RESOURCES ROADHOUSE™

The Inside Story
By Wally Graham

Australian Potash (ASX:APC)

Australian Potash Making Rapid Advancement at Lake Wells

Australian Potash (ASX: APC) completed a Scoping Study on the company's Lake Wells potash project, located approximately 500 kilometres northeast of Kalgoorlie, in Western Australia's Eastern Goldfields earlier this year.

THE LAKE WELLS POTASH PROJECT consists of a substantial 500 square kilometre tenement package made up of 100 per cent-owned granted exploration licences, over which Australian Potash has the rights to all potash minerals.

The Lake Wells potash project tenement package covers an area of palaeovalley and salt lake terrain in the northeast part of the Yilgarn Craton, which has been recognised by Geoscience Australia as a high-potential potash salt lake system with interpreted palaeovalley trends.

The recent Scoping Study confirmed both technical and economic aspects of the Lake Wells project to be strong and viable.

Highlights from the Study determined the project has potential to take Australian Potash from its current explorer moniker through to being a long-life, low capital and high margin sulphate of potash (SOP) producer.

In conjunction with the Scoping Study, APC upgraded the Lake Wells JORC 2012-compliant Mineral Resource Estimate to 14.7 million tonnes of Sulphate of Potash (SOP), including 12.7 million tonnes sitting in the Indicated category.

Australian Potash believes potential exists for substantial upside in the resource model, taking encouragement from the Scoping Study mine plan, which was based on the extraction of just 34 per cent of the project's Indicated Resource in the Western High Grade Zone and 33 per cent of the Inferred Resource in the Southern Zone.

The Study also outlined opportunities to extend the life of the mine with inclusion of the Eastern Zone (4.6 million tonnes SOP Indicated).

After completing the Scoping Study, APC received all necessary WA State Government approvals to proceed with the development of pilot evaporation ponds for the project.

As a result, an on-site, pilot evaporation pond program will commence to produce the first sample of SOP from the project.

Construction of the evaporation pond is underway with the program to operate for a minimum of six months.

The test-work from the bulk samples of potash salts from the pilot evaporation pond program will be used to further optimise process design.

"The Scoping Study gave us some ideas on areas we can improve and to de-risk the project and we are just finalising those now while we carry out some optimisation work," Australian Potash process engineer Shaun Triner told *The Resources Roadhouse*.

"Resource-wise we have identified the paleovalley, which is effectively an old river system that has filled up with sediments over time.

"The hyper-saline environment of the Goldfields has effectively formed—what could be described as—a tank full of brine containing potassium.

"That paleo-valley under our deposit goes down to around 160 metres deep and there are a couple of sandy layers in there, from where we will be able to extract brine."

The optimisation work underway includes recently-conducted laboratory based test-work that confirmed the validity of the conversion process of Muriate of Potash (MOP) to SOP, APC proposes to implement at Lake Wells.

The test-work also confirmed the ability of the Lake wells project to increase its SOP output by 50,000 tonnes per annum to 150,000 tonnes per annum in stage 1, and by 100,000 tonnes per annum to 300,000 tonnes per annum in stage 2 by converting MOP to SOP.

To achieve this APC will use a similar non-Mannheim conversion process to that currently used at the Compass Minerals brine SOP operation in the United States, which is the largest brine SOP operation outside of China.

The main differences between the conversion process APC intends using compared to the Mannheim process are it happens at low temperature and that it will not create additional reagent expense associated with purchasing sulphuric acid, as sulphate is already present.

The company considers the economic case for developing this conversion facility to be compelling considering the low marginal operating costs associated with producing an additional 50,000 to 100,000 tonnes of SOP from essentially the same plant.

APC is working to de-risk the three essential components of a brine SOP operation, being brine extraction, brine evaporation and salt processing and is about to commence a Stage 2 test-pumping program that will add to the plus-20 million litres of test-pumping already conducted.

This test-pumping program will feed into the brine flow model for brine extraction, building on decades of understanding and operation of brine bore fields in WA.

"We are now aiming to kick into a Feasibility Study, for financing purposes, during the second half of this year that should be ready for reporting in the first half of next year," Triner said.

"As we move into a Feasibility Study—obviously there is the technical side of the project to consider, but we also need to have a market for our material, which is where the recent MoUs regarding offtakes come into play."

A valuable lesson junior Resource companies learnt in recent times is that financiers can be reluctant to fund an operation that doesn't have customers for its product.

To that end, APC placed a healthy chunk of its corporate puzzle in place by demonstrating to the right people the company does have potential customers interested in its product.

Australian Potash signed of a non-binding Memorandum of Understanding (MoU) for the supply of SOP to one of China's largest fertiliser companies after striking a deal with Sino-Agri Holding Company Limited, a subsidiary of CNAMPGC Holding Limited Corporation.

The MoU portends potential high-level commercial terms for sales volumes of up to 30 per cent of estimated production—up to 100,000 tonnes per annum of SOP—from Stage 2 of the Lake Wells project.

"In the Scoping Study, we talked about a two-stage project, the first stage being 150,000 tonnes per annum and the second stage being another 150,000 tonnes per annum," Triner said.

"That was based on getting funding for the first half, and then funding the second half through cash flow.

"Although it is still non-binding at this stage, the signing of a 100,000 tonnes per annum offtake MoU is an extremely important component of the project's first 150,000 tonnes of production.

"We have been developing our relationships within the Chinese potash and fertiliser industries for some time and it is encouraging that we are now seeing the results in the form of a formal pathway to securing customers in the world's largest fertiliser market."

Australian Potash has a great deal of activity planned for Lake wells, including the commissioning of pilot evaporation ponds, completion of the Stage 2 test-pumping program, installation of Stage 2 test-production bores, continuing Resource upgrade and expansion program, and commencement of the Feasibility Study.

"We have made some rapid advancements with the release of the Scoping Study and we are now very confident the project is viable and should go ahead, which we have demonstrated to the market with the imminent commencement of our Feasibility Study," Triner said.

"Although we haven't quite kicked-off the FS at this stage, we are very busy finalising that work-optimisation phase on the back of the Scoping Study.

"The Scoping Study presented a few options we need to look at and we are just assessing those to finalise the fixed-scope of the Feasibility Study, which we anticipate will be underway by Q3 this year."

The Short Story

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