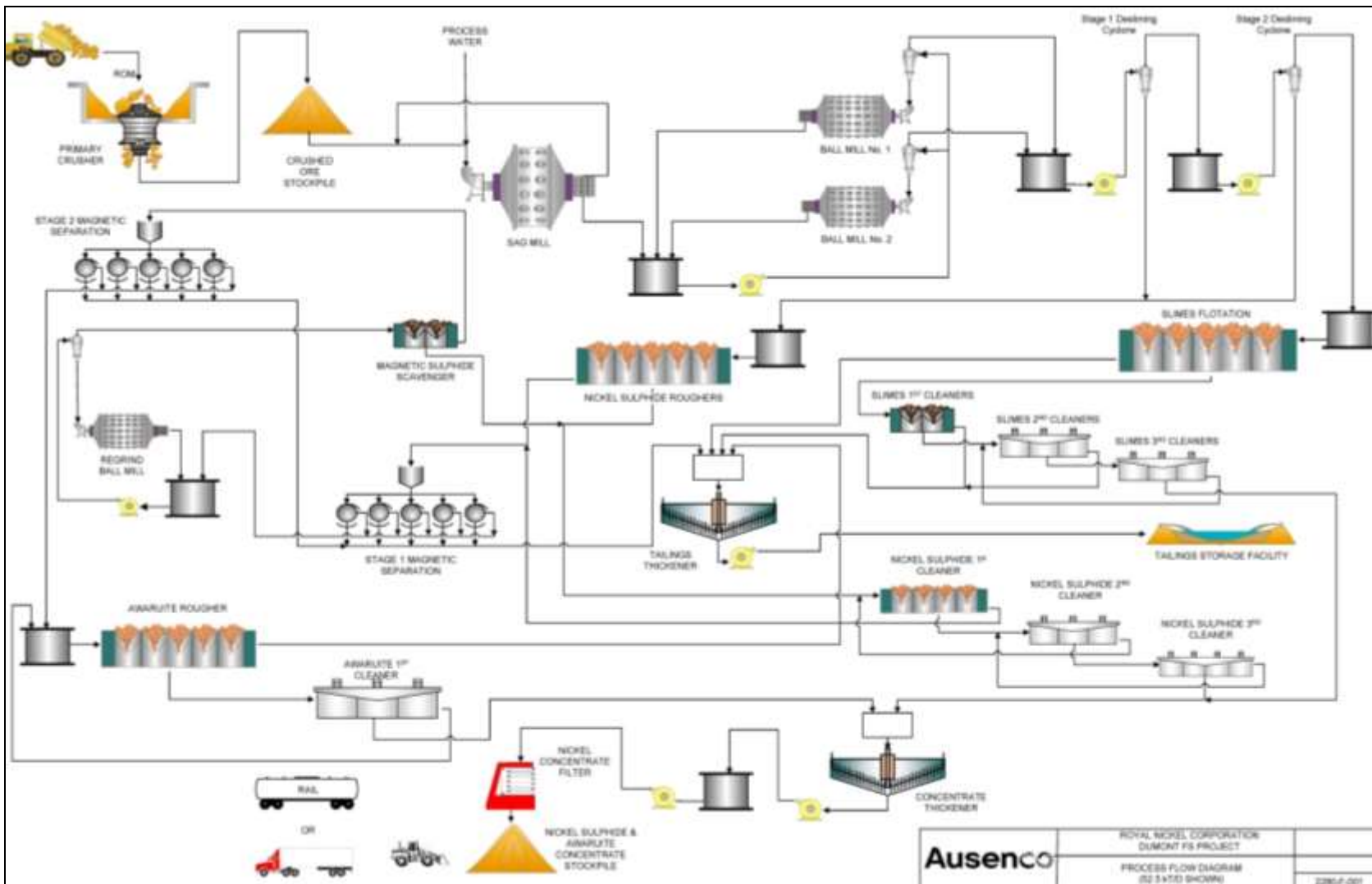
The process plant design is based on a flowsheet with unit process operations that are well proven in the minerals processing industry. The Dumont flowsheet incorporates the following unit process operations (52.5 kt/d plant discussed below):

- 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 ( $P_{80}$ ) 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 ( $P_{80}$ ) 180  $\mu\text{m}$ .
- Two-stage desliming circuit via hydrocyclones. First stage to split mass with a cut size ( $D_{50c}$ ) of 50  $\mu\text{m}$ . Second stage to split mass with a cut size ( $D_{50c}$ ) of 1 to 15  $\mu\text{m}$ . 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 ( $P_{80}$ ) of 46  $\mu\text{m}$ .
- 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 12 nickel smelters globally that have the capability to treat sulphide concentrates.

### ***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. Standard baseline measurements for hydrology, groundwater and air quality are ongoing.

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

<b>Type of Study</b>	<b>2007<sup>1</sup></b>	<b>2008<sup>2</sup></b>	<b>2009<sup>3</sup></b>	<b>2011<sup>4</sup></b>	<b>2012</b>
Water and sediment quality.....	✓	✓	✓	✓	
Groundwater quality .....					✓ <sup>6</sup>
Vegetation and wetlands .....		✓		✓	
Wildlife .....	✓	✓	✓		
Small mammals.....				✓	
Fish .....	✓	✓	✓	✓	✓ <sup>6</sup>
Benthic invertebrates.....	✓	✓	✓		
Birds .....		✓		✓	
Reptiles and amphibians .....				✓	
Archaeology.....		✓			
Stakeholders consultation.....				✓ <sup>5</sup>	✓ <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 pre-feasibility 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 (\$ M)	Expansion Capital (\$ M)	Sustaining Capital (\$ M)	LOM Total Capital (\$ 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
<b>Total .....</b>	<b>1,268</b>	<b>997</b>	<b>823</b>	<b>3,088</b>

Notes: 1. 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.

### 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
<b>Total Direct Costs.....</b>		<b>991</b>	<b>827</b>	<b>1,818</b>
09 Indirect Costs		125	80	205
10 Owner's Costs		47	9	56
<b>Total Indirect Costs.....</b>		<b>172</b>	<b>89</b>	<b>261</b>
<b>Total Direct &amp; Indirect Costs.....</b>		<b>1,163</b>	<b>916</b>	<b>2,079</b>
11 Escalation			Not Included	
11 Contingency <sup>1</sup>		105	81	186
<b>Total Project Costs (as of Q2 2013).....</b>		<b>1,268</b>	<b>997</b>	<b>2,265</b>

Notes: 1. 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.

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;

- 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 2016-2020	105 kt/d 2021-2036	Stockpile 2036-2049	LOM 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 ex-pit 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%
<b>Post-Tax NPV<sub>8%</sub> .....</b>	<b>\$M</b>	<b>1,330</b>	<b>1,137</b>
<b>Post-Tax IRR.....</b>		<b>15.9%</b>	<b>15.2%</b>

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 52.5kt/d Pit	'21 – '36 105kt/d Pit	'36 – '49 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
<b>Post-Tax NPV<sub>8%</sub> (M) .....</b>	<b>(1,183)</b>	<b>424</b>	<b>1,690</b>	<b>399</b>	<b>1,330</b>
<b>Post-Tax IRR.....</b>					<b>15.9%</b>

### 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 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*

Since completion of the Feasibility Study, economic conditions have impacted and are continuing to impact the timing of the financing process as well as 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;

- Estimated construction schedule of 24 months post securing of financing and completion of detailed engineering;
- Project commissioning is expected to begin in ten to eleven quarters after financing is in place.

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

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. As at March 31, 2016, there were 163,482,902 Common Shares of Royal Nickel are issued and outstanding as fully paid and non-assessable. See also "General Development of the Business - Events Subsequent to December 31, 2015".

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 ratably in respect of such dividends and return on capital.

### *Warrants*

As at March 21, 2016 there are RNC warrants outstanding to acquire an aggregate of up to 5,991,319 RNC Shares. 4,795,500 of the warrants are exercisable at a price of \$0.80 and entitles the holder thereof to acquire one common share of RNC on or before July 11, 2016. 1,195,819 of the warrants are exercisable at a price of \$0.375 and entitles the holder thereof to acquire one common share of RNC on or before June 12, 2017. As at March 21, 2016 5,991,319 RNC shares were reserved for issuance upon exercise of such warrants.

### *Options*

As at March 21, 2016, there are outstanding RNC options to acquire an aggregate of up to 14,342,852 RNC Shares. There are 575,460 compensation options outstanding as at March 21, 2016. As at March 21, 2016 14,342,852 RNC Shares and 575,460 RNC Shares were reserved for issuance upon the exercise of such options and compensation options respectively.

RNC’s 2010 share incentive plan, as amended and restated on March 26, 2013 (the “**Plan**”), provides for the granting of equity-based compensation securities, including options and awards for the purpose of advancing the interests of RNC through the motivation, attraction and retention of key officers, directors, employees and consultants of RNC. The Plan provides that the maximum number of RNC Shares issuable upon the exercise of share options and made available as other equity-based awards, in aggregate, shall not exceed 15% of the issued and outstanding RNC Shares from time to time.

At the time of grant or thereafter, the Compensation Committee of the RNC Board may determine when an option will vest and become exercisable and may determine that the option shall be exercisable in instalments on such terms as to vesting or otherwise as the Committee deems advisable subject to the rules of the Toronto Stock Exchange, if any. Unless otherwise determined by the Committee, options will vest and become exercisable, as to one third of the options granted, on each of the first, second and third anniversaries of the date of grant, provided that the participant is an eligible employee, eligible director, consultant or other participant at the time of vesting. Under the Plan, the expiry date of options may not exceed ten years from the date of grant.

### *Rights Plan*

On June 22, 2011, RNC shareholders ratified RNC’s shareholder rights plan agreement dated May 13, 2011 between RNC and Computershare Investor Services Inc, as the rights agent (the “**Rights Plan**”). The Rights Plan was not adopted in response to any proposal to acquire control of RNC. On June 13, 2014, RNC shareholders ratified the amended and restated rights plan to extend the expiry date of the Rights Plan to the conclusion of the 2017 annual meeting of shareholders of RNC. The amended and restated rights plan was not extended in response to, or in anticipation of, an acquisition or take-over bid of RNC.

## MARKET FOR SECURITIES

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

2015	Common Shares		
	High	Low	Volume
January	\$0.385	\$0.31	1,717,205
February	\$0.335	\$0.30	1,483,045
March	\$0.34	\$0.29	3,105,640
April	\$0.305	\$0.27	2,165,649
May	\$0.295	\$0.265	1,929,704
June	\$0.59	\$0.26	10,211,258
July	\$0.375	\$0.27	3,244,448
August	\$0.335	\$0.22	3,004,539
September	\$0.255	\$0.22	1,723,120
October	\$0.255	\$0.215	2,697,114
November	\$0.215	\$0.15	5,040,270
December	\$0.20	\$0.16	2,834,466

2015	Warrants		
	High	Low	Volume
January	\$0.10	\$0.07	110,650
February	\$0.065	\$0.04	98,000
March	-	-	-
April	\$0.04	\$0.01	12,500
May	\$0.045	\$0.02	110,000
June	\$0.075	\$0.03	174,000
July	\$0.05	\$0.03	20,100
August	-	-	-
September	\$0.015	\$0.015	30,500
October	\$0.02	\$0.015	416,700
November	\$0.015	\$0.015	5,000
December	\$0.09	\$0.035	214,350

## PRIOR SALES

There are no securities of the Company that were sold but not listed on the TSX during the most recently completed financial year of the Company.



## 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 Residence and Date first became a Director/Officer	Position with the Company	Principal Occupation(s)
<b>DIRECTORS</b>		
<b>Peter Goudie</b> <sup>(1)(2)</sup> Seaforth, NSW, Australia July 17, 2008	Director	Corporate Director
<b>Scott M. Hand</b> <sup>(3)</sup> Toronto, Ontario June 27, 2008	Executive Chairman of the Board	Corporate Director
<b>Peter C. Jones</b> <sup>(1)(3)(4)</sup> Canmore, Alberta November 17, 2008	Director	Corporate Director
<b>Frank Marzoli</b> <sup>(3)(4)</sup> Montreal, Quebec May 11, 2007	Director	President, CEO and Chairman, Marbaw
<b>Gilles Masson</b> <sup>(1)(2)</sup> Laval, Quebec August 15, 2007	Director	Corporate Director
<b>Donald McInnes</b> <sup>(2)(4)</sup> Vancouver, British Columbia June 18, 2015	Director	Partner, Oxygen Capital Corp.
<b>OFFICERS</b>		
<b>Mark Selby</b> Toronto, Ontario September 30, 2010	President and Chief Executive Officer	President and Chief Executive Officer, Royal Nickel
<b>Tim Hollaar</b> Oakville, Ontario January 1, 2015	Chief Financial Officer and Corporate Secretary	Chief Financial Officer and Corporate Secretary, Royal Nickel
<b>Alger St. Jean</b> Sudbury, Ontario April 30, 2007	Vice President, Exploration	Vice President, Exploration, Royal Nickel

<b>Name and Municipality of Residence and Date first became a Director/Officer</b>	<b>Position with the Company</b>	<b>Principal Occupation(s)</b>
<b>Johnna Muinonen</b> Sudbury, Ontario August 9, 2010	Vice President, Operations	Vice President, Operations, Royal Nickel

- 
- (1) Member of the audit committee of the Company (the “**Audit Committee**”).
  - (2) Member of the compensation committee of the Company (the “**Compensation Committee**”).
  - (3) Member of the corporate governance and nominating committee of the Company (the “**Corporate Governance and Nominating Committee**”).
  - (4) Member of the health, safety and environment committee of the Company (the “**HS&E Committee**”).

As at March 31, 2016, the directors and executive officers of the Company collectively beneficially own, directly or indirectly, or exercise control and direction over 10,162,586 Common Shares representing, in the aggregate approximately 6.2% 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.

#### *Peter Goudie — Director*

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 was 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.

#### *Scott M. Hand — Executive Chairman of the Board*

Mr. Hand is the Executive Chairman of the Company, a position held since November 2009, and a director of Legend Gold Corp. and Chinalco Mining Corporation International. Mr. Hand also serves on the boards of Boyd Technologies LLC (non-woven materials), Universal Helicopters Newfoundland and Labrador LP (a Labrador Inuit controlled company), the Massachusetts Museum of Contemporary Art and a number of private companies in the mineral resource sector. Mr. Hand was the Chairman and Chief Executive Officer of Inco from April 2002 until he retired from Inco in January 2007. Prior to that, Mr. Hand was President of Inco and held positions in Strategic Planning, Business Development and Law. Mr. Hand received a Bachelor of Arts from Hamilton College and a Juris Doctorate from Cornell University.

#### *Peter C. Jones — Director*

Mr. Jones is a director of a number of companies, including 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. Jones has over 40 years of international mining experience.

#### *Frank Marzoli — Director*

Mr. Marzoli is the President, Chief Executive Officer and Chairman of Marbaw International Nickel Corporation, a position held since December 2006. He is also the President, Chief Executive Officer and sole director of Marzcorp Oil & Gas Inc. since July 2008. Marbaw held a 100% interest in the Marbaw Claims, which were sold to Royal

Nickel in March 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.

*Gilles Masson — Director*

Mr. Masson is a director of Semafo Inc. 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. He is a certified director by the Institute of Corporate Directors. 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 du Québec since 1972.

*Donald McInnes — Director*

Mr. McInnes has more than 30 years' experience in natural resource development, including as founder of Kutcho Copper Corp. (formerly Western Keltic Mines Inc.) and Plutonic Power Corp., a renewable power development company with a broad portfolio of clean energy projects. Mr. McInnes is currently Vice-Chairman of Alterra Power Corp, and a cofounder of Oxygen Capital Corp. He is a Director of Pilot Gold and True Gold Mining and is a Director and former Chairman of the Board of Prostate Cancer Canada. Mr. McInnes is also a past President and Director of the AMEBC, past Director of the PDAC, a past Governor of the Business Council of British Columbia and former Chairman of the Clean Energy Association of British Columbia.

*Mark Selby, B. Comm (Hons) — President and Chief Executive Officer*

Mr. Selby is the 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.

*Tim Hollaar, B.A., CPA, CA — Chief Financial Officer and Corporate Secretary*

Mr. Hollaar is the Chief Financial Officer and Corporate Secretary of the Company. Prior to joining the Company in 2015, Mr. Hollaar was Corporate Controller of North American Palladium (2013-2014), prior to which he provided financial management consulting services to the Company (2010-2012). Mr. Hollaar was previously Group Financial Controller of Norilsk Nickel International (2008-2009). Before joining Norilsk, he worked sixteen years in senior nickel finance roles at Vale Canada, BHP, and WMC Resources Marketing Limited. Mr. Hollaar is a member of the Chartered Professional Accountants of Ontario and holds a B.A. (Business Administration) degree from Dordt College.

*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. Mr. St-Jean is also a director of True North Nickel Inc. and Sudbury Platinum Corporation.

*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. From 2007-2010, 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 pre-feasibility 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.
- Peter C. Jones was a director of Lakota Resources Inc. between September 2008 and October 2009. In May 2009 and August 2009, cease trade orders were issued against Lakota for failure to file annual and interim financial statements. On July 13, 2009, Lakota's common shares were delisted from the TSX Venture Exchange for failure to maintain listing requirements. On August 4, 2009, Lakota initiated proposal proceedings pursuant to the Bankruptcy and Insolvency Act (Canada), and a proposal was approved by the Ontario Superior Court of Justice on August 4, 2009. The cease trade orders were revoked in 2011.
- Gilles Masson was a director of Malaga Inc. during the period from November 2009 until June 2013. 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.

### **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 was a director of Malaga Inc. during the period from November 2009 until June 2013. 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 constituting 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 C.

### 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 <sup>(1)</sup>	Audit Related Fees <sup>(2)</sup>	Tax Fees <sup>(3)</sup>	All Other Fees <sup>(4)</sup>
2015 .....	\$120,415	\$84,078	\$18,474	\$2,113
2014 .....	\$247,411	\$51,160	\$25,335	\$2,091

(1) Fees charged for audit, review, NI 52-109 compliance and accounting matter consultation

(2) Fees charged for French translation of interim financial statements and financial due diligence

(3) Fees charged for preparation of income tax and mining duties returns and audit support

(4) CPAB

## RISK FACTORS

### Overview

The Company’s business consists of the acquisition, 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.

### Liquidity

As at December 31, 2015 the Company had cash and cash equivalents of \$9.6 million. Management estimates that these funds less the \$2.5 million acquisition payment made subsequent to December 31, 2015, will not be sufficient

to fund the advancement of the Dumont Nickel Project, meet obligations and cover general and administrative expenses for the ensuing twelve months. Until such time that financing becomes available on acceptable terms, the Company has taken action to limit the ongoing exploration and evaluation work and reduce its operating costs. Accordingly, these conditions indicate the existence of material uncertainties that cast significant doubt upon the Company's ability to continue as a going concern. The Company's ability to continue future operations and fund its exploration, evaluation, development and acquisition activities is dependent on management's ability to secure additional financing in the future, which may be completed in a number of ways including, but not limited to, the issuance of debt or equity instruments, expenditure reductions, or a combination of strategic partnerships, joint venture arrangements, project debt finance, offtake financing, royalty financing and other capital markets alternatives. While management 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 on terms which are acceptable to the Company.

### **Overview of Exploration, Development and Operating Risk**

The Company is engaged in mineral exploration, development and mining operations. Mining operations may be subject to risks and hazards, including environmental hazards, industrial accidents, unusual or unexpected geological formations, unanticipated metallurgical difficulties, ground control problems, seismic activity, weather events and flooding. Mining and exploration operations require reliable infrastructure, such as roads, rail, ports, power sources and transmission facilities and water supplies. Availability and cost of infrastructure affects the production and sales from operations, as well as capital and operating costs. 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 these mineral exploration and development 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 acquiring, 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) estimated construction schedule of 24 months post securing financing; and (iii) project commissioning is expected to begin in ten to eleven quarters after financing is in place. 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 or possibly a loss of property interests.

## **Funding Needs, Financing Risks and Dilution**

As at December 31, 2015, 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, or possibly a loss of property interests.

## **Limited Operating History**

The Company recently acquired a majority interest in an operating mine, has no history of profitability, and a limited operating history in the mineral exploration and development business. Prior to the acquisition of a majority interest in the Beta Hunt Mine, the Company had no history of producing metals from its mineral properties. As a result, the Company is subject to all of the risks associated with establishing new mining operations, business enterprises and operating assets 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 at the Beta Hunt Mine 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.

### **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 minerals from the ore.

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.

### **Commodity Price Volatility**

The ability of the Company to develop the Dumont Nickel Project and fully exploit the Beta-Hunt Mine and Reed Mine, along with the future profitability of the Company, is directly related to the market price of nickel, gold and copper, each of which is sold in an active global market and traded on commodity exchanges. These prices (i) 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, and (ii) 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 these commodity 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 a significant portion 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.

### **Decision to Mine not based on Feasibility Study**

The decision by SLM to produce at the Beta Hunt Mine was not based on a feasibility study of mineral reserves, demonstrating economic and technical viability, and, as a result, there may be an increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including increased risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. There is no guarantee that that anticipated production costs will be achieved. Failure to achieve the anticipated production costs would have a material adverse impact on SLM's cash flow and future profitability. It is further cautioned that the PEA referenced in Appendix A is preliminary in nature, includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. No pre-feasibility or feasibility study has been completed on Beta Hunt. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

### **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**

There is no guarantee that title to the Company's 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.

## **Foreign Operations**

The Company's Beta Hunt mine is located in Australia. Any changes in regulations or shifts in political attitudes in Australia, or other jurisdictions in which the Company has projects from time to time, are beyond the control of the Company and may adversely affect its business. Future development and operations may be affected in varying degrees by production, export controls, income taxes, expropriation of property, repatriation of profits, environmental legislation, land use, water use, land claims of local people, mine safety and receipt of necessary permits. The effect of these factors cannot be accurately predicted.

## **Integration Risk**

The Company substantially changed the scale of its operation with its acquisitions of SLM and VMS during 2016, and the risks that the integration of acquired businesses may take longer than expected, the anticipated benefits of the integration may be less than estimated or the costs of acquisition may be higher than anticipated could have an adverse impact on the Company's business, financial condition, results of operations and cash flows. The Company may discover it has acquired a substantial undisclosed liability with little recourse against the sellers.

## **Permitting Risks**

The Company has not received all permits and related authorizations required to exploit, develop and operate the Dumont Nickel Project. The process of permitting involves the filing of a number of studies and applications with federal and provincial authorities. The Company continues to work through the permitting process. 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.

## **Production Estimates**

The Company has prepared estimates of future metal production for its existing and future mines. The Company cannot give any assurance that such estimates will be achieved. Failure to achieve production estimates could have an adverse impact on the Company's future cash flows, profitability, results of operations and financial conditions.

The realization of production estimates are dependent on, among other things, the accuracy of mineral reserve and resource estimates, the accuracy of assumptions regarding ore grades and recovery rates, ground conditions (including hydrology), the physical characteristics of ores, the presence or absence of particular metallurgical characteristics, and the accuracy of the estimated rates and costs of mining, ore haulage and processing. Actual production may vary from estimates for a variety of reasons, including the actual ore mined varying from estimates of grade or tonnage; dilution and metallurgical and other characteristics (whether based on representative samples of ore or not); short-term operating factors such as the need for sequential development of ore bodies and the processing of new or adjacent ore grades from those planned; mine failures or slope failures; industrial accidents; natural phenomena such as inclement weather conditions, floods, droughts, rock slides and earthquakes; encountering unusual or unexpected geological conditions; changes in power costs and potential power shortages; shortages of principal supplies needed for mining operations, including explosives, fuels, chemical reagents, water, equipment parts and lubricants; plant and equipment failure; the inability to process certain types of ores; labour shortages or strikes; and restrictions or regulations imposed by government agencies or other changes in the regulatory environment. Such occurrences could also result in damage to mineral properties or mines, interruptions in production, injury or death to persons, damage to property of the Company or others, monetary losses and legal liabilities in addition to adversely affecting mineral production. These factors may cause a mineral deposit that has been mined profitably in the past to become unprofitable, forcing the Company to cease production.

