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Australian Securities Exchange 20 Bridge Street Sydney NSW 2000



# Quarterly Activities Report for period ended 31 December 2022

Australian Mines Limited ("Australian Mines" or "the Company") is pleased to provide its Quarterly Activities Report for the period ending 31 December 2022. During the period, the Company focussed on advancing its flagship, 100%-owned Sconi Nickel-Cobalt-Scandium Battery Chemical Project in North Queensland ("Sconi") and capital raising.

### **Key Activities include:**

- Sconi Project Studies Australian Mines announced the strategic decision to develop the Sconi Project producing battery grade nickel sulphate, cobalt sulphate and scandium oxide following a review of recent technical and financial studies. This is to maximise the value of the project and return for shareholders. A pathway to construction for nickel sulphate, cobalt sulphate and scandium oxide is being mapped which will include further technical studies, test work, environmental monitoring, permitting and approval and strategies for project funding as we progress to the Final Investment Decision (FID) targeted for the end of 2025.
- Capital Raise and Entitlement Offer Australian Mines executed agreements with Investors for a combined investment of \$4.55 million by way of Share Subscription Agreements, together with the successful completion of a 1 for 9.8 partially underwritten non-renounceable entitlement offer raising approximately \$2.8m. The combination of the Share Subscription Agreements and entitlement offer raised a total of approximately \$7.4 million with the funds to be applied to project financing activities, bolstering the management team and advancing the Sconi project.



- ASIC Settlement Subsequent to the quarter, on the 13 January 2023, the Federal Court approved the previously announced agreement between Australian Mines and ASIC to resolve the Proceedings by the Company making certain admissions of contraventions of its continuous disclosure obligations.
- Advancing Solid State Hydrogen Storage Metal Hydride project Positive progress was made on the Research and Development program targeting onboard Solid-State Hydrogen Storage solutions for light-duty vehicles. Independently verified test results of a recently developed Metal Hydride, named 'MH-Oct22' demonstrated favourable absorption and desorption capacities of hydrogen at 300°C and 350°C, respectively at a pressure of 38 bar, with the best results showing 5.0 wt% of hydrogen absorbed in 9.8 min and released within 3.7 minutes at 350°C. Additionally, the hydrogen was stored and released in the gas phase. MH-Oct22 was prepared as a bulk powder using a production process that the Company considers may be applicable for industrial scale manufacturing.

### **Sconi Project Studies**

Australian Mines made the strategic decision to develop the Sconi Project to produce battery grade nickel sulphate, cobalt sulphate and scandium oxide. The Company is working on the various activities: environmental monitoring, permitting, technical and test work and project funding as we progress the project to Final Investment Decision (FID) milestone by the end of 2025.

The Company remains committed to assisting our current offtake partner LG Energy Solution to meet its future cobalt and nickel requirements. A delegation from Australian Mines met with LG Energy Solution in Korea to discuss the required amendments to the Offtake Agreement and potential collaboration on the development of the Sconi Project. The Company will update the market in due course with respect to such amendments and collaboration if they are finalised.

#### Development

During the quarter, the Company completed an Initial Advice Statement (IAS) for the Sconi Project. This document provides the Queensland Department of Environment and Science (DES) with sufficient information to support an application for a voluntary Environmental Impact Statement (EIS). The IAS contains details of the Sconi Project background; a project description including land tenure, resource characteristics,



mine strategy and planning, process plant, tailings facility, ore and product transport, power and water supply; stakeholder and community consultation; legislative approvals required; existing and potential environmental impacts and mine rehabilitation.

The current MLA boundary for Greenvale and ML boundaries for Lucknow and Kokomo are sized to contain the ore reserves at each deposit. New expanded mining lease boundaries are required to accommodate mine infrastructure including ore and waste rock stockpiles, the process plant, tailings storage facility, raw water dam, pipelines and haul roads. An application to increase the size of the Sconi mining leases will commence in Q1 2023.

### **Permitting and Environmental**

Based on the size and scope of the Sconi Project, it was determined that the appropriate and most efficient environmental approvals pathway to obtaining an Environmental Authority (EA) was via a voluntary Environmental Impact Statement. Accordingly, a pre-lodgement meeting was held with DES to present the Sconi Project, submit the IAS and to ensure that the draft application for a voluntary EIS for the Sconi Project met all the required criteria.

Early wet season baseline terrestrial ecological studies were conducted at the Greenvale, Lucknow and Kokomo mine leases.

### **Exploration Activities**

Surface rock and soil sampling was conducted within the Company's exploration leases neighbouring the Greenvale, Lucknow and Minnamoolka mine leases. This work is part of the Sconi Project's exploration program being carried out throughout 2022 on a series of geophysical targets previously identified.

Additional geological field work was undertaken north-east of the Kokomo mine lease as a possible extension of known mineralisation. Annual activity reports were completed on several of the Company's Sconi exploration leases.



