

ASX Announcement

22 November 2022

COMMENCEMENT OF DEFINITIVE FEASIBILITY STUDY AT BIG SANDY LITHIUM PROJECT

HIGHLIGHTS

- **Fast tracked Definitive Feasibility Study (“DFS”) based on encouraging results of the Scoping Study.**
- **DFS to commence immediately and projected completion will be 1 year.**
- **Test work will be performed in the 100% owned Lithium Research Centre (LRC) with a focus on sustainability including alternative lixivants and water conservation technologies.**

Arizona Lithium Limited (ASX: **AZL**, **AZLOA**, OTC: **AZLAF**) (“**Arizona Lithium**”, “**AZL**” or “**the Company**”), a company focused on the sustainable development of the Big Sandy Lithium Project (“**Big Sandy**”, “**Project**”), is pleased to announce acceleration of Big Sandy with the commencement of the Definitive Feasibility Study (“DFS”). The Scoping Study, completed in October 2022, identified unique opportunities using new extraction technology that will be fast-tracked for development and inclusion in the DFS. AZL’s Lithium Research Centre, located in Tempe, Arizona, will be the base of operations for technology development and collaboration with process equipment and battery manufacturers.

The DFS will feature design and development of the following:

- **Minimisation of the carbon footprint associated with transportation of raw materials and finished products** - AZL currently owns and operates a Nikola Tre BEV electric semi-truck that will be used to develop performance and economic data for a full-scale fleet.
- **Alternative lixivants to strong inorganic acids** - As indicated in the announcement dated 28 October 2022, AZL has formed a strategic partnership with Cemvita to develop commercial scale application of biolixivants for lithium extraction from sedimentary ore. The DFS will include the design and production of the biolixivants required to support the Project.
- **Development of a chemically stable and structurally sound leached tailing that can be used as direct backfill for mining and reclamation activities** - To this extent, AZL has already started development of prototype filtration and cake washing equipment with an industry-leading filtration equipment manufacturer.
- **Progressive reclamation of mining and tailing facilities** - With the development of a chemically stable tailing, the mining plan will incorporate a progressive and sustainable reclamation strategy thereby significantly reducing the duration of the disturbance attributed to mining-related activities.
- **Direct conversion of a mid-stream lithium compound to battery-grade lithium carbonate and lithium hydroxide** - Conversion will be designed to take place in modular plants that can be located anywhere in the EV supply chain, with the mid-stream product able to be used to directly produce any lithium compound required by the battery manufacturer.
- **Application of direct lithium extraction (DLE)** - Early test work has demonstrated that DLE technology can be used to reject leached contaminants at a higher level of efficiency than conventional technology. An option for design and production of DLE media at commercial scale will also be included in the DFS.
- **Reduction of water consumption.** A water conservation strategy will be incorporated into the framework of the project, in particular, water loss attributed to evaporation will be eliminated or minimised.

AZL Managing Director, Paul Lloyd, commented: “We are delighted to be fast tracking the Definitive Feasibility Study in order to accelerate the development of the Big Sandy Project. I am currently in the US with our US based senior leadership team in order to finalize the signing of key contractors for the DFS and strategising as to how to best utilise the DFS in the most environmentally friendly and sustainable manner. I look forward to keeping shareholders up to date with new strategic partnerships, progress of the feasibility study and delivering an exciting report before the end of 2023.”

FOR FURTHER INFORMATION PLEASE CONTACT:

MR. PAUL LLOYD

Managing Director
Arizona Lithium Limited
Tel. +61 419 945 395
paul@arizonalithium.com

Second Floor, 10 Outram Street
West Perth WA 6005

Big Sandy Lithium Project (Arizona)

The Big Sandy Project, as a very shallow, flat lying mineralised sedimentary lithium resource and with excellent available infrastructure, has the potential to be developed with a very low environmental footprint.

Arizona Lithium’s successful 2019 drill program at Big Sandy resulted in the estimation of a total Indicated and Inferred JORC resource of 32.5 million tonnes grading 1,850 ppm Li for 320,800 tonnes Li_2CO_3 ¹. This represents 4% of the Big Sandy Project area that contains an estimated exploration target of between 271.1Mt to 483.15Mt at 1,000 - >2,000ppm Li².

Note that the potential quantity and grade of the estimated geological potential (Exploration Target) is conceptual in nature. There has been insufficient exploration to estimate a mineral resource and it is uncertain whether future exploration will result in the definition of a mineral resource. It has been estimated using a range of thicknesses for the mineralised sediments calculated from drill intercepts, surface sampling and geological mapping. The grade estimates a range of values demonstrated from drilling and surface sampling.

The Permit of Exploration (POE) that includes 145 exploration holes and a bulk sample at the Company’s Big Sandy Lithium project in Arizona is awaiting Bureau of Land Management (BLM) approval. Community involvement is welcomed to ensure mutually beneficial outcomes for all stakeholders and the Company is very confident that drilling program can be completed without environmental impact and to the satisfaction of all stakeholders.

¹ Announcement Sept 26, 2019, Big Sandy Lithium Project, Maiden Mineral Resource
² Announcement Nov 7, 2019, Big Sandy Lithium Project, Exploration Target Update



Figure 1- Arizona Lithium Project Portfolio, including major Li-battery infrastructure in close proximity to Big Sandy and Lordsburg Lithium Projects