## **Cost Estimates**

Capital and operating cost estimates made in respect of the Company's mines and development projects may not prove accurate. Capital and operating cost estimates are based on the interpretation of geological data, feasibility or prefeasibility studies, preliminary economic assessment study, anticipated climatic conditions, market conditions for required products and services, and other factors and assumptions regarding foreign exchange currency rates. Any of the following events could affect the ultimate accuracy of such estimate: unanticipated changes in grade and tonnage of ore to be mined and processed; incorrect data on which engineering assumptions are made; delay in construction schedules, unanticipated transportation costs; the accuracy of major equipment and construction cost estimates; labour negotiations; changes in government regulation (including regulations regarding prices, cost of consumables, royalties, duties, taxes, permitting and restrictions on production quotas on exportation of minerals); and title claims.

## **Aboriginal/First Nation**

Royal Nickel is committed to working in partnership with our local communities and aboriginal/First Nation communities 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. 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. In accordance with this MOU, Royal Nickel and Abitibiwinni are currently negotiating the terms of an Impact and Benefits Agreement. 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.

In Australia, native title claims and Aboriginal heritage issues may affect the ability of the Company to pursue exploration, development and mining on Australian properties. The resolution of native title and Aboriginal heritage issues is an integral part of exploration and mining operations in Australia and the Company is committed to managing any issues that may arise effectively. However, in view of the inherent legal and factual uncertainties relating to such issues, no assurance can be given that material adverse consequences will not arise. Reference is made to Appendix A hereto – “Native Title”.

### **Reliance on Third Parties**

The Company is heavily dependent on its ability to secure reliable supplies of raw materials and provision of certain services from third-party suppliers in order to carry out its operations. In particular, SLM is reliant on third parties for the processing of its intermediate products. Further, SLM holds its mining title under a sublease with a third party – see Appendix A for further information. There can be no guarantee that these arrangements will be sufficient for the Company’s future needs or that such rights, supplies or provision of services will not be interrupted or cease altogether. A failure of such third parties could have a material adverse effect on the Company’s business, operating results and financial position.

### **Joint Ventures**

From time to time the Corporation enters into joint venture arrangements with respect to its properties. The Corporation has a joint venture arrangement over the Reed Mine. A joint venture involves risks, including, among others, a risk that our partners: may have economic or business interests or goals that are inconsistent with our economic or business interests or goals; may take actions contrary to our policies or objectives; may become bankrupt, limiting their ability to meet calls for capital contributions and potentially making it more difficult to finance or manage the asset sell the property; may become engaged in a dispute with us that might affect our ability to participate in the asset. Although the Corporation expects relations with its joint venture partners to remain positive, contractual or other disputes may arise that may have a material adverse effect on the Corporation.

### **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 non-current 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, the Australian 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 and Warrants**

### ***Liquidity of Common Shares and Warrants***

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 and Warrants would be diminished.

### ***The Company's Shares and Warrants 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 price of the Company's Common Shares and Warrants,

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 and Warrants at any given point in time may not accurately reflect the Company's long-term value.

## **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

As of December 31, 2015, 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 Warrants, 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. Reference is also made to the authors of the Technical Reports identified in Appendices A and B.

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 Québec*.

## **MATERIAL CONTRACTS**

Except for contracts made in the ordinary course of business, the following are the only material contracts entered into by the Company in 2015:

- Agency agreement ("**Agency Agreement**") dated June 12, 2015 between the Company, Marquest Capital Management and Secutor Capital Management Corporation in connection with the brokered private placement by the Company of 8,571,428 flow through shares (at a price of \$0.35 per flow through share) and 2,391,638 non-flow through units (at a price of \$0.275 per unit; each unit consisting of one common share and one half of one common share purchase warrant exercisable into one common share of the Company at a price of \$0.375 per common share for a period of 24 months following the closing date), for total gross proceeds of \$3,657,700.



- Investment agreement (“**Investment Agreement**”) dated July 8, 2015 between the Company, Orion Mine Finance (Mater) Fund I LP and 8248567 Canada Limited in connection with the Orion royalty financing described on page 5 of this AIF.

A copy of the Agency Agreement and Investment Agreement is available under the Company’s profile at [www.sedar.com](http://www.sedar.com).

### ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at [www.sedar.com](http://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, 2015.

### 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, 2015, 2014 and 2013, as reported by the Bank of Canada, were as follows.

	2015 (\$)	2014 (\$)	2013 (\$)
Closing.....	1.3840	1.1601	1.0636
High.....	1.3990	1.1643	1.0697
Low.....	1.1728	1.0613	0.9839
Average.....	1.2787	1.1045	1.0299

As at March 31, 2016, the exchange rate for one US\$ expressed in Canadian dollars, based upon noon rates provided by the Bank of Canada was \$1.2971.

### 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  $\text{Ni}_2\text{Fe}$  to  $\text{Ni}_3\text{Fe}$ . The formula  $\text{Ni}_{2.5}\text{Fe}$  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  $\text{Mg}(\text{OH})_2$ .

“**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  $\text{Mg}_{10}\text{Fe}_{23}+[(\text{OH})_{24}|\text{CO}_3]_2\text{H}_2\text{O}$

“**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  $\text{Ni}_3\text{S}_2$ .

“**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 ranging 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  $\text{Fe}_3\text{O}_4$ .

“**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.

“**millerrite**” is a nickel sulphide mineral,  $\text{NiS}$ . 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 diameter of 47.6 mm.

“**olivine**” is an olive green magnesium iron silicate mineral common in mafic and ultramafic rocks with a composition of  $(\text{Mg,Fe})_2\text{SiO}_4$ .

“**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  $(\text{Fe,Ni})_9\text{S}_8$ .

“**peridotite**” means a general term for intrusive ultramafic igneous rocks consisting of olivine and lacking feldspar.

“**PGE**” is platinum group element.

“**ppb**” means parts per billion.

“**ppm**” means parts per million.

“**PQ**” 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  $\text{FeS}_2$ .

“**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  $\text{FeS}$ .

“**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

### SALT LAKE MINING PTY LTD. ACQUISITION

On March 16, 2016, Royal Nickel Corporation (“Royal Nickel” or the “Corporation”) announced that it had completed the acquisition of an additional 46% of Salt Lake Mining Pty Ltd. (“**SLM**”), increasing its ownership interest to 66% (the Company announced on February 1, 2016 that it had acquired 20% of SLM for \$2.5 million in cash). SLM is a private company based in Western Australia whose main asset is the Beta-Hunt nickel-gold mine. The additional 46% stake was acquired from the existing SLM shareholders in exchange for 31.9 million common shares of the Company. See below for further details regarding this acquisition. On March 21, 2016, the Company filed a Business Acquisition Report in respect of the transaction that is available under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

The Company has also entered into a shareholders agreement (the “SLM Shareholders Agreement”) with the remaining shareholders of SLM (the “Remaining SLM Shareholders”), who hold 34% of the SLM shares, under which, among other things, the Company has the right (but not the obligation) (the “Call Option”) to acquire all of the SLM shares held by the Remaining SLM Shareholders for additional Common Shares (subject to required approvals) during the period commencing April 1, 2016 and ending September 20, 2016, at an initial exchange ratio of 1.8501 (if exercised during the month of April), increasing by 1.5% in each subsequent month until the end of month 5 (August 2016), and then by 1% in month 6 (September 2016). For example, if the Company exercises the Call Option in September 2016, the Company would be required to issue 1.9777 common shares of the Company for each SLM share. The issuance price applicable under the Call Option will be between \$0.197 and \$0.1843 (depending on the date that the Company exercises the Call Option). In accordance with the requirements of the Toronto Stock Exchange, the Company is seeking shareholder approval to exercise the Call Option at a meeting to be held on May 18, 2016. If shareholder approval is obtained, then the Company intends to exercise the Call Option in May, 2016 in exchange for an aggregate of 24,324,066 common shares of the Company. The maximum number of common shares of the Company issuable upon an exercise of the Call Option is 25,622,213, if exercised in September, 2016..

#### *SLM - Beta Hunt Mine Overview*

SLM’s Beta Hunt Mine is a low-cost nickel and gold producer located in the prolific Kambalda mining district of Australia. Beta Hunt resumed nickel production in 2014 and gold production at the end of 2015. The Beta Hunt Mine is part of a multi-million ounce regional gold mineralization system and possesses significant gold by-product potential. Gold mineralization bodies are accessible from the main nickel decline, effectively leveraging existing infrastructure. RNC has received the results of the preliminary economic assessment (“**PEA**”) for Beta Hunt, which is contained in a technical report: “NI 43-101 Technical Report Preliminary Economic Assessment – The Beta Hunt Mine, Kambalda, Western Australia” dated March 4th, 2016 (the “**Beta Hunt Mine Technical Report**”). The authors of the Beta Hunt Mine Technical Report are David Penswick, P. Eng as a consultant, and Elizabeth Haren, MAusIMM CPGeo (Haren Consulting), each of whom is “independent” of Royal Nickel and a “Qualified Person”, as defined in NI 43-101. The Beta Hunt Mine Technical Report was prepared in accordance with the requirements of NI 43-101 and was filed on March 7, 2016 under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). A summary of the information contained in the SLM Technical Report (which report is not incorporated by reference) is set forth in this Appendix B to the Amended and Restated Annual Information Form of the Company for the year ended December 31, 2015 and defined terms used in this Appendix B and not set forth in the AIF have meanings ascribed to them in the Beta Hunt MineM Technical Report. The table below outlines production and cost results and guidance based on the PEA results.

*Beta Hunt Mine (100% Basis) 2016 Operating Guidance<sup>1,2,3,4</sup>*

<u>Beta Hunt Mine (US\$)</u>	<u>Units</u>	<u>2<sup>nd</sup> half-2015</u>	<u>2016 Guidance</u>
Nickel in Concentrate	kt	2.1	3.5 – 4.5
	Mlbs	4.6	8 – 10
Gold Production	000 ounces	2.2	35 – 45
C1 Cash Costs	\$/lb	\$3.50	\$(1.00) – \$0
(gold by-product basis)	\$/tonne	\$7,700	\$(2,200) – \$0
Nickel Co-product AISC Cash	\$/lb	\$4.90	\$3.75 – \$4.25
Costs	\$/tonne	\$10,800	\$8,270 – \$9,370
Gold Co-product AISC Cash	\$/ounce	N/A	\$800 – \$900
Costs			
Sustaining Capex (includes gold mine development)	\$M	\$1	\$6 – 8

1. Cash operating costs and cash operating cost per tonne sold are non-IFRS measures. In the nickel mining industry, cash operating costs and cash operating costs per tonne are common performance measures but do not have any standardized meaning. Cash operating costs are derived from amounts included in the Consolidated Statements of Comprehensive Income (Loss) of SLM and include mine site operating costs such as mining, processing and administration as well as royalty expenses, but exclude depreciation, depletion and share-based payment expenses and reclamation costs. Cash operating costs per tonne are based on tonnes sold and are calculated by dividing cash operating costs by commercial nickel tonnes sold; US\$ cash operating costs per tonne sold. SLM prepares this information as it believes the measures provide valuable assistance to investors and analysts in its operational performance and ability to generate cash flow. The most directly comparable measure prepared in accordance with IFRS is total production costs.
2. All-in sustaining costs and all-in sustaining cost per tonne sold are non-IFRS measures. These measures are intended to assist readers in evaluating the total costs of producing nickel from current operations. SLM defines all-in sustaining costs as the sum of production costs, sustaining capital (capital required to maintain current operations at existing levels), corporate general and administrative expenses, in-mine exploration expenses and reclamation cost accretion related to current operations. All-in sustaining costs exclude growth capital, growth exploration expenses, reclamation cost accretion not related to current operations, interest and other financing costs and taxes. The most directly comparable measure prepared in accordance with IFRS is total production costs.
3. Key 2016 assumptions: nickel price \$4.08/lb, gold price \$1,080/oz and 1.43 \$US = 1\$AUD
4. The technical information in this table has been prepared in accordance with Canadian regulatory requirements by, or under the supervision of David Penswick, P.Eng.

*Cautionary Statement.* The decision by SLM to produce at the Beta Hunt Mine was not based on a feasibility study of mineral reserves, demonstrating economic and technical viability, and, as a result, there may be an increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including increased risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. There is no guarantee that that anticipated production costs will be achieved. Failure to achieve the anticipated production costs would have a material adverse impact on SLM's cash flow and future profitability. It is further cautioned that the PEA is preliminary in nature, includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. No pre-feasibility or feasibility study has been completed on Beta Hunt. Mineral resources are not mineral reserves and do not have demonstrated economic viability.



## THE BETA HUNT MINE

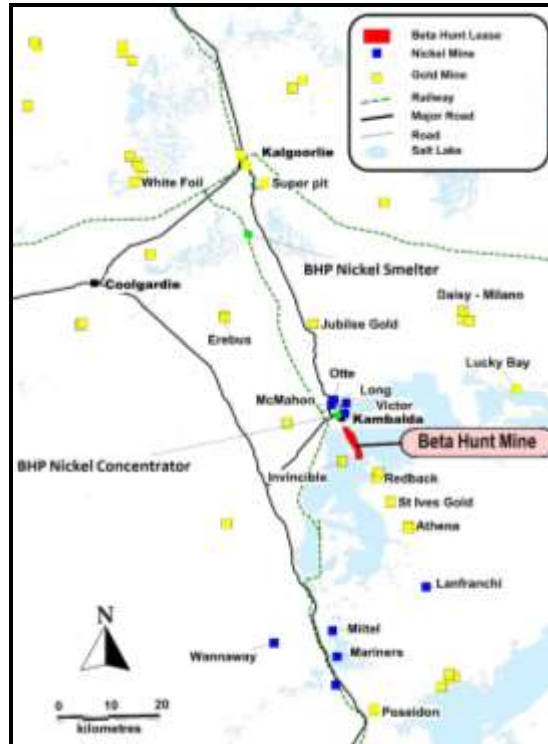
Unless otherwise indicated, information in this section is summarized or extracted from the Beta Hunt Mine Technical Report. Portions of the following information are based on assumptions, qualifications and procedures which are set out only in the full Beta Hunt Mine Technical Report. For a complete description of the assumptions, qualifications and procedures associated with the following information, reference should be made to the full text of the Beta Hunt Mine Technical Report which is available for review under the Company's profile on SEDAR located at [www.sedar.com](http://www.sedar.com).

### Project Description and Location

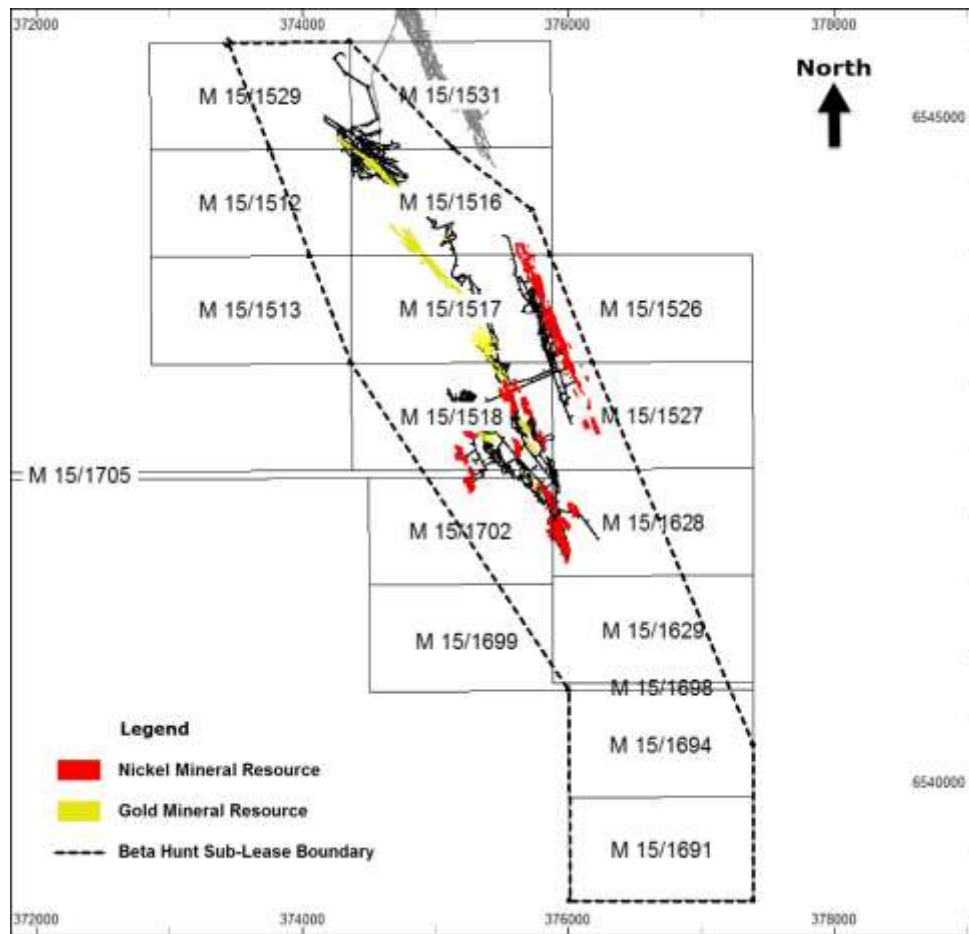
Beta Hunt is an underground mine located 2 km southeast of Kambalda and 60 km south of Kalgoorlie in Western Australia (Figure 1). The mine portal is located on the northern edge of Lake Lefroy at latitude 31°13'6"S and longitude 121°40'50"E. Kambalda has been a nickel mining centre since the discovery of nickel sulphides by Western Mining Corporation ("WMC") in 1966. The project consists of the underground mine and related surface facilities to support underground operations. There are no processing facilities on site with run of mine nickel and gold production being trucked to processing facilities within the district.

The Company holds a 66% interest in SLM. The mining rights for the Beta Hunt Mine are held by SLM through a sub-lease agreement with St Ives Gold Mining Company Pty Ltd. ("SIGMC") which gives SLM the right to explore for and mine nickel and gold within the Beta Hunt sub-lease. Mineral tenure information is provided in Table 1. The Beta Hunt sub-lease covers partial mineral leases for a total area of 960.43 ha as defined in Figure 2. Claim locations with respect to the sub-lease boundary are shown in Figure 2. SLM's rights within the sub-lease boundary only extend below a given elevation, as described in Table 2 below. SIGMC is the registered holder of the mineral leases that are all situated on vacant Crown Land.

**Figure 1: Beta Hunt Location Map**



**Figure 2: Beta Hunt Sub-Lease Boundary, Mineral Leases And Mineral Resources**



**Table 1: Beta Hunt Mineral Tenure Information**

Mineral Lease	Holder	Area	Unit	Rent <sup>1</sup>	Commitment <sup>1</sup>	Grant Date	Expiry Date
M 15/1512	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1513	SIGMC	121.20	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1516	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1517	SIGMC	121.45	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1518	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1526	SIGMC	121.45	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1527	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1529	SIGMC	121.40	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1531	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1628	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025
M 15/1629	SIGMC	121.35	ha	\$2,013	\$12,200	Dec 24, 2004	Dec 23, 2025

Mineral Lease	Holder	Area	Unit	Rent <sup>1</sup>	Commitment <sup>1</sup>	Grant Date	Expiry Date
M 15/1691	SIGMC	108.15	ha	\$1,799	\$10,900	Dec 24, 2004	Dec 23, 2025
M 15/1694	SIGMC	110.85	ha	\$1,832	\$11,100	Dec 24, 2004	Dec 23, 2025
M 15/1698	SIGMC	7.74	ha	\$132	\$10,000	Dec 24, 2004	Dec 23, 2025
M 15/1699	SIGMC	110.95	ha	\$1,832	\$11,100	Dec 24, 2004	Dec 23, 2025
M 15/1702	SIGMC	110.40	ha	\$1,832	\$11,100	Dec 24, 2004	Dec 23, 2025
M 15/1705	SIGMC	42.39	ha	\$710	\$10,000	Dec 24, 2004	Dec 23, 2025

<sup>1</sup> Rent and commitment are for 2015/2016 and are given on 100% basis. SLM share of rent is 20%.

**Table 2: Beta Hunt Sub-Lease Exploitable Area**

Mineral Lease	Exploitable Area (begins below elevation Australian Height Datum metres)
M 15/1512	Linear decrease from northern limit of the tenement to southern limit of the tenement, being from 200 to zero
M 15/1513	0
M 15/1516	Linear decrease from northern limit of the tenement to southern limit of the tenement, being from 200 to zero
M 15/1517	0
M 15/1518	-100
M 15/1526	0
M 15/1527	-100
M 15/1529	At and below surface
M 15/1531	At and below surface
M 15/1628	-100
M 15/1629	-100
M 15/1691	-100
M 15/1694	-100
M 15/1698	-100
M 15/1699	-100
M 15/1702	-100
M 15/1705	-100

### ***Mining Rights in Western Australia***

Under section 9 of the *Mining Act 1978* (WA) (“**Mining Act**”) all gold, silver, other precious metals and other minerals are generally the property of the Crown. In Western Australia, a mining lease is considered to be the primary approval required for major mineral development projects as it authorises the holder to mine for, and dispose of, minerals on the land over which the lease is granted.

The mining tenements subject to the Beta Hunt Sub-Lease are Mining Leases in good standing held by SIGMC. The term of a mining lease is 21 years and may be renewed for further terms.

The lessee of a mining lease may work and mine the land, take and remove minerals and undertake all things necessary to effectually carry out mining operations in, on or under the land, subject to conditions of the mining lease and certain other exceptions under the Mining Act.

### *Native Title Act*

In 1992, the High Court of Australia determined in *Mabo v Queensland (No. 2)* that the common law of Australia recognised certain proprietary rights and interests of Aboriginal and Torres Strait Islander people in relation to their traditional lands and waters. In response to the *Mabo* decision, the Native Title Act 1993 (Cth) (“**NTA**”) was enacted. ‘Native title’ is recognised where persons claiming to hold that title can establish they have maintained a continuous connection with the land in accordance with traditional laws and customs since settlement and where those rights have not been lawfully extinguished.

The NTA codifies much of the common law in relation to native title. The doing of acts after 1 January 1994 that may affect native title (known as ‘future acts’), including the grant of mining tenements, are validated subject to certain procedural rights (including the ‘right to negotiate’) afforded to persons claiming to hold native title and whose claim has passed a ‘registration test’ administered by the National Native Title Tribunal (which assesses the claim against certain baseline requirements).

### *Aboriginal Heritage Act 1972*

The Aboriginal Heritage Act 1972 (WA) (AHA) protects places and objects that are of significance to Aboriginal and Torres Strait Islander people in accordance with their traditional laws and customs (Aboriginal Sites). The AHA provides that it is an offence, for a person to damage or in any way alter an Aboriginal Site.

Compliance with the AHA is an express condition of all mining tenements in Western Australia. Accordingly, commission of an offence under the AHA may mean that the mining tenement is vulnerable to an order for forfeiture. The Western Australian Department of Aboriginal Affairs maintains a register of sites that have been registered under the AHA.

The Department of Aboriginal Affairs database shows no registered heritage sites on the four tenements (M15/1512, M15/1516, M15/1529 and M15/1531) where SLM is likely to do any surface disturbance.

