

16 January 2024  
Australian Securities Exchange  
20 Bridge Street  
Sydney NSW 2000

## ASX RELEASE

### Exploration Update - Brazil

Australian Mines Limited (ASX: AUZ) (“AUZ” or the “Company”) is pleased to report on the initial findings from exploration works completed at the Resende Lithium Project<sup>1</sup>, and further confirms the commencement of initial exploration works at the Jequie Niobium and Rare Earths Project<sup>1</sup> located in the state of Bahia (“Projects”)

#### Highlights

Initial findings of early exploration work completed at the Resende Lithium Project located, within ~17km of AMG’s<sup>2</sup> Mibra Mine, a producer with annual total capacity of 130,000 tonne of lithium concentrate<sup>3</sup>, has confirmed;

- The presence of intrusive pegmatitic phases associated with the Ritapolis Pluton which hosts the mineralization at AMG’s Mibra mine (See Figure 1), and
- Regional airborne geophysical data (magnetics) show the same corridor of deep-seated NE-SW trending regional controlling structures seen at AMG’s Mibra Mine extending to and traversing the Resende concession package. (See Figure 2)

**In addition**, we have commenced preliminary exploration at the Jequie Niobium and Rare Earths Project. This work will comprise the ground truthing of the numerous regional geophysical anomalies located within the licence areas.

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<sup>1</sup> The Projects are subject to acquisition terms as per ASX Release, 6 December 2023

<sup>2</sup> AMG Lithium GmbH (“AMG”)

<sup>3</sup> <https://amglithium.com/solutions/resources>

**AUZ's CEO, Andrew Nesbitt commented** "Despite the presence of an in-situ regolith cap, we are very pleased with these initial outcomes as it confirms our expectation of potential pegmatitic mineralization and as soon as we get the sampling results, we will be in a position to plan a cost-effective geochemical programme to develop targets for follow up trenching and drilling".



Figure 1: Clear evidence pegmatitic activity within the Resende Lithium Project area

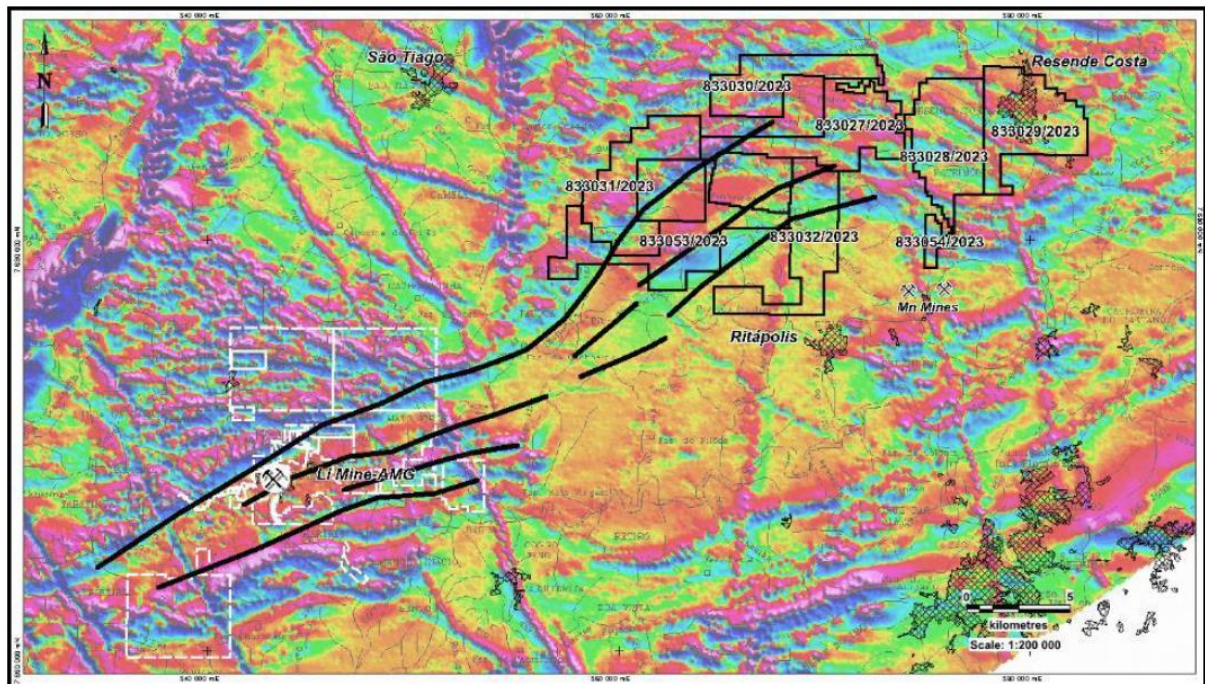


Figure 2: Deep-seated NE-SW trending structures which could reflect potential mineralisation corridors.

