$SCANDIUM\ INTERNATIONAL\ MINING\ CORP.$ 

Form 10-K March 16, 2016

Yes [ ] No [ X ]

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## **FORM 10-K**

[X] ANNUAL REPORT PURSUANT TO SECTION	1 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year	ended December 31, 2015
	ON 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _	to
	00-54416 ion File Number)
	ational Mining Corp.
(Exact Name of Registr	rant as specified in its charter)
British Columbia, Canada (State or other Jurisdiction of Incorporation or organization)	98-1009717 (I.R.S. Employer Identification No.)
1430 Greg Street, Suite 501  Sparks, Nevada  (Address of Principal Executive Offices)  Registrant s Telephone Number, including area code: (*	89431 (Zip Code) 775) 355-9500
Securities registered pursuant to Section 12(b) of the Ac	t: None
Securities to be registered pursuant to Section 12(g) of the Act:	he Common Shares without par value
	(Title of class) seasoned issuer, as defined in Rule 405 of the Securities Act.
Indicate by check mark if the registrant is not required Act.	to file reports pursuant to Section 13 or Section 15(d) of the

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes [X] No []

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any,
every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the
preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes [X] No []

Indicate by check mark if disclosure of delinquent filers in response to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act (Check one):

Large Accelerated Filer [ ]	Accelerated Filer [ ]
Non-Accelerated Filer [ ]	Smaller Reporting Company [X]
Indicate by check mark whether the registrar	at is a shell company (as defined in Rule 12b-2 of the Exchange Act)
Yes [ ] No [ X ]	

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was sold, or the average bid and asked price of such common equity, as of the last business day of the registrant s most recently completed second fiscal quarter: \$13,745,278 as at June 30, 2015.

Indicate the number of shares outstanding of each of the registrant s classes of common equity, as of the latest practicable date: 225,047,200 common shares as at March 11, 2015.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K, which Proxy Statement is to be filed within 120 days after the end of the registrant's fiscal year ended December 31, 2015.

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### PART I

Note about Forward-Looking Statements

Certain statements contained in this registration statement constitute "forward-looking statements". Forward-looking statements may include, but are not limited to, statements with respect to the future price of commodities, the estimation of mineral resources, the realization of mineral resource estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of new deposits, success of exploration activities, our ability to fund property acquisition costs, our ability to reach targeted time frames for establishing feasibility, permitting time lines, currency fluctuations, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims, our ability to raise funds necessary for ongoing and planned expenditures and operations, and regulatory approvals. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "scheduled", "estimates", "intends", "anticipates" or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would" or "will be taken", "occur" or "be achieved". Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward looking statements. Such factors may include, among others, risks related to our joint venture operations; actual results of current exploration activities or production technologies that we are currently testing; actual results of reclamation activities; future metal prices; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental or regulatory approvals or financing or in the completion of development activities, as well as those factors discussed in the section entitled "Risk Factors" and elsewhere in this registration statement. Although we have 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 not to be as anticipated, estimated or intended. 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. Accordingly, readers should not place undue reliance on forward-looking statements.

### Glossary of Terms

Company, SCY, we, us, our and similar words of similar meaning refer to Scandium International Mining Corp.

**\$, A\$, C\$** mean respectively, United States dollars, Australian dollars and Canadian dollars.

**Alteration** Usually referring to chemical reactions in a rock mass resulting from the passage of hydrothermal fluids.

**Assay** An analysis to determine the presence, absence or quantity of one or more components, elements or minerals.

Core The long cylindrical piece of a rock, up to several inches in diameter, brought to the surface by

Diamond drilling.

Diamond A drilling method in which the cutting is done by abrasion using diamonds embedded in a matrix drilling

rather than by percussion. The drill cuts a core of rock, which is recovered in long cylindrical

sections.

**Fractures** Breaks in a rock, usually due to intensive folding or faulting.

Grade The concentration of a valuable mineral within an Ore.

**Hydrothermal** Hot fluids, usually water, which may, or may not carry metals and other compounds in solution to

the site of mineral deposition or wall rock alteration.

**Igneous** A rock formed by the cooling of molten silicate material.

Intrusion A general term for a body of igneous rock formed below the surface of the earth.

Kg Kilogram which is equivalent to approximately 2.20 pounds.

Km Kilometer which is equivalent to approximately 0.62 miles.

**Mineralization** A term used to describe the presence of minerals of possible economic value. Also used to describe

the process by which concentration of economic minerals occurs.

**Net Smelter** A share of the net revenues generated from the sale of metal produced by a mine.

**Returns Royalty** 

NI 43-101 National Instrument 43-101 Standards for Disclosure of Mineral Projects, being the regulation

adopted by Canadian securities regulators that governs the public disclosure of technical and

scientific information concerning a mineral property.

Ore A naturally occurring solid material from which a metal or valuable mineral can be profitably

extracted.

An exposure of rock at the earth s surface. **Outcrop** 

**Pegmatite** Coarse-grained igneous rocks that often occur as wide veins cutting across other types of rock.

Parts per million. ppm

**Pyrite** 

Iron sulphide mineral. The most common and abundant sulphide mineral and often found in association with copper and gold.

Qualified Person

Means a Qualified Person as defined in National Instrument 43-101, including an engineer or geoscientist in good standing with their professional association, with at least five years of relevant experience.

Quartz

The second most common rock forming mineral in the earth s crust. SiO2.

Resource

Means any of a measured, indicated or inferred resource as used in NI 43-101, and having the following meanings:

**measured 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.

**indicated resource** is 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 resource** is 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.

For the purposes of the above a **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.

(Please refer to Item 3. Property - Cautionary Note To U.S. Investors Regarding Resource Estimates in regards to the use of the above terms in this registration statement.)

**Sulphide** A class of minerals characterized by the linkage of sulphur with a metal (such as Pyrite (FeS2)).

**Tpd/Tpa** Tonnes per day/tonnes per annum.

**Tonnes** A metric ton which is equivalent to approximately 2,204 pounds.

**Sediments** The debris resulting from the weathering and breakup of other rocks that have been deposited by or

carried by runoff, streams and rivers, or left over from glacial erosion or sometimes from wind

action.

**Vein** A geological feature comprised of minerals (usually dominated by quartz) that are found filling

openings in rocks created by faults or replacing rocks on either side of faults or Fractures.

Volcanic rock A finely crystalline or glassy Igneous rock resulting from volcanic actions at or near the earth s

surface.

### ITEM 1. BUSINESS

### General

We were incorporated on July 17, 2006 under the laws of British Columbia, Canada under the name Golden Predator Mines Inc. We were incorporated as a wholly owned subsidiary of Energy Metals Corp. for the purpose of holding precious metals and certain specialty metals assets. In order to focus on specialty metals, during February 2009 we transferred most of our precious mineral assets to our then wholly-owned subsidiary Golden Predator Corp. and on March 6, 2009 we completed a spin-out of Golden Predator Corp. to our shareholders. Effective March 12, 2009, we changed our name to EMC Metals Corp. In order to reflect a new emphasis on mining for scandium minerals, effective November 19, 2014, we changed our name to Scandium International Mining Corp.

We are a reporting issuer in the Canadian Provinces of British Columbia, Alberta and Ontario and our common shares are listed for trading on the Toronto Stock Exchange under the trading symbol SCY.

Our head office is located at 1430 Greg Street, Suite 501, Sparks, Nevada 89431. The address of our registered office is 1200 - 750 West Pender Street, Vancouver, British Columbia, Canada, V6C 2T8.

