

Pre-Feasibility Study Update

Aeon Metals Limited (ASX:AML) (**Aeon** or the **Company**) is pleased to present an update on the progress of the Pre-Feasibility Study (**PFS**) for its 100%-owned, world-class Walford Creek Copper-Cobalt Project (**Walford Creek Project**) in north-west Queensland.

Highlights:

- Completion and release of PFS, including maiden Ore Reserve, expected during April.
- Overall PFS progress to date suggests key physical outcomes and cost projections from the Scoping Study will be broadly confirmed.
- PFS expected to confirm the potential for Walford Creek Project to become a significant producer of high quality battery metals – copper, cobalt, zinc and nickel.
- Updated Mineral Resource estimate currently being finalised and expected to deliver significant increase in Measured classification tonnage following CY2021 infill drilling.
- Mine designs being updated to reflect infill drilling results; mine schedule optimisation and updated operating cost estimates to be finalised following Mineral Resource update.
- Metallurgical testwork program well advanced with pressure leaching optimisation largely completed on all flotation ore types.
- Hydrometallurgical process route yields much lower emissions compared to pyrometallurgical route typically required for sulphide ores.
- Basic process plant flowsheet design and layout largely completed.
- Process plant capital and operating cost estimation completed for circuit front end and well advanced through downstream stages.
- Site power supply evaluation progressing with finalisation of trade-off studies well advanced.
- Product marketing analysis indicates strong potential for premia to be achieved across the multiple metal sulphate products planned to be produced.
- Project financing engagement process initiated by Aeon's strategic and financial adviser, Bacchus Capital Advisers.

Commenting on the PFS update, Aeon Managing Director and CEO, Dr Fred Hess, said:

“From the completion of the Scoping Study in June 2021, we set an aggressive timetable for completion of the PFS and we have largely tracked to this. The travel restrictions, particularly for Western Australia, have posed some inconvenience and timing challenges given that all downstream metallurgical processing testwork has been undertaken in Perth. In saying that, these impacts have seen scheduled completion of the PFS deferred only a few weeks, now expected during April.”

“I am pleased to report that the key outcomes generated from the Scoping Study are expected to remain largely unchanged at this point. Importantly, we have now expanded our detailed understanding of all the key project elements to deliver sufficient confidence, and supporting data, to actively engage with potential project financiers – a process that has now commenced. Pleasingly, our initial interactions with various levels of government have also provided encouragement and

recognition that our mine development plans sit firmly within the sweet spot of the many government policy initiatives designed to facilitate investment in both new and greener mining development.

“The world needs far greater production of battery and electrification metals that underpin renewable and efficient energy use in order to meet the global policy demands of achieving net zero emissions by 2050. The Walford Creek Copper-Cobalt Project is being designed so as to be a major beneficiary of the shift towards renewable energy and also a major contributor to achieving carbon neutrality.

“The adoption of a relatively low emissions process flowsheet that efficiently delivers high quality final metal products that can be used directly by manufacturers and end-users, in conjunction with targeted high renewables penetration in the project energy mix, reflects the responsible future of mining investment in the carbon neutral age. Walford Creek is targeted to be a vanguard green mining development providing Australia with much needed, and responsibly produced, cobalt, copper, nickel and zinc products.”

Mineral Resource estimate

The updated Mineral Resource estimate is currently in the final stages of validation and review and is expected to be released before month end. The updated Mineral Resource estimate is expected to feature an increase in Measured classification tonnage following the CY2021 infill drilling.

The updated Mineral Resource estimate combined with the study work undertaken to date is expected to facilitate the declaration of a maiden Ore Reserve estimate with the release of the PFS.

Mining

Targeted throughput remains unchanged at 3 Mtpa, as does the preferred mining methods (conventional truck and shovel open pit, and transverse retreat longhole open stoping underground). During the CY2021 drill season, 13 of the holes drilled for metallurgical testwork were also logged for geotechnical data. The results are being used to refine the open pit and underground geotechnical parameters and will form the basis of the geotechnical recommendations for mining. No further geotechnical work is expected to be required as part of any subsequent Feasibility Study.

