Australian Mines Limited ABN 68 073 914 191 ASX | AUZ

Level 34, 1 Eagle Street, Brisbane, Queensland 4000

T + 61 8 9481 5811

E info@australianmines.com.au

W australianmines.com.au



23 April 2024 Australian Securities Exchange 20 Bridge Street Sydney NSW 2000



PHASE 3 EXPLORATION COMMENCES AT JEQUIE REE/NIOBIUM PROJECT

Australian Mines Limited (ASX: AUZ) ("AUZ" or the "Company") is pleased to report to shareholders that Phase 3 exploration has commenced at the Jequie¹ REE and Niobium project. consisting of detailed geological mapping, rock chip sampling, stream sediment sampling and grid soil sampling.

<u>Key Details</u>

- Previous work completed resulted in confirmation of multiple targets within 2 high priority areas, namely Jequie North and Jequie South.
- The Jequie North Project area is defined by a NW-SE trending sigmoid shaped Thorium anomaly extending some 7 km along strike and a width of 2 km (see Figure 1). Phase 3 Exploration at Jequie North consists of detailed geological mapping, rock chip sampling and a grid soil sampling programme. AUZ intends to carry out approx. 24 km of soil traverses, with individual samples dug at 50m intervals along the traverses. A total of 480 samples are to be taken.
- The Jequie South Project area is defined by a N-S trending linear shaped Thorium anomaly extending some 25 km along strike and a width of 1.5 km (See Figure 2). Phase 3 consists of a comprehensive stream sediment program. AUZ intends complete 35-40 stream sediments samples.

AUZ's CEO, Andrew Nesbitt commented "We are following a disciplined and systematic exploration approach resulting in the efficient use of shareholders' money to identify priority targets. We are looking forward to these results to justify a maiden drilling program.

¹ Licenses granted to RTB Geologia E Mineracao LTDA and are to be transferred to AUZ as per ASX Announcement, 6 December 2024



The Jequie North and South Project Areas and associated targets have been prioritised based on enhanced measured outcrop radioactivity associated with favourable host rock lithologies (leucogranites and charnockites). These rocks are coincident with elevated airborne Thorium anomalies. The radioactivity data is supported by both preliminary multi-element geochemical results which report high background REE results consistent with crustal abundances for REE associated with these favourable protolithologies and their coincidence with remote sensing targets which cluster over and near the same areas.

The Jequie North Project area is defined by a NW-SE trending sigmoid shaped Thorium anomaly extending some 7 km along strike and a width of 2 km. Reconnaissance traverses over this area have identified radioactive leucogranites with high background REE levels consistent with crustal abundances for this rock type. This highlights the potential for these rocks to host primary REE mineralization or weathering to form secondary REE deposits. **AUZ intends to carry out approx. 24 km of soil traverses, with individual samples dug at 50m intervals along the traverses. A total of 480 samples are to be taken.**





Figure 1: Jequie REE Niobium Project² (Northern Target) – Coincidental Remote Sensing Targets and high background Rare Earth Geochemical results, with planned soil traverse sampling lines.

The Jequie South Project area is defined by a N-S trending linear shaped Thorium anomaly extending some 25 km along strike and a width of 1.5 km. Reconnaissance traverses over this area have identified radioactive charnockite with high background REE levels consistent with

² Licenses granted to RTB Geologia E Mineracao LTDA and are to be transferred to AUZ as per ASX Announcement, 6 December 2024



crustal abundances for this rock type. This again highlights the potential for these rocks to host primary REE mineralization or weathering to form secondary REE deposits. **AUZ intends to embark on a stream sediment program consisting of 35-40 stream sediments sample.**



Figure 2: Jequie REE Niobium Project³ (Southern Target) – Coincidental Remote Sensing Targets and high background Rare Earth Geochemical results, with planned stream sediment sampling locations.

³ Licenses granted to RTB Geologia E Mineracao LTDA and are to be transferred to AUZ as per ASX Announcement, 6 December 2024



About Australian Mines in Brazil

Resende Lithium Project (Lithium Valley, Minas Gerais)⁴

Minas Gerais is a global leading mining jurisdiction. The government is well known for supporting productive and sustainable operations in the state. Recently the government is focused on encouraging the development of the lithium minerals sector within the province. The Lithium Valley is home to 3 notable lithium producers and several ASX explorers. The notable producers include the Mina da Cachoeira underground mine with a production capacity of 45,000t per annum of 5.5% Li₂O spodumene concentrate⁵, AMG Lithium GmbH's Mibra lithium-tantalum-niobium-tin mine, which is expected to produce 130,000t lithium concentrate per annum⁶ and Sigma Lithium Corporation's (NASDAQ: SGML) Grota do Cirio operation, which is ramping up to 270,000t per annum of lithium concentrate⁷. There is no guarantee that the Resende Lithium Project will have the same or similar levels of results, or that it will become a producing project.