### ASIC Settlement

Subsequent to the quarter, on the 13 January 2023, the Federal Court approved the agreement between Australian Mines and ASIC which was previously announced on 10 August 2022. The Agreement was to settle proceedings, which were announced on 10 May 2022.

The Proceedings related to certain announcements by the Company to the ASX between 19 February 2018 and 27 June 2018 with respect to the Sconi Project and the Term Sheet for an Offtake Agreement entered into between the Company and SK Innovation Co Ltd.

The Federal Court approved the Agreement to resolve the Proceedings by the Company making certain admissions of contraventions of its continuous disclosure obligations, and paying a penalty of \$450,000. The Company will also pay ASIC's costs in the amount of \$55,550.

### **Capital Raise and Entitlement Offer**

Australian Mines successfully completed a 1 for 9.8 partially underwritten nonrenounceable entitlement offer raising approximately \$2.8m. Together with the Institutional Placement announced to ASX on 22 November 2022 with Lind Global Fund II, LP and SBC Global Investment Fund for a combined investment of \$4.55 million by way of Share Subscription Agreements, a total of approximately \$7.4 million was raised. Australian Mines will use the funds raised from the Subscription Agreement and the entitlement offer to execute its plan to bring its flagship Sconi Project into production. The funds will be applied to project financing activities, to bolster the management team, exploration outside the Sconi Project's current Ore Reserve and Mineral Resource and progress the Sconi project.

#### Solid State Hydrogen Storage Project progress

Development of practical, safe, cost-effective and efficient storage of a large amount of hydrogen in a small volume remains one of the fundamental challenges of the hydrogen economy. Currently, the two most common techniques used to store hydrogen are to compress it to a high pressure or to liquify it (liquefaction). These storage methods require tanks and/or cooling equipment, which are bulky and heavy and are not expected to achieve the desired gravimetric and volumetric densities



required to fulfill the United States Department of Energy ('DOE') targets for onboard Hydrogen Storage for Light-Duty Vehicles<sup>1</sup>.

Solid-state hydrogen storage is considered to have the potential to meet the DOE targets. One of the most stringent DOE criteria for a hydrogen storage system is a target gravimetric capacity of 5.5 wt% of hydrogen by 2025. In addition to the requirement of high gravimetric capacities, a desired system should exhibit a high volumetric capacity, a high rate of (de)hydrogenation at near-ambient temperatures, high reversibility (operational cycle life), high stability, and cost effectiveness.

Australian Mines Research and Development program targeting onboard Solid-State Hydrogen Storage solutions for light-duty vehicles has made positive progress with Independently verified test results from LCGC Bioanalytic Solutions LLP, of a recently developed Metal Hydride, named "MH-Oct22". The tests demonstrated favourable absorption and desorption capacities of hydrogen at 300°C and 350°C, respectively at a pressure of 38 bar. The best results achieved showed 5.0 wt% of hydrogen absorbed in 9.8 min and released within 3.7 minutes at 350°C. MH-Oct22 was prepared as a bulk powder using a production process that the Company considers may be applicable for industrial scale manufacturing. Additionally, the hydrogen was stored and released in the gas phase.

Although the results are promising further development is required to achieve the 2025 DOE target for onboard Hydrogen Storage for Light-Duty Vehicles. MH-Oct22 exhibited hydrogen absorption and desorption at higher temperatures and pressures than the DOE operating temperature and pressure targets of 60°C and 5-12 bar respectively. The company has several strategies that may improve reaction kinetics and operating temperatures and pressures. Over the coming quarters the Company plans to test these strategies to seek to develop new metal hydrides to improve on the performance of MH-Oct22. The Company has also commenced a program of intellectual property protection.

<sup>&</sup>lt;sup>1</sup> https://www.energy.gov/eere/fuelcells/doe-technical-targets-onboard-hydrogen-storage-light-duty-vehicles



### Corporate

At the Annual General Meeting on 23 November, Shareholders passed the resolutions for the re-election of Director Michael Elias, the approval of 10% placement capacity and changes to the Constitution to allow for Virtual General Meetings and notices to Shareholders. The adoption of the remuneration report and spill resolution failed.

ENDS

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Authorised for release by the Board of Directors of Australian Mines Limited



Australian Mines Limited supports the vision of a world where the mining industry respects the human rights and aspirations of affected communities, provides safe, healthy, and supportive workplaces, minimises harm to the environment, and leaves positive legacies.



### **Appendix 1: Summary of Expenditure**

	Total as per Cashflow Appendix 5B	Sconi Project	Flemington Project	Broken Hill Project	Biloela & Others
Exploration & Evaluation	21,547	-	60,428	16,411	-55,293
Development	939,843	939,843	-	-	-
Total	961,390	939,843	60,428	16,411	-55,293

**Table A1-1**: Project development, exploration, and evaluation expenditure (in Australian dollars)by Australian Mines for the quarterly period ended 31 December 2022.