### ***Beta Hunt Sub-Lease***

The Beta Hunt sub-lease grants SLM the right to exploit nickel and gold mineralization on the property free from encumbrances other than the royalties discussed below and certain other permitted encumbrances. It was purchased from Consolidated Minerals in 2013 and the gold rights to the sub-lease were acquired separately from SIGMC in 2014. On an annual basis, SLM must pay to SIGMC 20% of (i) all rent payable by SIGMC in respect of each tenement (ii) all local government rates and (iii) all land or property taxes.

### ***Royalties***

SLM pays the following royalties on nickel production:

- A state royalty equal to 2.5% of recovered nickel,
- A royalty to Consolidated Minerals capped at A\$16,000,000 and equal to 3% of payable nickel when prices are less than A\$17,500/t nickel and 5% when prices are great than or equal to A\$17,500/t,
- A royalty to Resource Income Fund LP equal to 0.5% of payable nickel less allowable deductions, and
- A royalty to SIGMC equal to 1.0% of payable nickel less the cost of transportation and processing.

SLM pays the following royalties on gold production:

- A state royalty equal to 2.5% of recovered gold,
- A royalty to Resource Income Fund LP equal to 1.5% of recovered gold less allowable deductions, and
- A royalty to SIGMC equal to 6.0% of recovered gold.

#### ***LRC Pre-Payment***

SLM has in place a senior secured metal prepay agreement with LRC-SLM L.P., a wholly owned special purpose vehicle of Lascaux Resource Capital Fund I L.P. Under this agreement, as of Feb 1 2016, SLM is required to deliver 1,284 tonnes of nickel and 4,800 ounces of gold. These deliveries have been scheduled over the term of the agreement, which extends until February 2019. Among other terms and conditions, SLM is also required to deliver to LRC-SLM L.P. 3% of all gold produced from the property during the term (this obligation is extinguished on expiry or other termination of the agreement). Subject to its terms, the agreement expires in February 2019. There is no penalty for early repayment of the nickel. The Company cannot obtain any dividends from its interest in SLM until the agreement is fully repaid or replaced.

#### ***Effect of Native Title on Beta-Hunt Mining Tenements***

##### ***Federal Court Proceedings***

SIGMC is a party to proceedings commenced in the Federal Court of Australia by the Ngadju people seeking determination of its claim for native title in respect of certain lands located in Western Australia (the “**Current Proceedings**”). Those proceedings were substantively concluded in 2014 when the group obtained recognition of their native title rights. SIGMC, together with BHP Billiton Nickel West, have appealed one aspect of the decision, which relates to the validity of a number of tenements within and beyond the determined claim area (including the Beta Hunt tenements), as against the Ngadju group’s native title rights.

Whilst no formal determination of native title has yet been made over the Beta Hunt tenements, which sit outside of the determined claim area due to an overlap with a (now) dismissed alternative claim, in the event native title is determined to exist, and the current finding of invalidity is upheld on appeal to the Federal Court (decision currently reserved), SLM will be liable for its pro rata share (as determined under the Beta Hunt sub lease) of any compensation payable in respect of the Ngadju claim to the extent relating to the Beta Hunt tenements.

SIGMC is an Australian subsidiary of Gold Fields Limited (“**Gold Fields**”), a public company listed on the New York and Johannesburg stock exchanges. Gold Fields made disclosures regarding the Current Proceedings in its Form 20-F Annual Report for the year ended 31 December 2014 (filed on April 27, 2015 with the United States Securities and Exchange Commission). As of the date of the Beta Hunt Technical Report, Gold Fields has made no subsequent public disclosures regarding the status of the Current Proceedings.

On March 29, 2016) Gold Fields announced that the Federal Court of Australia overturned the July 2014 Federal Court and confirmed that (i) St Ives’ re-granted tenements are valid for the purpose of the Native Title Act, (ii) while St Ives’ rights as tenement holder and the Ngadju People’s native title rights co-exist, St Ives’ rights prevail should there be any inconsistencies. It is not yet clear whether the Ngadju People will seek to appeal this decision.

#### ***Environmental Liabilities***

SLM is responsible for satisfying all rehabilitation obligations arising on or after 25 July 2013 on the Beta Hunt Sub-Lease that have arisen as a result of the activities of SLM and Consolidated Minerals. However, SLM is not required to restore or rehabilitate the area to a condition that is better than that existing on July 25, 2003 as determined by the environmental audit conducted at that time. SIGMC is responsible for all other rehabilitation obligations. A 2015 internal audit, based on a 2008 independent audit undertaken by Consolidated Minerals,

estimated the current rehabilitation liability accruing to SLM for the Beta Hunt Sub-Lease at A\$308,000. SLM advises that there are no other outstanding significant environmental issues.

## **History**

- ***Kambalda Nickel Camp***

WMC first intersected nickel sulphide mineralization at Red Hill in January 1966 after drilling to test a gossan outcrop grading 1% Ni and 0.3% Cu. This discovery led to delineation of the Kambalda Nickel Field where WMC identified 24 deposits hosted in structures that include the Kambalda Dome, Widgiemooltha Dome and Golden Ridge Greenstone Belt. The deposits extend 90 km from Blair in the north to Redross in the south and over an east-west distance of 30 km, from Helmut to Wannaway. A single concentrator to treat ore from the various mines is centrally located, in Kambalda.

- ***Beta Hunt Discovery***

The Hunt nickel deposit was discovered by WMC in March 1970, during routine traverse drilling over the south end of the Kambalda Dome. The discovery hole, KD 262, intersected 2.0 m grading 6.98% nickel. Portal excavation for a decline access began in June 1973. While the decline was being developed, the Hunt orebody was accessed from the neighbouring Silver Lake mine, via a 1.15 km cross-cut on 700 level. As discussed in Section 18, the 700 level access is now used to provide service water to Beta Hunt. The first ore was hauled up the decline in October 1974.

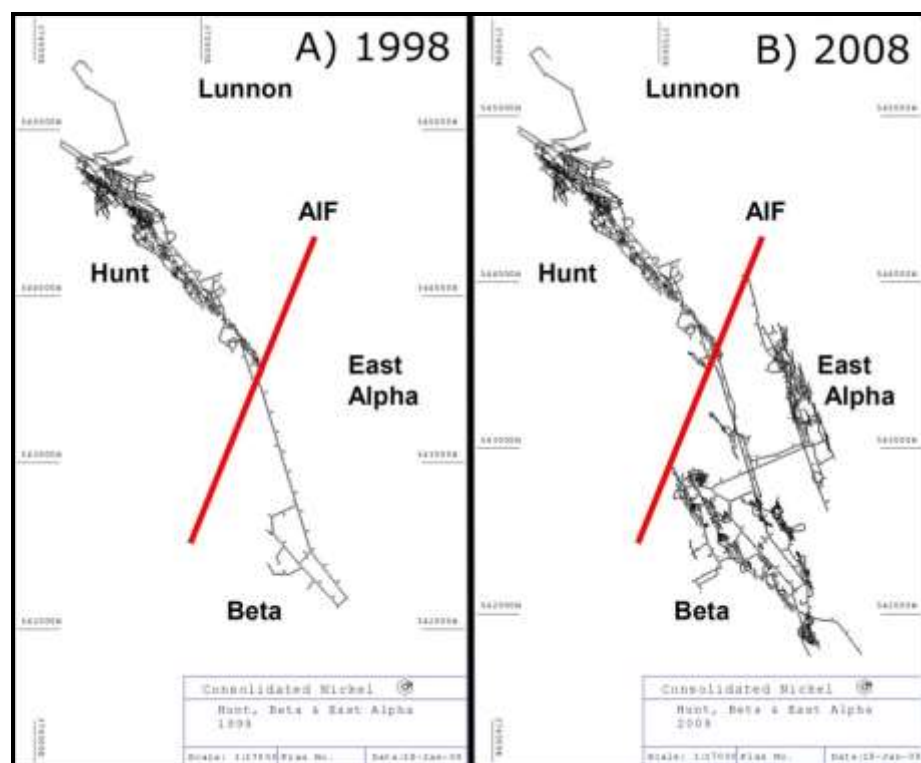
- ***1974 – 1998 WMC Operation***

The first ore production from the decline occurred in October 1974. Over the following 14 years, WMC operated the mine periodically and extended the decline south through the Alpha Island Fault (AIF) to access the Beta nickel deposit. By the time production was halted in 1998 due to the Asian crisis and associated collapse in Ni prices, the Beta decline and return airway had been established. Figure 3 shows the mine development at the completion of the WMC operation in 1998.

Although patches of gold have been found at Hunt since nickel mining began, it was not until 1978-1979, when decline development reached the 10 and 11 levels of A Zone and the 9 and 10 levels of D Zone deeps that the presence of a major gold mineralized system was confirmed in the footwall basalt. From 1979 to 1984, development and mining of the A Zone gold orebody took place on 4 levels using both airlegs and jumbos, with long-hole stopes being mined. Between 1979 and 1984, gold was also mined as specimen stone or in conjunction with nickel stoping operations.

As part of the divestment of non-core assets by WMC in late 2001, the tenements covering the current Beta Hunt Sub-Lease and all surface and underground infrastructure became the property of SIGMC, which is now part of Gold Fields Limited. SIGMC did not operate the Beta Hunt Mine.

- **Figure 3: Plan view of the Hunt, Beta and East Alpha mine development over time**



- **2003 – 2008 Reliance / CNKO Operation**

Reliance Mining Limited acquired rights to mine nickel on the Beta Hunt Sub-lease from SIGMC in 2003 and began production in November of that year. In 2005 Reliance was taken over by Consolidated Minerals and the operating company was renamed Consolidated Nickel Kambalda Operations (“**CNKO**”). The new owners invested heavily in infrastructure to access the deeper mineralization and increase the production rate, spending A\$15M on the Return Air Pass (RAP) and associated fans.

It is important to note that the Beta Hunt Sub-lease did not include gold rights, which remained with SIGMC. Consequently, no effort was made by CNKO to delineate gold resources and there was no follow-up of gold mineralization intersected while drilling for nickel.

CNKO conducted significant drilling to expand the resource base, resulting in discovery of the East Alpha nickel deposit. The first ore was mined from East Alpha in March 2006. Major exploration drilling programs were undertaken at Beta and East Alpha to extend the life of these mines. Despite the success of these programs, the financial crisis and associated collapse in nickel price resulted in CNKO placing the Beta Hunt mine on care and maintenance on November 13, 2008.

Total reconciled production for Beta and East Alpha for the period 2003 to 2008 is 652 kt grading 2.43% Ni for approximately 16 kt nickel contained in ore.

At the time that CNKO suspended mining activities in 2008, resources were updated using all available drilling results. This historical resource estimate is presented in Table 3 as shown in the internal document by Consolidated Nickel Kambalda Operations (2008b).

**Table 3: Historical Beta Hunt Mineral Resources as at 31 December 2008<sup>1, 2</sup>**

Category	DECEMBER 2008		
	Tonnes ('000)	Ni%	Ni Tonnes ('000)
Measured	123	4.9	6.0
Indicated	328	4.5	14.8
Inferred	416	3.7	15.4
<b>Total</b>	<b>877</b>	<b>4.2</b>	<b>36.5</b>

1. Mineral Resources reported above 1% Ni cut off

2. Rounding to significant figures was applied

These are historical estimates. The historical estimates may have been prepared according to the accepted standards for the mining industry for the period to which they refer; however, they do not comply with the current CIM standards and definitions for estimating resources and reserves as required by NI 43-101 guidelines. A qualified person has not done sufficient work to classify the historical estimates as a current resource estimate and the issuer is not treating the historical estimates as a current resource estimate. As a result, historical estimates should not be relied upon unless they have been validated and restated to comply with the latest CIM standards and definitions.

- **2013-Present Salt Lake Mining Operation**

The Beta Hunt Sub-lease was taken over from CNKO by SLM in 2013. Gold mining rights for the sub-lease were also secured from Gold Fields Limited in 2013. This consolidation of gold and nickel rights put SLM in a position to exploit the synergies of adjacent but separate nickel and gold deposits that are accessible from common mine infrastructure. The mine began producing nickel and gold in the second quarter of 2014, with gold production being temporarily halted in the third quarter before restarting in the fourth quarter of 2015. As at February 1, 2016 SLM has produced 221 kt of nickel ore at an average grade of 3.5 %Ni (7.7 kt contained nickel) and 62 kt of gold ore at average grade of 2.8 g/t Au (5.5 koz contained gold).

### **Geological Setting, Mineralization and Deposit Types**

#### ***Regional Geology***

The Kambalda–St Ives region forms part of the Norseman–Wiluna greenstone belt which comprises regionally extensive volcano-sedimentary packages. These were extruded and deposited in an extensional environment at about 2700–2660 Ma. The mining district is underlain by the north-northwest trending corridor of basalt and komatiite rocks termed the Kambalda Dome. The iron-nickel mineralization is normally accumulated within the thick Silver Lake Member of the Kambalda Komatiite Formation above, or on the contact with the dome structured Lunnon Basalt.

The following geological descriptions are summarized from Phillips and Groves (1982) and Banasik and Crameri (2006).

- ***Lunnon Basalt***

The footwall Lunnon Basalt is the lowermost unit in the stratigraphy at Hunt and is the host to the majority of gold mineralization. The Lunnon Basalt typically comprises in excess of a 1 km thickness of tholeiitic basaltic flows with persistent pillowed layers, flow top breccias and sediment bands.



- *Kambalda Komatiite*

The Kambalda Komatiite is a sequence of high-MgO ultramafic flows between 50 to 1000 m thick. It is divided into two members: the lower Silver Lake Member, and upper Tripod Hill Member. The Silver Lake Member comprises one or more komatiite flows (10 - 100 m thick) that are subdivided into a lower cumulate zone and an upper spinifex textured zone. The Tripod Hill Member consists of numerous thin (<0.5 – 10 m) komatiite flows. Lateral and vertical variations in composition of each flow as well as distribution of interflow sulphidic sediments define channel flow and sheet flow facies. In the near nickel resources, the stratigraphic contact is highly irregular and structurally disturbed. Numerous mafic, felsic and intermediate intrusions intersect the sequence. The nickel sulphide resources occur at the base of the Silver Lake Member on the contact with the Lunnon Basalt.

- *Interflow sediments*

Thin (< 5 m) interflow sedimentary rocks are common on the contact between the Lunnon Basalt and Kambalda Komatiite and within the komatiite lavas, particularly in the less differentiated Silver Lake Member. Sediments are dominated by pale cherty and dark carbonaceous varieties, which comprise quartz + albite with minor tremolite, chlorite, calcite and talc and sulphidic bands of pyrrhotite, pyrite, and minor sphalerite and chalcopyrite. Chloritic or amphibole-rich varieties are less common.

- *Intrusions*

The units that host the nickel sulphide mineralization are intruded by granitoids, dykes and sills of mafic, intermediate and felsic composition. Felsic intrusives of sodic rhyolite composition are coarse grained, porphyritic and quartz-rich, and commonly occur throughout the sequence as dykes and sills. Intermediate intrusives (typically dacitic composition) are more variable in texture and composition, but porphyritic types are common and contain feldspar phenocrysts in a biotite-amphibole matrix. Mafic intrusives of basaltic composition are less common but are known to occur in the Lunnon Shoot. The Kambalda Granodiorite in the core of the Kambalda dome is trondhjemitic in composition and has associated felsic dykes.

These dykes vary in size and composition but are all thought to have been emplaced post D2 deformation and pre D4 gold mineralization. As a result, gold mineralization is not greatly disrupted by the presence of the porphyry intrusives and mineralization is often enhanced at their contacts with the contrasting lithologies acting as a preferred zone of deposition.

- *Local and Property Geology*

The mine comprises a number of nickel surfaces in contact, flanking and hangingwall positions within a series of north-northwest striking mafic troughs that occur on the southern margin of the Kambalda Dome. The footwall unit is the Lunnon Basalt, overlain by the Silver Lake and Tripod Hill members of the Kambalda Komatiite.

The Hunt and Lunnon shoots are separated from the Beta and East Alpha deposits by the Alpha Island Fault. Hunt and Beta both occur on the moderately dipping western limb of the Kambalda dome and are thought to be analogous. Similarly, Lunnon and East Alpha occur on the steeply dipping eastern limb of the dome and also have similar characteristics.

### *Nickel Mineralization*

Nickel mineralization is hosted by talc-carbonate and serpentine altered ultramafic rocks. The deposits are ribbon-like bodies of massive, matrix and disseminated sulphides varying from 0.5 - 4.0 m in true thickness but averaging between 1.0 - 2.0 m. Down dip widths range from 40 - 100 m and the grade of nickel ranges from below 1 to 20%. Major minerals in the massive and disseminated ores are pyrrhotite, pentlandite, pyrite, chalcopyrite, magnetite, and chromite, with rare millerite and heazlewoodite generally confined to disseminated mineralization. The hangingwall mineralization tends to be higher tenor than the contact material. The range of massive ore grades in the hangingwall

is between 10 and 20% nickel while the range for contact ore is between 9 and 12% nickel. The hangingwall mineralogy varies between an antigorite / chlorite to a talc/magnesite assemblage. The basalt mineralogy appears to conform to the amphibole, chlorite, plagioclase plus or minus biotite.

Unlike other orebodies on the Kambalda dome, the Beta Hunt system displays complex contact morphologies, which leads to irregular ore positions. The overall plunge of the orebodies is shallow in a southeast direction, with an overall plunge length in excess of 1 km. The individual ore positions have a strike length averaging 40 m and a dip extent averaging 10 m. The geometry of these ore positions vary in dip from ten degrees to the west to 80 degrees to the east. The mineralization within these ore positions is highly variable ranging from a completely barren contact to zones where the mineralization is in excess of 10 m in true thickness.

- ***Gold Mineralization***

All known gold mineralization is confined to the Lunnon Basalt below the ultramafic contact, with the vein systems terminating abruptly at this contact. Gold mineralization occurs in three broad, steeply dipping, north-northwest striking quartz vein systems within a sheared biotite-rich, pyritic zone of the Lunnon Basalt. A Zone and the Western Flanks both occur to the north of a major north-northeast trending structure (Alpha Island Fault) and the Beta mineralization is located to the south of the fault. The A Zone and Western Flanks shears are interpreted to be the channelways for rising ore fluids, with the basalt/ultramafic contact acting as a fluid trap. The subsequent increase in pore fluid pressure induced preferential hydraulic fracturing of the brittle mafic and felsic rocks to form the quartz veining, with the migrating ore fluids causing the wall-rock alteration. Each of these gold mineralization zones exhibits subtle differences.

Gold mineralization in A Zone is located below the A Zone nickel surface and is composed of a large brecciated quartz vein that has a near vertical dip striking at 320°. A Zone varies in thickness from 2 - 20 m wide with a low to medium grade distribution. The A Zone shear is mineralized over approximately 800 m of strike length with the northern portion containing the higher grade and greater thickness. Sub-parallel mineralized structures are found in both the hangingwall and footwall to the main A Zone shear. These structures appear to be of a similar nature to the main mineralized zone and are considered to be splays within a major anastomosing shear system. High-grade zones with abundant visible gold are commonly found at the contact between the basalt and ultramafic. It is these areas which have been mined for specimen stone in the past.

The interpreted Western Flanks gold zone consists of 12 sub-parallel lodes striking at approximately 320° over varying strike lengths from 30 - 800 m. The total Western Flanks gold zone has a vertical extent of 120 - 200 m and dips approximately vertically. Lodes vary in thickness from 1 - 14 m thick with an average thickness of 4 m. The style of mineralization in the Western Flanks shear is very similar to that seen at A Zone, with massive brecciated veins hosted within a pyritic altered basalt. Overall grade at the Western Flanks is slightly higher than that of A Zone with patches of higher grade >10 g/t mineralization evident along the lodes. These high-grade areas appear to show some correlation to zones of dilation. Three lodes are continuous over the entire length of Western Flanks and it is these lodes that contain the majority of the resource tonnes and ounces. The presence of high-grade visible gold similar to A Zone has not been identified in drilling at Western Flanks, however due the wide spaced drilling pattern and the lack of development in the favourable locations it is still very probable that this style of mineralization will also exist at Western Flanks.

The Beta mineralization is interpreted to be an offset extension to the Western Flanks and A Zone mineralization, with a dextral offset of between 100 - 150 m. Beta is again characterized by a series of sub vertical quartz veins within a sheared basalt. Mineralization at Beta has a more disjointed and erratic form, with narrow discontinuous lodes that have a strike extent of 20 - 100 m. Lodes vary in thickness from 1 - 5 m wide commonly with high grades being present on the contacts of porphyries and ultramafic.

The Fletcher Trend is interpreted to be a parallel structural analogue to the Western Flanks and A Zone gold deposits occurring approximately 500 m west of the Western Flanks trend. The Fletcher trend may represent the offset continuation of the Beta Deposit across the Alpha Island Fault. The Fletcher Trend is inferred from gold mineralization intersected in surface hole KD 1237W1 (1.0 m @ 11.3g/t Au and 12.0 m @ 1.4 g/t Au) and KD1019

(6.5 m @ 2.2 g/t Au including 1 m @ 6.1 g/t Au, and 2.5 m @ 2.7 g/t Au including 1 m @ 5.2 g/t Au). This exploration target requires further investigation.

The structural controls on mineralization at the Beta Hunt deposit are related to the complex polyphase deformation exhibited throughout the Kambalda Dome.

- ***Deposit Types***

The nickel deposits on the Beta Hunt Sub-lease are type examples of the Kambalda style komatiite hosted nickel sulphide deposits. The characteristics of the Western Flanks and A Zone gold deposits are consistent with the greenstone-hosted quartz-carbonate vein (mesothermal) gold deposit model. Exploration for extensions of these deposits and new deposits within the Beta Hunt Sub-lease are therefore based on these models as described below.

- ***Kambalda Style Komatiite-hosted Nickel Sulphide Deposits***

Kambalda style nickel sulphide deposits are typical of the greenstone belt hosted komatiitic volcanic flow- and sill-associated subtype of magmatic Ni-Cu-Pt group elements deposits.

- ***Komatiitic Ores in Greenstone Belt Setting – Kambalda Camp***

Ni sulphide ores of the Kambalda camp are typical of the basal contact deposits associated with ultramafic flows in greenstone belts. They occur in the Kambalda Komatiite, which is a package of ultramafic flows (2710 Ma) that has been folded into an elongate doubly plunging anticlinal dome structure about 8 km by 3 km (Fig. 7.1). The underlying member of this succession is the Lunnon Basalt, and the overlying units are a sequence of basalts, slates and greywackes (2710 to 2670 Ma). The core of the dome is intruded by a granitoid stock (2662 Ma) whose dykes crosscut the komatiitic hosts and ores.

The Kambalda Komatiite is made up of a pile of thinner, more extensive "sheet flows" and thicker "channel flows" which have created channels by thermal erosion of the underlying substrate. The flows that contain ore are channel flows, which may be up to 15 km long and 100 m thick, and occupy channels in the underlying basalt. Flows in the pile are commonly interspersed with interflow sediment, typically sulphidic.

Most of the ore bodies are at the basal contact of the lowermost channel flows (accounting for 80% of reserves), though some do occur in overlying flows in the lower part of the flow sequence. The ore bodies typically form long tabular or lenticular bodies up to 3 km long and 5 m thick. The ores generally consist of massive and breccia sulphides at the base, overlain successively by matrix-textured sulphides, and disseminated sulphides. The sediment that underlies the flow sequence is generally absent beneath the lowermost ore-bearing channel flow, due to thermal erosion by the flow.

Structural deformation renders the shape and continuity of ores more complicated in many instances. Because of their weaker competency compared to their wallrocks, sulphide zones are in many cases strung out along, or cut off by faults and shear zones.

