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ASX ANNOUNCEMENT

ASX: TMG

Trigg establishes amenability of innovative technology for production of SOP feed salts

Bench-scale test work indicates alternative process has potential to improve processing reliability and feed-salt quality, positively impact costs and accelerate production ramp-up

Highlights

- Bench-scale test-work has shown promise in obtaining high-quality feed salts more quickly and efficiently than conventional evaporation techniques.
- The salts achieved targeted potassium concentration required for feed into a Sulphate of Potash (SOP) processing plant and were less complex than those produced from conventional evaporation, delivering potential benefits for process design.
- Results show potential for producing SOP more efficiently and reliably than via conventional evaporation.
- The technology is also able to capture some of the water that would otherwise be evaporated and can be re-used for the processing plant and other on-site requirements.

Trigg Minerals Limited (**ASX: TMG**) (**Trigg** or **the Company**) is pleased to report promising results from concept development test-work conducted on brine from the Lake Throssell Sulphate of Potash (SOP) Project, located 170km east of Laverton, Western Australia.

Trigg Minerals' Managing Director, Keren Paterson, said: *"This is an outstanding result from our preliminary investigations into identifying an alternative processing pathway. This innovative technique addresses key learnings from the emerging Australian Sulphate of Potash industry and shows potential in improving the processing efficiency, reliability and cost-effectiveness of this important fertiliser, which is vital for global food security.*

"Whilst the process is still very much in the concept development stage, we are encouraged by these early results and will commence further test-work in preparation for pilot-scale work to facilitate an economic evaluation of the innovative process.

Introduction

The traditional processing methodology for Sulphate of Potash (SOP) from potassium-rich brines has been to evaporate the brine using solar energy to remove waste salts (such as halite) and then produce the feed salts known as kainite-type (or potassium) mixed salts (KTMS) for conversion and final product.

This process, which relies on natural sunlight, can prove problematic with constant changes in atmospheric conditions impacting the ability to produce the desired quality and quantity of KTMS salts for down-stream processing.

In recognition of this, and in light of the continued difficulties experienced by the first-movers in the emerging Australian SOP industry in producing sufficient quantity and quality of feed salts, Trigg has been investigating alternative process routes with the aim of producing the feed salts more efficiently and reliably.

Process Development

In the September 2022 Quarter, numerous technology partners were identified and a 16,000L sample from existing on-lake trenches was extracted from the Lake Throssell deposit. This sample was provided to an accredited laboratory in Perth Western Australia (WA), where the brine was evaporated to a density close to saturation. Samples were then extracted and sent to various technology providers for further testing with their proprietary technology processes, with the test-work programs supervised by Independent Consultants Elmet and GR Engineering Services.

Results from one of these partners has shown significant promise in obtaining the required quality of feed salts quickly and efficiently. A bench-scale test at the technology provider's premises resulted in four salt samples and their associated brines. The samples were taken at pre-determined steps along the salting path. The salt samples have been subjected to X-Ray Diffraction ("XRD") to identify the salts produced in an accredited laboratory in Perth WA. The results indicate an increasing concentration of the typical potassium salts required for feed into an SOP processing plant, whilst also showing a reduced concentration of halite.

Furthermore, the salts produced appear to be less complex than those produced from the conventional evaporation salting path of the same brine, which may result in further simplification of the processing route for reliable and efficient production of SOP at Lake Throssell.

The innovative method of obtaining the feed salts from the brine also captures a significant volume of water that would otherwise be evaporated into the atmosphere. This water can then be re-used for processing and other site needs, reducing the volume of process water required from a traditional bore field.

Next Steps

On the back of these results, Trigg will immediately progress the bench-scale test-work to refine the control parameters and scope a pilot-scale test program of this promising processing technology. This will then allow assessment of the economics of producing SOP using this processing route versus the conventional evaporation processing route.

This announcement was authorised to be given to ASX by the Board of Directors of Trigg Minerals Limited.

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Forward Looking Statements

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