

ASX Announcement

1 February 2022

COMMENCEMENT OF SCOPING STUDY ON BIG SANDY LITHIUM PROJECT

Highlights

Arizona Lithium Ltd is pleased to announce the commencement of the scoping study for the Big Sandy Lithium Project, with the Company engaging Tucson, Arizona-based Ausenco Engineering USA South, Inc. to complete the study.

- Ausenco, with their experience in lithium and a wide range of resource development projects in study and execution phases currently underway globally, will evaluate extraction, treatment and transportation options to create optimum value by:
 - Identifying key cost centres enabling process and project valuation optimisation;
 - Examining methods to lower water use while creating a favourable environmental and carbon footprint; and
 - Using their vast experience in incorporating Environmental, Social and Governance (ESG) inputs into the analysis in order to fulfil Arizona Lithium's goal of minimizing its carbon footprint.
- Ausenco will work closely with Hazen Research who are nearing the completion of bench-scale testing program and concurrently completing test work to improve product quality and reduce operating costs by employing promising new technologies for:
 - Leach solution purification using ion exchange;
 - Improved crystallisation methods for the final product; and
 - Further recovery of lithium from beneficiation waste.
- Planning is underway to construct a demonstration plant and product qualification capabilities in Arizona.
- AZL is endeavouring to make the Big Sandy Lithium Project a global model for responsible and sustainable mining.
- The Company will be holding an investor webinar at 11:00am AEDT on Thursday, 3 February 2022, to discuss this announcement with registration through the Zoom via the link below:

https://janemorganmanagement-au.zoom.us/webinar/register/WN_mYW8cHk9QvGkFEquhcMMwQ

Arizona Lithium Limited (ASX:AZL) ("Arizona Lithium", "AZL" or the "Company") a company focussed on the sustainable development of the Big Sandy Lithium Project ("Big Sandy", "Project") in Arizona is pleased to announce the commencement of the scoping study for the Project, with the Company engaging Tucson, Arizona-based Ausenco Engineering USA South, Inc. ("Ausenco") to complete the study.

With the recent metallurgical advances and the imminent US BLM approval of a Stage 3 drilling program expected, the Company is focused on project implementation with Ausenco to examine all aspects of the Project from mining, through to processing and production. Promising new avenues are emerging to capitalise on the excellent infrastructure near the Big Sandy Lithium Project in Arizona, coupled with the strong Federal and Arizona stakeholder support for lithium and battery development.

Arizona Lithium Mining Managing Director, Paul Lloyd, commented: *“The previously announced excellent metallurgical results demonstrate the significant potential of the Big Sandy Lithium Project and, with these results in hand, the Company has appointed Arizona based Ausenco Engineering to complete a scoping study. This represents the first step in the process of evaluating extraction, treatment and transportation options, identifying key cost centres, that allow for evaluation and optimisation, thereby creating optimum value, while making the Project a global model for responsible and sustainable mining.”*

“Given the large existing JORC compliant lithium resource with excellent upside potential, AZL’s ability to produce a high-quality product in Arizona, USA, in a market with rapidly increasing demand and price, along with quality infrastructure choices and proactive State and Federal Governments, presents a highly promising future for Arizona Lithium and its shareholders.”



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

Recent results from bench-scale metallurgical test work by Hazen Research on mineralised material from the Big Sandy Lithium research include:

- Ore beneficiation has produced a concentrate containing 71% of the lithium in 36% of the whole ore mass¹.
- Four-hour duration leaching tests on the concentrate at 70°C have yielded 87% lithium extraction.
- Sulfuric acid consumption of 490 kg/mt on the beneficiated concentrate, the equivalent of 176 kg/mt for the whole ore body.
- Ongoing test work is ramping up to produce larger quantities of beneficiated concentrate to increase the scale of the leaching tests enabling leach circuit optimisation.
- Sufficient quantities of leach solutions will be produced for optimisation of purification methods and the production of battery grade lithium carbonate, with Hazen producing

¹ January 22, 2022, Outstanding Metallurgical Testwork Results

“battery grade” 99.85% lithium carbonate in previous test work on the Big Sandy lithium mineralised material. AZL’s current processing flow sheet is now determined.

However, to continually improve the approach, concurrent test work to improve product quality and reduce operating costs employing promising new technologies is planned for:

- Leach solution purification using ion exchange;
- Improved crystallisation methods for the final product; and
- Later recovery of lithium from beneficiation waste.

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_3^2 . 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 Li^3 .

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.

This announcement has been authorised for release by the Board of Arizona Lithium Limited.

FOR FURTHER INFORMATION PLEASE CONTACT:

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² Announcement Sept 26, 2019, Big Sandy Lithium Project, Maiden Mineral Resource

³ Announcement Nov 7, 2019, Big Sandy Lithium Project, Exploration Target Update

JORC compliant Maiden Mineral Resource Breakdown

Resource Classification	Tonnes (Mt)	Li Grade (ppm)	Contained Li Metal (t)	Contained LCE (t)
Indicated	14.6	1,940	28,400	150,900
Inferred	17.9	1,780	31,900	169,900
Total	32.5	1,850	60,300	320,800

COMPETENT PERSON'S STATEMENT

The information in this announcement that relates to the Big Sandy Sedimentary Lithium Project is based on, and fairly represents information compiled by Gregory L Smith who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Smith is a Consultant to the Company and holds shares in the Company. Mr. Smith consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears. The Company confirms that the material assumptions and technical parameters underpinning the Resource estimate and exploration target, which were announced to the ASX on 26 September 2019 and 7 November 2019 respectively, have not materially changed.