



Alpha **HPA**

ASX: **A4N**
ASX Announcement
23 July 2020

The Manager Companies
ASX Limited
20 Bridge Street
Sydney NSW 2000

REPORT ON ACTIVITIES FOR THE QUARTER ENDED 30 JUNE 2020

HIGHLIGHTS

COMPANY'S HPA PASSES 1ST STAGE TESTING BY US-BASED SEPARATOR MANUFACTURER

- The Company's HPA successfully passed the first stage of commercial qualification testing by a major US based manufacturer of alumina coated separators.

BROADENING PENETRATION INTO THE SAPPHIRE GLASS/LED HPA MARKETS

- Order received for a large (+90kg) test sample from US based sapphire glass manufacturer.
- Test sample order received from a Taiwan based sapphire glass manufacturer.

ADDITIONAL END-USER ORDERS FOR BOTH HPA AND BOEHMITE SAMPLES

- Additional test orders for HPA from a large lithium-ion battery separator manufacturer in China, as well as a request for high purity boehmite sample from the USA.

INCREASED VOLUME 'DEMONSTRATION SCALE' PILOT PLANT RUN

- Brisbane Pilot Plant being upscaled to operate at 'demonstration scale'.
- Successful trial operation of the solvent extraction, salt crystallisation and pre-cursor circuits at higher volumes.
- Procurement commenced for key additional process equipment including pellet press and sintering kiln.
- 'Demo' scale trial run of the HPA pre-cursor circuit generates 99.998% HPA purity.

HIGH PURITY GAMMA-ALUMINA PRODUCTION CONFIRMED

- Successful production of high purity gamma-HPA with assays up to 99.997% purity.

LEAD ADVISORS APPOINTED TO PROJECT FINANCING

- KPMG Debt Advisory Team (KPMG DAT) appointed to coordinate the project financing process for the HPA First Project.

SUCCESSFUL PLACEMENT RAISES \$7.0 MILLION TO ADVANCE THE HPA FIRST PROJECT

- Strong support received from new and existing sophisticated shareholders strengthens the Company's balance sheet.
- Funds to be applied to 'demo-scale' Pilot Plant and for the advancement of market outreach, financing and permitting aspects of the HPA First Project.

OPERATIONS

OVERVIEW

The June quarter saw the Company make significant progress across a number of key initiatives critical to the success of its HPA First Project. The Company's market outreach program to potential end users across both the lithium-ion battery and sapphire glass/LED HPA markets has continued to broaden and has resulted in an increased requirement for larger volumes of product sample from its HPA Pilot Plant in Brisbane, Queensland. Much of the quarter's activities were centred around the necessary scale-up of production capabilities of the Pilot Plant to cater for these larger sample requests. Additionally, the Company maintained a strong focus on progressing a number of engineering and Project interface considerations with its chemical counterparty, Orica, as well as advancing the various permitting requirements for its planned site development within the Gladstone State Development Area (GDSA).

These activities are discussed in further detail below.

MARKET OUTREACH

Alpha HPA passes first level testing by US based lithium-ion separator manufacturer

During the quarter the Company was advised that its test sample provided to a US based manufacturer of alumina coated separators for the lithium-ion battery market had successfully passed the first stage of testing as part of their commercial qualification assessment. The first stage testwork is the assessment of all physical HPA characteristics, including purity. The next stage of qualification will test separator coating performance.

Additional end-user orders for both HPA and boehmite samples

The Company received additional orders for HPA samples to be sent to a large lithium-ion battery separator manufacturer in China, as well as a request for boehmite samples to the USA. These samples were despatched from the Company's milling lab in the USA. Preliminary feedback is still awaited with testing delayed due to COVID-19 enforced restrictions.

Large HPA test order received from US based sapphire glass manufacturer

As a result of its continuing market outreach efforts into the sapphire glass/LED market, the Company secured a large (+90kg) test sample order from a US based sapphire glass counterparty, following a review of the Company's product specifications. The order is in addition to a standing order from a South Korean based sapphire glass/LED counterparty.

Shortly after this order being received the Company also received a request for a first test sample order from a respected Taiwan based sapphire glass manufacturer.

TECHNICAL

Increased volume, 'demonstration scale' Pilot Plant run

To cater for the increasing requirement for larger volume sample orders, and in anticipation of further additional orders, the Company is now upscaling its Pilot Plant in Brisbane to undertake an increased volume 'demonstration scale' production run.

The preparation process for the "demo" run included the trial operation of the solvent extraction, salt crystallisation and precursor circuits at higher volumes, as well as the procurement and commissioning of some key process equipment including a pellet press and sintering kiln, with these items critical to the delivery of the "pelletised" HPA required by potential Sapphire glass/LED counterparties.

