

# SCANDIUM INTERNATIONAL

MINING CORP.

NEWS RELEASE

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[www.scandiummining.com](http://www.scandiummining.com)

## SCANDIUM INTERNATIONAL – SALES AND MARKETING UPDATE

**Reno, Nevada, December 14, 2017** – Scandium International Mining Corp. (TSX:SCY) (“Scandium International” or the “Company”) is pleased to announce that it has both revised and renewed an existing scandium product offtake sales agreement entered into in 2015 with Alcereco Inc., a private Canadian aluminum alloy specialty research and manufacturing company, located in Kingston, Ontario, Canada.

The revised sales agreement extends the deadline for initial production and shipments from the Nyngan Scandium Project from December 1, 2017, to as late as December 1, 2020. The defined sale product has also been changed to an aluminum scandium 2% master alloy, from scandium oxide ( $Sc_2O_3$ ) in the prior agreement. This sales agreement covers 55% of Nyngan’s initial twelve month forecast production, and approximately 20% of nameplate capacity, as established by the definitive feasibility study.

The Company has been working extensively with Alcereco on test production batches of aluminum alloys containing scandium, for third party customers. These test pours have been conducted on various alloy types and scandium loads, and now form the basis of aluminum samples to advance customer marketing and sales initiatives in various target markets.

### SALES AGREEMENT HIGHLIGHTS:

- **New sales agreement extends delivery start date to as late as December 2020,**
- **Agreement addresses delivery of 225 tonnes/year of master alloy, for three years,**
- **Contract sets agreed prices of master alloy from delivery start date, on 150 tonnes of master alloy (2%) product per year,**
- **Contract provides a tight pricing framework for additional master alloy (2%) volumes of 75 tonnes per year, and**
- **The sales agreement includes force majeure clauses and no take-or-pay provision, consistent with terms of the earlier sales contract concluded in 2015.**

### ALLOY MIX PROGRAM HIGHLIGHTS:

- **Multiple alloy mix programs containing scandium undertaken in 2017,**
- **Programs range across 3, 5 & 7 Series aluminum alloys,**
- **Program results point to preferred recipes and optimized process techniques on larger batch sample manufacture in Q1 2018, and**

- **Alloy samples are key to promoting customer interest in scandium-containing aluminum alloys.**

## **DISCUSSION:**

In March of 2015, SCY executed an MOU with Alcereco Inc., outlining a research and development framework focused on aluminum scandium (Al-Sc) alloys. The parties simultaneously signed an offtake agreement for sale and purchase of scandium oxide (+98% grade  $\text{Sc}_2\text{O}_3$ ).

The MOU represented keen mutual interest in foundry-based test work on aluminum alloys containing scandium, based on understandings that Alcereco's team had gained from prior work with Alcan Aluminum, and based on SCY's twin goals of understanding and identifying quality applications for scandium, and also understanding the scandium value proposition with customers. The offtake agreement represented Alcereco's desire to also participate in the downstream economic opportunity represented by first-ever commercial-scale scandium availability from the Nyngan Scandium Project.

The new offtake agreement provides for sale of scandium to Alcereco in the form of aluminum scandium 2% master alloy (MA), rather than scandium oxide. This change reflects SCY's ability to manufacture MA, which is the form of scandium required by aluminum alloy manufacturers to introduce scandium into commercial scale alloy production. The Company's plans to pursue the ability to manufacture MA were outlined in our March 2, 2017 News Release, *SCY Enters into MOU with Weston Aluminum for Master Alloy Manufacture.*

This change in offtake product now puts Alcereco one step closer to direct manufacture of aluminum alloys with scandium. The volumes of MA in the new offtake agreement correspond to an equivalent tonnage of scandium oxide as was represented in the 2015 sales terms.

