

ASX Release: 16 February 2018

## Project Update

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### CALINGIRI WORK PROGRAM UPDATE

#### DRILLING, BULK ORE SORTING, HYDROLOGY, ENVIRONMENTAL AND FRONT-END FLOWSHEET

- The 5,000 metre Reverse Circulation (RC) drilling program is now at 65% completion. Hand-held XRF readings indicate extensive mineralisation, still subject to laboratory assaying and reporting, that lies outside of the currently defined JORC Resources
- The second phase of the bulk ore sorting testwork utilising approximately one tonne of representative mineralisation is nearing completion with laboratory results and reporting expected within this month
- Appointment of specialist consultants and proposals received to manage environmental, hydrology, mine closure and social impact assessments
- Drilling to evaluate water resources to commence in early March
- Caravel continues to target the release of a revised Calingiri Scoping Study in 2H 2018 incorporating ore sorting as part of the front-end flowsheet and integrating technical and environmental studies required for mining and development approvals

Caravel Chief Executive, Marcel Hilmer, said, *"We are progressing the Calingiri project on many fronts and the preliminary results for bulk ore sorting and resource extension drilling are promising. Phase 2 bulk ore testing is expected to support that the Calingiri mineralisation is suitable for beneficiation and should therefore deliver a resultant significant increase in expected copper feed grade. The appointment of specialist consultants to progress environmental and social assessments is an important step for the Company and we are pleased to be working with some of the most well regarded professional firms in WA."*

#### A. Drilling

The summer RC drilling program commenced in January 2018 with a program of infill and extensional drilling at the Bindi, Dasher and Opie Prospects. The program of 29 holes for 5,000 metres is now 65% complete. This drilling is evaluating the potential to increase the current JORC Resources at these Prospects. Hand-held XRF readings indicate extensive mineralisation, still subject to laboratory assaying and reporting, that lies outside of the currently defined JORC Resources.

Further drilling will be focused on evaluating several high priority target areas defined by previous aircore drilling (refer ASX announcement released on 4 April 2017). Induced

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Polarisation (IP) surveying is also planned to potentially provide better defined targeting within these very large areas.

