ASX Announcement

CARAVEL MINERALS

ASX:CVV

15 June 2022

CARAVEL COPPER PROJECT

PFS UPDATE

Highlights

- **PFS studies are now complete and report preparation is being finalised**
- **The PFS report will be based on a Dual Train Design, based on two by 13.9Mtpa process trains. The Dual Train design was selected to reduce financing costs by allowing staged development and funding of the second stage through project revenue**
- **Following recent capital cost updates and using the findings from the PFS studies to date a review of process plant design options has been undertaken by lead engineer Ausenco to assess opportunities to optimise capital**
- **The options review has determined the following;**
    - **The PFS model will be based on development of both 13.9Mtpa process trains up front rather than being staged, as the efficiencies from a single build and higher throughput outweigh the benefits from staging**
    - **A further option will be studied for the development of a Single Train for 28Mtpa based on the same flowsheet. Initial benchmarking indicates substantial improvements in capital and operating costs from the single train development**
    - **The single train option will also be investigated using High Pressure Grinding (HPGR) mills vs the current plan for Semi-Autogenous Grinding (SAG) mills. HPGR mills may offer further operating cost improvements**
- **The new options studies have commenced and are due in late July**
- **Technical studies for all other areas such as mining, metallurgy, flowsheet design, infrastructure, site layout and material costings are complete and will be used in the option review**
- **To avoid further delay, the PFS will be reported in the coming weeks based on the current Dual Train Design. The option review for the Single Train option will be reported when ready as an update to the PFS**
- **The PFS work has exceeded the requirements for a PFS study in many areas, and the project will be well prepared to advance to Definitive Feasibility Studies (DFS) once final reviews are completed.**

Review of Process Plant design options

The PFS studies have now been completed and the report is being prepared for release in the coming weeks. As reported in the PFS Update announcement on 5 May 2022, the plant design for the PFS will be based on a through-put of 27.8Mtpa constructed as two 13.9Mtpa processing trains.

At commencement of the PFS the plant was based on two processing trains with each having capacity of 12Mtpa. The throughput capacity of each train was subsequently upgraded to 13.9Mtpa by the addition of secondary crushing, for total capacity of 27.8Mtpa (see layout in Figure 1). The Dual Train option was selected due to the reduced financing costs allowed by building in stages with the second stage funded from project cashflows.

Following the recent updates to capital costs, Ausenco have further reviewed opportunities to optimise the plant design and reduce capital expenditure. This review was able to consider the more advanced studies on mine schedules, metallurgy and flowsheet design, site layout, supporting infrastructure, services and material cost inputs developed to PFS level. In particular, the mining studies have indicated the mine is capable of producing at significantly higher rates than currently planned and other variables such as power and water supply are now well understood.

The option review has highlighted significant cost efficiencies by building both process trains up-front rather than in stages, outweighing the financing benefits sought by deferring the second stage. The importance of this capital efficiency was further heightened by the increased capital costs announced in May. The building of both trains at the start of the project has been adopted as the base case for the PFS.

Figure 1: Preliminary layout for the process plant showing a crushing circuit (2,3) and coarse ore stockpile (4) feeding dual grinding mills (5,6&7) and flotation circuits (8). The dual train design was to allow staged developments and reduce up front capital costs. The option now being evaluated is based on a single ~27Mtpa plant through the use of larger equipment. The single train is expected to deliver significant savings in capital and operating costs, which are likely to outweigh the benefit of a staged development.

On the basis that mining and processing will commence at ~27Mtpa, the review also considered the option of using a single process train designed around a large SAG and ball mill combination. Based on benchmark costing of the equipment and other costs from the PFS study, the review found a Single Train Design for 27Mtpa throughput has the potential to deliver substantial capital and operating costs benefits over the Dual Train option.

Ausenco are now undertaking a more detailed study to quantify these preliminary findings. The new study will also re-evaluate the benefits of high-pressure grinding rolls (HPGRs) versus semi-autogenous grinding mills (SAGs) for a single train at the increased throughput rate. The Single Train ~27Mtpa trade-off study is expected to take 4-5 weeks to complete.