### **Resende Lithium Project (Lithium Valley, Minas Gerais)<sup>4</sup>**

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% Li<sub>2</sub>O spodumene concentrate<sup>5</sup>, AMG's<sup>6</sup> Mibra lithium-tantalum-niobium-tin mine which has capacity to produce 130,000t lithium concentrate per annum<sup>7</sup> and Sigma Lithium Corporation's (NASDAQ: SGML) Grota do Cirio operation, which is ramping up to 270,000t per annum of lithium concentrate<sup>8</sup>. 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<sup>2</sup>** (Figure 2). 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 targeting the eastern extensions of the geological structures and intrusive rocks, responsible for the mineralised pegmatites that are currently being mined at AMG'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 licences<sup>9</sup> and have not been previously tested/explored for lithium.**

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<sup>4</sup> The Resende Lithium Project has no current or historical minerals resources

<sup>5</sup> [Mina da Cachoeira underground mine, https://www.cbilitio.com.br/nossas-operacoes/producao-e-grades](https://www.cbilitio.com.br/nossas-operacoes/producao-e-grades) are not compliant with JORC 2012 reporting guidelines.

<sup>6</sup> AMG Lithium GmbH ("AMG")

<sup>7</sup> <https://amglithium.com/solutions/resources>

<sup>8</sup> Sigma Lithium, NI 43-101 TECHNICAL REPORT GROTA DO CIRILO LITHIUM PROJECT, 31 October 2022

<sup>9</sup> Based on Geological Survey of Brazil, <https://geoportao.sgb.gov.br/geosgb/>