This updated Mineral Resource estimate is to be used to update open pit mine and underground stope designs in conjunction with a new mine schedule optimisation and operating cost estimate refinement. This schedule optimisation will also include updated metal prices, exchange rates, metal premia and metal recoveries based on the ongoing testwork program.

Overall mine designs, waste dump designs and surface infrastructure are expected to remain largely the same as those developed previously.

Metallurgical testwork

The Scoping Study was based on a substantial body of previous testwork that focussed on the selective flotation of base metal and pyrite concentrates. Due to this very advanced starting point, the testwork on bulk flotation has proceeded both quickly and smoothly. The primary grind size has increased since liberation is now driven by sulphide / non-sulphide mineral separation rather than the more challenging separation of the individual metal sulphides from each other and the non-sulphide gangue.

Flotation and comminution testwork has been completed for all ore types, representing both open pit and underground ore which will be mined within the first 10 years of operation. Further flotation testwork is scheduled to be completed for the later mine life ore type of Amy.

Bulk flotation is followed by oxidative leaching to extract the key metals into solution. The leach testwork program is nearing completion with leach optimisation of most ore types and blends now well understood. A remarkable feature of the pressure leaching at our modest temperature of 150° C

and 15 atmospheres of pressure is the relative insensitivity of leach operation to the variations in composition and mix of the flotation ore types.

Pressure leaching conditions are well defined using both smaller scale batch and larger scale continuous autoclave configurations. The objective of the larger scale testwork is to confirm leach conditions for the expected bulk concentrate composition over the initial 10 years of the life of mine. The larger scale testwork also generates larger volumes of pregnant leach solution for downstream testwork.

Metallurgical testwork for the solid / liquid separation, copper solvent extraction and impurity removal stages are nearing completion. Solid / liquid separation will employ filters rather than the counter-current decantation proposed in the Scoping Study. This has several advantages including lower capital cost, improved metal recovery, higher solution tenors, lower water usage, and dry stacked tailings (smaller tailings footprint, facilitates co-disposal with mine waste and reduces environmental risks).

While a range of autoclave operating conditions were studied to optimise valuable metal extraction, the selection of the current design leach conditions does not result in significant silver or lead extraction to the pregnant leach solution. While no lead extraction and saleable production was incorporated into the Scoping Study, saleable silver production was included as a lesser source of revenue – this will be absent in the PFS. This will also however result in the removal of the capital and operating costs associated with the previously assumed silver circuit.

The Scoping Study contemplated the production of zinc metal by electrowinning. Subsequent analysis suggests that the production of zinc sulphate is both simpler and has the potential to yield a premium to LME zinc metal pricing. The primary market for zinc sulphate is as a trace element additive to fertiliser. Currently all of Australia's domestic consumption of zinc sulphate is imported from overseas, typically China.

Site layout

The general site layout has been refined to facilitate improved safety (separation of pedestrian, light vehicle, heavy vehicle and mine vehicle traffic; storage of flammables and similar chemicals), ergonomics (minimise travel distances around the site, walking path from nearby camp to site) and energy efficiency (use of gravity, electrical distribution).

The layout of major equipment within the processing plant flowsheet is largely resolved. Detailed plant layouts are progressing, subject to finalisation of the key technical parameters of each processing step.

Capital and operating cost estimates

Quotes for major equipment supply have been received. The feed preparation front end capex estimation is completed.

An update to the reagent and consumable costs is in progress, taking into account where reagents will be sourced from and the associated freight costs.

As is typical, finalisation of all capital and operating cost estimates is expected to be the last major workstream completed ahead of finalisation and release of the PFS.