PFS-level mine schedules have been completed for both the Dual Train and Single Train options and have confirmed ability to deliver ore to the plant over the 28-year project life. All mining studies and other areas of the PFS required for reporting of Ore Reserves are complete and the maiden Ore Reserve will be reported with the PFS.

In order to avoid further delay, the PFS will be reported based on the current scope using the Dual Train Design. The option for a Single Train Design will be described in the PFS in as much detail as available at the time subject to reporting requirements. The full design options review will be released when completed by Ausenco.

Although the late changes in the process plant design have delayed the PFS report slightly, the overall PFS timetable has achieved good progress in all other areas and the Project is on track to commence DFS studies in the second half of this year. The PFS is expected to confirm a robust and executable project and whilst up-front capital costs will be higher than originally planned, the overall capital intensity compares very favourably to similar scale projects.

The Caravel Copper Project remains one of very few projects globally with >60,000tpa Cu potential production that is well advanced and has a clear pathway to development. With the current forecasts of substantial copper deficits in the coming years, Caravel is very well placed to be ready for financing and development at a time of significant demand for copper.

This announcement is authorised for release by Managing Director, Steve Abbott.

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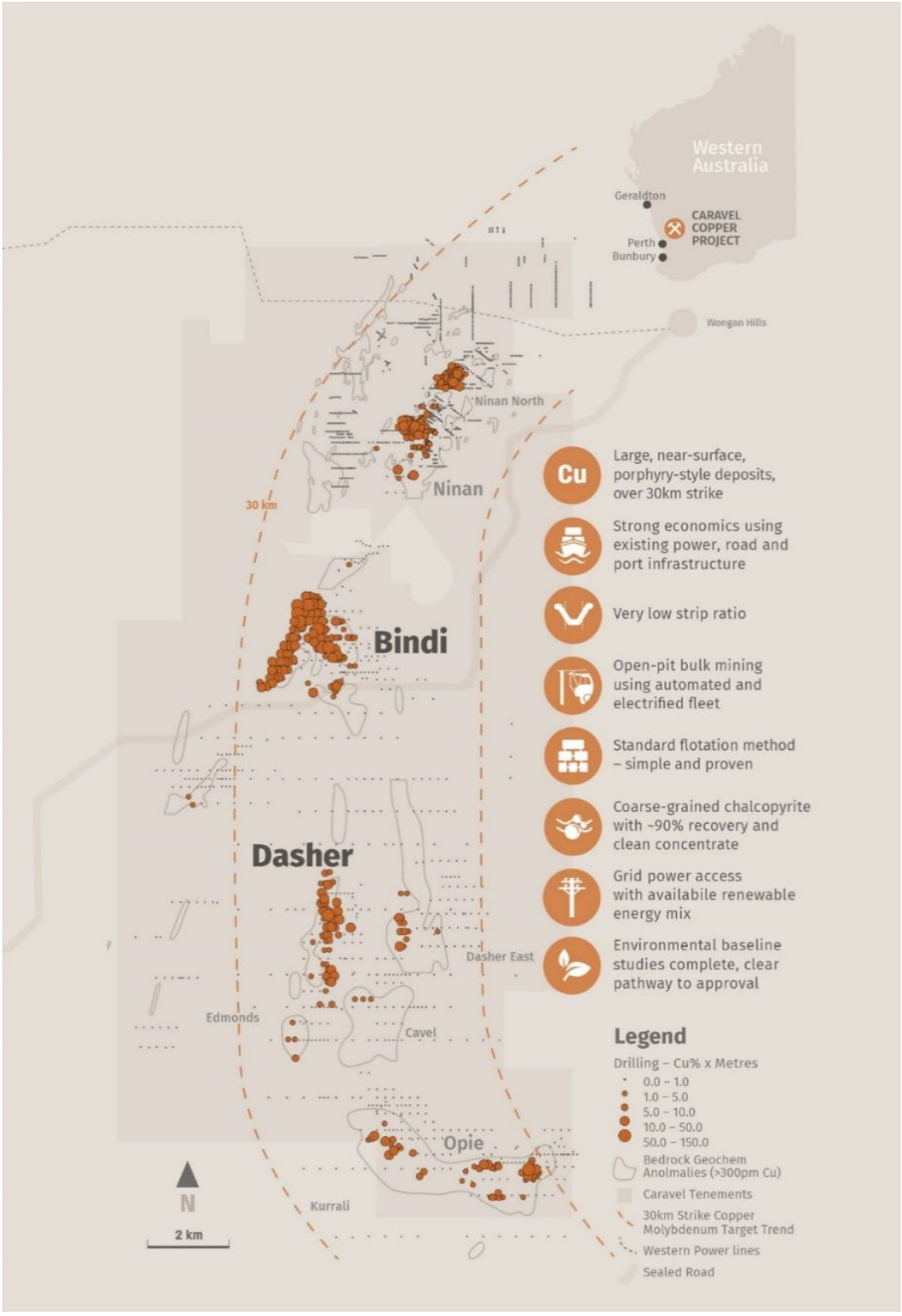
ABOUT
CARAVEL MINERALS