The research work contemplated by the 2015 MOU with Alcereco has so far focused on 3 Series and 5 Series aluminum alloys – specifically, the improvement in strength characteristics scandium can deliver without degrading other key properties. The team has run multiple alloy mix programs where scandium loading is varied, in order to look at response to scandium additions on a cost/benefit basis. This work has been done in the context of industries and applications where these particular alloys are popular today. In the case of the 5 Series, the strength increases from scandium additions expand the reach of this alloy series to industries and applications not previously considered prime markets.

The Company has also run Al-Sc alloy development programs in 2017 in two separate locations, and with two unrelated entities in Asia. These programs focused on 3 Series, 5 Series and 7 Series Al-Sc alloys, and have served to make independent data and volume samples available for sales efforts.

It is widely understood in the aluminum industry that the application of specific strengthening processes are equally as important as recipe choices in making strong and property-rich alloys suited to individual applications. These process regimes are critical to ensuring the best response to scandium additions. SCY has also included research into these process regimes to understand how Al-Sc alloys respond, most specifically in the area of cold work (strain hardening) techniques.

The results of our research work is positive, and consistent with the body of published literature available today on Al-Sc alloys. We are observing noteworthy strengthening effects with scandium additions above 0.1%, and dramatic strengthening improvements with additions of 0.35%, while preserving or enhancing other alloy properties and characteristics. We have also demonstrated that altering the combinations of scandium loads and alloy hardening process techniques has significant effect on the final alloy properties, offering the opportunity to tune alloy characteristics to suit specific applications.

Our growing portfolio of observed data, and physical samples, (as well as the significant amount of publicly available research data on this subject) is now being made available to select customer targets for scandium sales from the Nyngan project.

**George Putnam, CEO of Scandium International Mining Corp. commented:**

“The Company remains focused on offering our scandium products, either as master alloy or oxide depending on customer need, for sale to industry-leading customers across a broad range of businesses and products. In order to do that job effectively, we need to bring into sharper focus the value proposition for scandium, at every level in the supply chain. Our Al-Sc alloy research work, with the great help of our research partners, is essential to that understanding. This work enables our sales team to speak the language and make the case for the significant benefits of scandium with the customer, and do so at the technical level where the material choice gets made. It is very encouraging to find our research and results both supportive to this effort, and resonating with potential customers and technical partners.”

**QUALIFIED PERSONS AND NI 43-101 TECHNICAL REPORT**

Willem Duyvesteyn, MSc, AIME, CIM, a Director and CTO of the Company, is a qualified person for the purposes of NI 43-101 and has reviewed and approved the technical content of this press release on behalf of the Company.

**ABOUT SCANDIUM INTERNATIONAL MINING CORP.**

The Company is focused on developing its Nyngan Scandium Project, located in NSW, Australia, into the world’s first scandium-only producing mine. The project has received all key approvals, including a mining lease, necessary to proceed with project construction.

The Company filed a NI 43-101 technical report in May 2016, titled **“Feasibility Study – Nyngan Scandium Project”**. That feasibility study delivered an expanded scandium resource, a first reserve figure, and an estimated 33.1% IRR on the project, supported by extensive metallurgical test work and an independent, 10-year global marketing outlook for scandium demand.

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*This press release contains forward-looking statements about the Company and its business. Forward looking statements are statements that are not historical facts and include, but are not limited to statements regarding any future development of the project. The forward-looking statements in this press release are subject to various risks, uncertainties and other factors that could cause the Company's actual results or achievements to differ materially from those expressed in or implied by forward looking statements. These risks, uncertainties and other factors include, without limitation risks related to uncertainty in the demand for Scandium; the possibility that results of test work will not fulfill expectations and realize the perceived market utilization and potential of master alloys that may be developed for sale by the Company.*

*Forward-looking statements are based on the beliefs, opinions and expectations of the Company's management at the time they are made, and other than as required by applicable securities laws, the Company does not assume any obligation to update its forward-looking statements if those beliefs, opinions or expectations, or other circumstances, should change.*