- ***Greenstone-Hosted Quartz-Carbonate Vein (Mesothermal) Gold Deposits***

Greenstone-hosted quartz-carbonate vein deposits (GQC) are a sub-type of lode gold deposits. They are also known as mesothermal, orogenic, lode gold, shear-zone-related quartz-carbonate or gold-only deposits. They correspond to structurally controlled complex epigenetic deposits hosted in deformed metamorphosed terranes. They consist of simple to complex networks of goldbearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults with locally associated shallow-dipping extensional veins and hydrothermal breccias. They are hosted by greenschist to locally amphibolite facies metamorphic rocks of dominantly mafic composition and formed at intermediate depth in the crust (5-10km).

The greenstone-hosted quartz-carbonate vein deposits are one of the most significant sources of gold and account for 13.1% of all the world gold content (production and reserves). They are second only to the Witwatersrand

paleoplacers of South Africa. The largest GQC deposit in terms of total gold content is the Golden Mile complex in Kalgoorlie, Australia with 1821 tonnes Au. The Hollinger-McIntyre deposit in Timmins, Ontario, is the second largest deposit ever found with 987 tonnes of gold. The average grade of the deposits varies from 5 to 15 g/t Au, whereas the tonnage is highly variable from a few thousand tonnes to 10 million tonnes of ore, although more typically there are only a few million tonnes of ore.

## Exploration

Exploration for nickel and gold mineralization on the Beta Hunt Sub-Lease has been completed primarily by drilling which is described under the heading “Drilling” below. Since the sale of the asset by WMC in 2001, limited non-drilling exploration has been completed on the property. Exploration programs relevant to ongoing resource definition and exploration work are described below.

### *Geophysics*

A three dimensional seismic survey was conducted in 2007 by Geoforce Pty Ltd during CNKO tenure. Three-dimensional design and logistics were provided by the Department of Exploration Geophysics, Curtin University. Data was acquired above Beta Hunt nickel mine on Lake Lefroy.

The survey demonstrates that high-quality, high-resolution, 3D seismic data combined with volumetric seismic interpretation could become a primary methodology for exploration of deep, small, massive sulfide deposits distributed across the Kambalda area.

## Drilling

Drilling at Beta Hunt has been carried out by SLM, CNKO, RML and WMC since 1970 to explore for and delineate nickel and gold resources using a variety of methods. At the effective date of the Mineral Resources, this database contains 5,692 drill holes for approximately 675,000 metres within the sub-lease boundary as presented in Table 4. Only diamond drilling and, in the case of the A Zone gold resource, face chip samples were used to estimate the resources in this report.

**Table 4: Beta Hunt Database**

Hole Type	Code	Number	Metres
Air Core	AC	1,072	37,662
Diamond	D	3859	567,415
Face or wall chip	FC	29	164
Percussion	P	155	13,315
Rotary Air Blast	R	6	289
Reverse Circulation	RC	571	56,151
<b>Total</b>		<b>5,692</b>	<b>674,996</b>

Since acquisition of the Beta Hunt Sub Lease in 2014, SLM have drilled more than 100 drill holes to define additional Mineral Resources and to upgrade the Mineral Resource classification to support ongoing production and define mineable material. To date SLM has concentrated the majority of drilling on the Western Flanks (9,983 m in 39 diamond drill holes), the A Zone (1,955 m in 26 diamond drill holes) as well as Nickel resource confirmation (2,733m in 48 diamond drill holes).

Drilling at Beta Hunt has served to establish resource estimations both for nickel and gold as detailed under the heading “Mineral Resource Estimates” below. A significant number of nickel and gold occurrences have been intersected outside the current resources. These include both occurrences along the immediate trends of current resources and along poorly explored parallel trends.

## Sampling, Analysis and Data Verification

### *Sampling*

Drill hole data for the Beta Hunt gold and nickel mineralization has been collected by SLM, CNKO, and WMC since 1966. Drill-hole programs by SLM and CNKO were conducted under written protocols which were very similar and generally derived from the original operator, WMC. In the case of diamond drill holes, the operators geologists performed the geological (and geotechnical where required) logging and marked the core for sampling. The core was either cut onsite or delivered to the laboratory where all further sample preparation was completed prior to assay analysis. All diamond core has been 100% logged by a geologist. Core after 2007 has also been geotechnically logged. All core after 2007 has been photographed both wet and dry and the photos are stored on the network.

Initial drilling targeted nickel mineralization and was highly selective according to the visual nickel mineralization observed by the geologist. Generally, sampling was between 0.1 m or 0.3 m to 1.2 m though some historical sample intervals were noted to 0.06 m. As the importance of gold mineralization was realized, sampling became less selective as the gold mineralization did not have significant visual clues.

Sample security involves two aspects: maintaining the chain of custody of samples to prevent inadvertent contamination or mixing of samples, and rendering active tampering as difficult as possible. No specific security safeguards have been put in place to maintain the chain of custody during the transfer of core between drilling sites, core library and sample preparation and assaying facilities. Core and rejects from assay sample preparation are archived in secured facilities and remain available for future testing.

Key details of each operators sample preparation procedures as well as laboratory sampling and sub-sampling procedures are found below.

- *SLM 2014-2016*

Diamond drilling carried out by SLM is sampled and analysed according to written procedures. Gold mineralization is targeted using diamond drill holes with a minimum 0.3 m to maximum 1.2 m sample size. Diamond holes drilled are NQ, BQ and AQ sizes. NQ2 holes drilled in 2014 were orientated. Sampling was performed by a technician after the geologist marked sample intervals on the core. Core is cut at the sample line and either full or ½ core is taken according to the geologist instructions and placed into numerically marked calico sample bags ready for dispatch to the laboratory.

- *CNKO 2005-2008*

CNKO drilling was targeting nickel mineralization in most cases. Diamond drilling carried out by CNKO was sampled and analysed according to written procedures. Drill core is halved and sampled at maximum 1 m intervals through potentially mineralized zones. Sampling to lithological boundaries takes precedence for smaller intervals, down to a minimum length of 0.1 m. The sampling protocol and the sampling volumes are considered to provide a representative sample for the style of massive sulphide mineralization encountered. The remaining half core is retained on site and stored at the core yard.

- *RML 2003-2005*

Diamond drilling carried out by Reliance Mining Limited (RML) was sampled and analysed according to written procedures. Core is logged geologically on site by mine geologists and marked with the desired sample intervals. The core is then transported to Kalassay's (formerly Kalgoorlie Assay Laboratory's), Kalgoorlie laboratory for cutting, sample preparation and analysis.

- *WMC pre 2003*

Western Mining Corporation procedures for logging, sampling, assaying and QAQC of drill hole programs were not available at the time of the Beta Hunt Mine Technical Report. It is assumed it was of high quality and in line with industry standards.

### *Analysis*

Since 2005 all samples to be analysed for either nickel or gold have been sent to Bureau Veritas (Kalassay) laboratories in Kalgoorlie. The assay laboratories used prior to this time are unknown. In September 2010, Inspectorate Kalassay became part of the Bureau Veritas Group and now operates under the global Bureau Veritas Minerals brand. The Kalassay Group was a privately owned company, established in 1989 to provide commercial assay services to the mining industry. In late 2007, Kalassay Group was purchased by Inspectorate Holdings Australia Limited, which is part of the worldwide Inspectorate group of companies. Bureau Veritas Minerals has adopted the ISO 9001 Quality Management Systems. All Bureau Veritas Amdel laboratories work to documented procedures in accordance with this standard. WMC procedures for logging, sampling, assaying and QAQC of drill hole programs are not available at the time of this report. It is assumed it was of high quality and in line with industry standards.

- *Gold Analysis*

The Bureau Veritas (Kalassay)'s analytical method for analysing gold by Fire Assay / ICP-AES (FA002) is:

- **Assay Weight.** A sub-sample of 40 g is taken from the homogenised, pulped sample – this will be the assay sample charge. The remainder of the pulp is stored in its paper pouch inside cardboard cartons. Each sample pouch has a printed label with all the sample and job information, including a reproduction of the original barcode. Similarly, the carton also has a printed label with the job details and an individual carton number.
- **Fluxing.** Flux and reducing agents are introduced to the assay sample charge and mixed mechanically to ensure a homogenous mixture. This process is conducted in a sealed disposable container.
- **Fire Assay Fusion.** The samples are then subjected to the standard fire assay fusion method, using digitally controlled, high temperature gas furnaces. A “multi-pour” method is used to pour the melt from the fire assay pot to the assay mould.
- **Button Production.** The melt settles and cools in the mould, with the lead fraction settling to the bottom. When sufficiently cool, the glassy “slag” is removed and the button recovered.
- **Cupellation.** The button is placed on a Cupel and heated in a muffle furnace. The lead oxidizes and is absorbed into the Cupel, leaving behind a small ball of silver and other precious metals – this is called a “Dore Bead”. The cupel and the bead are allowed to cool in a vented rack.
- **Bead Digest.** Once cooled, the bead is placed into a test tube, to which dilute nitric acid is added. The tube is then heated.
- **Parting.** The combination of heat and nitric acid causes the silver present to go into solution, leaving behind the gold and other precious metals as solids.
- **Aqua Regia Digest.** Concentrated hydrochloric acid is then added to the tube, which combines with the nitric acid already present, to form Aqua Regia. This powerful acid mixture forces the gold and other precious metals into solution.

- Instrumental Analysis. After the digestion stage, the solution is diluted and then subjected to analysis by ICP-AES. The instrument provides a 1 ppb lower limit of detection for gold.

Instruments are calibrated at the commencement of each working day and are constantly monitored throughout an analytical batch. The instrument's solution transfer tubing is flushed between samples, using distilled water to prevent cross contamination between samples.

All stages of the process are tracked and controlled by the Laboratory Information Management System (Sorby LIMS). Integral to this system are a range of internal checks and QA/QC protocols.

- *Nickel Analysis*

The Bureau Veritas (Kalassay) analytical method for analysing nickel by multi-element analysis by mixed acid digest / ICP-AES or ICP-MS (MA200, MA201, MA202) is:

- Assay Weight. A sub-sample of 200 mg is taken from the pulped sample in the high wet strength paper packet – this is the assay weight. The actual weight is recorder and is included in the results calculation process.
- Mixed Acid Digest. The 200 mg (0.2 g) sub-sample is then placed into a Teflon beaker, numbered for identification purposes, to which a very aggressive acid mixture is introduced. The acids which constitute the mixture are added to the sample in a set order: Nitric Acid, Perchloric Acid and finally, Hydrofluoric Acid. The digest commences with the samples at room temperature and after thirty minutes the beakers are transferred to a hotplate which heats the digest solution to 200 °C the digest solution is reduced until the solution is reduced to a dry, solid, state. This process takes approximately four hours. The dry, powdery, material which remains is soluble in hydrochloric acid and ready for the next stage. The beaker is then removed from the hot plate and hydrochloric acid is added. The beaker is then returned to a hotplate, this time operating at 100 °C. This process is referred to as the leach back stage. When all the crystallised solids have gone back into solution, the beaker is removed from the hotplate and allowed to cool. Water is then added to the beaker to bring the volume up of the solution up to a standard volume. The solution is then transferred to a test tube, where the volume is checked again and if necessary adjusted. This solution is now vigorously agitated, to that solution is fully homogenised. This solution is the primary digest liquor. The solution is diluted using a computer controlled auto-diluter. The dilution ratio is set as part of the job set up process in the LIMS System and is factored into the results calculation process.
- ICP Analysis. The diluted sample solution is now subjected to analysis by ICP-AES or ICP-MS. Commercially available and traceable standards are digested and analysed as part of the job. The performance of these standards within the analytical batch is used to validate the job data and are reported with the job results.

All stages of the process are tracked and controlled by the LIMS. Integral to this system are a range of internal checks and QA/QC protocols. Each job is checked for analytical performance against known/client standards, analytical performance against internal standards, reproducibility of repeat samples, taking into account method limitations and agreed error bars, analytical performance of blank samples, and distribution of anomalous elemental values.

- Should there be any failures detected at this stage an investigation is initiated and the results of that could be reanalysis of part or all of the samples in the batch. Only when the analysts are satisfied with all the results are results made available

- *Quality Control*

Drill hole programs by SLM, CNKO and RML were conducted under written protocols which were very similar and generally derived from the previous operator. Certified standards, blanks and duplicates were part of the protocols. No umpire laboratories have been used.

QA/QC data is available for certified standards and blanks which were routinely inserted into sample batches after 2007.

The standards and blanks analysed suggest the quality of nickel sample preparation and assaying work conducted by the Kalassay during 2008 was not to a high standard with some jobs requiring re-assay. The analysis did not demonstrate any clear bias in the data. Reconciliation of nickel mining by SLM has generally been very good and therefore it is assumed that quality of laboratory work during this time has not impacted materially on the estimation of nickel mineral resources.

Documentation for WMC QA/QC data is potentially held in hard copy at the SLM site however at the time of the Beta Hunt Mine Technical Report it was not available. Reconciliation of nickel mining by SLM has generally been very good and therefore it is assumed that the WMC data is reliable. It is worth noting that WMC were considered to be leaders in the mining industry and had a reputation as a company with high standards.

- *SLM 2014-2016*

All drill hole programs completed by SLM were conducted under the protocols of written procedural standards. Coarse blanks were provided by Geostats. Standards for gold and nickel were provided by Ore Research & Exploration Pty Ltd.

The procedure for insertion of quality control samples is as follows. First, coarse blank material used should be as close as possible to the sample weights being submitted. The standard blank weight to be used for half core samples is 2 kg, and whole core samples is 4 kg. These can be prepared in blank sample bags and then added to a numbered sample bag during sampling. Next, a blank must be inserted at the beginning of the sampling for each drill hole. This ensures there is no contamination between batches. A minimum of one standard and one blank should be inserted at each ore zone within each drill hole.

Standards should be inserted immediately before the start of the ore zone (and also within the ore zone where the zone is >10 m). The value of the standard inserted should, wherever possible, be of similar grade to the mineralization (as estimated visually). Blanks should be inserted immediately after the ore zone or after any area within the ore zone where very high grade is expected. The geological technician shall select the specified standard or blank and then re-label the standard or blank with the sample number specified in the drillhole\_samp\_submission spreadsheet. The standards and blanks shall be sent to the lab with the drill core.



#### *CNKO 2005-2008*

All drill hole programs completed by CNKO were conducted under the protocols of written procedural standards. Core recovery was > 99%, and is recorded in RQD logs. All drill core is geologically logged using codes set up for direct computer input. Rock type, including mineralization intensity and texture, plus structural information are recorded. Zones of sulphide mineralization determined during geological logging are selected for assays. CNKO initiated routine duplicate sampling in October 2008.

In order to establish the degree of error associated with testing of drill core samples, certified standards and course blanks were placed within each sample batch which represents about 13% of submitted samples. Overall, an acceptable reconciliation exists between assayed and the expected value of standards.

#### *RML 2003-2005*

All drill hole programs completed by RML were conducted under the protocols of written procedural standards. The RML procedure for inserting standards and blanks into drill core are as follows. Each day after the core has been logged and assay intervals have been specified, the geologist shall specify which standards and blanks are to be inserted into the sample, and at which depths using the drillcore\_samp\_submission spreadsheet. As a general rule, a minimum of 1 standard and 1 blank should be inserted into each ore zone within each hole. If an ore zone is particularly wide (say >10 m) then more than 1 standard may be inserted at the discretion of the geologist. The value of the standard inserted should wherever possible be of similar tenor to the mineralization (as estimated visually). Standards should be inserted either within the ore zone or immediately before the start of the ore zone. Blanks should preferably be inserted within the ore zone or (less preferably) immediately after it. Note that there is no point placing a blank within or immediately after a zone of barren-looking material. The geological technician shall select the specified standard or blank and then relabel the standard or blank with the sample number specified in the drillhole\_samp\_submission spreadsheet. The standards and blanks shall be sent to the lab with the drill core.

#### *WMC pre 2003*

WMC procedures for logging, sampling, assaying and QA/QC of drill hole programs for gold and nickel were not available at the time of the Beta Hunt Technical Report. QA/QC data is also not available, however considering their excellent reputation it is assumed drilling, sampling and assaying were carefully managed by WMC.

To monitor quality from the Bureau Veritas (“**Kalassay**”) laboratory in Kalgoorlie there have been 19 certified standards inserted into sample batches since 2008 of which two are blanks. An additional coarse blank has also been used which when submitted is approximately the same weight as routine samples. The standards have been sourced from Ore Research and Exploration Pty Ltd (“**OREAS**”).

Should the quality control standard(s) and/or blanks fail the batch may be re-assayed at the discretion of the geologist. Where re-assaying has occurred the quality control standards and blanks are checked again and if passed the data is added to the database.

Two holes were quarter-cored in October 2008 and sent as duplicates to the lab. BE18-219 had an outlier of 17%Ni vs 0.5%Ni for one sample. This has been deemed a sample mix-up and is not included in the results. The comparison shows no bias and an acceptable scatter for a field duplicate of this type.

Standards and blanks are reviewed at the time of assay return from the laboratory with the geologist determining whether the quality control samples have passed and therefore the batch of assays is accepted. This is done by reviewing all standards and blanks submitted with a batch in unison. The results were considered adequate in the Beta Hunt Technical Report.

Two holes were quarter-cored in October 2008 and sent as duplicates to the lab. BE18-219 had an outlier of 17% Ni vs 0.5% Ni for one sample; this has been deemed a sample mix-up and is not included in the results. A review of the relevant data does not indicate any bias and the data shows an acceptable scatter for a field duplicate of this type with 89% of pairs falling within a 20% precious tolerance.

### ***Data Verification***

#### *Site Visit*

In accordance with 43-101 requirements, Ms Haren completed site visits to the Beta Hunt mine on October 22-23, 2014, January 27-28 2015 and July 7-8, 2015. During the site visits, Ms Haren discussed diamond drilling procedures and carried out a review of the on-site logging and sampling facilities for processing the drill core. Ms Haren visited some underground nickel mining headings and observed air leg mining taking place. Comparison of the ore being mined and the tenor of the drill holes in the area confirmed qualitatively the presence of nickel ore.

#### *Database Verifications*

Drill hole programs by Salt Lake Mining, Consolidated Minerals and Reliance Operations were conducted under written protocols which were very similar and generally derived from the previous operator. Drill hole logging is directly entered into a pro-forma spreadsheet using a Toughbook. Logging data and assay data are put through a number of checks to ensure validity before being uploaded into the master Access database. Ms Haren is of the opinion that the database is acceptable and sufficiently reliable for mineral resource estimation.

#### *Verifications of Analytical Quality Control Data*

SLM made available to Haren Consulting analytical control data as Microsoft Excel spreadsheets containing the assay results for the quality control samples including field blanks, field duplicates, certified reference material and pulp blanks.

Haren Consulting aggregated the assay results for the external quality control samples for further analysis. The gold and nickel variables were examined. Sample blanks and certified reference materials data were summarized on time series plots to highlight the performance of the control samples. The paired field duplicate data were analyzed using bias charts and relative precision plots. The external analytical quality control data produced for this project represents approximately 14% of the total number of samples submitted for assaying since 2008.

Overall, Ms Haren considers that analytical quality control data reviewed suggest that the assay results delivered by the Kalassay laboratory used by SLM are sufficiently reliable for the purpose of mineral resource estimation. The data sets examined by Haren do not present obvious evidence of analytical bias. The proximity of recent drill holes (2008-2015) to older drill holes (pre 2008) and their similar geology and grade suggests the older sample data is sufficiently reliable.

Haren Consulting has not undertaken any independent verification sampling. Ms Haren has reviewed the reconciliation of nickel ore mined compared to drill hole intercepts, modelled mineralization and grade estimates. The generally good reconciliation lends veracity to the drill hole assay values. It is not anticipated that the gold data will be of different quality to the nickel data. Verification of historic WMC/Reliance Operations significant drill intersections was undertaken by Consolidated Minerals/Reliance Operations Ltd in preparing their 2005 Mineral Resource Estimate for the Beta Hunt Gold Deposits, Kambalda, Western Australia as part of the 2004 JORC compliance guidelines. Salt Lake Mining have subsequently undertaken desktop verification of results selectively checking significant intersections against geology, existing mine development and more recent Salt Lake Mining drill intersections as part of the Western Flanks resource estimate in 2015. As part of this exercise, all mineralized drill intersections were visually verified by and Salt Lake Mining geologist on-site during the drill hole validation process.

## **Mineral Processing and Metallurgical Testing**

Beta Hunt is an operating mine with separate tolling contracts in place for processing of nickel and gold ores. Elements of these contracts that relate to the metallurgical performance of Beta Hunt mineralization are summarized below.

### ***Nickel Processing***

Since ownership by WMC, nickel ore from Beta Hunt has been processed at the nearby KNC that is currently owned by BHPB. As a result, the quality, variability and metallurgical response for this material is well understood. The mineralization is considered to be typical for the area and is blended with ores from other mines. As it would not be possible to measure the metallurgical recovery of Beta Hunt material within the blend, recovery is credited based on the grade of material treated as per the contractual agreement between BHPB and SLM.

The nickel mineralization also contains limited quantities of both copper and cobalt. Copper is recovered by KNC in sufficient quantities for SLM to receive some credit. However, as the resource statement does not include a copper grade estimate, no accounting for copper has been made in this PEA. SLM is given no credit for cobalt.

The nickel mineralization is considered 'clean' as it has low levels of deleterious elements. Specifically, arsenic (As) levels currently average < 20 ppm, compared to the penalty threshold of 400 ppm, and the Fe: MgO ratio is well above the threshold level of 0.8, below which penalties are charged.

The low levels of deleterious elements make Beta Hunt mineralization attractive to BHPB, as it is blended with their own ores containing much higher concentrations of As in order to produce an acceptable feed to the KNS.

### ***Gold Processing***

The Beta Hunt gold mineralization is processed by SIGMC through the nearby Lefroy Mill. Material is treated in batches of between 10 – 50 kt and SLM is credited with the actual recovery achieved. To date, two batches have been processed. The initial batch treated in December 2015 achieved a 96% recovery while the second batch in January 2016 achieved a 94% recovery. Recovery for January is in line with the average performance of other gold ores in the region and 94% has been used as the basis for forecasting future production.

## **Mineral Resource Estimates**

The mineral resource estimates presented herein are effective February 1, 2016 and were prepared for the Beta Hunt Mine in accordance with the NI 43-101. Block model quantities and grade estimates for the Beta Hunt project were classified according to the CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May 2014) by the SLM geology team and endorsed by Elizabeth Haren MAusIMM CPGeo who is an independent Qualified Person for the purpose of NI 43-101.

- Both Surpac and Datamine software was used to construct the geological and mineralization solids, prepare assay data for geostatistical analysis, construct the block model, estimate metal grades, and tabulate mineral resources. Snowden Supervisor software was used for geostatistical analysis and variography.
-

The resource estimation methodology involved database compilation and verification, the construction of wireframe models for the mineralization envelopes, the definition of estimation domains, data conditioning (compositing and capping) for geostatistical analysis and variography, block modelling and grade interpolation, resource classification and validation, the assessment of “reasonable prospects for eventual economic extraction” and selection of appropriate cut-off grades, and the preparation of the mineral resource statement. There are three estimation areas that make up the total Beta Hunt gold mineral resource: A Zone, Western Flanks, and Beta. While the gold mineralization in each area is intrinsically linked the three areas have been modelled at different times using slightly different methodologies. There are ten estimation areas that make up the total Beta Hunt nickel mineral resource. No mineral reserves have been estimated.