Two SX trials at double-flow rate successfully completed

In preparation for the demonstration scale operation, the solvent extraction (SX) circuit of the Pilot Plant was operated twice on a trial basis at double the previous flow rates. Process assays confirm the SX circuit is successfully operable at double capacity.

'Demo' scale run of the HPA pre-cursor circuit generates 99.998% HPA purity

In further preparation for the upscaled Pilot Plant run, Alpha HPA completed trial operation of the pre-cursor circuit at demonstration-scale. The trial was very successful generating high-purity alumina (HPA) at 100% alpha form and assaying at 99.998% purity. This result builds confidence that purity levels will continue to improve with increased process volumes and scale.



Demonstration scale pre-cursor circuit generated 99.998% purity HPA

Feedstock and reagent procurement

Other preparation activities for the demonstration scale pilot run include the procurement of feedstock (complete) and working with Orica for the supply of process reagents from the Orica Yarwun facility, to fully replicate commercial process conditions.

High purity gamma-alumina production confirmed

The June quarter also saw the Company employ its HPA First process to successfully produce a high purity gamma-HPA, with assays of up to 99.997% purity. 'Gamma' HPA has a different crystal structure to 'alpha' HPA and is characterised by much lower density and very high specific surface area (SSA). These properties lend themselves to use of HPA as a catalyst in phosphors and certain sapphire glass applications, and also as a pre-cursor to alpha HPA in some lithium-ion battery coating techniques.

In catalytic applications, gamma HPA, often referred to as activated alumina, is valued highly for its SSA. Alpha HPA was pleased to note the HPA First process produced gamma HPA with an extremely high SSA of 230m²/g. The Company is still at the early stages of investigating the gamma HPA market and potential end-users for this product but the adaption of the HPA First process to produce this variant of HPA specification is highly encouraging.

COMMERCIAL

Orica ECG Activities advanced

The Company and Orica have progressed a number of engineering considerations around Project interface under the Engineering Co-operation Group (ECG). Key activities during the quarter focussed on by-product treatment and delivery and engineering of the by-product concentration area.

Lead advisors appointed to Project Financing

The Company was pleased to announce the appointed of the Brisbane based KPMG Debt Advisory Team (KPMG DAT) to co-ordinate the project financing process for the HPA First Project. The KPMG DAT have recent and relevant project finance advisory experience including securing funding from the Northern Australia Infrastructure Facility (NAIF), and the Clean Energy Finance Corporation (CEFC) for Queensland based projects. In parallel to working with these lending agencies the KPMG DAT has also commenced an engagement program with several commercial banking groups to provide debt funding to the HPA First Project.

Gladstone land contract finalised

The Company has finalised contract negotiations with the Queensland Government for the purchase of the optioned project site within the Gladstone State Development Area (GSDA). The land parcel is approximately 10 hectares and lies adjacent to the Orica Yarwun site within the GSDA. The key contract terms include a refundable \$125,000 deposit, with a purchase consideration of \$2.5 million payable on a Final Investment Decision (FID) by the Company, within 24 months of contract signing.

HPA First Project permitting activities further advanced

Alpha HPA has now submitted its pre-lodgement documentation and has held initial meetings with the Queensland Office of the Co-ordinator General (OCG) as well as the Queensland Department of Environment and Science (DES). The OCG has provided a state level waiver for the clearing of vegetation on the GSDA project site for operational works.

The Company has also continued to progress work with external consultants AECOM in preparing its Application for Material Change of Use (MCU) with respect to the GSDA. More recent activities have been focused on key permitting considerations for the road interface between the Orica and Alpha HPA Project sites, as well as preparing documentation for various Queensland Government agencies.

Appointment of Chief Operations Officer

Alpha HPA was pleased to advise of the appointment of Rob Williamson as Chief Operations Officer (COO). Rob is a mechanical engineer and joins the Company having recently rebuilt and started up a new 155ktpa SX zinc refinery in the USA in the capacity of Vice President and GM of the facility and is ideally placed to bring 20 years of experience in large facility operations to Alpha HPA. Rob will be based in Brisbane and responsible for building a Project delivery team for the HPA project in Gladstone.

CORPORATE

Capital Raising

As the Company's market penetration into the Lithium-ion battery and Sapphire glass/LED HPA markets continued to broaden, a scale-up of the Pilot Plant to cater for 'demonstrations scale', commercial volumes of sample product became a requirement. With the need for larger volume equipment and several new capital items required to produce a "pelletised" HPA, the Company undertook a capital raising and was pleased to accept firm commitments of \$7.0M at 14.5c per share from a mix of new and existing sophisticated investors. Proceeds from the capital raising will be used to facilitate these 'demo-scale' Pilot Plant initiatives and further advance the market outreach, financing and permitting aspects of the HPA First Project.

