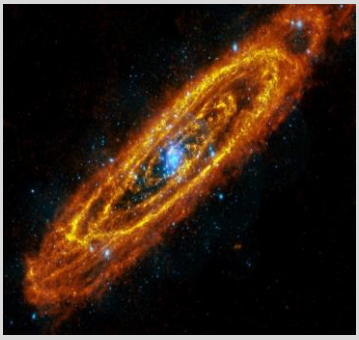
ASX ANNOUNCEMENT

ANDROMEDA METALS LTD (Andromeda, ASX: ADN)



Andromeda Metals Limited
ABN: 75 061 503 375

Corporate details:

ASX Code: ADN

Cash (21 Sept 2021): $46.41 million

Issued Capital:
2,461,552,016 ordinary shares
85,495,000 unlisted options
23,139475 performance rights

Directors & Officers:

Rhod Grivas
Non-Executive Chairman
James Marsh
Managing Director
Joe Ranford
Operations Director
Andrew Shearer
Non-Executive Director
Andrea Betti
Company Secretary

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22 September 2021

Andromeda Progresses HPA Strategy Following Positive Testing Results

Highlights

- **Testing results from AEM's HPA pilot test facility in Canada have confirmed Great White halloysite-kaolin as a premium grade feed material for the HPA production process**
- **Positively the incredibly low levels of specific impurities in Andromeda supplied feed indicates that approx. 3 tonnes of Great White Feed will produce approx. 1 tonne of 4N or better HPA whereas the normal ratio is about 10:1.**
- **Andromeda has engaged global expert Dr Bryn Harris assisted by Dr Mike Dry to lead the Company's HPA strategy and to augment work being done in Australia by HPA expert Boyd Willis**
- **Bryn will oversee the ongoing due diligence on Advanced Engineering Materials (AEM) and their plans for a HPA plant in the UK and testing of Andromeda's Eyre Peninsula kaolins**
- **The MOU with AEM has been extended until Dec 31st 2021 to further advance AEM's UK HPA project that is in the Feasibility Study phase and which Andromeda is planning to replicate, and also to complete due diligence on the modular plant design**
- **AEM is a global leader in HPA and operates a HPA plant in Canada capable of producing HPA at 4N (99.99%) and 5N (99.999%) purity**
- **A large amount of Mount Hope kaolin has been collected and refined in preparation for testing to determine its suitability as HPA feed as this resource contains some very high purity material**

Discussion

Andromeda Metals Limited (ASX Code: ADN, Andromeda, the Company) is pleased to announce that it has engaged Dr Bryn Harris as a consultant and advisor to the Company. Dr Harris received a Ph.D. from the University of Birmingham, UK. Dr Harris is widely recognised globally as a leading expert on chloride-based processing, having designed, built and commissioned commercial plants.

Dr Harris holds numerous patents on chloride processes and was the invited keynote speaker for the 2019 ALTA nickel-cobalt-copper and CIM Chloride 2021 conferences. Dr Harris was the recipient of their Sherritt Award for Hydrometallurgy in 1995 and has also acted as an Expert Witness involving some chloride-based processes.

Dr Harris' expertise in chloride-based processes is critical to the optimising of the High Purity Alumina ("HPA") hydromet process as the leaching of the kaolin typically involves hydrochloric acid and then the chloride leachate requires different purification and crystallisation steps to remove the majority of the impurities to leave a maximum of 100ppm (0.01%) for a 4N HPA product or 10ppm (0.001%) for a 5N HPA product.

Dr Harris is also being assisted by Dr. Mike Dry who holds a BSc (Chemical Engineering) and a PhD (Engineering). His career began in the petrochemical field with Sasol in South Africa. He then moved to Mintek in South Africa and spent 19 years in R&D in the field of hydrometallurgy, the last five as the manager of Mintek's Hydrometallurgy Division. In 1999 he moved to Lakefield Research (now SGS Minerals) in Canada, where he participated in R&D in hydrometallurgy, among other things managing the first Ravensthorpe HPAL pilot plant in collaboration with the Ravensthorpe people, managing a plant recycling gallium and supporting other projects via process modelling. In 2003 he switched to independent consulting, specialising in process modelling (for SGS and others). In 2008 he founded Arithmetek Inc., offering process and cost modelling services to the industry at large.

Input from the Australian side is being provided by Boyd Willis who is a metallurgical consultant with 31 years' experience in complex hydrometallurgical processes for base metal recovery. His experience includes 7 years in operations, 12 years in engineering design and 12 years in private consulting. His experience includes design and coordination of detailed testwork and pilot programs, process development, process modelling, and managing studies from scoping level through pre-feasibility and definitive feasibility studies. Boyd has been involved in the metallurgical testwork and development of flowsheets to produce HPA as a by-product of nickel laterite processing since 2015, and has been consulting to Andromeda on HPA for over a year.