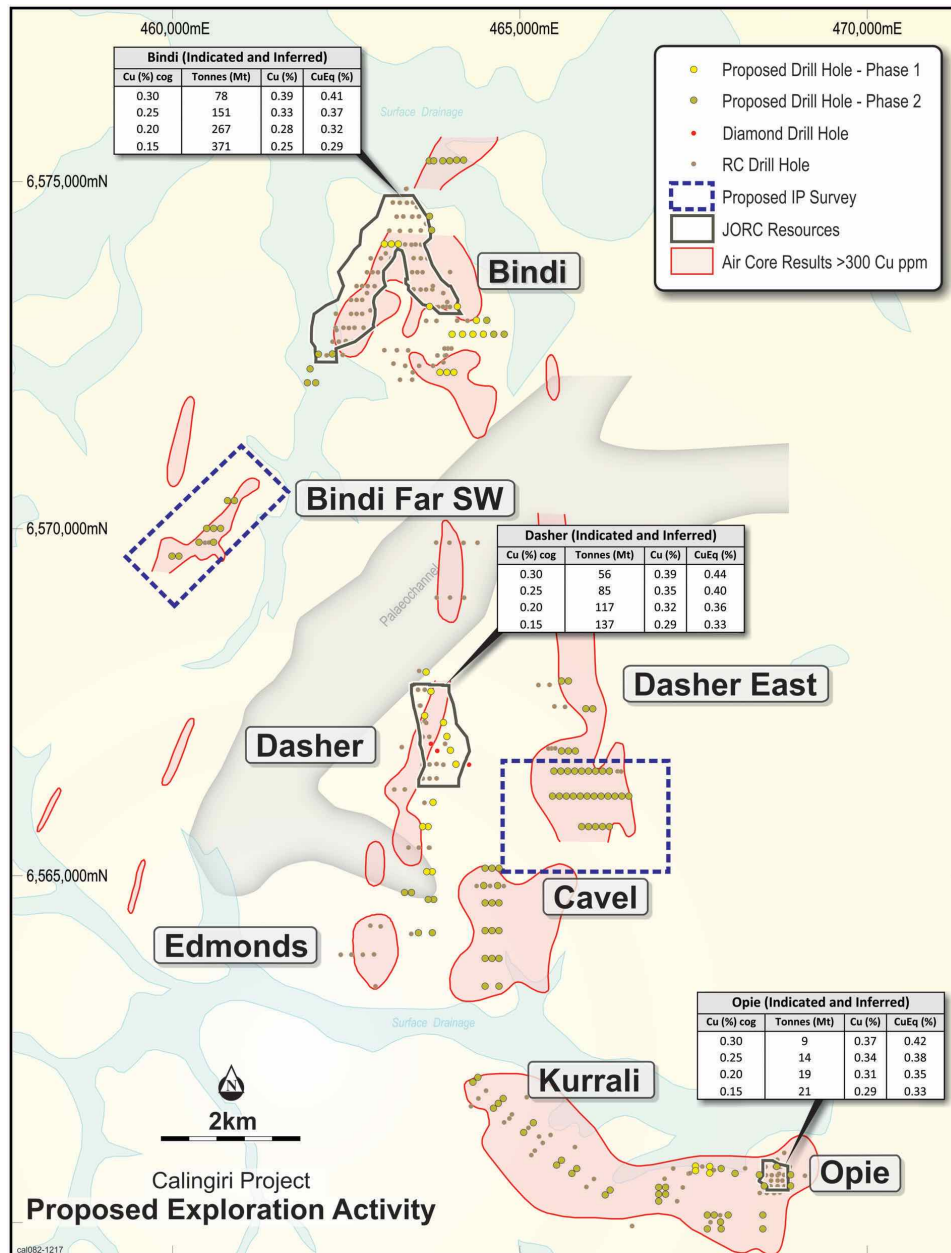


Figure 1: Calingiri project: Proposed Exploration Activity and Prospects

## B. Environmental and Social Impact Assessments

A scope of works has been completed that addresses ESIA scoping and technical reports including:

- Preliminary level and/or desktop studies of ecological and social factors influenced by the project
- A review of legislation and the identification of approval and permit requirements
- Risk assessment to inform risk reduction strategy and opportunities

- Development of the ESIA approvals strategy, a project schedule and costs to support commencement of construction and mining in liaison with key regulatory stakeholders. This includes identification of capability to support the ESIA process

A series of studies and investigations will largely identify any environmental and social factors for consideration by project development. The list of proposed studies and investigations includes:

- Flora and vegetation
- Fauna including salt-lake ecology
- Hydrology and hydrogeology
- Geochemical characterisation of waste
- Social impact assessment
- Stakeholder engagement
- Soils and material properties of waste
- Mine closure strategy
- Contaminated sites

### **C. Water Supply**

Complementary to the above related programs will be a further evaluation of water supply options, including initial drilling and pump testing of target areas with the potential to source project water requirements. Of particular interest is a large paleochannel located close to the Bindi and Dasher Prospects (refer Figure 1).

### **D. Bulk Ore Sorting and Revised Scoping Study**

The Phase 2 Bulk Ore Sorting program is nearing completion with assays from the laboratory expected within the coming days. The CEO and Director of Exploration spent two days at the TOMRA laboratory in January 2018 assisting with the evaluation of bulk ore samples through the proprietary XRT system. Visual results demonstrated the potential to materially separate Calingiri ore from barren waste.

### **E. Flowsheet**

The incorporation of front-end ore sorting before feeding ore to the mill requires changes to the post mining development flowsheet. It is expected this will allow for higher grade plant feed and deliver positive impacts for both Capex and Opex inputs. A revised Scoping Study incorporating these changes, including a smaller plant design, is targeted for completion in 2H 2018.

## **Calingiri Project Overview**

To date the bulk ore sorting testwork results support the case for improved project economics as well as a reduced project environmental footprint. The work programs underway will advance the various technical studies due for completion in 2018.

