

2 July 2018

# Australian Mines to set benchmark with largest sample of battery-grade cobalt and nickel sulphate ever exported from Australia

### HIGHLIGHTS

- 40 kilograms of battery-grade nickel sulphate (NiSO<sub>4</sub>) and 4 kilograms of battery-grade cobalt sulphate (CoSO<sub>4</sub>) to be exported to Korean-based off-take partner, SK Innovation<sup>1</sup>
- Cobalt and nickel sulphate crystallisation achieves >98% purity for cobalt and >99% purity for nickel, exceeding SK Innovation specifications
- Ability to deliver battery-grade products confirms Australian Mines' in-house processing expertise and industry standard flow-sheet
- Exported product may be used directly in SK Innovation's Electric Vehicle battery manufacturing process
  - o this is the first time Australian mined and processed cobalt sulphate and nickel sulphate may be used in the battery manufacturing process without the need for further refinement<sup>2</sup>
- Australian Mines has produced cobalt and nickel sulphates in partnership with Simulus Group without utilising a third-party commercial lab for any part of the process
  - o another first for an Australian resource company<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Australian Mines Limited, AUZ partners with SK Innovation to develop Sconi Project, released 19 February 2018

<sup>&</sup>lt;sup>2</sup> Statement independently verified by Apex Geoscience (Australia) Pty Ltd



**Australian Mines Limited** ("Australian Mines" or "the Company") (Australia ASX: *AUZ*; USA OTCQB: *AMSLF*; Frankfurt Stock Exchange: *MJH*) is pleased to announce it is scheduled to deliver 40 kilograms of nickel sulphate (NiSO<sub>4</sub>) and 4 kilograms of cobalt sulphate (CoSO<sub>4</sub>) to Korean-based off-take partner SK Innovation<sup>3</sup> this week, setting a new benchmark for the largest known shipment of battery-grade cobalt and nickel sulphates from Australian mined and processed ore.

These samples have been produced from Australian Mines' High-Pressure Acid Leach (HPAL) and solvent extraction (SX) demonstration-size processing<sup>4</sup> plant located in Perth, Western Australia, utilising an industry standard processing flow-sheet and overseen by Australian Mines' Chief Operating Officer, Tim Maclean<sup>5</sup> (who is a highly experienced processing plant operator). This is the first time that battery-grade samples of these commodities have been produced without the use of third-party commercial laboratories for any part of the process.

The Company's demonstration-size processing plant was commissioned in conjunction with Simulus Group's laboratories and Australian Mines acknowledges the invaluable assistance provided to the Company by engineers at Simulus Group throughout this process.

Importantly, Australian Mines has achieved over 98% purity for CoSO<sub>4</sub> and 99% purity for NiSO<sub>4</sub> samples through the final crystallisation process at the demonstration plant, which exceeds SK Innovation's specification for materials to be used directly in its manufacturing process for electric vehicle (EV) batteries, with the material requiring no additional processing or refinement ahead of its application in this process, being another first for an Australian resources company.

The demonstration plant is expected to continue to operate for the next 12 to 24 months and produce additional battery-grade material to supply SK Innovation's EV battery manufacturing plants from ore to be sourced from the Sconi Cobalt-Nickel-Scandium Project in northern Queensland. The Company, therefore, anticipates announcing delivery of additional, and larger shipments of both battery-grade nickel sulphate and cobalt sulphate material to SK Innovation during October - November 2018.

<sup>&</sup>lt;sup>3</sup> Australian Mines Limited, AUZ partners with SK Innovation to develop Sconi Project, released 19 February 2018

<sup>&</sup>lt;sup>4</sup> Australian Mines Limited, Construction commenced of processing plant, released 15 May 2017

<sup>&</sup>lt;sup>5</sup> Australian Mines Limited, Experienced processing plant builder appointed COO, released 24 July 2017





**Figure 1:** A sample of the battery-grade nickel sulphate produced from the company's demonstration plant located in Perth, Western Australia. In total, Australian Mines is scheduled to deliver 40 kilograms of battery-grade nickel sulphate (and 4 kilograms of cobalt sulphate) to SK Innovation this week.

SK Innovation has signed a binding off-take agreement<sup>6</sup> with Australian Mines for 100% of the cobalt and nickel sulphate production from the Sconi Project, for an initial seven (7) year contract term with an additional six (6) year extension option.

Under the supply agreement, SK Innovation will take up to 12,000 tonnes of cobalt sulphate per year and up to 60,000 tonnes of nickel sulphate per year (following a ramp-up period)<sup>7</sup>.

Under the binding off-take term sheet agreement with SK innovation, the US dollar price for the product payable by SK innovation to Australian Mines shall be the average trading price for cobalt or nickel (as the case requires) as quoted on the London Metal Exchange (LME) in the quarter immediately preceding the Quarter Price Negotiation Date adjusted for the percentage of contained cobalt or nickel and impurities in the product less any buyer discount (which is yet to be confirmed) plus a market premium related to the fact that Australian Mines is supplying the product to SK Innovation in the form of a sulphate.

<sup>&</sup>lt;sup>6</sup> Australian Mines Limited, AUZ reaffirms binding off-take agreement for Sconi Project, released 6 March 2018

<sup>&</sup>lt;sup>7</sup> 12,000 tonnes of cobalt sulphate and 60,000 tonnes of nickel sulphate equates to approximately 2,650 tonnes of contained cobalt metal and 13,200 tonnes of contained nickel metal.



The operation of the demonstration plant has played a critical role as part of the Bankable Feasibility Study optimisation process for the Sconi Project. Australian Mines has used the opportunity for flow-sheet development to significantly improve equipment reliability, recovery and quality of the nickel, cobalt and scandium products.

Australian Mines is also pleased to note that the demonstration plant has attracted interest from other battery materials project developers who will be using the autoclave circuit developed for the Australian Mines demonstration plant for that company's upcoming pilot plant trials of their laterite nickel-cobalt project.

Australian Mines Managing Director, Benjamin Bell, commented: "Australian Mines has achieved a couple of very significant firsts with the delivery of these samples and once again has reinforced the Company's position as a leader among resources companies looking to participate in Australia's emerging battery materials sector."

"The shipment of battery-grade cobalt and nickel sulphate that departs Australia this week for delivery to SK Innovation is not only the largest ever bulk sample export of these commodities produced using Australian nickel-cobalt ore, but it is also the first time an Australian resources company has produced cobalt and nickel sulphate samples without relying on a third-party commercial lab for any part of the process."

"Perhaps most significant for Australian Mines' shareholders is the fact the material mined from Sconi and processed through our demonstration plant has exceeded SK Innovation specifications for purity and may therefore be used directly in the manufacture of EV batteries through SK Innovation's world-class plants, which is another first for an Australian project."

"This is a very important step in the optimisation process for our Bankable Feasibility Study on the Sconi Project, and will also assist in the further advancement of project financing negotiations for the construction of the full-size processing plant in Queensland, which will use a replica processing flow-sheet to the demonstration plant."

\*\*\*ENDS\*\*\*

At the time of writing, the LME price for nickel metal was trading around US\$15,000 per tonne, with cobalt metal trading around US\$80,000 per tonne. (https://www.lme.com/).



# For further information:

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