Our focus of operations is the development of the Nyngan Scandium project located in New South Wales, Australia (the Nyngan Scandium Project ). We also hold a scandium/rare earth minerals property in Norway known as the Tørdal property.

Our plan of operation for the remainder of 2016 is to complete a definitive feasibility study (DFS) and an environmental impact statement (EIS) on our Nyngan Scandium Project, obtain the required environmental and mining permits and seek additional funding for project construction and corporate working capital. We will also continue to test and develop unique scandium recovery and finishing techniques.

### **Intercorporate Relationships**

The chart below illustrates our corporate structure on December 31, 2015, including our subsidiaries, the jurisdictions of incorporation, and the percentage of voting securities held.

### **Recent History**

**Preliminary Economic Assessment** 

In October of 2014 we obtained an independent report of a preliminary economic assessment of our Nyngan Scandium Project entitled NI 43-101 F1 Technical Report on the Feasibility of the Nyngan Scandium Project prepared by Larpro Pty Ltd. of Brisbane, Australia. On May 20, 2015, we obtained an amended technical report (the PEA) titled Amended Technical Report and Preliminary Economic Analysis on the Nyngan Scandium Project, NSW, Australia. The effective date of the report, as amended, is October 10, 2014. The full report is available on our website. A summary of the report is provided herein under ITEM 2. PROPERTIES NYNGAN SCANDIUM PROJECT Nyngan Preliminary Economic Assessment.

### **Definitive Feasibility Study**

During September 2015 we initiated an independent DFS on our Nyngan Scandium Project. The engineering firm Lycopodium Minerals Pty Ltd, of Brisbane, QLD, Australia, was selected to prepare the DFS which is expected to be completed in the first quarter of 2016. The DFS will include all elements of project description and design to generate an economic report suitable for seeking project construction financing in 2016. Process engineering and other project study elements will be advanced to a +/-15% accuracy level.

### June 2014 Financing Transaction

On June 24, 2014 SCY entered into a \$2.5 million loan facility with Scandium Investments LLC (SIL), a company owned by a US private investor group (the 2014 Loan). The proceeds of the 2014 Loan were applied to pay a A\$1.3 million final payment to Jervois Mining Ltd. (Jervois) required for SCY to acquire a 100% interest in the Nyngan Scandium Project pursuant to the terms of a settlement agreement. The balance of the proceeds of the 2014 Loan was applied to repay \$1.2 million in maturing debt. The 2014 Loan had a maturity date of December 24, 2015.

In accordance with the terms of the 2014 Loan, the outstanding principal and interest automatically convert into an effective 20% joint venture interest in both our Nyngan Scandium Project and our exploration license, referred to as the Honeybugle Scandium property, at the time the Company meets a funding milestone (defined as raising \$3.0 million in equity). The funding milestone was met on August 24, 2015 and the 2014 Loan has converted into a 20% ownership interest in EMC Metals Australia Pty Ltd ( EMC Australia ), with SCY holding an 80% ownership interest. EMC Australia holds our interests in the Nyngan Scandium Project and Honeybugle Scandium property. Under the terms of the 2014 Loan, upon conversion of the loan EMC Australia will be operated as a joint venture between SIL and SCY with SIL holding a carried interest in the Nyngan Scandium Project until the Company meets two development milestones: (1) filing a feasibility study on SEDAR, and (2) receiving a mining license on either joint venture property. At such time as the two development milestones are met, SIL becomes fully participating on project costs thereafter.

Completion of the development milestones by the Company, as described above, activates a second onetime, limited period option for SIL to elect to convert the fair market value of its 20% joint venture interest in the Nyngan Scandium Project and Honeybugle Scandium property into an equivalent value of the Company s common shares, at then prevailing market prices, rather than continue with ownership at the project level.

### Nyngan Scandium Project Acquisition

On February 5, 2010, SCY entered into an Exploration Joint Venture Agreement (JV Agreement) with Jervois Mining Limited (Jervois) of Melbourne, Australia (ASX: JRV) to co-develop the Nyngan scandium property (Nyngan), in New South Wales, Australia. The JV Agreement gave SCY the right to earn a 50% interest in a joint venture with Jervois for the purpose of holding and developing Nyngan, provided SCY met certain technical and financial milestones. SCY met all financial requirements and delivered evidence of technical milestone achievement to Jervois on February 24, 2012.

On February 27, 2012, Jervois formally rejected SCY s claim to have met the earn-in conditions specified in the JV. The parties discussed and successfully reached an agreed settlement in February 2013 that resolved all issues in dispute. The terms of the binding settlement provided for the transfer of 100% ownership and control of the Nyngan Project, including the relevant exploration tenements and surface (freehold) land holdings, to the Company, in return for A\$2.6 million in future cash payments. The settlement agreement also applied a production royalty on the Nyngan project of 1.7% of sales for products produced from the site, payable to Jervois. The royalty has a 12 year term from first production date, and a 10 tpa scandium oxide production minimum.

In June of 2014 the Company completed all settlement payments required under its agreement with Jervois and formal transfer of the Nyngan Project exploration licenses to SCY s Australian subsidiary has been completed.

### **Business Operations**

### **Company Summary**

We are a mineral exploration and development company that is focused on the development of scandium, rare earth minerals, and other specialty metals, including nickel, cobalt, boron, manganese, tantalum, titanium and zirconium. We have not commenced development of any of our projects, and as a result we are an exploration stage company. We have not established mineral reserves on any of our projects.

Our principal project is the Nyngan Scandium Project located in New South Wales, Australia, which we own 80% of the rights to, including exploration licenses. In April of 2014 we also acquired an exploration license referred to as the Honeybugle Scandium property, a prospective scandium exploration property located 24 kilometers from the Nyngan Scandium Project.

We also hold 100% of the Tørdal Scandium/REE property exploration licenses located in Norway.

### Corporate Objective and Strategy

Our corporate focus is to produce and sell scandium (Sc) and scandium-based products. None of our current properties has advanced to the development or production stage and we are currently an exploration stage company. In addition we do not currently have reserves on any of our properties. We have, however, completed an independently prepared preliminary economic assessment of the Nyngan Scandium Project and are conducting additional technical and assessment work for the purpose of preparing a DFS on the development of the scandium resource. Subject to a successful DFS, we intend to develop the Nyngan Scandium Project for production, with a view to supplying anticipated future demand for scandium oxide and scandium-content materials. For further information on the Nyngan Scandium Project, please refer to *Item 3. Properties - Description of Properties Nyngan Scandium Project and Item 1A. Risk Factors*.

Concurrently with our analysis of the Nyngan Scandium Project, we are developing and testing unique mineral recovery techniques as well as techniques to produce high quality intermediate scandium-content aluminum alloy products. If effective at a commercial level, these mineral recovery techniques, scandia finishing techniques and intermediate product developments are expected to provide increased economic margins and returns on capital on any future scandium production.

Presently our recovery and finishing technology is completed to a degree that it supports engineering and flow sheet design for our +/- 15% DFS, although further development work will continue in both areas. There is no guarantee that we will be able to benefit from the commercial application of such techniques or that we will have scandium production in the future.

### Global Scandium Production and Market

Scandium is the  $31^{st}$  most abundant element in the earth s crust (average 33 ppm), which makes it more common than lead, mercury and precious metals, but less common than copper. Scandium has characteristics that are similar to rare earth elements, and it is often classified as a member of that group, although it is technically a light transition metal. Scandium occurs in nature as an oxide, rarely occurs in concentrated quantities because it does not selectively combine with the common ore-forming anions, and is very difficult to reduce to a pure metal state. Scandium is typically produced and sold as scandium oxide ( $Sc_2O_3$ ), and is properly known as scandia.