#### Beta Hunt Nickel Mineral Resources by Area as at February 1, 2016<sup>1,2,3,5</sup>

Area	Measured			Indicated			Measured + Indicated			Inferred		
	Inventory	Grade	Metal	Inventory	Grade	Metal	Inventory	Grade	Metal	Inventory	Grade	Metal
	(kt)	Ni %	(kt)	(kt)	Ni %	(kt)	(kt)	Ni %	(kt)	(kt)	Ni %	(kt)
1820N_1825	0	0	0	63.9	3.1	2.01	63.9	3.1	2.01	8.0	2.8	0.23
1890	18.3	3.8	0.70	0	0	0.00	18.3	3.8	0.70	0	0	0.00
1920	0	0	0	8.4	2.6	0.22	8.4	2.6	0.22	0.6	4.6	0.03
1925	3.9	2.3	0.09	12.2	2.2	0.27	16.1	2.2	0.36	8.2	2.1	0.17
2130	2.1	7.9	0.16	14.3	3.1	0.44	16.4	3.7	0.60	3.5	2.6	0.09
2320	0	0	0	3.8	7.1	0.26	3.8	7.1	0.26	2.8	4	0.11
2330	0	0	0	9.1	4.3	0.39	9.1	4.3	0.39	0	0	0.00
2440-2640	10.1	5.4	0.55	10.4	6.0	0.63	20.4	5.7	1.17	4.3	4.5	0.19
Beta West	0	0	0	25.6	5.3	1.36	25.6	5.3	1.36	14.8	4.3	0.64
East Alpha	61.7	4.8	2.96	135.7	4.3	5.79	197.4	4.4	8.75	174.1	3.4	5.93
<b>Total</b>	<b>96.0</b>	<b>4.6</b>	<b>4.46</b>	<b>283.2</b>	<b>4.0</b>	<b>11.38</b>	<b>379.2</b>	<b>4.2</b>	<b>15.84</b>	<b>216.3</b>	<b>3.4</b>	<b>7.40</b>

#### Beta Hunt Gold Mineral Resources by Area as at February 1, 2016<sup>1,2,4,5</sup>

Area	Measured			Indicated			Measured + Indicated			Inferred		
	Inventory	Grade	Metal	Inventory	Grade	Metal	Inventory	Grade	Metal	Inventory	Grade	Metal
	(kt)	Au g/t	(koz)	(kt)	Au g/t	(koz)	(kt)	Au g/t	(koz)	(kt)	Au g/t	(koz)
A_Zone	0	0.0	0	0	0.0	0	0	0.0	0	1,327	3.5	148
Western Flanks	0	0.0	0	779	3.5	88	779	3.5	88	1,404	3.4	153
Beta	0	0.0	0	36	3.4	4	36	3.4	4	179	3.6	21
<b>Total</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>815</b>	<b>3.5</b>	<b>92</b>	<b>815</b>	<b>3.5</b>	<b>92</b>	<b>2,910</b>	<b>3.4</b>	<b>321</b>

1. 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 estimated will be converted into Mineral Reserves.
2. The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is also no certainty that Inferred Mineral Resources will be converted to Measured and Indicated categories through further drilling, or into Mineral Reserves once economic considerations are applied. Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.
3. Nickel Mineral Resources are reported using a 1% Ni cut-off grade
4. Gold Mineral Resources are reported using a 1.8 g/t Au cut-off grade
5. Mineral Resources described here has been prepared by Elizabeth Haren, MAusIMM CPGeo, of Haren Consulting Pty Ltd.

## Mining Operations

The mine hosts a number of discrete deposits of varying geometry that are mined using the following three methods:

- In the Beta West zone, where Ni mineralization is narrow vein and flat lying, mineralization is mined with handheld airleg drills, using the room and pillar method.
- In the East Alpha zone, where Ni mineralization is narrow vein and more steeply dipping, mineralization is also mined with handheld drills, using a cut and fill method.
- In the A Zone and Western Flanks zones of Au mineralization, wider and more steeply dipping geometry permits use of mechanized drilling equipment and the blast hole stoping method.

A key constraint considered in the scheduling of production from various zones was ventilation, specifically the maximum capacity of the existing system. Fresh air enters the mine via the portal and two fresh air passes, then is ultimately exhausted via a RAP measuring 4.2 m in diameter. The system currently supplies approximately 180 m<sup>3</sup>/sec, which represents 60% of the design limit of 320 m<sup>3</sup>/sec. It would be possible to supply airflow in excess of this limit through investment in additional ventilation passes – CKNO contemplated an expansion to 400 m<sup>3</sup>/sec by adding a 2.4 m diameter intake raise. The airflow required has been calculated based on the Australian regulation of 0.05 m<sup>3</sup>/sec per kW equipment.

A summary of the mine production plan is provided below:

**Table 5: Mining Production Plan**

Item	units	Total	2016	2017	2018	2019	2020	2021
Decline Development	metres	5,612	2,725	2,231	633	23	0	0
Lateral Waste	metres	7,333	3,291	3,376	570	94	0	0
Ore Drives	metres	6,892	3,362	2,408	1,045	77	0	0
Raises	metres	819	232	365	219	3	0	0
<b>Total Development</b>	<b>metres</b>	<b>20,655</b>	<b>9,610</b>	<b>8,380</b>	<b>2,467</b>	<b>198</b>	<b>0</b>	<b>0</b>
Nickel Mineralization <sup>1</sup>	kt	572	143	156	152	121	0	0
Nickel Grade <sup>1</sup>	% Ni	2.42	2.75	2.55	2.37	1.94	0.00	0.00
Contained Nickel	000 lbs	30,556	8,675	8,782	7,951	5,149	0	0
Gold Mineralization <sup>1</sup>	kt	2,924	425	600	600	600	495	204
Gold Grade <sup>1</sup>	g/t Au	3.06	3.30	3.07	2.76	3.16	3.01	3.19
Contained Gold	000 oz	287	45	59	53	61	48	21
Average Airflow	m <sup>3</sup> /sec	171	202	220	194	179	129	100
Maximum Airflow	m <sup>3</sup> /sec	241	227	241	199	194	133	112

1. Diluted tonnes and grade

The global dilution and mining recovery is as follows:

- Nickel operations extract 60% of the total MII Resource with overall dilution of 38%, and
- Gold operations extract 67% of the total MII Resource with overall dilution of 11%

**Cautionary Statement:** The decision by SLM to produce at the Beta Hunt mine was not based on a feasibility study of mineral reserves, demonstrating economic and technical viability. As a result, there may be an increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including increased risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. There is no guarantee that the anticipated production costs will be achieved. Failure to achieve the anticipated production costs would have a material adverse impact on SLM's cash flow and future profitability. It is further cautioned that the PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. . No mining feasibility study has been completed on Beta Hunt. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that the PEA will be realized.

### ***Nickel Operations Development***

The nickel operation extracts mineralization hosted in two distinctly different styles of mineralization:

- In the Beta West zone, nickel mineralization is narrow vein and flat lying (typically dipping at ~20°). This style of mineralization is mined using the room and pillar method.
- In the East Alpha zone, nickel mineralization is also narrow vein but more steeply dipping (typically at ~65°). This style is also mined using the flat back cut and fill method.

Both styles are mined conventionally, using handheld airleg drills. These drills are also used for installation of rock bolts. Holes are charged using ANFO and the target advance is 2.0 m per round. In the flat-lying room and pillar stopes, broken ground is scraped using winches to ore drives at the front of the stopes. Here, material is excavated using narrow vein (3 t payload) LHDs and trammed to re-muck stockpiles where it is re-handled by the large LHD onto 50 t trucks. In the steeply dipping flat back stopes, the loading drives have been sized to allow immediate loading of broken material by narrow vein LHDs, eliminating the need for scrapers.

### ***Gold Operations Development***

The steeply dipping gold mineralization is mined using the longitudinal blast hole stoping method. With this method, ore drives are developed on a 25 m level spacing along strike to the limits of mineralization. The resulting pillar between ore drives will be drilled using long holes that measure 64 mm and are charged with ANFO. Production blasts will retreat from the extremities to the limits of an open stope that can be supported.

Where mineralization extends beyond the limits of open stoping, support will be provided either by:

- Leaving a pillar (in lower grade material < 2.0 g/t), or
- Backfilling the primary stope with CRF (for mineralization ≥ 2.0 g/t).

### **Processing and Recovery Methods**

Processing of Beta Hunt mineralization is performed offsite, by third parties under separate tolling contracts.

Nickel mineralization is processed by BHPB at the KNC, which is a conventional flotation style nickel concentrator. There is limited risk associated with the ongoing processing of nickel mineralization as:

- KNC has successfully processed ore from Beta Hunt for many years, and
- The term for the current contract extends until January 31, 2018. BHPB have an option to extend this contract.

Mineralization is blended with ores from other mines and the recovery credited to Beta Hunt is based on the grade of feed. Concentrate produced from Beta Hunt mineralization is treated and refined by BHPB at the KNS under standard commercial terms.

Gold mineralization is processed at the SIGMC Lefroy Mill. Material is processed in batches and SLM is credited with the recovery actually achieved. The Lefroy Mill flowsheet is a conventional gold circuit with SAG milling with a production capacity of 4.8 Mt/a. After milling, a gravity circuit recovers the gravity recoverable gold from the ore, with this gold treated separately to produce bullion. The mill cyclone overflow product flows to a leach circuit. The pregnant solution reports to, carbon adsorption tanks followed by an acid wash and elution before the electrowinning circuit produces a calcine for smelting. Tailings are alternately deposited on two paddock-type tailings facilities, which are constructed upstream.

### **Infrastructure, Permitting and Compliance Activities**

Beta Hunt is an operating mine with all required infrastructure already in place. The main elements of this infrastructure include:

- Normal infrastructure associated with a ramp access underground mine, including the portal, a decline ramp measuring 5.0 m x 5.5 m, the trackless mining fleet and refuge stations. This existing infrastructure is adequate to support the LOM plan; specifically permitting the safe operation at planned maximum mining rates of 2.1 kt/d.
- A surface workshop used for major maintenance and weekly services for the mobile equipment fleet.
- An underground workshop used for minor maintenance of the mobile fleet. This is located in the footwall side of the main decline in the East Alpha section.
- A ventilation system that uses the decline and two smaller raises as intakes, with a single RAP measuring 4.2m in diameter. The system has a capacity to supply 320 m<sup>3</sup>/s, compared to the current airflow of 180 m<sup>3</sup>/s. At the maximum production rate of 2.1 kt/d, airflow of 241 m<sup>3</sup>/s will be required.
- A dewatering system which includes six stage pumps that discharge, via a 100 mm line, into Lake Lefroy.
- The management and administration offices, which are portable buildings that will be easy to de-commission at closure.

Utilities provided to the mine include:

- Electricity that is supplied by SIGMC at a cost of A\$0.23/kWh;
- Service water that is sourced from ground water stored in what is effectively an aquifer created by the mined out Silver Lake deposit. Storage tanks have been added to provide surge capacity; and

- Potable water that is supplied by SIGMC.

Beta Hunt is an operating mine and in possession of all required permits. SLM operates Beta Hunt through a sub-lease, most environmental permitting and compliance requirements for mining operations on the project tenements are the responsibility of the primary tenement holder, SIGMC. The project is a small operation with a limited disturbance footprint and the environmental impacts of the project are correspondingly modest.

### *Environmental*

The project is a small operation with a limited disturbance footprint and the environmental impacts of the project are correspondingly modest. Key environmental aspects requiring management effort are:

- Water management, and
- Mine rehabilitation and closure.

SLM has disclosed that there are no other outstanding significant environmental issues.

### *Water Management*

Mine dewatering at Beta Hunt is generally required to be undertaken in accordance with the Licence to Take Water (GWL 62505) and the conditions attached to that licence. SIGMC is the licence holder and accordingly has primary responsibility for ensuring compliance with the licence.

Discharge of mine water, however, is regulated under DER licence L8893/2015/1, held by SLM. SLM is required to lodge annual compliance in relation to its water discharge licence and periodic scrutiny by the DER should be expected. The water quality monitoring results presented in the 2012 - 2013 environmental compliance report showed relatively high concentrations of nickel in water being discharged to Lake Lefroy, as well as trace amounts of hydrocarbon and slight turbidity, but were otherwise unremarkable. The discharge water was hypersaline (as expected). The licence approved by DER specifies no limits for the other parameters to be monitored.

### *Mine Rehabilitation and Closure*

Under the *Mining Act* 1978, responsibility for mine rehabilitation and closure generally lies with the tenement holder (SIGMC, in this case). The Beta Hunt project management plan explains that accountability for rehabilitation of the Beta Hunt tenements will be allocated as follows:

- SLM will be responsible for disturbance arising from September 9, 2003 to the completion of its operations.
- SIGMC will be responsible for disturbance prior to September 9, 2003 or after the cessation of SLM's operations and mine rehabilitation / closure activities.

SLM does not contemplate any significant clearing of vegetation or new surface disturbance so rehabilitation and closure costs are limited.

SLM notes that it does not propose to undertake any work on the existing mullock dump unless it disturbs the dump through removal of material. It is SLM's expectation that the rehabilitation that it will be required to implement will be generally limited to closure and rehabilitation of access tracks, routine clean-up of rubbish and waste materials, removal of buildings, pavements and above ground infrastructure, and sealing of exploration boreholes and mine openings.



The MRF is a State Government levy, the responsibility of the DMP, which provides a pooled fund, based on the environmental disturbance existing on a tenement at the annual reporting date. Levies paid into the MRF will be used for rehabilitation where the operator fails to meet rehabilitation obligations and every other effort has been used to recover funds from the operator. Liability to pay the MRF Levy became compulsory from 1 July 2014. This means that tenement holders now need to report for the MRF each year prior to the close of the levy period, which is on 30 June each year (prescribed day).

The MRF Liabilities are based on negotiated set of standard rates for the purposes of setting the levy. The amount of levy payable is assessed as the Rehabilitation Liability Estimate (if over \$50,000) multiplied by the Fund Contribution Rate which is set at 1%.

With respect to the Beta Hunt Sub-Lease, the MRF levy is paid by SIGMC as registered owners of the leases to which SLM contributes an agreed to amount based on its rehabilitation commitments as defined in the Beta Hunt Sub-Lease Agreement. For 2015, SLM's contribution was A\$9,091.

It should be noted that levies paid into the MRF required under the *Mining Rehabilitation Fund Act 2012* and the *Mining Rehabilitation Fund Regulations 2013* are non-refundable and separate from the internal accounting provisions for closure and rehabilitation and should not be used to offset the costs for rehabilitation.

### ***Social and Community***

The nearest town to Beta Hunt is Kambalda, with a population of 2,701 (2011 Census). The closest houses are approximately 2 km from the portal. As the active underground workings are a further 1 - 4 km down the decline and the scale of operation is small, noise and vibration do not affect the residents. The mine workings are underground and waste rock is generally used to backfill mined out voids so there is no active surface waste dump. There is also no concentrator or tailings storage facility. As a result, dust generation is not an issue. There are no registered heritage sites within the project area or nearby.

### **Capital and Operating Costs**

Capital and operating costs for Beta Hunt have been estimated using a zero-based model. The design criteria, unit costs and other assumptions used in this model are based on current actual performance at Beta Hunt. The currency for all costs presented in this section is Australian dollars (A\$).

### ***Capital Costs***

Beta Hunt is an operating mine with all necessary infrastructure already in place and primary development to the various mining areas already established. Capacity of the existing mining fleet is in excess of current production rates and only limited additional units will be required as the gold operation ramps up to full production. Processing of mineralization is performed off site and by third parties so there is no required investment by SLM in surface infrastructure such as a mill or tailings storage facility. The mine is in operation, with no requirement for initial pre-production capital. As is customary for sustaining capital estimates, contingency has not been included.

Table 6 summarizes the life-of-mine capital requirements for the Base Case mine plan that depletes current Measured, Indicated and Inferred (MII) Resources.

**Table 6: Beta Hunt Capital Cost Estimate**

<b>Item</b>	<b>Units</b>	<b>Base Case</b>
Capitalized Development	A\$ 000s	22,638
Mining Fleet	A\$ 000s	4,223
Sustaining	A\$ 000s	19,094
<b>Total Capital</b>	<b>A\$ 000s</b>	<b>45,955</b>

Discussion on each of the areas of spending follows below.

*Capitalized Development*

Any development access in waste that has a useful life exceeding 12 months is classified as capital and includes (i) extensions to the main decline (mined at 5.0m wide x 5.5m high) (ii) lateral accesses to both Ni and Au mineralization (mined at 4.0m wide x 4.5m high) and (iii) raises installed for storage of broken mineralization, access and ventilation (raisebored by contractors at 3m diameter).

Costs for lateral development reflect the design criteria, productivity and unit costs for the current operation. Given a large component of fixed costs (mainly labour), the overall rate (A\$/m developed) varies as a function of the development rate (metres developed per month). A large percentage of the broken waste is used to backfill mined out voids underground, reducing the need for rehandle into trucks and haulage to surface. The cost for contracted raise boring is based on the current fixed unit rate.

Table 7 summarizes total quantities of capital development and associated costs for the LOM plan.

**Table 7: Beta Hunt Capital Development**

Item	Units	Base Case
Decline	metres	5,612
Ni Lateral Waste	metres	2,490
Au Lateral Waste	metres	4,843
<b>Sub-Total Lateral Development</b>	<b>metres</b>	<b>12,945</b>
Raises	metres	819
<b>Total Development</b>	<b>metres</b>	<b>13,763</b>
Lateral Development Rate	A\$/m	1,464
Raise Development Rate	A\$/m	4,500
<b>Total Development Rate</b>	<b>A\$/m</b>	<b>1,645</b>
<b>Capitalized Development</b>	<b>A\$ 000s</b>	<b>22,638</b>

#### *Mining Fleet*

The current fleet of production equipment at Beta Hunt is either owned, leased or held on a lease-to-buy option. Many of the units that are currently owned were used at time of purchase. Key assumptions used in estimating the fleet capital requirements were: (i) there would be no buy-out of existing leases, which are reflected as an operating cost; (ii) given the relatively short life of mine for current MII Resources, it would not be necessary to replace any of the units of existing fleet; (iii) given the current availability of used equipment, it would be possible to source used equipment for any additional units that may be required. Note that the assumed cost of used equipment was conservatively estimated at rates significantly higher than prior purchases.

Table 8 summarizes the capital fleet requirements.

**Table 8: Beta Hunt Fleet Capital Requirements**

Unit	Cost	Units	Additional Units
Jumbo	A\$300k	# of purchases	2
Charger	A\$150k	"	2
3t LHD	A\$180k	"	0
6t LHD	A\$300k	"	0
12t LHD <sup>2</sup>	n/a	"	1
17t LHD	A\$500k	"	0
Truck	A\$300k	"	2

Unit	Cost	Units	Additional Units
Grader	A\$150k	"	0
Production Drill <sup>1</sup>	n/a	"	2
<b>Sub-Total</b>		<b>A\$ 000s</b>	<b>1,500</b>
Miscellaneous Units <sup>2</sup>		A\$ 000s	2,348
Remaining hire-purchase costs <sup>3</sup>		A\$ 000s	375
<b>Total Fleet Capital</b>		<b>A\$ 000s</b>	<b>4,223</b>

1. 12t LHD and production drill leases at rates of A\$30k/m and A\$29k/m, respectively (operating cost)

2. Including tool carrier, scrapers, ambulance, fuel and water tanks, and refuge chambers

3. For 1 x jumbo and explosives charger

### *Sustaining Capital*

Included under sustaining capital are the following:

- An allowance for infill drilling of existing Inferred Resources of A\$2.6M. The bulk of this expenditure will be incurred in 2016.
- An allowance for step-out drilling of targets near existing resources of A\$2.2M. The bulk of this expenditure will be incurred in 2017.
- An allowance for completing a PFS of A\$1.0M. This estimate reflects the limited complexity and significant database associated with an operational mine. Additionally, with offsite toll treatment by third parties, there is no requirement to include surface infrastructure such as a concentrator or tailings storage facility in the study.
- A further allowance for ongoing drilling of A\$8.9M that will be expended after 2017. It should be noted that the financial model does not associate any benefit to this expenditure (i.e., notwithstanding the inclusion of expenditures in the cash flows, any success in identifying new targets and converting mineable resources has not been included in the production plan). The actual amount invested on drilling will be contingent upon the success of earlier phases.
- A monthly allowance for maintenance (above and beyond that provided under operating costs) of A\$25k.
- A monthly allowance for unspecified sustaining items of A\$25k.

### *Operating Costs*

The nickel and gold mining operations share common infrastructure and overhead costs, resulting in low costs for the combined operation, as summarized in Table 9.

**Table 9: Operating Cost Estimate**

Item	Units	Base Case		
		Nickel	Gold	Total
Mineralization Mined	kt	572	2,924	3,496
Development	A\$/t			2.95
Nickel Mining <sup>1</sup>	A\$/t	137.69		22.53
Gold Mining <sup>1</sup>	A\$/t		68.42	57.24
Central Services	A\$/t			8.22
G & A	A\$/t			3.71
<b>Total Operating Costs</b>	<b>A\$/t</b>			<b>94.65</b>
<b>Total Operating Costs</b>	<b>A\$ 000s</b>			<b>330,899</b>

<sup>1</sup>Direct costs include mining, transportation and processing

Discussion on each of the areas of spending follows below.

#### *Operating Development*

Operating development includes waste development with a useful life up to 12 months. In practice, no waste development meets this criteria and the operating development cost includes only the ore drives established using mechanized equipment in gold mineralization. The standard dimension for ore drives is 4.0m wide x 4.5m high, but SLM are able to drive ends down to 3.0m wide where mineralization tapers.

Table 10 summarizes total quantities of operating development and associated cost.

**Table 10: Beta Hunt Operating Development**

Item	Units	Base Case
Total Operating Development	metres	6,892
Total Mineralization	kt	3,496
Development Rate	A\$/m	1,495
Total Development Cost	A\$ 000s	10,306
<b>Development Cost</b>	<b>A\$/t</b>	<b>2.95</b>

#### *Nickel Mining*

The conventional mining method employed in narrow vein nickel mineralization results in labour being the largest cost element, representing more than 50% of total costs.

**Table 11: Beta Hunt Nickel Mining Operating Costs**

<b>Item</b>	<b>Units</b>	<b>Base Case</b>
Total Mineralization	kt	572
Average Mining Rate	kt / month	12.2
Labour	avg # FTE	48
Labour Cost	A\$/t	70.74
Consumables	A\$/t	20.53
Maintenance	A\$/t	10.50
Energy	A\$/t	2.13
Equipment Leases	A\$/t	5.94
Contract Services <sup>1</sup>	A\$/t	27.86
<b>Total Nickel Mining Directs</b>	<b>A\$/t</b>	<b>137.69</b>

<sup>1</sup> Contract Services includes trucking to and processing of mineralization at plants owned by third parties.

### *Gold Mining*

With the mechanized mining method employed in the wider vein gold mineralization, significantly greater labour productivity can be achieved resulting in unit operating costs that are 50% lower than for nickel.

**Table 12: Beta Hunt Gold Mining Operating Costs**

<b>Item</b>	<b>Units</b>	<b>Base Case</b>
Total Mineralization	kt	2,924
Average Mining Rate	kt / month	44.3
Labour	avg # FTE	45
Labour Cost	A\$/t	14.13
Consumables	A\$/t	4.78
Maintenance	A\$/t	6.26
Energy	A\$/t	1.72
Equipment Leases	A\$/t	7.03
Contract Services <sup>1</sup>	A\$/t	34.50
<b>Total Nickel Mining Directs</b>	<b>A\$/t</b>	<b>68.42</b>

<sup>1</sup> Contract Services includes trucking to and processing of mineralization at plants owned by third parties.

### *Central Services and G&A*

Costs associated with the mining operation that cannot be directly allocated to either nickel or gold mining have been grouped under Central Services and include the complement of supervisory and technical personnel responsible for managing operations and the costs of de-watering and ventilating the mine.

G&A costs are of an administrative nature, including (i) travel and accommodation, (ii) insurance, (iii) the mines safety levy, and (iv) operation of surface facilities such as the gate house and core farm.

Both cost areas are largely fixed in nature. In the event that higher than planned production rates were achieved, unit costs could be materially lower than currently forecast.