Site power supply

Detailed evaluation of power supply arrangements is progressing with completion of trade-off studies expected upon finalisation of overall electricity demand parameters. Key elements currently under consideration include the level of penetration for solar PV, wind and large-scale battery storage. The intention remains to source as much of the total power requirements as possible from renewable sources in order to support our goal of minimising emissions.

Environmental

In parallel with the completion of the PFS, work has continued on the preparation of an Environmental Impact Statement (EIS). This is required for inclusion in a subsequent Feasibility Study and is also a requirement for the grant of a Mining Lease Application. The EIS is expected to be completed in H1 CY2023.

Project execution

Significant progress has been made with the development of the project execution and contracting strategies. The overarching intent is to ensure that project execution is managed by an experienced owner's team that will provide the necessary guidance and oversight of external contractors during design, engineering, construction and commissioning phases through into commercial operations.

Product marketing

Product marketing analysis indicates the strong potential for metal premia to be achieved across the multiple metal sulphate products planned to be produced. In particular, nickel sulphate and cobalt sulphate typical trade at a premium to LME metal pricing.

Key PFS outcomes

The Scoping Study was completed in June 2021. Due to its preliminary nature, the confidence limits for the estimates in the Scoping Study were considered accurate within the range of +/- 50%.

The PFS is on track to be completed to a tighter confidence range of +/- 25%. While still incomplete, the advanced status of many of the key PFS workstreams broadly suggest that the key physical outcomes and cost projections from the Scoping Study will be broadly confirmed in the PFS.

PFS completion

The PFS schedule has been impacted by several weeks due to an accumulation of minor issues including delays related to receiving assay results, sample transportation, gaining laboratory access and border closures preventing return travel. As a result, PFS finalisation and release is now expected during April 2022.

Green development and mining

The Walford Creek Project is being designed as a green mining project on a number of levels. First and foremost, it is targeted to produce the metals that are critical to delivery of net zero emissions by 2050. In doing so, the development is seeking to use substantial renewable energy content to power production in what is a remote region.

Key elements of the development layout and implementation stress the desire to achieve maximum levels possible for energy and resource efficiency. The hydrometallurgical processing route delivers the lowest emissions pathway to finished metal products compared with pyrometallurgical and other routes. The flotation tailings are to be directed to the underground mine where they can be combined with cement to form a paste that will be used to fill the mine stope voids and provide structural stability. The leach solids residue is to be filtered and stored as dry stacked tailings, with potential co-disposal with the mining waste also.

Government

Applications have been made to gain recognised project designations from both the Queensland State and Commonwealth governments. Aeon has applied for Coordinated Project status with the

State government and for Major Project status with the Commonwealth with respect to the Walford Creek Project.

Broadly speaking these designations facilitate approval processes through the many and overlapping branches of government while also ensuring recognition of the potential contribution that the project would make to social and economic development. It is expected that the completed PFS will be a key document used to inform government of the details of the proposed development of the Walford Creek Project.

In September 2021, the Commonwealth government also created the A\$2 billion Critical Minerals Fund (managed by Export Finance Australia) to facilitate new project development. The Walford Creek Project is set to produce cobalt, which is a critical mineral for Australia, and therefore is expected to readily qualify for consideration under this initiative.

Project financing

As PFS completion approaches, Aeon now possesses the detailed understanding of all key project elements to deliver sufficient confidence, and supporting data, to actively engage with potential project financiers. A project financing engagement process is now underway and being run by Aeon's strategic and financial adviser, Bacchus Capital Advisers.

This ASX release has been authorised by the Aeon Board:

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ABOUT AEON METALS

Aeon Metals Limited (**Aeon**) is an Australian based mineral exploration and development company listed on the Australian Securities Exchange (ASX: AML). Aeon holds a 100% ownership interest in the Walford Creek Copper-Cobalt Project (**Walford Creek Project**) located in north-west Queensland, approximately 340km to the north north-west of Mount Isa.

Aeon's vision: making a difference – creating sustainable value by delivering key metals driving the low carbon future.