Global annual production estimates of scandium range from 10 tonnes to 15 tonnes, but accurate statistics are not available due to the lack of public information from countries in which scandium is currently being produced. There are four known production sources globally today: stockpiles from the former Zhovti Voty uranium mine in Ukraine, the rare earth mine at Bayan Obo in China, apatite mines on the Kola Peninsula in Russia, and by-product production from titanium dioxide (TiO<sub>2</sub>) pigment refiners in China.

There is no reliable pricing data on global scandium oxide trading. The U.S. Geological Survey ( USGS ) in its latest report (January 2016) documents the 2015 price of scandium oxide (99.99% grade) at US\$5,100/kg, essentially the same as their 2014 price estimate. Small quantities of scandium oxide are currently offered on the internet by traders for prices at this level, although product of slightly lower grade is commonly available at lower prices. Scandium oxide grades of 95% or greater are considered commercially suitable, with 99.9% grade used for electrical applications, and grades higher than 99.9% reserved for science and new technical applications. Scandium oxide grades of 95-98% are generally considered suitable for aluminum alloy applications.

Scandium oxide is typically traded in small quantities, between private parties, and pricing is not transparent to other buyers or sellers as there is no clearing facility as is more common with more commonly traded metals and commodities. Prices do vary, based on purity and quantity supplied. Small sale quantities tend to command premium prices, and large quantities (over one tonne) are simply not available to establish appropriate commercial pricing.

Scandium can also be effectively purchased in form of aluminum-scandium (Al-Sc) master alloy, typically containing 2% scandium by weight. This product is tailored for use in aluminum alloy production containing scandium. The 2016 USGS report indicates the 2015 price for Al-Sc 2% master alloy at US\$220/kg. This 2015 price estimate represents a lower estimate than the 2013-2014 USGS average, and one very consistent with the 2011-2012 average.

Principal uses for scandium are in high-strength aluminum alloys, high-intensity metal halide lamps, electronics, and laser research. Recently developed applications include welding wire and fuel cells which are expected to be in future demand. Approximately 15 different commercial aluminum-scandium alloys have been developed, and some of them are used for aerospace applications. In Europe and the U.S., scandium-containing alloys have been evaluated for use in structural parts in commercial airplanes, high stress parts in automobile engines and brake systems, and high tension electrical wires. Military and aerospace applications are known to be of interest, although with less specificity. The combination of high strength and light weight makes aluminum-scandium alloys generally suitable for a number of applications where existing aluminum alloys made with other metals are used today.

### **Competitive Conditions**

We compete with numerous other companies and individuals in the search for and the acquisition or control of attractive rare earth and specialty metals mineral properties. Our ability to acquire further properties will depend not only on our ability to operate and develop our properties but also on our ability to select and acquire suitable properties or prospects for development or mineral exploration.

In regards to our plan to produce scandium, there are a limited number of scandium producers presently. If we are successful at becoming a producer of scandium, our ability to be competitive will require that we establish a reliable supply of scandium to the market, delivered at purity levels demanded by various applications, and that our operating costs generate margins at prices that will be set by customers and competitors in a market yet to mature.

### Governmental Regulations and Environmental Laws

The development of any of our properties, and specifically the Nyngan Scandium Project, will require numerous local and national government approvals and environmental permits. For further information about governmental approvals and permitting requirements, please refer to *Item 1A. Risk Factors*.

### **Employees**

As at January 1, 2016, we have 4 full and part time employees and 2 individuals working on a consulting basis. Our operations are managed by our officers with input from our directors. We engage geological, metallurgical, and engineering consultants from time to time as required to assist in evaluating our property interests and recommending and conducting work programs.

### ITEM 1A. RISK FACTORS

In addition to the factors discussed elsewhere in this registration statement, the following are certain material risks and uncertainties that are specific to our industry and properties that could materially adversely affect our business, financial condition and results of operations.

### Risks Associated with the Nyngan Scandium Project

### There are technical challenges to scandium production that may render the project not economic.

There is no assurance that we will demonstrate economic viability on the Nyngan resource. The economics of scandium recovery are known to be challenging. There are very few facilities producing scandium and the existing scandium producers are secretive in their techniques for recovery. In addition, the recovery of scandium product from laterite resources, such as are found on the Nyngan property, has not been demonstrated at an operating facility. The Nyngan processing facility design, if constructed, will be the first of its kind for scandium production. These factors increase the possibility that we will encounter unknown or unanticipated production and processing risks. Should any of these risks become actual, they could increase the cost of production thereby reducing margins on the project or rendering the project uneconomic.

### There is no guarantee that we will be able to finance the Nyngan Scandium Project for production.

Any decision to proceed with production on the Nyngan Scandium Project will require significant production financing. Scandium projects are uncommon, and economic and production uncertainty may limit our ability to attract the required amount of capital to put the project into production. If we are unable to source production financing on commercially viable terms, we may not be able to proceed with the project and may have to write off our investment in the project.

If we are successful at achieving production, we may have difficulty selling scandium. Scandium is characterized by unreliable supply, resulting in limited development of markets for scandium oxide. Markets may take longer to develop than anticipated, and Nyngan and other potential scandium producers may have to wait for products and applications to create adequate demand. Certain applications may require lengthy certification processes that could delay usage or acceptance. In addition certain scandium applications require very high purity scandium product, which is much more difficult to produce than lower grade product. If we commence production, our inability to supply scandium in sufficient quantities, in a reliable and timely manner, and in the correct quality, could reduce the demand for any scandium produced from our projects and possibly render the project uneconomic.

### General Risks Associated with our Mining Activities and Company

We may not receive permits necessary to proceed with the development of a mining project. The development of any of our properties, including the Nyngan Scandium Project, will require numerous local and national government approvals, including environmental permits. Our ability to secure all necessary permits required to develop any of our projects is unknown until we make application for such permits. If we cannot obtain all necessary permits, the project cannot be developed, and our investment in the project will likely be lost. Our future market value will likely be significantly reduced to the extent one or more of our projects cannot proceed to the development or production stage due to an inability to secure all required permits.

Mineral Resource Estimates on our properties are subject to uncertainty and may not reflect what may be economically extracted. Resource estimates included for scandium on our Nyngan property are estimates only and no assurances can be given that the estimated levels of scandium minerals will actually be produced or that we will receive the metal prices assumed in determining our resources. Such estimates are expressions of judgment based on knowledge, mining experience, analysis of drilling and exploration results and industry practices. Estimates made at any given time may significantly change when new information becomes available or when parameters that were used for such estimates change. By their nature resource estimates are imprecise and depend, to a certain extent, upon statistical inferences which may ultimately prove unreliable. Furthermore, market price fluctuations in scandium, as well as increased capital or production costs or reduced recovery rates, may limit our ability to establish reserves at some future point on Nyngan, or on any of our properties. The extent to which resources may ultimately be reclassified as proven or probable reserves is dependent upon the demonstration of their profitable recovery. The evaluation of reserves or resources is always influenced by economic and technological factors, which may change over time. Accordingly, current resource estimates on our material properties may never be converted into reserves, or be economically extracted, and we may have to write off such properties or incur a loss on sale of our interest on such properties, which will likely reduce the value of our shares.

Our potential for a competitive advantage in specialty and rare metals production depends on the availability of our technical processing abilities, as currently provided by our Chief Technology Officer. We are dependent upon the personal efforts and commitment of Willem Duyvesteyn, our CTO, a director and significant shareholder of our company, for the continued development of new extractive technologies related to scandium and other rare and specialty metals production. The loss of the services of Mr. Duyvesteyn will likely limit our ability to use or continue the development of such technologies, which would remove the potential competitive and economic benefit of such technologies.