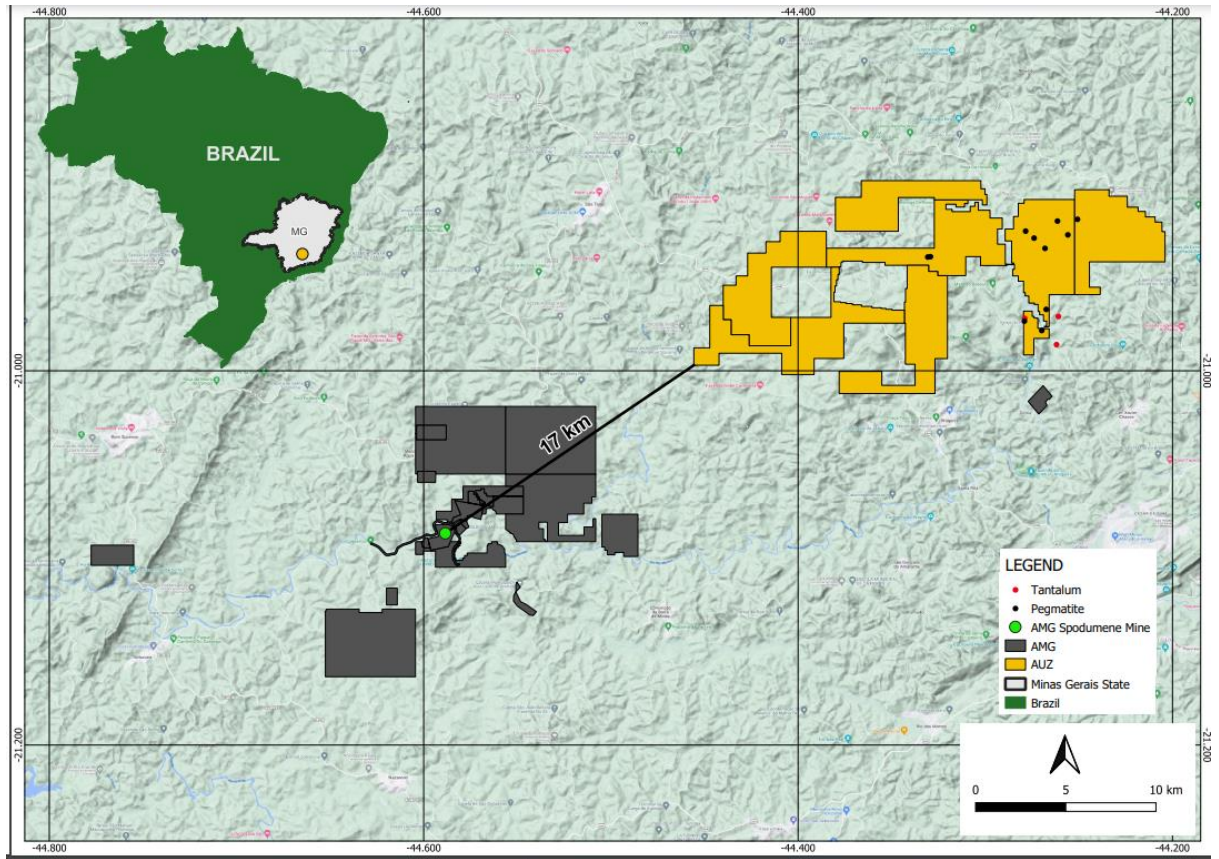


Figure 3: Location of Resende Lithium Project

### **Jequie Rare Earth Project (Bahia State)<sup>10</sup>**

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 large-scale 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 45 mineral right claims covering a total aggregate land holding of **82,568 HA** or **~826km<sup>2</sup>** (Figure 1). The licences are located in the Jequié Block, a tectono-structural block of the northeastern Sao Francisco craton.

<sup>10</sup> The Jequie Rare Earth Project has no current or historical mineral resources



The Jequié Block comprises granulite facies-metamorphosed intrusive rocks with 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, the highly anticipated newcomer to the ASX, seeking a \$315 million Initial Public Offering, with their Inferred Mineral Resource Estimate of 510Mt at 1,513ppm Total Rare Earth Oxide<sup>11</sup>. 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.

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<sup>11</sup> 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.

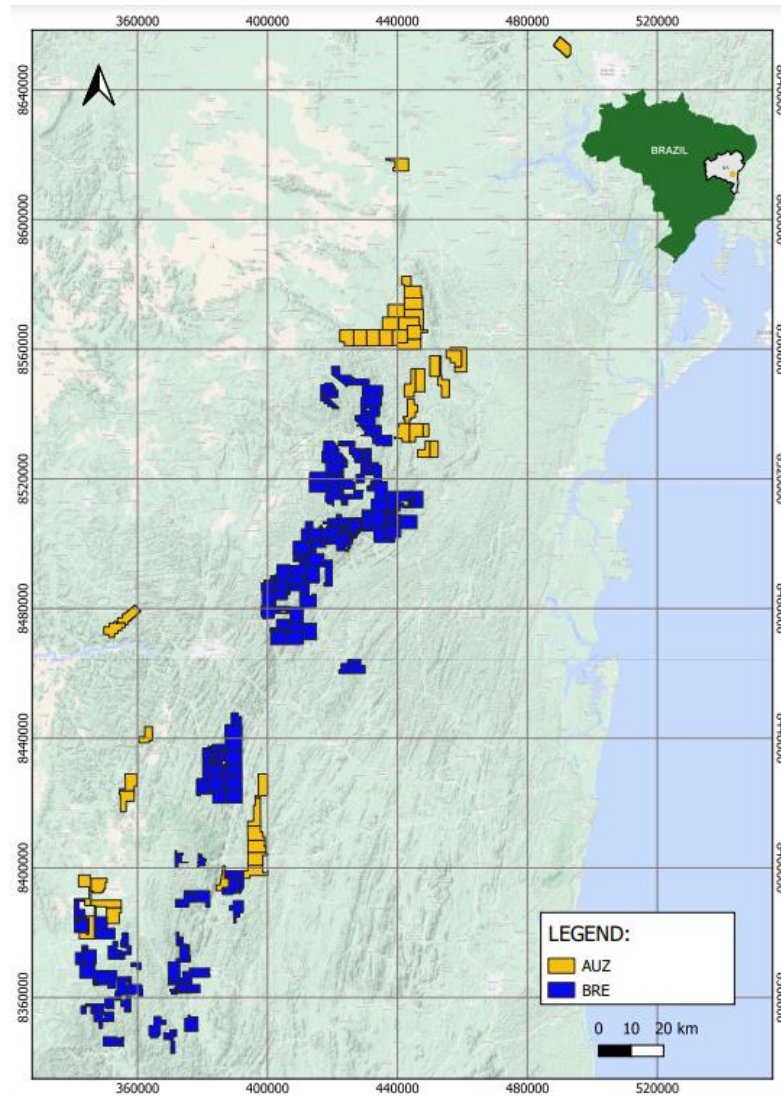


Figure 4: Location of Jequie Rare Earth Project (Orange)

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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.

#### 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."