**Table 13: Beta Hunt Central Services and G&A Costs**

Item	Units	Base Case
Total Mineralization	kt	3,496
Average Mining Rate	kt / month	53.0
Labour	avg # FTE	17
Labour Cost	A\$/t	4.40
Consumables	A\$/t	0.00
Maintenance	A\$/t	0.00
Energy	A\$/t	5.40
Equipment Leases	A\$/t	2.12
<b>Total Central Services and G&amp;A Costs</b>	<b>A\$/t</b>	<b>11.93</b>

- 
- *Closure*
- 

According to terms of Sub-Lease with SIGMC, SLM is responsible for satisfying all rehabilitation obligations arising since inception of the lease in September 2003. In June 2008, Consolidated Minerals had estimated its share of this total liability would be A\$308k, as detailed in Table 14.

**Table 14: Consolidated Minerals 2008 Closure Estimate**

Item	Liability A\$ 000s	Description
Infrastructure Area	98	Footprint for plant, roads, dumps and other surface infrastructure.
Plant	94	Remove mine compound and other surface infrastructure
Underground	52	Stockpiles, dumps and pads
<b>Sub-Total Direct Costs</b>	<b>243</b>	
Indirect Costs - Labour	34	Project management, supervisor, plant operators.
Indirect Costs - Operations	21	Light vehicle fuel, power, misc., admin.
Audit	9	Final audit and report
<b>Sub-Total In Direct Costs</b>	<b>64</b>	
<b>Total Closure Provision</b>	<b>308</b>	

Comparison of photos taken at the time of this estimate with more recent images from Google Earth do not show significant increase in the footprint of disturbances other than for addition of a small water management dam. While some additional material has been deposited in dumps and stockpiles, waste from earlier dumps has since been removed for road construction and the net change is not significant.

### *Economic Analysis*

The economic analysis contained herein is based, in part, on Inferred Resources, and is preliminary in nature. Inferred resources are considered too geologically speculative to have mining and economic considerations applied to them to be categorized as mineral reserves. There is no certainty that economic forecasts on which this PEA is based will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 15 summarizes key metrics for the Base Case evaluation.

**Table 15: Beta Hunt Summary Metrics**

Area	Item	Units	Base Case
Macro-Economic	Nickel Price <sup>1</sup>	US\$/lb	\$5.41
	Gold Price <sup>1</sup>	US\$/oz	\$1,150
	A\$ f/x <sup>1</sup>	US\$	\$0.72
Production	Total Mineralization	kt	3,496
	Total Nickel <sup>2</sup>	Mlbs	26.8
	Total Gold <sup>3</sup>	000 oz	270
	Average Annual Nickel <sup>2</sup>	Mlbs pa	6.7
	Average Annual Gold <sup>3</sup>	000 oz pa	47
Opex	Revenue / tonne <sup>4</sup>	US\$/t	\$116
	Total Operating Costs	US\$ / t	\$68
	Ni Net C1 Cost	US\$ / lb Ni <sup>2</sup>	(\$2.70)
	Au Net C1 Cost	US\$ / oz Au <sup>3</sup>	\$529
	EBITDA Margin	EBITDA : Revenue	41.3%
Capex & Total Costs	Total Capital Investment <sup>5</sup>	US\$ M	\$33
	Ni Net AISC <sup>6</sup>	US\$/lb Ni <sup>2</sup>	\$0.28
	Au Net AISC <sup>6</sup>	US\$/oz Au <sup>3</sup>	\$825
	Ni Co-Product AISC <sup>6</sup>	US\$/lb Ni <sup>2</sup>	\$2.87
	Au Co-Product AISC <sup>6</sup>	US\$/oz Au <sup>3</sup>	\$893
Valuation	Annual post-tax OCF	US\$ M	\$17
	Post-tax NPV <sub>5%</sub> <sup>7</sup>	US\$ M	\$70
	Post-tax NPV <sub>8%</sub> <sup>7</sup>	US\$ M	\$65

1. Weighted average over life of mine

2. Nickel recovered to concentrate

3. Recovered Gold

4. Revenue includes deductions for payability

5. Capital investment includes closure costs

6. AISC: All-in sustaining cost includes site costs, off-site costs, royalties, and sustaining capital

7. NPV includes Operating Cash Flow and Investment, excludes Financing

All financial metrics presented in Table 15 are expressed in real, Q1 2016 terms. Metrics reflect the forecast performance of Beta Hunt from February 1, 2016. Macro-economic assumptions are summarized in Table 16.

**Table 16: Macro-Economic Assumptions**

Item	Units	2016	2017	2018	2019+
Nickel Price	US\$/lb	4.00	5.25	6.50	6.50
Gold Price	US\$/oz	1,150	1,150	1,150	1,150
A\$ f/x	US\$	0.72	0.72	0.72	0.72

•



- Returns are expressed on a post-tax basis, incorporating the following assumptions regarding taxation:
- - The federal rate for corporate income tax is 30% and no other taxes are charged. The State of Western Australia collects revenues via the royalties described herein. Note that the Mineral Resource Rent Tax only applied to iron ore and coal operations and was repealed in September 2014.
  - Interest charges are deductible from taxable income.
  - Historic tax losses and the un-depreciated capital balance as of Dec 31 2015 were approximately A\$0.4M and A\$17.8M, respectively.
  - The Australian tax code does not allow carry-back of a terminal loss at the end of mine life to offset taxes paid in previous years.

*Base Case Evaluation*

- 
- The Base Case plan entails the following a continuation of the nickel operation at current production rates of approximately 13 ktpm until depletion of existing MII resources in Q4 2019 and a ramping up of gold operations to a steady-state rate of 50 ktpm by December 2016 then maintenance of this rate until depletion in Q2 2021. Table 17 provides a summary of annual production, revenue, costs and cash flow.

**Table 17: Base Case LOM Summary**

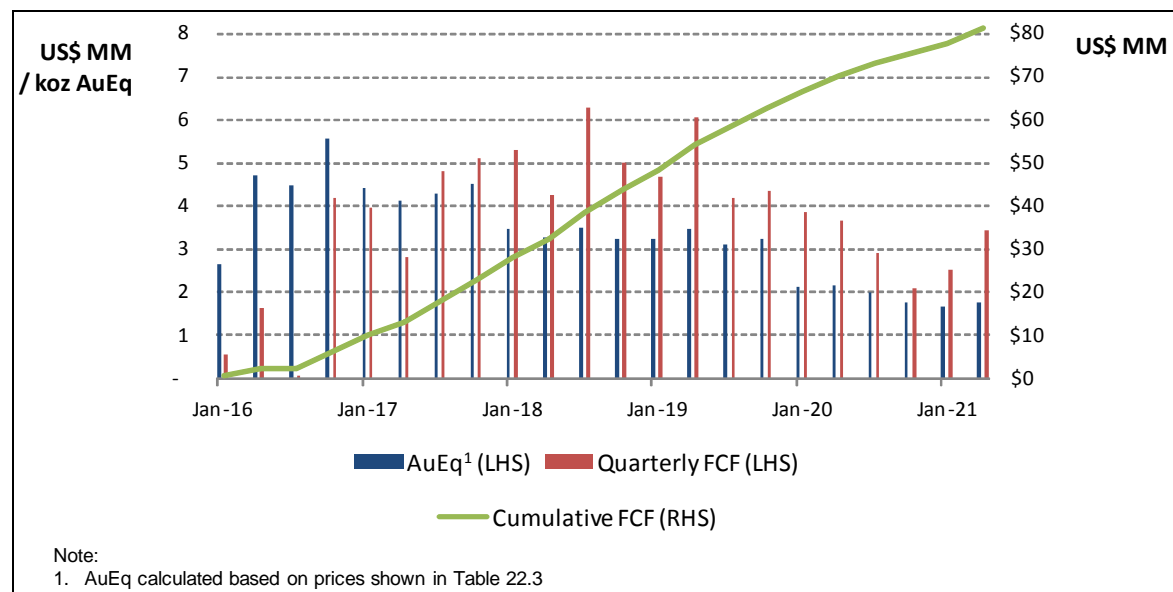
Macro-Economic	units		Jan-16	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21
Ni	US\$ / lb		\$4.00	\$5.25	\$6.50	\$6.50	\$6.50	\$6.50
Gold	US\$ / oz		\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150
Production	units	TOTAL	Jan-16	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21
Ni rec'd to conc	'000 lbs	26,779	7,712	7,764	6,966	4,337	-	-
Payable Au	'000 oz	270	42	56	50	57	45	20
Income Statement	units	TOTAL	Jan-16	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21
<b>Gross Revenue</b>	<b>US\$ 000s</b>	<b>\$405,836</b>	<b>\$69,259</b>	<b>\$90,744</b>	<b>\$87,152</b>	<b>\$84,303</b>	<b>\$51,789</b>	<b>\$22,588</b>
<b>Operating Costs</b>	<b>US\$ 000s</b>	<b>\$238,189</b>	<b>\$42,208</b>	<b>\$51,587</b>	<b>\$50,243</b>	<b>\$49,493</b>	<b>\$30,622</b>	<b>\$14,036</b>
Net C1 Costs – Ni	US\$ / lb Ni	(\$2.70)	(\$0.86)	(\$1.60)	(\$1.04)	(\$3.77)	n/a	n/a
Net C1 Costs – Au	US\$ / oz Au	\$529	\$513	\$447	\$412	\$542	\$680	\$715
Royalties	US\$ 000s	\$33,124	\$5,541	\$7,213	\$7,434	\$7,086	\$4,059	\$1,791
<b>EBITDA</b>	<b>US\$ 000s</b>	<b>\$134,523</b>	<b>\$21,510</b>	<b>\$31,944</b>	<b>\$29,475</b>	<b>\$27,725</b>	<b>\$17,108</b>	<b>\$6,760</b>
Depreciation	US\$ 000s	\$46,646	\$5,601	\$8,671	\$8,740	\$10,137	\$8,226	\$5,271
<b>Earnings Before Tax</b>	<b>US\$ 000s</b>	<b>\$87,877</b>	<b>\$15,909</b>	<b>\$23,274</b>	<b>\$20,736</b>	<b>\$17,588</b>	<b>\$8,882</b>	<b>\$1,489</b>
Net AISC (Ni in conc)	US\$ / lb Ni	\$0.28	\$0.59	\$0.44	\$1.28	\$0.20	n/a	n/a
Net AISC (Au)	US\$ / oz Au	\$825	\$775	\$732	\$735	\$843	\$953	\$1,074

Macro-Economic	units		Jan-16	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21
AISC Co-Product Ni	US\$ / lb Ni	\$2.87	\$2.37	\$2.66	\$3.16	\$3.65	n/a	n/a
AISC Co-Product Au	US\$ / oz Au	\$893	\$826	\$841	\$889	\$889	\$953	\$1,074
Accounting Taxes	US\$ 000s	\$26,363	\$4,773	\$6,982	\$6,221	\$5,276	\$2,665	\$447
<b>Earnings</b>	<b>US\$ 000s</b>	<b>\$61,514</b>	<b>\$11,136</b>	<b>\$16,291</b>	<b>\$14,515</b>	<b>\$12,311</b>	<b>\$6,217</b>	<b>\$1,042</b>
Cash Flow Statement	units	TOTAL	Jan-16	Jan-17	Jan-18	Jan-19	Jan-20	Jan-21
Earnings	US\$ 000s	\$61,514	\$11,136	\$16,291	\$14,515	\$12,311	\$6,217	\$1,042
Depreciation	US\$ 000s	\$46,646	\$5,601	\$8,671	\$8,740	\$10,137	\$8,226	\$5,271
Accounting Taxes	US\$ 000s	\$26,363	\$4,773	\$6,982	\$6,221	\$5,276	\$2,665	\$447
<b>Pre-Tax Cash OCF</b>	<b>US\$ 000s</b>	<b>\$134,523</b>	<b>\$21,510</b>	<b>\$31,944</b>	<b>\$29,475</b>	<b>\$27,725</b>	<b>\$17,108</b>	<b>\$6,760</b>
Cash Taxes	US\$ 000s	\$20,850	\$3,614	\$5,224	\$3,731	\$5,170	\$2,665	\$447
<b>Post-Tax Cash OCF</b>	<b>US\$ 000s</b>	<b>\$113,673</b>	<b>\$17,896</b>	<b>\$26,721</b>	<b>\$25,744</b>	<b>\$22,555</b>	<b>\$14,443</b>	<b>\$6,313</b>
<b>Total Investment</b>	<b>US\$ 000s</b>	<b>\$33,310</b>	<b>\$11,511</b>	<b>\$10,127</b>	<b>\$4,953</b>	<b>\$3,347</b>	<b>\$1,989</b>	<b>\$1,382</b>
<b>Free Cash Flow</b>	<b>US\$ 000s</b>	<b>\$80,363</b>	<b>\$6,385</b>	<b>\$16,594</b>	<b>\$20,791</b>	<b>\$19,208</b>	<b>\$12,454</b>	<b>\$4,931</b>

Under the base case macro-economic forecast, from the end of this year, the Base Case is forecast to consistently generate quarterly free cash flow in excess of US\$4M (Figure 5).

• **Figure 5: Base Case LOM Production and Cashflow**

•



## **Exploration, Development and Production**

The authors of the Beta Hunt Technical Report recommended that the following work be completed:

- Infill drilling of existing Inferred Resources should be performed in order to confirm resource estimates and upgrade these resources to Indicated or Measured categories. The recommended program could be completed from stations in existing workings and entails 8,000 m drilling of Ni mineralization and 18,000 m drilling for Au for a combined target of 26,000 m.
- Infill drilling should be followed by a pre-feasibility study (PFS) to identify the economically viable portion of Measured and Indicated Resources that can be classified as reserves. This study will include test work on Beta Hunt mineralization to validate the concentrates suitability for roasted concentrate market. It is expected this study would be initiated before the end of 2016
- Subsequent to infill drilling and in parallel with the engineering study, step-out drilling of exploration targets should be conducted in order to define new resources that would permit mine life to be extended. The recommended initial program consists of 21,500 m, including 16,500 m targeting gold and the remaining 5,000m to target nickel.

## APPENDIX B

### VMS VENTURES INC. ACQUISITION

On February 1, 2016, the Company announced it had entered into a definitive agreement dated January 30, 2016 to acquire a 100% interest in VMS Ventures Inc. (“**VMS**”) by way of a plan of arrangement. This transaction, closed on April 27, 2016. Under the terms of the agreement, VMS shareholders received 36 million common shares of the Company and cash consideration of \$3.5 million. Prior to closing, VMS distributed its investment in North American Nickel Inc. to VMS shareholders. See below for further details regarding this acquisition. The Company filed a Form 51-102 Business Acquisition Report dated May 5, 2016 in respect of this transaction that is available under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

#### *VMS - Reed Mine Overview*

VMS’s principal asset is a 30% participating interest in the Reed Mine which is located near Flin Flon, Manitoba. VMS announced the discovery of the Reed property in 2007 and after follow-up drilling signed a joint venture agreement with Hudbay Minerals Inc. (“**Hudbay**”) in 2010 whereby Hudbay became the 70% owner and operator of the Reed project and VMS retained a 30% participating interest. In December 2011, Hudbay approved the construction of the Reed Mine. The capital construction budget for Reed was CDN\$72 million. Construction at Reed commenced in September 2013 and the mine commenced commercial production on April 1, 2014. Reed ore is transported by truck for processing at Hudbay’s Flin Flon concentrator.

As per the Joint Venture Agreement, a contribution loan was established to record VMS’s 30% share of the mine development costs incurred by Hudbay to the date of commercial production. VMS reports quarterly drawdowns on same basis as the loan based on gross profits before depletion from actual ore concentrate sales less production costs and accrued interest on a bridge loan from Hudbay. There is a delay of approximately 100 days before the ore concentrate sales are finalized. The bridge loan of CDN\$3.3 million funded VMS’s portion of Reed production costs from April to June of 2014 and accrues interest at 8% per annum, which is repaid from the gross profits of the mine. The bridge loan principal will not be repaid from the gross profit of the mine until the contribution loan has been repaid in full and is non-recourse to RNC. The contribution loan is interest free and non-recourse to RNC and is repaid by cash flow from the mine. At December 31, 2015, the contribution loan balance was CDN\$17 million. During 2015, a total of CDN\$4.8 million had been repaid - CDN\$4.3 million of the loan was repaid from cash flow from operations during 2015 and a further CDN\$0.5 million from a contribution to exploration costs.

In an investor presentation dated February 29, 2016, Hudbay disclosed the following life-of-mine estimates for the Reed Mine on a 100% basis:

Daily Ore Throughput	1,300 tonnes
Average Annual Copper Production	15,000 tonnes
Cash Cost of Copper Production	US\$1.64 per pound
Combined Mine and Mill Unit Operating Costs	CDN\$90 per tonne
Mine Life	3 years

Source: Hudbay and VMS disclosure

1. LOM as per NI 43-101 Pre-Feasibility Study Technical Report on the Reed Copper Deposit dated April 2, 2012 as filed on Sedar.com by VMS Ventures Inc., shown on 100% basis
2. Average US\$/CDN\$ exchange rate assumption is 0.97
3. Production represents contained metal in concentrate
4. Cash costs per pound calculated using the life of mine model supporting the NI 43-101 report
5. Mine life based on mineral reserves as of January 2016
6. Cash cost of copper production and operating costs per tonne are non-IFRS measures. Cash cost of copper production and operating costs per tonne are common performance measures but do not have any standardized meaning. Cash cost of copper production is a function of the efforts and costs incurred to mine and process all ore mined. In order to calculate the cost to produce and sell copper, the net of by-product credits measure subtracts the revenues realized from the sale of the metals other than copper. Life-of-mine unit operating costs per tonne in the 2012 Technical Report are based on contractor estimates provided to Hudbay to estimate surface infrastructure, underground dewatering and some indirect costs. The remainder of the capital and operating costs were estimated by Hudbay and are based on historical costs from operating Hudbay mines of similar deposit size, production levels and workforce. When historical equivalent costs were not available, quotes from local contractors and suppliers were used.

A NI 43-101 technical report of VMS (the “**VMS Technical Report**”) dated April 2, 2012, was filed on SEDAR under the profile of VMS in respect of the Reed Mine. A summary of the information contained in the VMS Technical Report (which is not incorporated by reference) is set below. Certain defined terms set forth in this Appendix B have the meanings ascribed to them in the VMS Technical Report.

#### *Reed Mine – Mineral Lease*

The Reed Mine mineral claims were converted to mineral leases number ML-335 and ML-336 on April 11, 2012.

#### *Reed Mine – Current Mineral Reserve and Resource*

On March 30, 2016 Hudbay published an updated reserve for the Reed Mine as set out below.

<b>Reed Mineral Reserves – January 1, 2016 <sup>(1)(2)</sup></b>					
<b>Reed Mine</b>	<b>Tonnes</b>	<b>Cu (%)</b>	<b>Zn (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>
Proven	677,000	3.80	0.46	0.35	4.87
Probable	517,000	4.46	0.28	0.52	6.11

<b>Total Mineral Reserve</b>	<b>1,194,000</b>	<b>4.09</b>	<b>0.38</b>	<b>0.42</b>	<b>5.41</b>
<b>Reed Inferred Mineral Resources – September 30, 2015 <sup>(3)</sup></b>					
<b>Tonnes</b>	<b>Cu (%)</b>	<b>Zn (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	
203,000	4.63	0.39	0.81	7.71	

Notes:

1. Hudbay four year average metal price and foreign exchange forecast were used to estimate mineral reserves at Reed mine.

The zinc price was \$1.16 per pound (includes premium), the copper price was \$2.75 per pound, the gold price was \$1,190 per ounce and the silver price was \$16.50 per ounce using an exchange rate of 1.25 C\$/US\$.

2. For additional details relating to the estimates of mineral reserves and resources at the Reed mine, including data verification and quality assurance/quality control processes refer to the pre-feasibility study filed on SEDAR on May 14, 2012 by VMS Ventures Inc. titled “Pre-Feasibility Study Technical Report on the Reed Copper Deposit, Central Manitoba, Canada” prepared by Trevor Allen, P. Geo., Cassandra Spence, P. Eng., Mark Hatton, P. Eng. and Brent Christensen, P. Eng. and dated effective April 2, 2012.

3. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The above mineral resources are exclusive of reserves and were estimated using the same metals prices as were used for the estimate of mineral reserves at Reed

#### *Reed Mine – 2015 and Q1 2016 Production*

The Reed Mine ore is processed at the Flin Flon Concentrator, located in Flin Flon Manitoba. The Flin Flon Mill is owned and operated by Hudbay. The ore is stockpiled separately and then blended with the other ores for processing at the mill.

During 2015, VMS’s 30% share of metal contained in concentrate production from the Reed Mine was 4.0 kt of copper and 1.4 koz of gold. Production figures are metal contained in concentrate.

*For the First Quarter of 2016, the operator mined 111,461 tonnes from the Reed Mine (100% basis) at a grade of 4.38% Cu, 0.82% Zn, 0.54 g/t Au and 7.21 g/t Ag.*

#### *Reed Mine - 2016 Guidance*

The operator has not provided guidance for the Reed Mine. The following information is RNC’s management estimate of production and costs. In 2016, RNC’s 30% share of production from the Reed Mine is expected to be 4-4.5 kt of copper and 0.5-0.75 koz of gold. The operator has provided guidance for 2016 that the total operating costs for their Manitoba mines and mill (including Reed) would be between \$80-100/tonne.

Further information regarding the VMS acquisition and the Reed Mine can be found in RNC's news release dated February 1, 2016 available at [www.royalnickel.com](http://www.royalnickel.com) and filed under RNC's profile on [www.sedar.com](http://www.sedar.com).

#### *Reed Mine - Exploration*

The Reed Mine deposit remains poorly tested at depth. Drilling to test for new ore zones is expected to begin once underground development reaches an appropriate depth. In addition to exploration potential at the Reed Mine.

### **THE REED COPPER DEPOSIT**

**Note to reader:** The following section of this Appendix B contains a summary of the VMS Technical Report, that was filed on Sedar, dated April 2, 2012. The VMS Technical Report is the most recently filed NI 43-101 technical report for the Reed mine by VMS. It should be noted, however, that since the VMS Technical Report was filed, the Reed mine has been constructed and has been in operation since 2013. The summary below has not been adjusted for events subsequent to April 2012.

Unless otherwise indicated, information in this section is summarized or extracted from VMS Technical Report. The authors of the VMS Technical Report are Trevor Allen, P.Ge (Hudbay), Cassandra Spence, P.Eng (Hudbay), Mark Hatton(Stantec Consulting Ltd), P.Eng, Brent Christensen, P.Eng (Hudbay) , each of whom is a "Qualified Person", as defined in NI 43-101. The VMS Technical Report was prepared in accordance with the requirements of NI 43-101.

Portions of the following information are based on assumptions, qualifications and procedures which are set out only in the full VMS Technical Report. 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 VMS Technical Report which is available for review on the System for Electronic Document Analysis and Retrieval ("**SEDAR**") located at [www.sedar.com](http://www.sedar.com).

#### **.Property Description and Location**

The Reed Copper Project is located approximately 80km by paved highway southwest of the town of Snow Lake, Manitoba. This community of 837 people has 477 dwellings. There are two cottage subdivisions located on Wekusko Lake near Provincial Road #392, approximately 10 and 13 km south of the town. There are also a small number of seasonal remote cottages located near lakes throughout the area.

The nearest larger centers (5,000+) are, Flin Flon (120km), The Pas (129km), and Thompson (262km) accessible by paved highway. The nearest full service commercial airports are located at Baker's Narrows, near Flin Flon, and at Clearwater Lake, near The Pas. The nearest international airport is located in Winnipeg, approximately 712km from the Reed deposit.