An application to relinquish Biloela tenements was submitted in December 2022 in which Australian Mines received a total refund of \$72,272 for tenement rents and annual fees paid in the previous quarter. The receipt was offset by this quarter's expenditure of \$16,980.

The aggregate payments to related parties and their associates for the reporting period under item 6.1 of the Company's accompanying Appendix 5B (Quarterly Cashflow Report) was \$81,314 which constitutes director fees salaries, superannuation and business expense reimbursement.

No consulting fees were paid to any related parties or their associates during the quarter.

Similarly, no payments in any form (except for the standard director fees, salaries, superannuation, and business expense reimbursement) were paid to any related party of Australian Mines or their associates during this reporting period.



#### **Appendix 2: Forward-Looking Statements**

This announcement contains forward-looking statements. Forward-looking statements can generally be identified by the use of forward-looking words such as, 'expect', 'anticipate', 'likely', 'intend', 'should', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target' 'outlook', 'guidance', 'potential' and other similar expressions within the meaning of securities laws of applicable jurisdictions.

Any forward-looking statements in this document relating to the outcomes of the Sconi Project Feasibility Studies and ongoing refinement work as outlined in this report. Actual results and developments of projects and the market development may differ materially from those expressed or implied by these forward-looking statements. These, and all other forward-looking statements contained in this announcement are subject to uncertainties, risks and contingencies and other factors, including risk factors associated with exploration, mining, and production businesses. It is believed that the expectations represented in the forward-looking statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and productions results, resource estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

Any forward-looking statement is included as a general guide only and speak only as of the date of this document. No reliance can be placed for any purpose whatsoever on the information contained in this document or its completeness. No representation or warranty, express or implied, is made as to the accuracy, likelihood or achievement or reasonableness of any forecasts, prospects, returns or statements in relation to future matters contained in this document. Australian Mines does not undertake to update or revised forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.

To the maximum extent permitted by law, Australian Mines and its Associates disclaim all responsibility and liability for the forward-looking statements, including, without limitation, any liability arising from negligence. Recipients of this document must make their own investigations and inquiries regarding all assumptions, risks, uncertainties, and contingencies which may affect the future operations of Australian Mines or Australian Mines' securities.



## Appendix 3: Tenement Information

#### Mining tenements held at end of the quarter

Location	Project	Tenement	Status	Interest
AUSTRALIA				
Queensland	Sconi	ML 10366	Granted	100%
Queensland	Sconi	ML 10342	Granted	100%
Queensland	Sconi	ML 10324	Granted	100%
Queensland	Sconi	ML 10332	Granted	100%
Queensland	Sconi	ML 20549	Granted	100%
Queensland	Sconi	MDL 515	Granted	100%
Queensland	Sconi	MDL 387	Granted	100%
Queensland	Sconi	EPM 25834	Granted	100%
Queensland	Sconi	EPM 25865	Granted	100%
Queensland	Sconi	EPM 25833	Granted	100%
Queensland	Sconi	EPM 26575	Granted	100%
Queensland	Sconi	EPM 26577	Granted	100%
Queensland	Sconi	EPM 26578	Granted	100%
Queensland	Sconi	EPM 26579	Granted	100%
Queensland	Sconi	EPM 26559	Granted	100%
Queensland	Sconi	EPM 26853	Granted	100%
Queensland	Sconi	EPM 26857	Granted	100%
Queensland	Sconi	EPM 26918	Granted	100%
Queensland	Sconi	EPM 27529	Granted	100%
Queensland	Biloela	EPM28047 *	Granted	100%
Queensland	Biloela	EPM28048 *	Granted	100%
Queensland	Biloela	EPM28049 *	Granted	100%
Queensland	Biloela	EPM28050 *	Granted	100%
New South Wales	Flemington	EL 7805	Granted	100%
New South Wales	Flemington	EL 8546	Granted	100%
New South Wales	Flemington	EL 8478	Granted	100%
New South Wales	Flemington	EL 8855	Granted	100%
New South Wales	Flemington	EL 9321	Granted	100%
New South Wales	Broken Hill	EL 8477	Granted	100%
New South Wales	Broken Hill	EL 9300	Granted	100%
New South Wales	Broken Hill	EL 9326	Granted	100%



#### Mining tenements acquired and disposed of during the quarter

Location	Project	Tenement	Status	Interest	Comments
Queensland	Biloela	EPM28047*	Granted	100%	-
Queensland	Biloela	EPM28048 *	Granted	100%	
Queensland	Biloela	EPM28049*	Granted	100%	
Queensland	Biloela	EPM28050 *	Granted	100%	

\* An application to relinquish the Biloela tenements was submitted in December 2022. An approval from the Department of Environment and Science is expected to be received in the next quarter.

Beneficial percentage interests held in farm-in or farm-out agreements at end of the quarter

Location	Project	Agreement	Parties	Interest	Comments
-	-	-	-	-	-

Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter

Location	Project	Agreement	Parties	Interest	Comments
-	-	-	-	-	-