Our operations are subject to losses due to exchange rate fluctuation. We maintain accounts in Canadian and U.S. currency. Our equity financings have to date been priced in Canadian dollars. All of our material projects and non-cash assets are located outside of both Canada and the USA, however, and require regular currency conversions to local currencies where such projects and assets are located. Our operations are accordingly subject to foreign currency fluctuations and such fluctuations may materially affect our financial position and results. We do not engage in currency hedging activities.

We do not currently earn any revenue and without additional funding, we will not be able to carry out our business plan, and if we raise additional funding existing security holders may experience dilution.

As an exploration stage mining company, none of our principal properties are in operation and we do not currently earn any revenue. In order to continue our exploration activities and to meet our obligations on the Nyngan Scandium Project, we will need to raise additional funds. Recently, we have relied entirely on the sale of our securities to raise funds for operations. Our ability to continue to raise funds from the sale of our securities is subject to significant uncertainty due to volatility in the mineral exploration marketplace. If we are able to raise funds from the sale of our securities, existing security holders may experience significant dilution of their ownership interests and possibly to the value of their existing securities.

### ITEM 2. PROPERTIES

### **Cautionary Note to U.S. Investors Regarding Resource Estimates**

Certain terms used in this section are those used in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of U.S. securities laws. Canadian requirements, including NI 43-101, differ significantly from the requirements of the SEC, and resource information contained herein may not be comparable to similar information disclosed by U.S. companies.

In particular, and without limiting the generality of the foregoing, the term resource does not equate to the term reserves . The requirements of NI 43-101 for identification of reserves are not the same as those of the SEC, and reserves reported in compliance with NI 43-101 may not qualify as reserves under SEC standards. Under U.S. standards, mineralization may not be classified as a reserve unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. We have not established reserves on any of our properties.

The SEC s disclosure standards normally do not recognize information concerning measured mineral resources, indicated mineral resources or inferred mineral resources or other descriptions of the amount of mineralization in mineral deposits that do not constitute reserves by U.S. standards, in documents filed with the SEC. In addition, resources that are classified as inferred mineral resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimated inferred mineral resources may not generally form the basis of feasibility or pre-feasibility studies. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable.

Disclosure of contained ounces in a resource is permitted disclosure under Canadian regulations, however, the SEC normally only permits issuers to report mineralization that does not constitute reserves by SEC standards as in-place tonnage and grade without reference to unit measures.

Accordingly, information concerning mineral deposits set forth herein may not be comparable with information presented by companies using only U.S. standards in their public disclosure.

### **Description of Mineral Projects**

### Nyngan Scandium Project

### Property Description and Location

The Nyngan Scandium Project site is located approximately 450 kilometres northwest of Sydney, NSW, Australia and approximately 20 kilometres due west from the town of Nyngan, a rural town of approximately 2900 people. The deposit is located 5 kilometres south of Miandetta, off the Barrier Highway that connects the town of Nyngan to the town of Cobar. The license area can be reached via the paved Barrier Highway, which allows year-round access, but final access to the site itself is reached by clay farm tracks. The general area can be characterized as flat countryside and is classified as agricultural land, used predominantly for wheat farming and livestock grazing. Infrastructure in the area is good, with available water and electric power in close proximity to the property boundaries.

The Nyngan property is classified as an Australia Property for purposes of financial statement segment information.

The scandium resource is hosted within the lateritic zone of the Gilgai Intrusion, one of several Alaskan-type mafic and ultramafic bodies which intrude Cambrian-Ordovician metasediments collectively called the Girilambone Group. The laterite zone, locally up to 40 meters thick, is layered with hematitic clay at the surface followed by limonitic clay, saprolitic clay, weathered bedrock and finally fresh bedrock. The scandium mineralization is concentrated within the hematitic, limonitic, and saprolitic zones with values up to 350 ppm scandium.

The general location of the Nyngan Scandium Project is provided in Figure 1 below. The specific location of the exploration licenses that we may earn an interest in are provided in Figure 2 below.



### **Mineral License Details**

The scandium resource is held under Exploration License (EL) 8316 (Block Number 3132, units d, e, j, k and Block no. 3133, unit f) and EL 6096 (Block 3132, unit p, and Block 3133, units l, m, r and s); a total of ten (10) graticular units. The exploration licenses allow the license holder to conduct exploration on private land (with landowner consents and signed compensation agreements in place) and public lands not including wildlife reserves, heritage areas or National Parks. The scandium resource is fully enclosed on private agricultural land.

The Company s Australian subsidiary holds legal title to both the surface and mineral exploration rights on the Nyngan Scandium Project.

The exploration licenses cover 29.25 square kilometers (2,925 hectares). The resource site is located at geographic coordinates MGA zone 55, GDA 94, Lat: - 31.5987, Long: 146.9827, Map Sheets 1:250k Cobar (SH/55-14) and 1:100k Hermidale (8234).

The project surface rights (freehold) total 810 acres (370 hectares) on a portion of the exploration license area. The freehold property boundaries are defined by standard land survey techniques undertaken by the Lands Department and currently presented in the form of Cadastral Deposited Plans (DP) and Lots. The land associated with the project

rights is DP 752879, Lots 6 and 7 (Appendix 2, Lots 6 and 7 - Nyngan).

The Company is required to lodge individual A\$10,000 environmental bonds with the NSW Mines Department for each license, and must meet total minimum work requirements annually of approximately A\$65,000, covering both licenses. Annual property costs to the local Shire Council are under A\$1,000 per year.

Royalties attached to the properties include a 1.5% Net Profits Interest royalty to private parties involved with the early exploration on the property, a 1.7% Net Smelter Returns Royalty payable to Jervois for 12 years after production commences, subject to terms in the settlement agreement, and a 0.7% royalty on gross mineral sales to a private investor. Another revenue royalty is payable to private interests of 0.2%, subject to a US\$370k cap. A NSW minerals royalty will also be levied on the project, subject to negotiation, currently 4% on revenue.

### Metallurgy Development

The Company has invested in and developed methodology for extracting scandium from the Nyngan property resource since 2010. A portion of the work done over this period has been superseded by work that followed, but subsequent test programs universally benefitted from prior efforts. In summary, the programs have been as follows:

The Company inherited work done on Nyngan from Jervois, and applied that work to a quick flowsheet and capital estimate done for management by Roberts & Schaefer of Salt Lake City, Utah;

- 2011 The Company employed Hazen Research, Inc., of Golden, Colorado, USA (Hazen) to test acid baking techniques and solvent extraction (SX) processes with Nyngan resource material. The Company also employed SGS-Lakefield (Ontario) to test pressure acid leach techniques on Nyngan resource, as a replacement for or an enhancement to acid bake techniques done earlier in the year by Hazen;
- 2012 The Company engaged SNC-Lavalin to do an economic study for management, utilizing an acid bake flowsheet and SX work from the Hazen test program;
- 2014 The Company published a preliminary economic assessment ( PEA ) entitled NI 43- 101F1 Technical Report on the Feasibility of the Nyngan Scandium Project, authored by Larpro Pty Ltd, utilizing both Hazen and SGS-Lakefield testwork results; and
- 2015 The Company amended and refiled the 2014 PEA Report as the Amended Technical Report and Preliminary Economic Analysis on the Nyngan Scandium Project, NSW, Australia .

### Development Program Review

The first work phase of the metallurgy development program consisted of detailed metallurgical bench scale testing, and was intended to refine and enhance the Company s existing material process flow sheet to extract scandium from the resource material. This existing flow sheet, developed by Jervois and external consultants, formed the basis of a preliminary, conceptual engineering report for the processing elements of the project that was completed by Roberts & Schaefer specifically for use by SCY management.