On July 5, 2010, Hudbay entered into a joint venture agreement with VMS pursuant to which VMS and Hudbay agreed to combine a total of four claims giving Hudbay a 70% interest and VMS a 30% interest in a 917ha area that hosts the Reed deposit. Hudbay made a cash payment of \$2,595,000 to VMS and must

contribute on behalf of VMS, in proportion to its participating interest, all joint venture expenditures through a contribution loan. Hudbay will be the operator and have overall management responsibility for the joint venture.

The Reed property lies within a group of four contiguous claims (CB5503, MB8412, MB8413, and P5030E) that cover an area of 917ha with two claims in good standing until 2015 and the remaining two claims in good standing until 2016 as described in Table 1. Hudbay is the registered owner of these four claims that are part of the VMS and Hudbay joint venture area (see Figure 1).



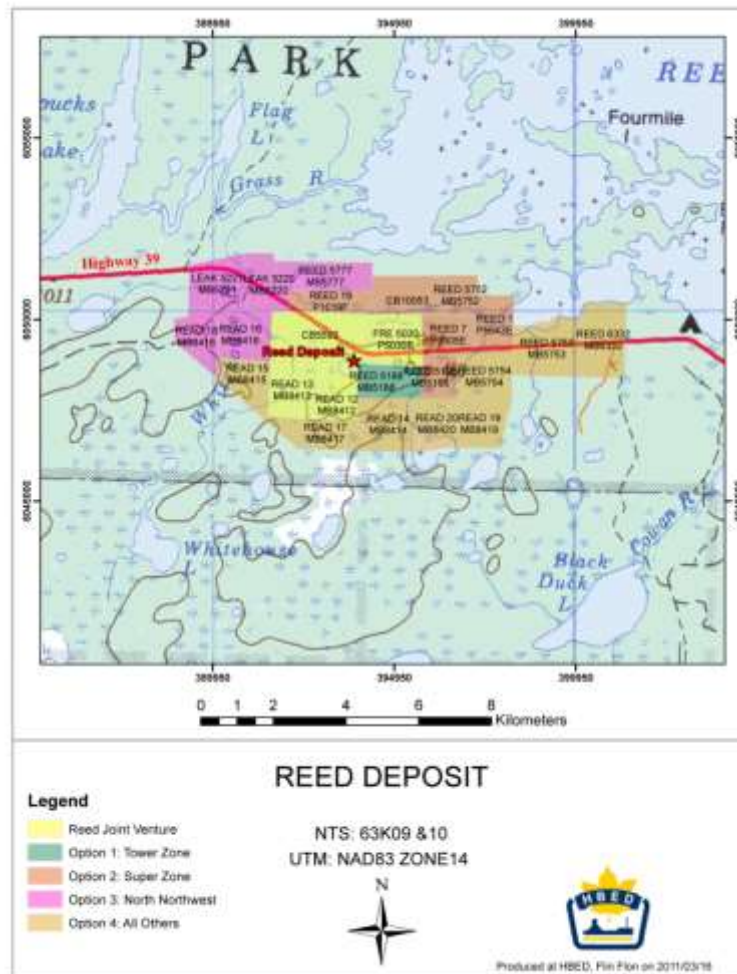
**Table 1: Reed Property Land Claims**

<b>Name</b>	<b>Number</b>	<b>Holder</b>	<b>Recorded</b>	<b>Expires</b>	<b>Hectares</b>	<b>Annual Work Requirement</b>	<b>Annual Filing Fee</b>
FRE	CB5503	Hudbay	Apr 02, 1973	Jun 01, 2016	377.00	\$9,425.00	12.00
READ 12	MB8412	Hudbay	Jun 02, 2008	Aug 01, 2015	170.00	\$2,125.00	12.00
READ 13	MB8413	Hudbay	Jun 02, 2008	Aug 01, 2015	174.00	\$2,175.00	12.00
FRE 5030	P5030E	Hudbay	Jun 16, 1987	Aug 15, 2016	196.00	\$4,900.00	12.00

Commercial production from claim CB5503, where the Reed mineralization is located, is subject to a royalty payable to M.J. Monroe, J.A. Proudfoot, J.A. Woodard as defined in the 1983 Spruce Point Prospectors Royalty Agreement. As part of this agreement there is a royalty of \$0.0827 per tonne mined on the first 4,535,925 tonnes and

These claims lie within the Grass River Provincial Park boundaries. The Grass River Provincial Park covers an area of 2,279km<sup>2</sup> and is characterized by numerous rivers and lakes of the Grass River system. It is classified as a Natural Park that will accommodate commercial resource uses such as forestry and mining, where such activities do not compromise other park purposes.

Figure 1: Reed Deposit Claim Map



## History

Prospecting in the Reed deposit area dates back to the mid 1950's. Many claims have been held by various parties through the years, with most of the exploration conducted by Hudbay, Freeport Canadian Exploration Company, Noranda Mining and Exploration Inc., and Homestake Mineral Development Company.

Various geophysical surveys have been conducted over and around the project area starting with Hudbay in 1955 which consisted of an airborne EM and radiometric survey. Freeport flew a Questor electromagnetic survey in 1972 as well as a Turam EM and magnetometer survey between 1973 and 1974 identifying numerous conductors. This was followed up by diamond drilling in 1975, which resulted in the discovery of the Spruce Point deposit and several other mineralized zones.

Hudbay drilled six holes in 1980 to test geophysical anomalies on the property intersecting sulphides with trace chalcopyrite and sphalerite. This was followed up in 1981 with line cutting and ground EM surveys. In 1982 Hudbay drilled three more holes to test conductive anomalies which intersected sulphides with low grade chalcopyrite mineralization. Two more holes were drilled in 1984 intersecting disseminated and stringer sulphides with minor chalcopyrite and sphalerite. A ground pulse EM survey was also completed.

Homestake performed an airborne geophysical survey in 1988 which was followed up with line cutting, a magnetometer survey, and an EM survey on an area just north of the deposit. Geological mapping and geochemical work was also completed and noted the discovery of 11.5 g/t gold over 2m in a shear zone.

Hudbay drilled an additional hole on the property in 1991 to test a previously untested geophysical anomaly which intersected disseminated sulphides that included traces chalcopyrite and sphalerite within altered felsic rocks. Around this time Noranda was also conducting a drill program to the north of the Reed joint venture property area which also intersected sulphides that included traces of chalcopyrite and sphalerite.

Noranda optioned the property in 1995 and performed line cutting and ground geophysical surveys. This was followed up by diamond drilling which intersected base metal mineralized sulphides.

In 1996 Hudbay completed line cutting and horizontal loop EM and magnetometer surveys that defined several conductive and magnetic targets. In 1997 Hudbay followed these surveys up with an 18 hole diamond drill program which intersected disseminated and near solid sulphides over narrow widths. Noranda at this time was completing its own program of geological mapping, geophysical surveying, and diamond drilling which intersected trace amounts of base metals.

In 2005 Rare Earth Metals Corp. (now VMS Ventures Inc.) acquired the Read 12 and Read 13 claims through staking. In 2006 VMS evaluated the immediate project area with a geological review of assessment and historic exploration results, previous geophysical and geochemical surveys and diamond drill testing of these targets. Geochemical surveys were initiated by VMS in 2006 and were followed up in 2007.

In 2007 VMS acquired two claims from Hudbay, CB5503 and FRE 5030, through an option agreement, and conducted a VTEM airborne electromagnetic and magnetic survey over approximately 1,800 line kilometres that resulted in the definition of several anomalous geophysical responses.

VMS drilled hole RD-07-02 in 2007 to a depth of 270m to test an 800m long southwest-trending VTEM anomaly. The hole intersected 33.50m of 5.38% copper and 1.95% zinc. The majority of VMS's efforts during 2007 to 2008 was focused on drilling an additional 69 holes for a total of 21,694m on what is now known as the Reed deposit. In 2008, a second VTEM airborne geophysical survey was flown over a smaller portion of the Reed property, 1251.4 line kilometres, and was merged with the 2007 survey and led to the identification of additional magnetic anomalies. In 2008 several ground surveys were conducted on the property

including an IP survey by Matrix Geotechnologies over 14.45km, a gravity survey by Quadra Surveys, as well as BHEM and DPEM surveys by Koop Geophysics Inc.

In 2009, Geotech Ltd. carried out an airborne ZTEM survey over a 290 line kilometre part of the Reed joint venture property to compare this latest airborne system to the VTEM system previously flown.

In April, 2010, an airborne gravity survey was flown by Fugro Airborne Surveys over the property comprising 290 line km of flying.

On July 5, 2010, Hudbay concluded the signing of a joint venture agreement with VMS. VMS has agreed to a 30% participating interest and Hudbay to acquire a 70% participating interest from the claims. Hudbay began an aggressive ongoing diamond drill program with 14,562m of core retrieved from 35 definition holes, including one wedge, in 2010 and 2011.

## **Geological Setting, Mineralization and Deposit Types**

### ***Regional Geology***

The Reed volcanogenic massive sulphide deposit is located near the northern boundary of the Paleozoic-covered portion of the eastern end of Paleoproterozoic meta-volcanic Flin Flon Domain. Located within Trans-Hudson Orogen, the Flin Flon Domain belongs to the juvenile (internal) Reindeer Zone. The Trans-Hudson Orogen is a major, >450km wide Paleoproterozoic orogen that extends from South Dakota, through western and north-western Manitoba.

The Flin Flon Belt is interpreted to be comprised of a variety of distinct 1.92 to 1.88Ga tectonostratigraphic assemblages including juvenile arc, back-arc, ocean-floor and ocean-island and evolved volcanic arc assemblages that were amalgamated to form an accretionary collage prior to the emplacement of voluminous intermediate to granitoid plutons and generally subsequent deformation. The volcanic assemblages (Amisk Collage) consist of mafic to felsic volcanic rocks with intercalated volcanogenic sedimentary rocks. The younger plutons and coeval successor arc volcanics, volcanoclastic, and sedimentary successor basin rocks include the older, largely marine turbidites of the Burntwood Group and the terrestrial metasedimentary sequences of the Missi Group.

### ***Property Geology***

The Reed deposit is a stratabound massive sulphide deposit that occurs within Precambrian metavolcanic rocks. It is overlain by 3 to 7m of unconsolidated organic and glacial overburden, 15 to 20m of Ordovician dolomitic limestone, 1 to 2m of semi-consolidated to consolidated Ordovician quartz rich sandstone, and 5 to 25m of deeply weathered Precambrian rocks. The Precambrian rocks beneath the Ordovician cover consist of Flin Flon Domain volcanic rocks that belong to the Fourmile Island Assemblage.

The Fourmile Island Assemblage (FIA) is a back arc-rift succession that was formed around 1.89Ga, during the opening of an ocean basin. The basin is now occupied by 1.84Ga successor arc sedimentary rocks of the Kiseynew domain and was closed off during the Trans Hudson Orogeny.

The FIA consists of at least six principal stratigraphic components that top to the northwest and contain lower greenschist facies metamorphic assemblages. Weathered aphyric, pillowed to massive mafic flows (unit E) and aphyric to plagioclase-phyric mafic flows (unit F) form the upper portion of the FIA and are up to 2km thick. Geochemical analysis suggests that unit E is similar to the mafic hosting rocks of the Reed deposit. Widespread silicification of both units is also

noted in outcrop of the FIA and at the deposit. The volcanic rocks of units E and F are on strike with the basalt flows that hosted the past producing Dickstone volcanogenic massive sulphide deposit.

The Reed lithology is logged primarily as basalt with minor quartz-feldspar-porphyry intrusives (rhyolites).

### ***Mineralization***

The Reed deposit is interpreted as three stacked tabular bodies with varying orientations. The upper zone, Zone 30, trends 305° and dips 77° to the northeast, Zone 20 trends 300° and dips 71° to the northeast, and Zone 10 trends 275° and dips 80° to the south. The sulphide intersections range from 2.00m up to 72.51m in core length. Diamond drilling has intersected mineralization along a strike length of 430m and to depths of 550m below surface.

Mineralization begins at approximately 25m below surface and extends to approximately 580m below surface. Mineralization is generally fine to medium-grained disseminated to solid sulphides consisting of pyrrhotite, pyrite, chalcopyrite, sphalerite, and magnetite. The principle gangue minerals are chlorite, and quartz.

Mineralization in Zone 30 is generally characterized by solid sulphides with elevated gold and silver, and moderate copper and zinc grades. Zone 20 is also characterized by solid sulphides with the mineralization consisting of high grade copper, minor zinc, and low grade gold and silver. Stringers and disseminated sulphides tend to characterize Zone 10, which consists of high grade copper and low grade gold, silver, and zinc.

### ***Deposit Type***

The property hosts a volcanogenic massive sulphide deposit that precipitated at or near the seafloor in association with contemporaneous volcanism, forming a stratabound accumulation of sulphide minerals. Volcanogenic massive sulphide deposits typically form during periods of rifting along volcanic arcs, fore arcs, and in extensional back arc basins. Rifting causes extension and thinning of the crust, providing the high heat source required to generate and sustain a high-temperature hydrothermal system.

The location of volcanogenic massive sulphide deposits is often controlled by synvolcanic faults and fissures, which permit a focused discharge of hydrothermal fluids. A typical deposit will include the massive mineralization located proximal to the active hydrothermal vent, footwall stockwork mineralization, and distal products, which are typically thin but extensive. Footwall, and less commonly, hanging wall semiconformable alteration zones are produced by high temperature water- rock interactions.

The depositional environment for the mineralization at Reed is similar to that of present and past producing base metal deposits in mafic volcanic and volcanoclastic rocks in the Flin Flon and Snow Lake mining camps.

### **Exploration**

In 2007 VMS conducted a VTEM (versatile time-domain electromagnetic) airborne electromagnetic and magnetic survey over approximately 1,800 line kilometres that resulted in the definition of several anomalous geophysical responses. Drilling during 2007 to test an 800m long southwest- trending VTEM anomaly led to the discovery of the Reed deposit. In 2008, a second VTEM airborne geophysical survey was flown over a smaller portion of the Reed property, 1251.4 line kilometres, and was merged with the 2007 survey which led to the identification of additional magnetic anomalies. In 2008 several ground surveys

were conducted on the property including an IP survey by Matrix Geotechnologies over 14.45km, a gravity survey by Quadra Surveys, as well as BHEM and DPEM surveys by Koop Geophysics Inc. In 2009 Geotech Ltd. carried out an airborne ZTEM gravity and magnetics survey over a 290 line kilometre portion of the property. Also, in April, 2010, an airborne gravity survey was flown by Fugro Airborne Surveys over the property comprising of 290 line kilometres of flying.

### ***Borehole Electromagnetic (EM) Surveys***

Thirty three of the 35 holes drilled by Hudbay were surveyed using the Crone Time Delay Electro Magnetic (BHPem) borehole system. No significant and complete off-hole anomalies identifying known zones were left untested by drilling. Drill hole RD-08-42, a near vertical hole drilled in the footwall of the mineralized zones to a depth of 645m, identified an electromagnetic approach at the end of the hole and Hudbay plans on deepening this hole to define a potential target or anomaly.

### **Drilling**

The Reed copper and zinc mineralization was drilled by VMS in 2007 and 2008 with a total of 71 drill holes on the Property. The majority of holes were drilled by Rodren Drilling Ltd., with 12 drill holes also drilled by Prospector Drilling, and four holes drilled by Element Drilling Ltd. Core size was NQ with the exception of three BQ size holes. Drill hole spacing along the deposit generally ranged from 30 to 60m. Core recovery is near 100% for all holes and there is no factors that could materially impact the accuracy and reliability of the drilling results.

Hudbay drilled an additional 35 holes in 2010 and 2011, including one wedge, for definition of the deposit at optimum core angles, reducing the drill spacing to a range of 25 to 50m. All Hudbay holes were drilled from surface by Rodren Drilling Ltd. using NQ core size. Core recovery is near 100% for all holes. As of March 15, 2011, a total of 106 drill holes for a length of 36,762 meters has been drilled on the property. There has been limited drilling to define the lower extents of Zone 10 mineralization.

The drilling results were used to enable the preparation of an interpretation of three base metal zones and provide an estimation of mineral resource that are described under the heading “Mineral Resource and Mineral Reserve Estimates” below.

### **Sampling, Analysis and Data Verification**

#### ***Sampling***

Once sample intervals are selected, estimated chalcopyrite, sphalerite, pyrrhotite and pyrite percentages are recorded in a sample tag book with a unique sample number for each sample interval. The samples are labelled on the core and are recorded in the sample booklet.

All sample intervals were cut in half with a diamond saw. Half of the core was placed into a plastic bag with its unique sample identification tag. The other half of the core was returned to the core box for storage.

The bagged samples were placed in either a burlap bag or a plastic pail and a submittal sheet was prepared by the geologist. VMS submitted a total of 1,931 samples from 34 drill holes to TSL Laboratories and 807 samples from 16 drill holes to Actlabs for analysis. The average length for these sample intervals was

0.81m for the samples analysed by TSL and 0.74m for the samples sent to Actlabs. Hudbay submitted a total of 3,871 samples from 34 drill holes, including one wedge, to the Hudbay assay laboratory in Flin Flon for analysis. The average length for these sample intervals was 0.80m.

During the VMS drilling, blanks were inserted into the sample stream as per geologist instruction at approximate intervals of every 20 to 30 samples. Blank material was obtained at the Reed property from non-mineralized felsic material, quartz-feldspar porphyry, which displays only minor fluctuations in silver content. Hudbay geologists also inserted blanks into the sample stream during its 2010 to 2011 drilling, at approximate intervals of every 20 samples. Hudbay uses a certified blank material.

As part of the Hudbay drilling, the Hudbay laboratory performed duplicate checks on certain assay intervals. These sample intervals were marked on the assay request form as per the geologist instruction at approximate intervals of one every 20 samples. Pulp material was sent to Acme to perform a check on the Hudbay assay laboratory results at approximate intervals of one every 20 samples.

For security purposes, all sample preparation, splitting, handling, and storage and was in the control of VMS or Hudbay and Hudbay personnel at all times and appears to be up to industry standards. No documentation was recorded; however data verification measures by the author suggest that copper and zinc assays were consistent with the mineralization observed in the core and precious metal assays generally correlated well with the mineralization features.

#### ***Bulk Density Measurements***

***Bulk density measurements by VMS were determined by air pycnometer at SGS labs in Toronto, Ontario on 77 of the mineralized samples selected for assaying, of which only 17 were from the four holes used in the resource. The measurement methodology consisted of first crushing the samples to 2mm split and then pulverized to a 200 mesh. The sample is weighed in air and then placed in a Penta Pycnometer with helium gas to determine the true volume of the sample. The use of helium gas, with its small atomic dimension, allows penetration of the smallest pores of the sample for improved accuracies. Sample Preparation***

All samples generated from the VMS drilling were prepared and analyzed at TSL Laboratories in Saskatoon, SK and Actlabs in Ancaster, ON, both accredited by the Standard Councils of Canada. All samples generated during the Hudbay drilling campaign were prepared and analyzed by the Hudbay assay laboratory in Flin Flon, MB and is currently not an accredited laboratory. As part of Hudbay QAQC measures, pulp duplicates are sent to the accredited Acme Analytical Laboratories Ltd. (Acme) in Vancouver, BC for comparison and verification purposes.

The sample preparation, analyses and security procedures are considered to be industry standard and are adequate and acceptable.

#### ***Assay Methodology***

TSL Laboratories performed base metal assays by atomic absorption spectrometry (AAS) after multi-acid digestion. Gold was determined by fire assay with a gravimetric finish on a 29.16g sample..

*Actlabs analyzed copper, zinc, and silver metals by inductively coupled plasma – optical emission spectroscopy (ICP-OES) after sodium peroxide fusion, acid dissolution. Gold, and to a lesser extent silver, was determined by fire assay with a gravimetric finish on a 29.16g sample.*

*All samples for the Hudbay drilling were analyzed at the Hudbay assay laboratory in Flin Flon. The samples were analyzed for the following elements: gold, silver, copper, zinc, lead, iron, arsenic and nickel. Base metal and silver assaying was completed by aqua regia digestion and read by a simultaneous ICP unit. The gold analysis was completed on each sample by AAS after fire assay lead collection. Gold values greater than 10 g/t were re-assayed using a gravimetric finish. Quality Control Measures and Data Verification*

VMS submitted a total of 778 samples from 16 drill holes to Actlabs and 1,959 samples from 36 drill holes to TSL Laboratories for analysis. In addition to these samples, 99 blanks and 102 reference standards were submitted. Due to the drilled orientation of the VMS holes compared to the resource shape, only four VMS holes were used in the resource estimation. They contained 225 assays from two holes that were analyzed by Actlabs and 198 assays from two holes that were analyzed by TSL Laboratories. In addition to these samples 22 blanks and 22 reference standards were used, representing approximately 10% of the samples that were inserted into the sample stream and submitted for assaying. Also a total of 17 preparation duplicates were processed by SGS Minerals Services on select assays from Actlabs and TSL Laboratories.

Hudbay submitted a total of 3,567 samples from 35 drill holes, including one wedge, to the Hudbay assay laboratory for analysis. In addition to these samples, 204 blanks and 206 reference standards were submitted, representing approximately 11% of the samples from drilling were inserted into the sample stream and submitted for assaying. A total of 215 duplicates from 33 drill holes, including one wedge, were analyzed by Acme for comparison and verification purposes.

### ***Data Verification***

Robert Carter, P.Eng., Manager of Project Evaluation, HudBay, visited the Reed Property on December 16, 2010 and Trevor Allen, P.Geo., Central Mine Geologist, Hudbay visited the site on March 25, 2011. The personal site inspection was part of the mineral resource estimation and technical report process to become familiar with conditions on the Property, to observe the geology and mineralization and verify the work completed on the Property. Visits to the Hudbay core facility at the Reed deposit camp and core storage near Flin Flon were conducted for core review and verification of mineralization. An internal validation of the drill hole database against the original drill logs and assay certificate information was carried out by Hudbay. The validation included 100% of the assay values from the VMS drilling. Minor discrepancies stemming from lower detection limits were corrected. No significant discrepancies existed within the database and it is believed to be accurate and suitable for mineral resource estimation.

### **Mineral Processing and Metallurgical Testing**

The primary objective of the test program is to determine expected concentrate grade, metal recovery and to produce saleable copper concentrate, with a flowsheet the same or similar to that employed at the Hudbay Flin Flon Concentrator.

In April 2011, 550 kg of mineralization from the three mineralized zones and waste dilution material was received by G & T Metallurgical Services in Kamloops, BC. The mineralized material was crushed and assayed in triplicate to determine the head grades. Material from each zone was blended with waste to create three primary composites representing diluted mineralized material from Zones 10, 20, and 30. Ore hardness was measured using the Bond Work Index test, which showed that Reed mineralization is relatively soft with work indexes ranging from 8 to 11 kWhr/tonne.



The locked cycle testing on the Reed composite sample showed a copper recovery of 94.9% at a copper concentrate grade of 23.7%. Results of the locked cycle testing are shown in Table 7. These assays indicate no deleterious elements in the concentrate, and all elements fall below the threshold for smelter penalties except fluorine, which often has penalties of \$1/tonne beginning at the 350 to 400g/t for every 100g/t above this threshold.

**Table 7: Locked Cycle Test Results**

Product	Weight	Assay - percent or g/t							Distribution - percent						
	%	Cu	Pb	Zn	Fe	Mg	Au	Ag	Cu	Pb	Zn	Fe	Mg	Au	Ag
Flotation Feed	100	3.87	0.02	0.68	38.1	1.44	0.42	4	100	100	100	100	100	100	100
Copper Con	15.5	23.7	0.02	0.59	34.1	1.34	1.59	18	94.9	15.5	13.4	13.9	14.4	58.1	62.3
Copper Ro Tail	84.5	0.24	0.02	0.70	38.9	1.46	0.21	2	5.1	84.5	86.6	86.1	85.6	41.9	37.7

## Mineral Resource and Mineral Reserve Estimates

The Reed mineral resource and mineral reserve estimates are effective April 2, 2012.

