

YENDON HIGH PURITY ALUMINA PROJECT UPDATE 26 March 2018

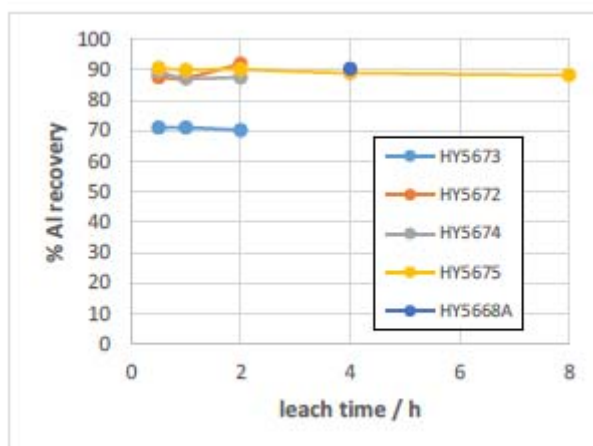
ASX Code: HEG, HEGOC

Metallurgical Test Work Continues To Show Yendon Will Produce Top-Quality High Purity Alumina

Latest results highlight potential to reduce capital and operating costs

Hill End Gold Ltd (HEG) is pleased to announce that it continues to make strong progress towards becoming a leading supplier of high purity alumina (HPA), with outstanding results from the latest metallurgical test work at its Yendon project in Victoria.

The tests, which form part of the Pre-feasibility Study (PFS), show that Yendon's kaolin resource is highly responsive to acid leaching, which is a key part of the process to convert kaolin to HPA. The PFS is set for completion next quarter.



The graph of Al concentration to leach times for the different acid strengths and temperature shows that most of the leaching of Al is complete within 30 minutes, and after 2 hours there is very little change.

The current phase of the metallurgical test work is being conducted to optimise the acid strength, temperature and residence time for the process flow sheet.

The key findings from this first stage of process optimisation test work were:

- The sub 63 micron kaolin concentrate drives an efficient leach time as the large surface area produced by the small particle size allows excellent acid contact with the kaolin;
- The fine-sized nature of the kaolin concentrate also means lower acid concentrations can be used without any significant impact on recoveries of Alumina; and
- The kaolin concentrate reacts strongly with the acid at low temperatures of 80 degrees centigrade, potentially leading to lower energy consumption.

These results highlight the potential to reduce Yendon's capital and operating costs. Efficient leach times may lead to smaller equipment sizes while lower temperatures and acid strengths may result in less exotic and expensive materials being specified for the process equipment, thus reducing capital costs. Lower acid strengths and temperatures may also reduce operating costs.



The process design and equipment selection components of Hill End's pre-feasibility study are underway to determine the capital and operating costs.

Another key outcome from this test program is that the process has been upscaled from 1-litre to 5-litre vessels with slightly improved results. This provides significant comfort that the process can be scaled up to an industrial level without impacting the efficiency of the flow sheet.



Leaching and precipitation test work being undertaken as part of the PFS

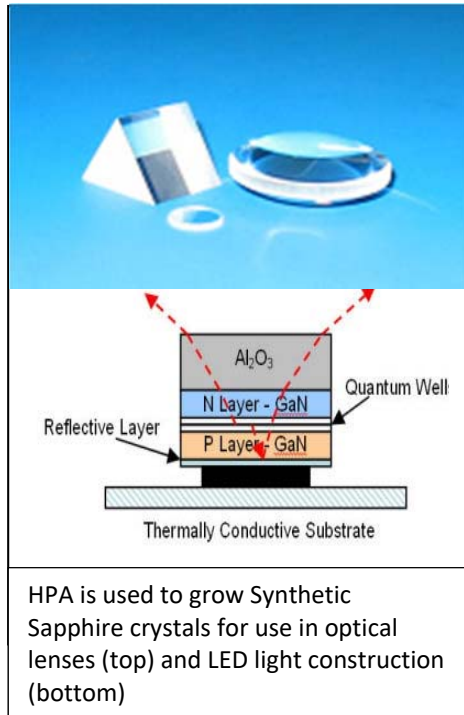
HEG Managing Director Martin McFarlane said: "These results, combined with the large, high-grade resource announced last month show the Yendon HPA project is well-placed to deliver high-quality HPA at a competitive cost."

Following these very successful process optimisation tests, the next stage of test work will focus on processing the kaolin through three leach and precipitation cycles with a

range of parameters to optimise the purification step. The final stage will include product roasting and finished HPA product.

Hill End also plans to take a sample through a fourth leach and precipitation stage with the aim of producing a 99.999% HPA product (5N HPA).

The PFS is on schedule for completion in the second quarter of 2018.



HPA is in increasing demand from synthetic sapphire producers to meet the tight specifications of the light-emitting diode (LED), semi-conductor and laser markets.

The higher the purity of the HPA, the better the quality of the synthetic sapphire which can be grown. This in turn leads to a higher quality and performance of light produced by the LED or laser. With an increasing range of uses for LED's and lasers, particularly in medical and scientific applications, the need for high quality performance is becoming more important.

The price received for HPA is directly related to the purity levels, 4N is priced at \$25-\$30,000/t* while 5N is \$50-\$60,000/t* (*Source: Roskill Market Report Dec 2017)

Martin McFarlane
Managing Director

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