The Roberts & Schaefer report included capital and operating cost estimates, based on process flow sheets and technical reports previously done for Jervois or SCY on various metallurgical aspects of the resource.

These technical/process reports included work done by METCON, the CSIRO, and by others, proprietary to or sourced by Jervois or SCY. The bulk of the process applied by Roberts & Schaefer in their Report was defined by bench scale as well as small scale pilot plant work results compiled by others, and a preliminary flow sheet complied by the CSIRO.

This early stage Roberts & Schaefer Report was carried forward into the later metallurgical test work subsequently conducted by Hazen and the design work utilized in the SNC- Lavalin economic study presented to management in 2012.

In January 2011, SCY announced results of initial lab test work, independently prepared by Hazen. These results defined general results involving conventional contained acid leach systems and suggested recoveries from resource of up to 75%. No secondary recoveries were considered in these initial bench-scale tests.

The second phase of the Hazen test work program continued through July, and involved continuous pilot plant testing of the acid leach systems, solvent extraction systems and product finish systems identified by earlier CSIRO work. The overall objectives of the test work program were to define and optimize a process or series of processes that achieves an 80% scandium recovery, lowest possible capital and operating costs, and most benign environmental impact, using standard and accepted processes.

On January 19, 2012 we announced receipt an independent metallurgical test-work report, titled *Purification of Scandium Extracted from Laterite Ore*, outlining the results of a number of pilot-scale tests on Nyngan resource material, and estimated recoveries and grades of scandium oxide product. The report was independently prepared by Hazen and is the final in a series of three phases of semi-continuous pilot plant scale test-work completed by Hazen during 2011. Work was finalized in late November.

Highlights of the 2011 Hazen semi-continuous pilot plant test-work are as follows:

Results of conventional contained sulfuric acid bake and water leach systems, at atmospheric pressure, demonstrated scandium recoveries averaging 75%;

Results of conventional SX on the pregnant leach solution, demonstrated scandium recoveries exceeding 99%;

Results on final stage precipitation of scandium oxide (Sc O), focused on highest combined purity and recovery, demonstrated scandium recoveries of 97.5%, at purity levels of 97.5% Sc O. Higher purity levels were achieved at lower recoveries;

Overall recovery results were 70% to 80%, based on ore type (limonite or saprolite); and

All process assumptions were based on standard and accepted techniques for ore preparation, leaching, solvent extraction and final product preparation.

In late 2011, the Company commissioned test work on high pressure acid leach ( HPAL ) processes, with both Hazen and SGS-Lakefield of Ontario, Canada. The initial HPAL work was applied to residue from the acid bake process sourced from the earlier Hazen test work, specifically to determine if additional scandium could be effectively recovered in a second pass with a pressure system. Those results were encouraging, and led to later test work in 2012-13 which applied HPAL techniques directly on the laterite resource material. No HPAL research results were included in the report and findings compiled for management by SNC-Lavalin in early 2012. However, the work that subsequently continued on HPAL, after that SNC Report was completed, has been incorporated into current engineering studies and flow sheet strategies for the Nyngan project. Existing HPAL work results were done to bench scale, and not to pilot scale, and are currently being followed up with further test work.

The Company is continuing test work on metallurgy to increase recoveries and final product grades.

In February, 2011 we announced results of a series of laboratory-scale tests investigating the production of aluminum-scandium alloys directly from aluminum oxide and scandium oxide feed materials, prepared by the CSIRO. The overall objective of this research was to demonstrate and commercialize the production of aluminum-scandium master alloy using impure scandium oxide as the scandium source, potentially significantly improving the economics of aluminum-scandium master alloy production.

### **Environmental Permitting Work**

In April, 2011 SCY announced a general progress report on the project which outlined a series of environmental work steps designed to advance an Environmental Impact Study (EIS), the foundation environmental document required for a mining permit in the state. Work steps included both ground and surface water assessments, along with other assessments of Aboriginal, ecology, traffic, noise and air quality matters.

All of this work has subsequently been completed, including 8 water bores with ongoing test monitoring equipment, and reports on the various other targeted assessments, without material issues in any area. An aerial photography and contour mapping program was also completed, to support the feasibility study work regarding location of site facilities.

On January 18, 2012 SCY announced that that key elements of environmental site work on the Nyngan Scandium Project have been completed and a Conceptual Project Development Plan ( CPDP ) submitted to the NSW, Australia state regulators. The CPDP submission forms the basis for an EIS.

Specific EIS and property work, contained in the CPDP, completed by year end 2011 are as follows:

Draft ground water assessment study finalized and submitted to regulators;

Surface water assessment results favorable, State review ongoing;

Aboriginal heritage study finalized, no areas of significance;

Soils study finalized, no issues; and

Property aerial photography and contour mapping completed, location of site facilities defined.

Continuing EIS work underway are as follows:

License applications (6), for access to groundwater as generated from property water bores have been submitted:

Flora and fauna studies are ongoing; to date no significant issues have arisen; and

Traffic, noise and air quality baseline monitoring are ongoing.

The environmental work was performed under direction from R. W. Corkery & Co., (Orange, NSW, Australia), and formed part of the SNC-Lavalin Nyngan economic study.

### **Nyngan Preliminary Economic Assessment**

On October 14, 2014, the Company announced completion of a report on a Preliminary Economic Assessment of the Nyngan project entitled, NI 43-101F1 Technical Report on the Feasibility of the Nyngan Scandium Project. As a result of a disclosure review by the British Columbia Securities Commission, an amended technical report (the PEA) titled Amended Technical Report and Preliminary Economic Analysis on the Nyngan Scandium Project, NSW, Australia was completed on May 20, 2015. The effective date of the report, as amended, is October 10, 2014.

The PEA was prepared by the engineering firm of Larpro Pty Ltd, of Brisbane, Australia, and supported by Mining One of Melbourne, Australia and Rangott Mineral Exploration Pty Ltd of Orange, Australia, and confirms the technical and economic potential of the Nyngan Scandium Project. The PEA has been independently prepared as a technical report on the form prescribed under NI 43-101 F1 and is available for public review on the Company s website at <a href="https://www.scandiummining.com">www.scandiummining.com</a>

The PEA is preliminary in nature and should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. While this PEA does not consider or include any inferred mineral resources, and does include only measured and indicated resources, it remains a preliminary analysis that is not sufficient to enable resources to be categorized as mineral reserves. Furthermore, there is no certainty that the PEA will be realized.

We advise U.S. investors that while the terms measured resources, indicated resources and inferred resources are recognized and required by Canadian regulations, the U.S. Securities and Exchange Commission does not recognize these terms. U.S. investors are cautioned not to assume that any part or all of the material in these categories will be converted into reserves. It should not be assumed that any part of an inferred mineral resource will ever be upgraded to a higher category.

The PEA concludes that the Nyngan Scandium Project has the potential to produce 35,975 kilograms of scandium oxide (scandia) per annum, at grades of 97%-99%, generating an after-tax cumulative cash flow over a 20 year Nyngan Scandium Project life of \$565 million, with an NPV10% of \$175 million. The PEA also concludes the project can achieve this financial result with a conventional flow sheet, employing HPAL and solvent extraction (SX) techniques, which have been modeled and validated from METSIM modeling and bench scale/pilot scale metallurgical test work. Note that mineral resources that are not mineral reserves do not have demonstrated economic viability.