### *Mineral Resources*

The Reed mineral resource estimate was prepared by Trevor Allen, P.Geo., Central Mine Geologist, Hudbay under the supervision of Robert Carter, P.Eng., Superintendent Mines Technical Services, Hudbay on behalf of VMS Ventures Inc. The estimate was completed using MineSight 5.50-03 software in UTM NAD83 coordinates. The block model was constrained by interpreted 3D wireframes of the mineralization. Gold, silver, copper, zinc, iron, and specific gravity were estimated into blocks using Nearest Neighbour (NN), Inverse Distance Squared Weighted interpolation (IDW), and Ordinary Kriging (OK). Zone intersections were selected based on a copper equivalency (CUEQ) of greater than or equivalent to 1.5% over a 2m interval. The CUEQ was calculated from metal price and metal recovery assumptions. Each block was assigned a CUEQ.

At the 1.5% CUEQ cut-off, the Reed deposit contains an Indicated resource of 2,550,000 tonnes grading 4.52% copper, 0.91% zinc, 0.64 g/t gold, and 7.86 g/t silver and an Inferred resource of 170,000 tonnes grading 4.26% copper, 0.52% zinc, 0.38 g/t gold and 4.55 g/t silver.

### *Copper Equivalency*

Due to the polymetallic nature of the Reed deposit, a CUEQ formula was derived based on metal price and metal recovery assumptions supplied by HudBay (Table 9).

$$CUEQ\% = Cu\% + ((Zn\% \times (Zn \text{ Value in US\$ per } \%) / (Cu \text{ Value in US\$ per } \%)) \times (Zn \text{ Recovery} / Cu \text{ Recovery})) + ((Au \text{ g/t} \times (Au \text{ Value in US\$ per g/t}) / (Cu \text{ Value in US\$ per } \%)) \times (Au \text{ Recovery} / Cu \text{ Recovery})) + ((Ag \text{ g/t} \times (Ag \text{ Value in US\$ per g/t}) / (Cu \text{ Value in US\$ per } \%)) \times (Ag \text{ Recovery} / Cu \text{ Recovery}))$$

**Table 9: Metal Price Assumptions and Dollar Value**

Product	Metal Price (US\$)	Metal Recovery	US\$ Equivalent
Gold	900.00/oz	0.65	18.81 per g/t
Silver	15.00/oz	0.60	0.29 per g/t
Copper	2.50/lb	0.95	52.36 per %
Zinc	1.00/lb	0.50	11.02 per %

In selecting drill hole intersections for the Mineral Resource estimation, a minimum of 1.5% CUEQ over a two metre core length, or 3m%, was required. This equates to US\$78.54/t of metal value using the metal price and metal recovery assumptions in the CUEQ formula. The US\$78.54/t minimum value is reasonable

as an underground mining operation incremental cut-off based on operations of similar type, scale and location but may not reflect the true economic cut-off for the project. Additional work is necessary to refine the cut-off grade based on the project economics.

### *Geological Interpretation*

The mineralization on the Property was interpreted into three stacked three-dimensional wireframes based on a CUEQ cut-off of greater than or equivalent to 1.5% over a two metre interval. The interpreted Zones were built by digitizing polylines around the mineralization on 10m sections at an azimuth of 45 degrees. Polylines were then linked with tag strings and triangulated in order to create a three-dimensional wireframe solid. As of the March 15, 2011 cut-off for assay information, the wireframe incorporates a total of 30 drill holes used for determining grade, most of which intersected more than one Zone due to their stacked nature. Several other VMS holes were incorporated into the wireframe but were solely used for interpretation purposes.

### *Bulk Density*

Specific gravity (SG) was measured on 632 of the 959 sampled assay intervals included in the resource estimation. A summary of all the measured SG values that were part of the resource estimation is displayed in Table 10.

**Table 10: Summary of Measured SG Values**

<b>Zone</b>	<b>Number of Records</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>
10	216	2.84	4.50	3.59
20	183	2.89	4.57	4.19
30	233	2.78	4.73	4.24

### *Capping, Composites and Spatial Analysis*

A review of assay values for the resource estimation included the preparation of histograms and cumulative probability charts. Because high grade outliers can lead to overestimation of a resource, the high grade assays were capped between the 96th to 99th percentiles prior to compositing.

After capping, assay samples were weighted by SG and composited into 1m downhole lengths while honouring the interpreted mineralized Zone boundaries for the inverse distance squared weighted and ordinary kriging interpolations. Intervals that were shorter than 0.5m were combined with the nearest up the hole assay. Full length composites from footwall to hanging wall contact weighted against SG were also prepared for the nearest neighbour calculations of each Zone.

Correlograms, using Minesight software, were completed on the gold, silver, copper, zinc, iron, and SG composites. Combined composite data from Zones 10, 20, and 30 were used for the variography process. Correlograms were generated to determine the spatial continuity of the composited mineralization and bulk density using omni-directional search parameters. The search rotation conforms to the interpreted mineralization trends of each individual mineralized Zone.

### *Resource Block Model and Mineral Resource Classification*

The resource block model was created using MineSight 5.50-03 on UTM NAD83 coordinates with an origin at 394,700m east, 6,049,700m north, and 325m above sea level elevation. Block dimensions of 5m by 5m by 5m were selected based on average width of the resource wireframes, as well as anticipation of the smallest mining unit. Drill hole spacing at the Property ranges from 25 to 50m between intersections.

The interpolation plan of the Reed resource estimation model was completed using the following estimation methods: nearest neighbour (NN), inverse distance squared weighted (IDW), and ordinary kriging (OK).

The Reed resource estimation model was validated by the following methods:

- Comparison of the global mean grades based on NN, IDW, and OK estimation methods.
- Inspection of the OK block model grades in plan and sectional views in comparison to the drill hole composite grades.
- Swath plot comparisons of the estimated methods of NN, IDW, and OK.

Mineral resources have been classified according to the CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM definitions), as incorporated in NI 43-101. Resource blocks are classified as Indicated or Inferred, depending upon the confidence level of the resource based on experience with similar base metal deposits and the spatial continuity of the mineralization.

Classification of the Indicated Resource for Zones 10, 20, and 30 shows a reasonable continuity of the mineralization under the following block model criteria:

- Blocks estimated in the second pass
- Blocks estimated by composites from at least two drill holes
- Distance to closest composite is less than or equal to 35m

An outline was created around these blocks in order to select contiguous blocks, and all blocks contained within this outline were then classified as indicated.

The remainder of the blocks within the interpreted Zone were classified as Inferred Resources. There were no blocks assigned to the Measured category.

### *Mineral Resources Estimate*

The mineral resource estimate for the Reed deposit is tabulated in Table 11.

**Table 11: Summary of Mineral Resources**

Category	Tonnes	Au g/t	Ag g/t	Cu %	Zn %	SG
Indicated	2,550,000	0.64	7.86	4.52	0.91	4.09
Inferred	170,000	0.38	4.55	4.26	0.52	3.95

Notes:

7. CIM definitions were followed for the estimation of mineral resources.

Mineral resources are estimated at a CUEQ cut-off of 1.5% (CUEQ% equals  $\text{Cu}\% + \text{Zn}\% \times 0.211$

+  $\text{Au g/t} \times 0.359 + \text{Ag g/t} \times 0.006$ ) and a minimum two metre core length.

Long term \$US metal prices of \$900/oz gold, \$15/oz silver, \$2.50/lb copper and \$1.00/lb zinc were used for the estimation of CUEQ.

Metal recovery assumptions of 65% gold, 60% silver, 95% copper and 50% zinc were used for the estimation of CUEQ.

Specific gravity measurements were taken on a portion of the samples, where actual measurements were not available either stoichiometric values were calculated or average Zone SG values were used.

Mineral resource estimates by classification and CUEQ are tabulated in Tables 12 and 13.

**Table 12: Indicated Mineral Resource by CUEQ**

CUEQ %	Tonnes	Au g/t	Ag g/t	Cu %	Zn %
>=1.5	2,550,000	0.64	7.86	4.52	0.91
>=2.0	2,450,000	0.65	8.03	4.66	0.86
>=2.5	2,260,000	0.67	8.32	4.89	0.82
>=3.0	2,080,000	0.68	8.55	5.12	0.79
>=4.0	1,570,000	0.72	9.17	5.79	0.70
>=5.0	1,080,000	0.76	10.00	6.58	0.69

**Table 13: Inferred Mineral Resource by CUEQ**

CUEQ %	Tonnes	Au g/t	Ag g/t	Cu %	Zn %
>=1.5	170,000	0.38	4.55	4.26	0.52
>=2.0	160,000	0.39	4.83	4.59	0.41
>=2.5	140,000	0.38	5.09	4.97	0.36
>=3.0	110,000	0.36	5.36	5.53	0.30
>=4.0	90,000	0.33	5.50	6.12	0.30
>=5.0	60,000	0.30	5.40	6.90	0.25

There are no known permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant issues which may materially affect the mineral resource estimate

There are no known issues with local communities or indigenous peoples. There is strong community support, as the population and workforce of Snow Lake and/or Flin Flon, MB would benefit from the potential exploitation of these resources.

The Reed deposit is located within the Grass River Provincial Park. Defined as a Natural Park, the purpose of the park includes preserving areas that are representative of the natural region and accommodates a diversity of recreational opportunities and resource uses. Since the Reed deposit is located on the south side of Provincial Highway #39, away from Reed Lake and its recreational facilities, and in a historical clear-cut area, the potential of the project to compromise the other park purposes is limited. Mining has historically occurred within the boundaries of the Park. The Spruce Point Mine, located on the south shore of Reed Lake was operated by Hudbay from 1982 to 1988 and is now fully decommissioned.

The principal commodities at Reed are freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured.

### ***Mineral Reserves***

The Mineral Reserve for the Reed Project was estimated based on the indicated mineral resources included within the mining plan with the application of mining dilution and recovery and economic factors. The Mineral Reserves for the Reed Project are summarized in Table 14.

**Table 14: Summary of Mineral Reserves for Reed**

<b>Mineral Zone</b>	<b>Reserve Category</b>	<b>Tonnes</b>	<b>Gold g/tonne</b>	<b>Silver g/tonne</b>	<b>Copper %</b>	<b>Zinc %</b>
30	Probable	270.9	1.424	15.95	2.16	2.42
20	Probable	1,022.1	0.349	4.87	3.98	0.48
10	Probable	864.3	0.332	4.28	4.17	0.15
<b>Total</b>	<b>Probable</b>	<b>2,157.3</b>	<b>0.477</b>	<b>6.02</b>	<b>3.83</b>	<b>0.59</b>

### ***Resource to Reserve Economic Cut-Off***

To determine an economic cut-off for the reserve, the resources were divided into mining blocks spaced vertically at 25 metres for each mineralized zone. Dilution and recovery was estimated for each block and the net smelter return of each mining block was calculated using the parameters in Table 15 and Table 16. Development and infrastructure were planned for each mining block using Promine software to determine the total direct mining cost for each block. Any block that did not have a positive net smelter return was removed from the reserve.

**Table 15: Mining and Milling Costs**

	<b>Unit</b>	<b>Cost (CDN\$)</b>
Development	Per Meter	3,310
Waste Removal	Per Meter	930
Vent Raise	Per Meter	11,000
Waste Pass	Per Meter	3,800
Escape Raise	Per Meter	2,800
Ore Extraction	Per Stope Tonne	14.47
Ore Removal	Per Tonne	23.58
Indirects and Overhead	Per Tonne	31.92
Milling	Per Tonne	15.77

**Table 16: Recoveries, Treatment Charge, Freight, and Metal Prices**

Parameter	Metal	Value	Units
Recoveries	Au	58%	
	Ag	62%	
	Cu	94%	
Payables	Au	96.5%	
	Ag	90%	
	Cu	95.8%	
Concentrate Treatment		\$ 75.00	\$US/tonne of Concentrate
Concentrate Freight		\$ 185.60	\$CDN/dmt of Concentrate
Refining	Au	\$ 5.00	US\$/oz
	Ag	\$ 0.50	US\$/oz
	Cu	\$ 0.075	US\$/lb
Metal Price	Au	\$ 1,100.00	US\$/oz
	Ag	\$ 22.00	US\$/oz
	Cu	\$ 2.75	US\$/lb
Exchange Rate		\$ 0.952	US\$/CDN\$

### *Dilution*

Mining dilution is defined as waste rock that is mined with the ore and cannot be separated out prior to transport to the concentrator. Most of the dilution at Reed is assumed to come from hangingwall and footwall overbreak, and mucking dilution, which is caused by digging into the waste fill while mucking. The mucking dilution was estimated at 5% by weight for all stopes. The resulting overall dilution was estimated to be 23%. A breakdown of the dilution by mining zone is presented in Table 17.

**Table 17: Summary of Dilution by Mineral Zone**

Zone	Resource in Mining Plan	Dilution			Diluted Mineral Resource	
	Tonnes	Overbreak %	Mucking %	Total %	Tonnes	Cu%
30	282,905	15.0	5.0	20.0	339,486	2.16
20	1,090,795	14.4	5.0	19.4	1,300,179	3.98
10	866,054	23.5	5.0	28.5	1,110,010	4.17
<b>Total</b>	<b>2,239,754</b>	<b>18.0</b>	<b>5.0</b>	<b>23.0</b>	<b>2,749,675</b>	<b>3.83</b>



### *Recovery*

Mining recovery is defined as the recovery of the resources included within the mine plan and does not apply to those resources already excluded as being outside the mine plan. Recovery losses result from resources left behind in pillars, and unrecoverable ore left in the stope after remote mucking.

The resource left unmined in pillars was estimated based on the stope layout design. In total, it is estimated that 22% of the mineral resources included in the mine plan will be lost as a combination of non-recoverable rib, sill pillars and stope mucking resulting in an overall mining recovery of 78%.

Following the application of mining recovery to the diluted resources contained within the mine plan, the Mineral Reserve for the Reed project was estimated. A summary of the mining recoveries and estimated Mineral Reserve is shown in Table 18.

**Table 18: Summary of Dilution by Mineral Zone**

Zone	Diluted Resource	Mining Recovery			Mineral Reserve	
	Tonnes	Pillars %	Mucking %	Total %	Tonnes	Cu %
30	339,486	84	95	80	270,910	2.16
20	1,300,179	82	95	78	1,022,136	3.98
10	1,110,010	82	95	78	864,330	4.17
<b>Total</b>	<b>2,749,675</b>	<b>82</b>	<b>95</b>	<b>78</b>	<b>2,157,375</b>	<b>3.83</b>

## **Mining Operations**

The ore will be extracted using a longhole open stoping mining method, and the stopes will be backfilled with unconsolidated waste.

Twin boom jumbos and conventional blasting will be used for drift development. Mucking of the face rounds will be done by a 10yd LHD and 60 tonne trucks. During the pre-production phase, waste will be hauled to surface and stored until mined out stopes during the production phase are available to be backfilled. During the production phase, the waste rock will be hauled directly to stopes for backfill.

All stopes will be mined using a longhole drill. The economic analysis assumed two topammer longhole drills each drilling a 76mm diameter hole. Longhole stopes will be blasted using conventional techniques with ANFO or sulphide inhibited emulsion depending on the possibility of secondary sulphide blasts. Stope mucking will be done with remote 10yd LHDs that will dump into a 60 tonne truck at the main ramp. The haul trucks will dump the ore on surface where it will be loaded into highway trucks and taken to Flin Flon to be crushed and milled.

The mined out stopes will be filled with unconsolidated rock fill from development rounds or waste material back hauled from Flin Flon. A raise driven from surface to the 485m level is planned for backfilling purposes and will be accessed on each mining level. The stopes will be filled by a remote 10yd LHD mucking out of the waste pass and dumping into the stope. Some areas may use cemented rock fill to increase the recovery beyond 80%, but this was not considered in this pre- feasibility study.

The waste rock generated from lateral and raise development will produce only half the required stope backfill for Reed. During the years 2015 to 2018, 630,000 tonnes of waste rock will be hauled to Reed for use as stope backfill. The same trucks that deliver Reed ore to the Flin Flon Concentrator will be used to backhaul waste from the 777 Mine in Flin Flon when extra fill is required.

## ***Production and Development Schedule***

The major milestones for the Reed Copper Project are shown in Table 19. The production schedule assumes a pre-production period of 1.5 years, a ramp up period of half a year and full production from 2014 to year 2018, as shown in Table 20. The full production rate is 468,000 tonnes/year or 1,300 tonnes/day.

**Table 19: Reed Copper Project Milestones**

<b>Milestone</b>	<b>Estimated Date</b>
Start Decline Development	Q3 2012
Environment Act License	Q2 2013
Start of Production	Q3 2013
Full Production	Q1 2014

**Table20:LOM Production Schedule**

<b>Year</b>	<b>Production</b>	<b>Gold (g/tonne)</b>	<b>Silver (g/tonne)</b>	<b>Copper (%)</b>
2013	51,000	0.49	6.34	3.00
2014	420,000	0.31	4.58	3.23
2015	468,000	0.32	4.03	4.15
2016	468,000	0.39	4.63	3.79
2017	468,000	0.70	8.83	4.07
2018	282,376	0.74	9.09	3.97

It was assumed that no zinc concentrate will be recovered due to low zinc grades and extensive pyrrhotite content of the mineralization. The pyrrhotite preferentially floats over the sphalerite in conventional milling, which reduces the zinc recovery and concentrate grade below saleable requirements.

Reed will produce a total of 323,176 tonnes of copper concentrate as shown in Table 21 by year of project production.

**Table 21: LOM Concentrate Production by Year**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Tonnes	5,993	53,134	76,070	69,471	74,603	43,907	323,176
Au (g/tonne)	2.42	1.42	1.14	1.52	2.55	2.76	1.84
Ag (g/tonne)	33.43	22.43	15.35	19.35	34.34	36.26	24.93
Cu (%)	24.00	24.00	24.00	24.00	24.00	24.00	24.00
Zn (%)	0.51	0.32	0.13	0.13	0.35	0.37	0.25

The total lateral development required in the Reed PFS is 11,172m. The total amount of waste development is 8,373m and the total amount of ore development is 2,799m. See Table 22 for the proposed lateral development by year.

During the pre-production phase, 2,000m of ramp development will be completed down to the 260m level. This will allow access to enough resource to support full mine production. Access to the three mining areas will support 1,300 tonnes per day and also allow the flexibility to sequence production and backfill stopes to provide continuous production. During the production phase, the remainder of the development will be completed and the main ramp will continue to be developed down to the 510m level.

The main assumptions used in the PFS to meet the development schedule are:

- Trench, portal, and development of the main ramp from surface to the 45m level will be done by a mining contractor
- Advance rate for the main decline during the pre-production phase will be 4.5m per day down to the 260m level
- 15 months to complete development down to the 260m level

**Table 22: Mine Lateral Development by Year**

<b>Year</b>	<b>Waste Development (m)</b>	<b>Ore Development (m)</b>	<b>Total Development (m)</b>
2012	425	0	425
2013	2475	560	3035
2014	1313	622	1935
2015	1313	522	1835
2016	1313	522	1835
2017	1313	373	1686
2018	221	200	421
Total	8373	2799	11172

The total estimated meters of raising is 1,625m, which includes 550m for a 4.6m X 4m ventilation raise, 550m for a 1.8m X 1.8m escape way and 525m for a 2.1m X 2.1m waste pass, see Table 23. During the pre-production phase, 275m of the ventilation raise and escape way will be completed. The remaining 275m of the ventilation raise and escape way will be done during the ramp-up and production phases. The waste pass will be entirely driven during the production phase.

**Table 23: Total Mine Raise Development**

<b>Raise</b>	<b>Total</b>	<b>Development</b>	<b>(m)</b>
Ventilation Raise	550		
Escape Raise	550		
Waste Pass	525		
Total	1625		

### **Processing and Recovery Operations**

The run of mine material will be transported by truck directly to Flin Flon where it will be crushed to less than 150mm prior to concentrating.

The Flin Flon Concentrator processes approximately two million tonnes of ore annually, and produced 210,000 tonnes of copper concentrate and 120,000 tonnes of zinc concentrates in 2010. Typically the crushed ore is trucked to the concentrator, where each specific mine ore is stored individually and crushed to 20mm in a two stage closed circuit crushing plant. The grinding circuit consists of two 1,200HP open circuit rod mills in parallel and one 5,000HP ball mill. The ball mill operates in closed circuit with 6x500mm cyclones to produce a final product size of 80% passing 70 microns.

Copper and zinc minerals are recovered in sequential flotation circuits. Refer to Figure 2 for the detailed Flin Flon concentrator flowsheet.

**FLIN FLON MILL**  
**GRINDING & FLOTATION CIRCUIT PROCESS FLOW DIAGRAM**

**GRINDING CIRCUIT**

**COPPER FLOTATION CIRCUIT**

**ZINC FLOTATION CIRCUIT**

**FILTER PLANT**

**Legend:**

- Cu CONCENTRATE
- Zn CONCENTRATE

**SEE DWG. 1-04-03-003**  
**SEE DWG. 1-04-03-004**

## **Infrastructure, Permitting and Compliance Activities**

### ***Infrastructure***

Run of mine material from the Reed Copper Project will be trucked to Flin Flon via Provincial Trunk Highway (PTH) #39 and #10. The material will be dumped at the Hudbay Flin Flon concentrator complex where the material will be crushed to minus 6 inch and sent to the existing Flin Flon Concentrator. The proposed surface site plan for the Reed Copper Project is previously shown in Figure 16.1. The site is approximately 14ha in area, which includes the mine site access road and camp. The infrastructure at site will include an employee camp, mine office, dry, shop, warehouse, core shack, electrical generator and fuel storage area, electrical distribution room, downcast building, and compressor building.

An abandoned logging road will be upgraded to provide access to the Reed site.

A 1,600m<sup>2</sup> ore storage pad will be used to store a maximum of 10,000 tonnes of ore on surface. This pad will be lined and composed of non-acid generating rock and will be stored until it can be trucked to Flin Flon for crushing and processing.

***Discharge water from the underground development will be treated in a two cell 2,000m<sup>2</sup> polishing pond located at surface. Permitting and Compliance***

### ***Environmental and Social Factors***

An environmental baseline assessment draft was completed by AECOM, and the following is a brief summary of this discussion based on collection of field data from the fall of 2010 and spring of 2011. The environmental baseline assessment draft concluded that there were no major negative environmental or social-economic impacts expected from the development of the Reed Copper Project. It will be constructed within the Grass River Provincial Park, which will accommodate commercial resource use, such as mining, where such activities do not compromise the other park purposes. There is currently no mining activity in the park. However, Hudbay operated the Spruce Point Mine in the Grass River Provincial Park from 1982 to 1988 and is now fully decommissioned.

### ***Permitting***

An application for the Advanced Exploration Project (AEP) plan for the Reed Copper Project was submitted to the Manitoba Government on September 16, 2011. Approval of the AEP was given October 31, 2011, which will allow early site construction and commencement of underground development to extract a 10,000 tonne bulk sample of the mineralization.

The main permits required for the Reed Mine are the environmental act licence, conservation lease, mineral lease, surface lease and water rights licence. As of the date of this report, applications for the surface lease and water rights licence for the AEP phase of the project were approved by the Manitoba Government. No federal permits will be sought or are anticipated for the Reed Copper Project.

#### *Closure*

Total closure costs for the site are estimated at \$805,000.

#### **Capital and Operating Costs**

The capital costs for the pre-feasibility study are based on a mixture of recent quotes from suppliers and contractors, recent Hudbay project costs, and cost database information from Stantec. The capital cost estimate assumed that some used equipment will be purchased from Hudbay's Trout Lake Mine, which is scheduled to close July 2012. The operating costs were estimated from Hudbay's existing Manitoba operations, and recent quotes provided by local contractors.



## **APPENDIX C**

### **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; and
  - (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 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 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** 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 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.