First stage testing of Andromeda's provided kaolin ore in now complete which has successfully confirmed the feed material as being in a "class of its own" as a kaolin feed material.

The kaolin feedstock was digested using a miniclave to give an aluminium chloride solution. Multiple acid digestions were then carried out to give a very thorough evaluation. Pure aluminium chloride solution is clear with colouration indicating impurity, which demonstrates the sensitivity of the process considering the extremely low levels of impurities found in this kaolin.

The purification stage was very effective and as a result the final stages of the process are predicted to yield a high purity final HPA product within the timeframe of the extended agreement.

ADN signed a Memorandum of Understanding (MoU) with AEM Technologies Inc, part of the Advanced Energy Minerals group (AEM) and entered an initial 90-day exclusivity period to explore a HPA licencing transaction that is intended to include testing ADN kaolin feed, process feasibility studies and potential licensing and marketing arrangements.

AEM's Cap Chat HPA Process Plant, located in Quebec Canada, uses its patented process to make 99.99% ("4N") and 99.999% ("5N") pure high purity alumina. With proven technology and extensive patents, Cap Chat is recognised as environmentally friendly with its focus on reducing reagent consumption and transitioning to a near "zero carbon emission" energy consumption plant. The facility is the only one of its type globally that is capable of producing 4/5N HPA from a kaolin feed. Having commissioned the plant in 2020, AEM is now in offtake discussions with potential customers around the world.

The MoU was signed with AEM to enable kaolin samples from Andromeda's projects on the Eyre Peninsula to be evaluated using the AEM proven process to determine its suitability for HPA manufacture, and potentially lead to the construction by Andromeda of a HPA plant under a licencing agreement with AEM, which could also include the marketing of HPA manufactured product by ADN through AEM's global distribution network. The MoU was subsequently extended to enable completion of the suitability testing as well as remaining due diligence work.

Figure 1: Solution of Supplied Kaolin after Digestion

Figure 2: Solution of Supplied Kaolin after Purification

Andromeda's Kaolin: Proven Premium Feedstock for HPA

In February 2019, Andromeda announced results from a third round of enhanced HPA metallurgical testwork of halloysite-kaolin from the Great White Project (75% owned) after testing had shown that 4N (99.99%) purity could be achieved with only one stage of purification (*refer ADN ASX announcement dated 4 February 2019 titled "High Purity Alumina (HPA) testing confirms premium grade feed potential at Poochera"*), thus confirming it to be a truly world class feed material for HPA production.

Round One preliminary testing carried out by Bureau Veritas, UniSA and the University of Newcastle had already achieved a purity of 99.9855% from an over-refined sample where impurities had been introduced (*refer ADN ASX announcement dated 30 May 2018 titled "Initial High Purity Alumina (HPA) results confirm 99.99% (4N) potential at Poochera"*).

A Second-Round of testing conducted by Perth based BHM Process Consultants used a more suitable halloysite-kaolin sample and gave an Al_2O_3 purity of 99.9946% with only a single stage of purification (*refer ADN ASX announcement dated 29 August 2018 titled "High Purity Alumina (HPA) testing proves 99.99% (4N) premium grade potential at Poochera"*).

The Third Round of testing announced in February 2019 was undertaken to confirm that the single stage purification result was repeatable, and to also determine if even higher levels of purity were possible. Results from this additional testwork confirmed that producing 4N HPA from a single stage purification process is fully achievable and repeatable when using ADN's high-purity halloysite-kaolin as a feed.

About ADVANCED ENERGY MINERALS (AEM)

AEM is a privately owned company focused on producing High Purity Alumina used by several high growth markets, including the global LED, semiconductor and lithium-ion battery sectors. The group's assets include a commissioned HPA plant in Quebec, Canada, along with a research centre and associated patented intellectual property, which it plans to use as a springboard for developing a global HPA business.

This announcement has been approved by James Marsh, Managing Director of Andromeda Metals Ltd.

For more information about the Company and its projects, please visit our website www.andromet.com.au or contact:

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Competent Person's Statement

Information in this announcement has been assessed and compiled by Mr James Marsh, a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Marsh an employee of the Andromeda Metals Limited has sufficient experience, which is relevant to metal recovery from the style of mineralisation and type of deposits under consideration and to the activity being 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'. This includes over 30 years of experience in kaolin processing and applications.