### **PEA Financial Highlights and Key Assumptions**

The PEA concludes that the Nyngan Scandium Project has the potential for positive economics, based on a capital estimate supported by conventional process designs. The overall PEA level of accuracy is +/-30%. The PEA is expressed in US dollars (US\$), unless otherwise noted. A foreign exchange rate of US\$0.90 (1A\$=US\$0.90) to one Australian dollar (A\$) was applied in all conversions. No escalation for inflation was assumed in cash flows. All cash flows and discounted cash flows (NPVs and IRRs) in this PEA are shown on an after tax basis, based on a 30% tax rate.

Highlights and key assumptions are as follows:

Table 1. Nyngan PEA Financial Highlights (October 10, 2014)

The above estimates of capital and operating costs are a component of a number of factors required to complete a preliminary assessment of the economic viability of the project, and there is no guarantee that the company will achieve production from the resource at Nyngan. There are currently no established reserves on the Nyngan Scandium Project.
PEA Mineral Resource Estimate

In March of 2010, a NI 43-101 technical report which outlined a resource estimate on the Nyngan Scandium Project was completed. The report, titled, *NI 43-101 Technical Report on the Nyngan Gilgai Scandium Project, Jervois Mining Limited, Nyngan, New South Wales, Australia*, was prepared by or under the supervision of Max Rangott (BSc). The PEA does not alter the existing Nyngan Scandium Project resource estimate, established in the 2010 technical report. The NI 43-101 measured and indicated scandium resource totals 12 million tonnes at an average grade of 261ppm scandium, from both limonite and saprolite resource material. The cut-off value of 100ppm used in the initial 2010 resource was reviewed as part of the PEA. While the input assumptions to the formula calculations are different from those assumed in 2010, the overall cut-off assumption for the combined limonite and saprolite resource generated by the formula was still considered reason nable, and has s not changed.

The PEA assumes that a portion of limonite-only resource, in one particular area of the overall resource, will provide a 20 year mining pit sufficient to supply the processing facility at a rate of 75,000 tpy and an average grade of 371ppm scandium. A 20 year mining pit design was developed from drill hole data in support of this assumption and included in the PEA.

The current Nyngan Scandium Project scandium mineral resource as calculated in the 2010 report by Rangott and accepted in the 2015 PEA, is as follows:

**Table 2. Nyngan Scandium Resource** (Effective Date February 9, 2010) (1)

Nyngan Project NI 43-101 Resource Summary Category	Tonnes	Grade (ppm Sc)	Cut-Off Sc (ppm Sc)	Overburden Ratio (t/t)
Measured Resource Indicated Resource Total Resource	2,718,000	274	100	0.81:1
	9,294,000	258	100	1.40:1
	12,012,000	261	100	1.10:1

NI 43-101 Technical Report on the Nyngan Gilgai Scandium Project, Jervois Mining Limited, Nyngan, New South Wales, Australia, dated March 2010, (Rangott Mineral Exploration Pty Ltd).

(1) Mineral resources that are not mineral resources do not have demonstrated economic viability.

Note that the terms measured and indicated resources are not terms recognized in the United States under SEC rules and guidelines. See *Note to U.S. Investors Regarding Resource Estimates* above under *ITEM 2 PROPERTIES*.

The cut-off level used to define the resource was established using a standard formula that considered scandium pricing, estimated costs of mining and processing, and overall recovery rates, as they pertained to markets and process understanding at the time. Processing methodology assumed acid leaching and solvent extraction systems, and mining assumed a shallow, surface mining operation consistent with drill results on the resource. Additional information on cut-off value assumptions, including pricing assumptions, is provided in the PEA, available on the Company s website.

### **PEA Mining and Processing Assumptions**

Mining represents a relatively minor part of the overall project activity, based on a plant feed of 240tpd or 75,000 tonnes per year requirement. Mine production is based on conventional open pit methods, strip ratios of 1.5:1 to 3:1 (overburden/resource), contract mining assumptions and mining activity in campaigns of one month, three times per year, avoiding the wet season. The plant will run continuously, fed from field and plant stockpiles of mined resource, and covered against moisture and weather.

The processing plant operations will size the input material, apply HPAL using sulfuric acid, and then recover the liberated scandium using SX, oxalate precipitation and calcination, to generate a finished scandium oxide product. The output of the plant is forecast at 35,975 kilograms of scandium per year, at grades between 97% and 99%, as  $Sc_2O_3$ . Product output will be refined to suitable grade for direct sales to end users, recognizing that grade varies based on application.

Plant tailings will be neutralized with lime to pH 8.5, dewatered, and stored in a permanent tailings facility which is subject to the environmental requirements of mining permits and NSW State regulators.

### **PEA Capital Cost Assumptions**

Total capital costs for the Nyngan Scandium are estimated at \$77.4M, which includes a 20% contingency. The majority (70%) of the capital cost in the PEA was Australian-sourced, and consequently, initially priced in Australian dollars, supported by direct vendor capital pricing. Concrete and steel costs have been estimated from concept drawings, and piping, electrical and instrumentation costs were estimated using standard industry factors. The capital cost estimate is considered to be +/-30% accuracy. Capital costs included in overall cash flow include \$2M per year for sustaining capital items (\$38M over full PEA term), and \$3M in final reclamation costs in year 20. No salvage

costs were assumed. On the basis that the resource is adequate for 45 years at the assumed grade, it is unlikely the project would be closed in year 20 if current assumptions remain viable.

### **PEA Operating Costs Assumptions**

Operating costs were estimated based on metallurgical test work results and METSIM modelling quantities and requirements. The single most significant cost item in operating costs is sulfuric c acid, which is used in quantity and requires transport to site. The second most significant cost item is staff/labor cost. Reagents in total represent approximately 57% of total operating cash costs. Quantities were established through METSIM software outputs, and were 100% vendor-priced. The level of accuracy on the operating component costing in the PEA is +/-25%.

Operating cost details in the PEA are as follows:
Table 4. PEA Operating Costs, and Unit Costs Per kg Oxide

### **PEA Revenue Pricing Assumptions**

The price assumption in the PEA is \$2,000 per kilogram (kg), as an average price covering all products sold over various product grades. Current pricing is substantially above these levels, based on small unit quantities and varying grades. The pricing benchmark applied in the PEA was supported by limited current trading and pricing information, our discussions with potential customers, and the understanding that lower prices than scandium trades for today will be necessary to penetrate potential markets with significant sales tonnages in the future.

### **PEA Sensitivities Analysis**

The Nyngan Scandium Project is most sensitive to changes in product pricing, and somewhat less sensitive to either operating cost or capital cost changes, as shown below.

### Table 5. Profitability Sensitivities to Changes in Key Assumptions

### **PEA General Assumptions**

The PEA is presented on a 100% ownership basis. As a result of the conversion of the 2014 Loan into a 20% joint venture interest at the project level in Nyngan, the Company currently holds an 80% interest in the Nyngan Scandium Project.

All cash flows and financial analyses have been presented on a 100% equity basis. No debt leverage has been assumed in providing capital for development. No inflation factors have been applied to future cash flows, making the discounted cash flow performance measures constant dollar figures. Had inflation been applied to future cash flow streams, the NPVs and IRRs would have been higher.

The PEA incorporated considerable metallurgical test work independently prepared for SCY over the previous four years, along with engineering, project design work and economic estimates done previously for SCY management. The PEA also utilized existing environmental and detailed mine planning work previously undertaken on the property, and previously incorporated in prior management studies. The PEA had the benefit of prior flow sheet designs, and results, but it did not compare previous designs. The batch autoclave HPAL design presented in the PEA was the only design considered.