The Company previously released a Scoping Study on Calingiri on 28 June 2016. The study determined that Calingiri demonstrates robust project fundamentals with low technical risk. It contemplates the co-development of three open pits, located 120km to the northeast of Perth in Western Australia (refer Figure 2). The Company considers the study validation that the project is viable based on its



ability to pay back project start-up capital, provide ongoing positive operational cash flows and deliver strong projected economic returns. The study was completed by CSA Global in conjunction with Caravel and indicated an initial 20 year LOM for 710,000 tonnes (1.6B/lbs) of copper produced. Existing infrastructure within and adjacent to the project, coupled with industry-standard mining and treatment options available to Caravel, make the project a standout Australian copper development project.

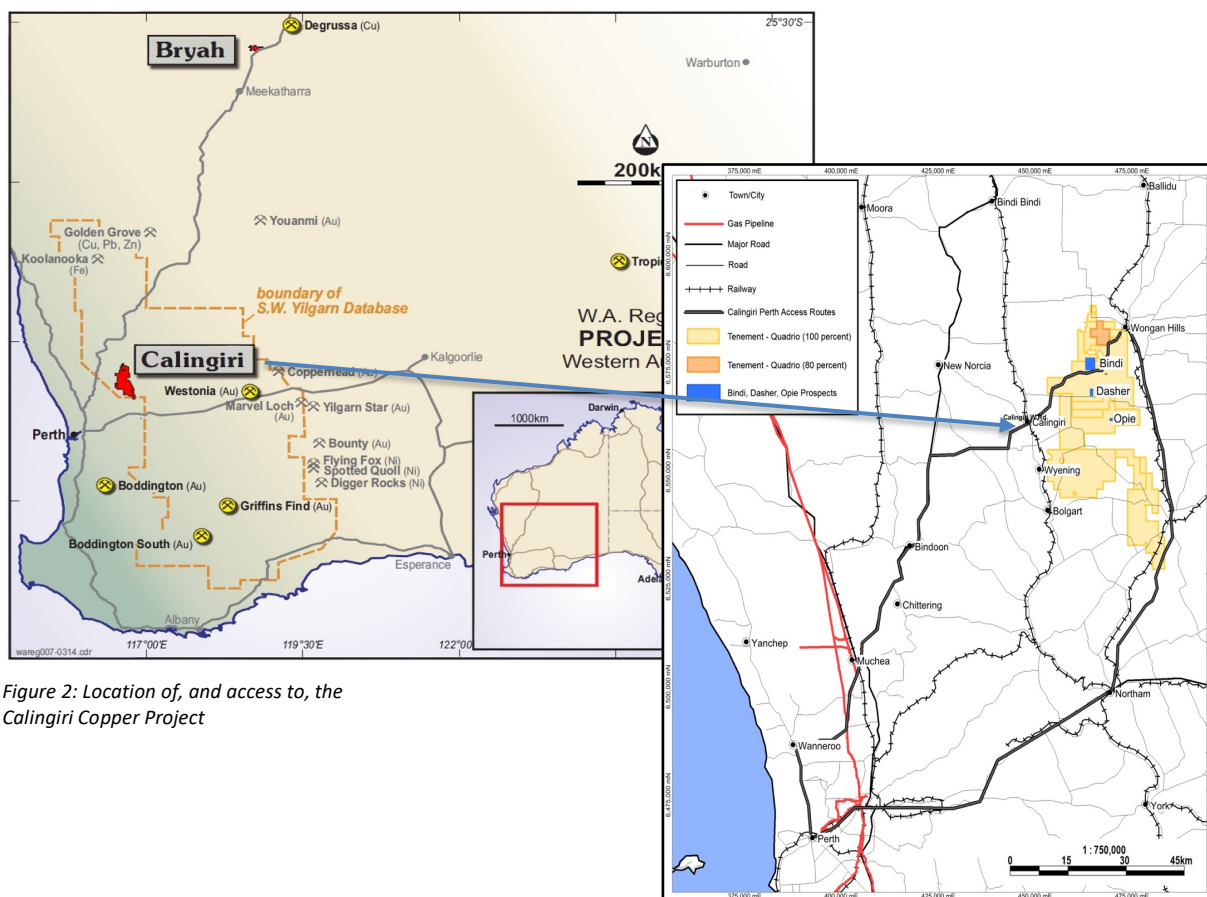


Figure 2: Location of, and access to, the Calingiri Copper Project

#### For further information, please contact:

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#### About Caravel Minerals Limited

Caravel Minerals is a gold, copper and base metals exploration and resource development company with projects located in Western Australia. Caravel has a technically strong and well established exploration and mine development team.