The Resende Lithium Project comprises 8 mineral right claims with total aggregate land holding of **13,314 HA** or ~**133km**² (Figure 3). The Jequie Rare Earth Project is subject to acquisition terms as per ASX Announcement, 6 December 2023 and subject to transfer as per ASX Announcement 19 February 2024. The licences are in the Sao Joao del Rey Pegmatite Province, which is widely known for the presence of various mineralised bodies and is located~17km west of the AMG Mibra Spodumene producing Mine.

The licences are believed to contain the eastern extensions of the geological structures and intrusive rocks, responsible for the forming the mineralised pegmatites that are currently being mined at AMC's Mibra lithium-tantalum-niobium-tin mine. The district is characterised by numerous pegmatite bodies of varying mineralogical composition dominated by spodumene but including beryl, tantalite-columbite and monazite. **Several historically mapped pegmatite and tantalum occurrences have been mapped within the boundaries of the exploration licences⁸ and have not been previously tested/explored for lithium.**

⁴ The Resende Lithium Project has no current or historical minerals resources

⁵ <u>Mina da Cachoeira underground mine, https://www.cblitio.com.br/nossas-opera%C3%A7%C3%B5es, production rates and grades are not compliant with JORC 2012 reporting guidelines.</u>

⁶ <u>https://amglithium.com/solutions/resources</u>

⁷ Sigma Lithium, NI 43-101 TECHNICAL REPORT GROTA DO CIRILO LITHIUM PROJECT, 31 October 2022,

https://sigmalithiumresources.com/wp-content/uploads/2023/05/2023-01-SGML-Updated-Technical-Report-1.pdf

⁸ Based on Geological Survey of Brazil, <u>https://geoportal.sgb.gov.br/geosgb/</u>





Figure 3: Location of Resende Lithium Project

Jequie Rare Earth Project (Bahia State)⁹

The project is located within the state of Bahia (Northeast Brazil). This renowned geological and government friendly jurisdiction has resulted in the establishment of several largescale mining operations in the vicinity of the Jequie Rare Earth Project. The Jequie Rare Earth Project is expected to benefit from the associated complementary infrastructure of sealed roads and access to clean hydropower and a major deep-water port less than 200km distant.

The Jequie Rare Earth project comprises 72 mineral right claims covering a total aggregate land holding of approx. **131,000 HA** or **~1,310km**² (Figure 4). The licences are located in the Jequié Block, a tectono-structural block of the northeastern Sao Francisco craton. The Jequié Block comprises granulite facies-metamorphosed intrusive rocks with

⁹ The Jequie Rare Earth Project has no current or historical mineral resources



demonstrated rare earth element ("REE") anomalism, with Ionic clay and hard rock REE occurrences in the district. The Jequie project which is targeting Rare Earths/ Niobium is located adjacent to Brazilian Rare Earth Limited (BRE.ASX), with their Inferred Mineral Resource Estimate of 510Mt at 1,513ppm Total Rare Earth Oxide¹⁰. This has resulted in large scale pegging activity within the area. These results do not guarantee the same or similar levels of results at the Jequie Rare Earth Project.



¹⁰ Brazilian Rare Earth Prospectus of 13 November 2023,Pg 164. Rocha da Rocha Inferred mineral resource statement as of 23 May 2023 (reported in accordance with the JORC Code (2012)). These results do not guarantee the same or similar levels of results at the Jequie Rare Earth Project.



Figure 4: Location of Jequie Rare Earth Project (Orange)

ENDS

For more information, please contact:

Andrew Luke Nesbitt Chief Executive Officer Australian Mines Limited +61 8 9481 5811 investorrelations@australianmines.com.au 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.

COMPETENT PERSONS STATEMENT

"The information in this report is based on and fairly represents information and supporting documentation reviewed by Rodrigo Mello, who is a consultant to Australian Mines Ltd. Mr. Mello is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Mello consents to the inclusion in this report of the matters based on his information in the form and context in which they appear."