#### **PEA Conclusions and Recommendations**

This PEA consolidates a significant amount of metallurgical test work and prior study on the Nyngan Scandium Project. The work demonstrates a viable, conventional process s flow sheet utilizing the HPAL leaching process, and good metallurgical recoveries of scandium from the resource. The metallurgical assumptions are supported by various bench and pilot scale independent test work programs that are consistent with known outcomes in other laterite resources. Combined with the capital cost estimate, the Nyngan Scandium Project exhibits robust financial outcomes.

The PEA recommends that project owners proceed to a full feasibility study, including additional test work to confirm certain key process variants. Those recommendations include:

Consider test work to support process changes that could reduce capital/operating costs;

Conduct a comparative study between batch and continuous autoclave systems;

Consider/test certain alternative reagents/techniques in the solvent extraction area;

Conduct test work to develop engineering parameters around the materials handling properties of the laterite resource as it relates to optimum sizing for best leach results; and Conduct test work on pumping and settling properties of process slurries.

### **Definitive Feasibility Study**

On September 10, 2015 the Company announced that it has selected the engineering firm Lycopodium Minerals Pty Ltd, of Brisbane, QLD, Australia (Lycopodium), to prepare a DFS on the Nyngan Scandium Project. The work is expected to be completed in the first quarter of 2016. The DFS will include all elements of project description and design to generate an economic report suitable for seeking project construction financing in 2016. Process engineering and other project study elements will be advanced to a +/-15% accuracy level.

While Lycopodium will coordinate the overall project, significant contributions will be sourced from other engineering groups and consultants who have been a part of previous reports, including Altrius Engineering Services Pty Ltd (Brisbane, QLD), Rangott Mineral Exploration Pty Ltd (Orange, NSW), Mining One Consultants (Melbourne, Victoria) and R.W.Corkery & Co. Pty Limited (Orange, NSW). Knight Piesold Pty Ltd (Brisbane, QLD) will contribute engineering services on tailings dams, geotechnical work, and surface water management.

The DFS will incorporate and be based on metallurgical test work independently prepared for the Company over the previous five years, along with engineering, project design work, environmental work on the property, mine planning and development work, and economic estimates done previously for management use, specifically as incorporated in the *Amended Technical Report and Preliminary Economic Assessment on the Nyngan Scandium Project, NSW, Australia*, effective date October 10, 2014, amended and restated issue date May 20, 2015.

The Nyngan Scandium Project DFS has been commissioned to be independently prepared in accordance with the requirements of NI 43-101 as applicable to the preparation of technical reports.

### Nyngan Scandium Project 2014 Drilling Program

On January 29, 2015, we announced assay results from a 14-hole resource drilling program at the Nyngan Scandium Project in NSW, Australia, conducted in October 2014. The 14 hole-program totaled 655 meters in the existing resource area. The program attempted 2 additional exploration holes, which were abandoned due to difficult drilling conditions. Highlights of the fourteen drill-hole program assay results follow:

Average scandium grade of 357ppm over 214 meters (200ppm cut-off);

Average scandium grade of 444ppm over 120 meters (300ppm cut-off);

Best results: 4 meters @ 795ppm, 5 meters @ 755ppm and 7 meters @ 721ppm;

Best individual 1 meter assay was 879ppm;

Lithium borate fusion (fusion) assay preparation demonstrated superior result to the traditional four acid method, as used on the resource estimate in 2010; and

These new assay results strongly support the average grade and location selected and included in the PEA on the Nyngan Scandium Project.

### **Drilling Program Details**

The Company conducted and completed a 14-hole drill program in October, focused on a high grade section of the Nyngan Scandium Project, selected from within the area of the measured and indicated resource disclosed in the NI 43-101 technical report filed on SEDAR in March of 2010. This high grade zone of mostly indicated resource was the basis of a 20 year mine plan and scandium grade assumptions used in the PEA on the Nyngan Scandium Project. This latest drill program was designed to infill certain areas to 50 meter centers (from 100 meter centers), and to provide better information on pit limits as defined in the PEA. The program was conducted using a conventional rotary air core drill rig, which captured over five tonnes of chip sample material, for assay, and for fresh resource material to support ongoing metallurgical test work programs. Holes were vertically drilled, so interval widths in the results table below represent true widths.

The Company assayed all 14 new holes with both four acid digestion, and also by fusion digestion techniques, followed in each case by ICP-AES metal assays. The Company notes that fusion digestion results generally deliver higher scandium assays than the four acid digestion method, traditionally used in nickel and cobalt assay work. We believe the fusion technique generates a truer assay result, because acid digestion of scandium within limonite-hosted mineralization can be incomplete, particularly at higher grades, and flux digestion by high temperature fusion produces a more homogeneous sample for analysis. We intend to rely on and utilize fusion digestion techniques going forward to support our mine planning and advanced economic and development studies.

The limonite-only assay results presented in the summary table below are based on a 200ppm scandium cut-off value, A saprolite resource underlays the limonite, is generally lower in grade, requires somewhat different processing techniques than limonite for optimal recovery, and is not planned for early extraction and processing by the Company. Each hole in the drill program was completed to bedrock, including both limonite and saprolite resource. Saprolite was present in 13 of the 14 holes drilled.

This application of a higher limonite cut-off value of 200ppm is consistent with the PEA assumptions on initial production from the top layer limonite resource. The results presentation is also consistent with the company focus on an initial pit configuration in a higher grade zone of resource. The area of this recent drill result corresponds to the area delineated by the 20 year PEA operating area, and in fact expands beyond that area.

Assay results were taken over each meter of drilling material, and only continuous intervals have been included in the summary table. Reporting intervals above cut-off were established based on fusion results, and the presentation table then applied those same intervals to both fusion and four acid assays for comparability. The generally higher fusion results generated wider resource intervals above cut-off grade, resulting in inclusion of some below cut-off grade assays into the four acid results presented in the table below.

Detail limonite-only results for each drill hole were as follows:

**Table 6. Drill hole Limonite Results** 

Edgar Filling: SCANDIOW IN LERNATIONAL MINING CORP FORM TO-K
The location of the 14-hole drill program is as follows:

### **Drill Program QAQC standards**

SCY employed an independent local geological consulting and drill supervisory team, Rangott Mineral Exploration Pty. Ltd., (RME) of Orange NSW, Australia, to manag ge the drill work on-site. Bulk samples of drill returns were collected at one meter intervals from a trailer-mounted cyclone and splitter for one reported hole - EMCG-01, and a separate RME three-tier riffle sp plitter was used on site for holes EMCG-09, EMCG-10 and EMCG-16, due to moisture. Assay samples ranged from 0.4 - 4.7 kg in weight. Individual sample identifiers were cross-checked during the process. The individual assay samples were double-bagged and held in RME s possession while in the field, prior to transport and storage at RME s office in Orange. RME personnel checked/validated the sequence of sample numbers, and submitted the samples to Australian Laboratory Services (ALS) laboratory in Orange, NSW. The remainder of bulk samples were sealed in the field in heavy polyethylene bags and transported by RME to a secure site at Orange for long-term storage or further use in metallurgical test work.

ALS/Orange dried and weighed the received assay samples, and pulverized the entire sample to 85% passing 75 microns or better (technique PUL-21). 50 g bags of the pulps were then split off and sent to the ALS laboratory at Stafford in Brisbane, Queensland for analysis. ALS/Brisbane analyzed the pulps for scandium, nickel, cobalt, chromium, iron, magnesium, manganese, aluminum and calcium, using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) after a four acid digestion (technique ME-ICP61). The 4-hole results were also repeat-tested,

only for scandium, using a lithium borate fusion digestion technique, followed by similar ICP-AES assay. The lower detection limit for scandium using either technique is 1ppm. RME included one commercial standard sample and three high-grade scandium pulps from previously analyzed batches, for quality control; and also included one duplicate sample from each hole in the batch. For internal quality control, ALS/Brisbane added additional standard samples (for repeat analyses), blank samples and duplicate samples to the batch.