The capital raising resulted in the Company issuing an additional 48,275,862 fully paid ordinary shares with the shares issued within the Company's 15% placement capacity pursuant to ASX Listing Rule 7.1.

Related Party Expenditures

During the June quarter the aggregate amount of payment to related parties and their associates totalled \$244,042. \$169,667 of this was payments to Directors or Director related entities for Directors' consulting fees. \$74,375 in fees was paid to MIS Corporate Pty Limited ('MIS'), an entity in which Directors Norman Seckold and Peter Nightingale have a controlling interest. MIS provides full administrative services, including administrative, accounting and investor relations staff both within Australia and Indonesia, rental accommodation, services and supplies, to the Group.

COLLERINA PROJECT – NSW (100% Alpha HPA and subject to commodity split agreement)

In line with the Company's plans to focus on advancing the HPA First Project, no exploration activities were undertaken at the Collerina project during the quarter.

WONOGIRI PROJECT – INDONESIA (45% Alpha HPA)

No exploration activities were undertaken at the Wonogiri Project during the quarter.

Rimas Kairaitis
Managing Director
rkairaitis@alphaHPA.com.au
+61 (0) 408 414 474

Cameron Peacock
Investor Relations & Business Development
cpeacock@alphaHPA.com.au
+61 (0) 439 908 732

pjn10418

About the HPA First Project

The Company's HPA First Project represents the evaluation and intended commercialisation of the production of ~10,000tpa of high purity alumina (HPA) using the Company's proprietary licenced solvent extraction and HPA refining technology. The technology provides for the extraction and purification of aluminium from an industrial feedstock to produce 4N (>99.99% purity) alumina for the intended use within the lithium ion battery and LED lighting industry. Following a successful testwork program and completion of a Pre-Feasibility Study, updated in March 2019, Alpha HPA has now completed Definitive Feasibility Study based on the successful completion of its Pilot Plant program at its dedicated laboratory facility in Brisbane.

The Company has commenced full permitting, market outreach and project financing processes, with the expectation of positioning the HPA First Project to Final investment Decision.

Competent Persons Statement (Process Development Testwork)

Information in this announcement that relates to metallurgical results is based on information compiled by or under the supervision of Dr Stuart Leary, an Independent Consultant trading as Delta Consulting Group. Dr Leary is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Dr Leary has sufficient experience to the activity which he is undertaking to qualify as a Competent Persons under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Leary consents to the inclusion of the technical data in the form and context in which it appears.

For further information on testwork results and processes see ASX announcements dated: 19 June 2020, 23 April 2020, 25 March 2020, 17 March 2020, 10 March 2020, 23 December 2019, 10 December 2019, 10 October 2019, 23 September 2019, 28 August 2019, 5 August 2019, 25 July 2019, 2 July 2019, 1 July 2019, 3 June 2019, 17 April 2019, 7 March 2019, 4 December 2018, 20 November 2018, 6 September 2018, 31 August 2018, 9 July 2018, 30 April 2018, 26 April 2018, 21 March 2018, 6 March 2018, 21 February 2018, 8 December 2017, 30 November 2017, 29 November 2017, 24 November 2017 and 13 November 2017.

Cautionary Statement

The Definitive Feasibility Study (DFS) referred to in this announcement has been undertaken to assess the technical and financial viability of the HPA First project. The DFS is based on the material assumptions about the availability of funding and the pricing received for HPA. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by this DFS will be achieved. To achieve the range of outcomes indicated in the DFS, additional funding will be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the HPA First project. If it does, this could materially reduce the Company's proportionate ownership of the HPA First project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the DFS.

Forward Looking Statements

The DFS contains certain forward-looking statements with respect to the financial condition, results of operations, business of the Company and certain plans and objectives of the management of the Company. These forward-looking statements involve known and unknown risks, uncertainties and other factors which are subject to change without notice and may involve significant elements of subjective judgement and assumptions as to future events which may or may not occur. Forward-looking statements are provided as a general guide only and there can be no assurance that actual outcomes will not differ materially from these statements. Neither the Company nor any other person give any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. In particular, those forward-looking statements are subject to significant uncertainties and contingencies, many of which are outside the control of the Company. A number of important factors could cause actual results or performance to differ materially from the forward looking statements. Investors should consider the forward looking statements contained in the DFS in light of those disclosures.