Caravel Minerals Limited (ASX:CVV) is advancing Pre-Feasibility Studies for the Caravel Copper Project – a large-scale, long-life copper mining and processing project located 150km northeast of Perth in Western Australia's Wheatbelt region. Current mineral resources for Measured, Indicated and Inferred are 1.18 billion tonnes at 0.24% Cu for 2.84Mt contained Cu (0.1% cut-off), making Caravel Australia's largest undeveloped copper project based on contained Cu. The Project will use conventional open-pit mining and simple flotation processing methods to process 12Mtpa of ore from years 1 to 5 ramping up to 24Mtpa from year 6. Copper will be sold as a concentrate and exported via road through local ports with ~35,000 tpa copper in concentrate in years 1 to 5 and ~65,000 tpa copper in concentrate from year 6. Current mine life is >25 years.



Competent Persons Statements

The information in this report that relates to Exploration Results is based on and fairly represents information compiled by Mr Peter Pring. Mr Pring is Senior Exploration Geologist with Caravel Minerals. Mr Pring is a shareholder of Caravel Minerals and is a member of the Australasian Institute of Mining and Metallurgy. Mr Pring has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Pring consents to the inclusion in this report of the matters based on information in the form and context in which they appear.

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd). Mr Barnes is a shareholder of Caravel Minerals. Mr Barnes is a member of both the Australasian Institute of Mining and Metallurgy and the Australasian Institute of Geoscientists. Mr Barnes has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Barnes consents to the inclusion in this report of the matters based on information in the form and context in which they appear.

Information in this announcement relating to Mineral Resources is extracted from the ASX release dated 23 November 2021. Caravel Minerals Limited confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the Mineral Resource continue to apply and have not materially changed. Caravel Minerals Limited confirms that the form and context in which the Competent Persons' findings are presented in this announcement have not been materially modified from the original market announcement.

Previous Disclosure *The information in this report is based on the following Caravel Minerals ASX Announcements, which are available from the Caravel Minerals website www.caravelminerals.com.au and the ASX website www.asx.com.au:*

- *4 November 2021 "Scoping Study – Caravel Copper Project"*
- *23 November 2021 "Major Mineral Resource Upgrade – Caravel Copper Project"*
- *17 February 2022 "PFS Update - Caravel Copper Project"*
- *6 April 2022 "PFS Update - Caravel Copper Project"*
- *5 May 2022 "PFS Update - Caravel Copper Project"*

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcement.

Forward Looking Statements *This document may include forward looking statements. Forward looking statements include, but are not necessarily limited to, statements concerning Caravel Minerals planned exploration programmes, studies and other statements that are not historic facts. When used in this document, the words such as "could", "indicates", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward looking statements. Such statements involve risks and uncertainties, and no assurances can be provided that actual results or work completed will be consistent with these forward looking state*