### **Patent Application Filings**

On February 17, 2015 the Company announced the filing of five patent applications with the US Patent Office that correspond to novel flowsheet designs for the recovery of scandium from laterite resource material. All five of these patents are directly applicable to our Nyngan Scandium Project, although one of the five patents pertains to downstream product design.

The five patent applications are titled as follows:

- 1. Systems and methodologies for recovering scandium values from mixed ion solutions;
- 2. Systems and methodologies for direct acid leaching of scandium bearing laterite ores;
- 3. Solvent extraction of scandium from leach solutions;
- 4. Systems and processes for recovering scandium values from laterite ores; and
- 5. Scandium-containing master alloys and method for making the same.

### **Patent Applications Discussion:**

These patent applications cover novel, unique flowsheet designs, applicable to scandium extraction, from scandiferous laterite resources;

The patented designs are largely supported by test work done with Nyngan Scandium Project resource material and known design parameters;

The patents cover HPAL system material flows, SX, ion exchange systems ( IX ), atmospheric tank and heap leaching systems and techniques, and processes for directly making select master alloys containing scandium:

The designs will be part of a DFS, scheduled for 2015; and

The master alloy patent application uniquely integrates planned flowsheet design and downstream product development, either by SCY or with future customers.

These five patent applications have been filed with the US Patent Office, with dates of record from September 2014 to February 2015. They protect the Company s position and rights to the intellectual property (IP) contained and identified in the applications as of the date filed, within the worldwide jurisdiction limits of the US patent system. Review by the US Patent Office takes further time, but the dates of record define the basis of IP ownership claims, as is generally afforded US patent-holders.

The Company intends to utilize the IP contained in these process patents in the development of process flowsheets for recovery of scandium from its Nyngan Scandium Project.

The Company believes that patent protection of these specific, novel process designs will be granted. Many of the basic design elements contemplated in the Nyngan Scandium Project flowsheet are commonly applied to other specialty metals, particularly nickel. However, the application of these basic design elements has not been commonly applied to scandium extraction from laterite resources, and there are enough intended and required operational differences in the application to permit the Company to patent-protect IP on those differences.

These patent claims are the result of several years of metallurgical testwork with independent resource laboratories and specific design work by Willem Duyvesteyn, the Company s Chief Technology Officer, using Nyngan property resource material. This work is ongoing. Patent protection on flowsheet intellectual property will serve to limit or prevent the unauthorized use of that IP by others, without the Company s consent. We believe these filings are an important action to protect the ownership of a Company asset, on behalf of all SCY shareholders.

### **ALCERECO MOU and Offtake Agreements**

On March 30, 2015, the Company announced that it had signed a memorandum of understanding (the MOU) with ALCERECO Inc. of Kingston, Ontario (ALCERECO), forming a strategic alliance to develop markets and applications for aluminum alloys containing scandium. To further that alliance, and to reinforce the capability of both companies to deliver product developed for Al-Sc alloy markets, SCY and ALCERECO also signed an offtake agreement (the Offtake Agreement) governing sales terms of scandium oxide product (scandia) produced from the Nyngan Scandium Project. The Offtake Agreement specifies deliveries of scandium oxide product commencing in early 2017.

Scandium as an alloying agent in aluminum allows for aluminum metal products that are much stronger, more easily weldable and exhibit improved performance at higher temperatures than current aluminum based materials. This means lighter structures, lower manufacturing costs and improved performance in areas that aluminum alloys do not currently compete.

The MOU covers areas of joint cooperation and development of aluminum alloys that contain and are enhanced by the addition of scandium;

The MOU recognizes the specialized capabilities ALCERECO holds for the design, manufacture, and testing of Al-Sc alloy materials;

The Offtake Agreement outlines standard sale terms on 7,500 kg of scandia per annum, for a term of three years beginning in 2017, which can be extended; and

The Offtake Agreement contains both fixed and variable pricing components, which are subject to confidentiality.

ALCERECO is an advanced materials development company that provides services and specialty processing capabilities to companies innovating in a diverse range of markets, including aerospace, automotive, electronics and consumer/sporting goods. ALCERECO staff work with a range of materials and processes and have the tools and knowledge to take on leading-edge projects such as development of aluminum-scandium alloys, specialty ceramics, composites and graphene enhanced materials. ALCERECO has a particular focus on lightweight materials capable of delivering greater strength, functionality and exceptional performance.

ALCERECO operates out of the Grafoid Global Technology Centre in Kingston, Ontario that was originally founded by Alcan Aluminum in the 1940s. ALCERECO is a Canadian private company, and a wholly-owned subsidiary of Ottawa-based Grafoid Inc., a graphene application development company.

### Nyngan Scandium Project - Planned Activities for 2016-2017

The following steps are planned for Nyngan during the 2016 and 2017 Calendar years:

Complete and file an EIS on the Nyngan Scandium Project in Q1 2016;

Complete an advanced stage economic study (the DFS) with a +/- 15% accuracy level, scheduled for completion during the first quarter of 2016, and filed on SEDAR in the second quarter of 2016;

Make formal application for a mining license pertaining to the Nyngan Scandium Project with NSW Mines Department in Q1 2016;

Pursue additional offtake agreements in support of planned future scandium sales;

Seek project financing to fund the construction of the Nyngan Scandium Project for drawdown after the granting of a mining license from NSW for the mine development;

Commence site construction during in 2017, with anticipated construction completion over 12 months, targeting year-end 2017; and

Initiate project commissioning in Q1 2018, with product available for sale by the end of Q1 2018.

### **Honeybugle Scandium Property**

On April 2, 2014 the Company announced that it had secured a 100% interest in an exploration license (EL 7977) covering 34.7 square kilometers in New South Wales (NSW), Australia referred to as the Honeybugle Scandium property. The license area is located approximatelly 24 kilometers west-southwest from SCY s Nyngan Scandium Project. The license area covers part of the Honeybugle geologic complex, and will carry that name in our future references to the property. The ground was released by the prior holder, and SCY intends to explore the property for scandium and other metals.

The Company currently does not consider the Honeybugle Scandium prop perty to be a material property at this time. No resources or reserves are known to exist on the property. The property is classified as an Australian property for purposes of financial statement segment information.

The location of the Honeybugle Scandium property is provided below.

### **Honeybugle Drill Results**

On May 7, 2014 the Company announced completion of an initial program of 30 air core (AC) drill holes on the property, specifically at the Seaford anomaly, targeting scandium (Sc). Results on 13 of these holes are shown in detail, in the table below. These holes suggest the potential for scandium mineralization on the property similar to our Nyngan Scandiu um Project.

Highlights of initial drilling program results are as follows:

The highest 3-meter intercept graded 572 ppm scandium (hole EHAC 11);

EHAC 11 also generated two additional high grade scandium intercepts, grading 510 ppm and 415 ppm, each over 3 meters;

The program identified a 13-hole cluster which was of particular interest;

Intercepts on these 13 holes averaged 270 ppm scandium over a total 273 meters at an average continuous thickness of 21 meters per hole, representing a total of 57% (354 meters) of total initial program drilling; The 13 holes produced 29 individual (3-meter) intercepts over 300 ppm, representing 31% of the mineralized intercepts in the 273 meters of interest; and

This initial 30-hole AC explor