**Calingiri Update 16 February 2018** (ASX:CVV)

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### **Competent Person's Statement**

The information in this report that relates to the Calingiri Mineral Resource estimates is extracted from an ASX Announcement dated 4 April 2016, (see ASX Announcement – 4 April 2016 “Calingiri Maiden JORC Resource”, [www.caravelminerals.com.au](http://www.caravelminerals.com.au) and [www.asx.com.au](http://www.asx.com.au) ). 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 Mineral Resource estimates in 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.

### **Production Targets and Financial Information**

Information in relation to the Calingiri Project Scoping Study, including production targets and financial information, included in this report is extracted from an ASX Announcement dated 28 June 2016, (see ASX Announcement – 28 June 2016, “Scoping Study Confirms Outstanding WA Copper Project”, [www.caravelminerals.com.au](http://www.caravelminerals.com.au) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement released on 28 June 2016 continue to apply and have not materially changed.

### **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 program, 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 statements.

### **Disclaimer**

This release may include forward-looking statements. Such forward-looking statements may include, among other things, statements regarding targets, estimates and assumptions in respect of metal production and prices, operating costs and results, capital expenditures, mineral reserves and mineral resources and anticipated grades and recovery rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements inherently involve subjective judgement and analysis and are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Caravel. Actual results and developments may vary materially from those expressed in this release. Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. Caravel makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release. All information in respect of Exploration Results and other technical information should be read in conjunction with Competent Person Statements in this release. To the maximum extent permitted by law, Caravel and any of its related bodies corporate and affiliates and their officers, employees, agents, associates and advisers:

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- disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).





## Appendix 1

### Technology and Benefits of Ore Sorting

Bulk ore sorting is a proven pre-concentration technology in which barren gangue is separated from mineralisation based on the grade as measured or inferred from a sensor measurement. With bulk ore sorting, ore that previously didn't qualify for processing may be upgraded, making it economic to treat and improving the resource utilisation. More valuable metal may be extracted from the resource while the processing plant treats less tonnes at higher feed grade, reducing consumption of water and power as well as lower tailings output. Significant capital reductions may also be achieved through smaller back end milling and processing requirements.

The technology is based on industry proven, high capacity industrial sorting machines from major international equipment suppliers, with well established businesses in industrial minerals, material recycling and food processing. The TOMRA technology is currently being successfully used by many large global mining groups, including:



Figure 3: Ore Sorting Equipment

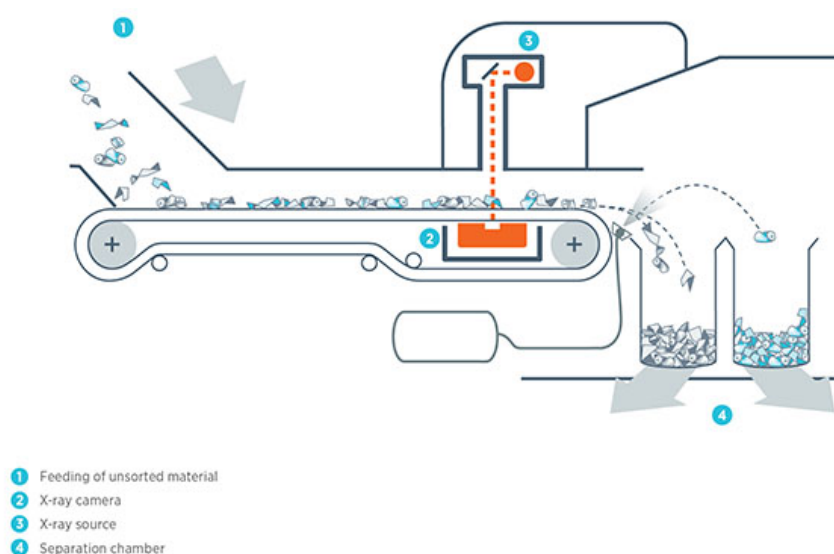


Figure 4: Ore Sorting Flow Diagram