

FOR IMMEDIATE RELEASE: 28 JUNE 2016

"CVV" ASX

Shares Outstanding: 50m

# Calingiri Scoping Study confirms outstanding WA Copper Project

- A technically and financially robust project study prepared with CSA Global
- A future low-cost, mid-tier producer
- Life of Mine operating cash surplus of A\$1.5B (after tax) from revenue of A\$7.1B<sup>1</sup>
- NPV<sub>7</sub> pre and post-tax ranges of:

Cu Price	Pre-Tax	Post-tax	
US\$1	<u>NPV7</u> A\$	NPV7 A\$	_
\$2.20	\$ 250M	\$ 130M	
\$2.48	\$ 520M	\$ 330M	
\$2.75*	\$ 800M	\$ 520M	
\$3.03	\$1,070M	\$ 720M	
\$3.30	\$1,350M	\$ 930M	

- Estimated LOM Operating Cash Cost (C1) of A\$1.50/Ib<sup>2</sup> : first five years A\$1.40/Ib<sup>2</sup>
- Low pre-production Capital Cost of A\$440M 3 year Payback
- Production of 90M/lbs in first full year LOM average of 80M/lbs
- 710,000t Cu within the initial mine plan (310Mt @ 0.3% CuEq)<sup>3</sup>, plus by-product
- Significant nearby expansion and organic growth potential
- Tier-1 partner: leading international miner First Quantum Minerals (FQM:TX)
- Three open cut deposits with a low LoM ore to waste ratio of 1:1
- A conventional SAG milling and flotation circuit throughput of 15Mtpa
- Pre-Feasibility Study approved with completion expected H1 2017

"This detailed Scoping Study demonstrates that the Calingiri Copper Project is set to be an outstanding WA copper project. Strong production rates, a long Life of Mine together with low Capex and Opex will likely deliver robust margins and cashflow. We are confident that Calingiri's strong economic and technical merits will enable us to secure the funding required on attractive terms with our current Tier 1 Farm-In partner in First Quantum Minerals, a highly regarded and rapidly growing global resources group operating six mines and developing five projects worldwide. They currently produce copper, nickel, gold, zinc and platinum group metals. This may help ensure Calingiri delivers strong returns for Caravel shareholders. Our forward strategy is focused on the Pre-Feasibility Study that is expected in H1 next year and we intend to continue an aggressive exploration campaign to unlock the full value of the project area." – Caravel CEO, Marcel Hilmer

<sup>&</sup>lt;sup>1</sup> Based on production of 1.56B/lbs US\$2.75 copper price, A\$/US\$ exchange rate of 72c. All amounts in A\$ unless otherwise stated

 $<sup>^2</sup>$  C1 operating costs include all mining and processing costs, site administration, refining and site rehabilitation costs

<sup>&</sup>lt;sup>3</sup> See ASX announcement of 4 April 2016 for JORC Table 1 and herein for further Resource details

<u>Cautionary Statement</u>. Caravel Minerals has concluded it has a reasonable basis for providing the forward looking statements included in this announcement (see also Appendix 2). The detailed reasons for that conclusion are outlined throughout this announcement and additionally, the Mineral Resource material assumptions are disclosed in the Company's ASX announcement of 4 April 2016.

This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules. The Company advises that the Scoping Study results, Production Targets and Forecast Financial Information contained in this announcement are based on mid-level technical and economic assessments that approximate but do not confirm the estimation of Ore Reserves. The outcomes provide a reasonable basis for the Company to release the outcomes whilst not providing an assurance of economic development at this stage. The stated Production Target is based on disclosure in Appendix 2 and the Company's current expectations of future results or events, and the Company has satisfied itself that there is a reasonable basis for the Production Target and forecast financial information derived from the Production Target to be released. Investors are advised that the Production Target may change as additional technical studies are completed including pre-feasibility and feasibility studies and should not be relied upon when making investment decisions. The current mining inventory has an 97.5 : 2.5 proportionate split of Indicated Mineral Resource to Inferred Mineral Resource for the Life of Mine plan (LoM). There is a low level of geological confidence associated with Inferred Mineral Resources (2.5% of the total optimised material) and only 1.1% falls within the first six years of the mining schedule, nonetheless, there is no certainty that further exploration work will result in the determination of indicated mineral resources.

Caravel Minerals Limited (ASX: **CVV**) ("Caravel" or "the Company") is pleased to present the findings of the Calingiri Copper Project Scoping Study ("CSS").

Following the positive outcome of the Scoping Study the Company is preparing to commence its Prefeasibility Study (PFS) on Calingiri, and indeed has completed certain parts of the CSS to a PFS level.

The Scoping Study has 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. Central to the project is the construction of a stand- alone 15 million tonne per annum (Mtpa) ore processing facility. The Company considers the project is economically viable based on its ability to pay back project start-up capital and provide ongoing positive operational cash flows.

As discussed in more detail below, the CSS indicates an initial 20 year LOM for 710,000 tonnes (1.6B/lbs) of copper produced is possible and will be assessed more fully in a detailed Pre-Feasibility Study aimed for completion in H1 2017. Following the delineation of Ore Reserves, the Caravel Board

in conjunction with our partners will then proceed to DFS and determine a project construction timeline that will be dependent on prevailing market conditions.

Calingiri is located in the heart of the Wheatbelt district in Western Australia, only 120km's from Perth. Existing infrastructure within and adjacent to the project, coupled with industry-standard mining and treatment options available to Caravel, make the project a standout new Australian copper project. All material assumptions on which the forecast financial information is based are as follows:

	ble 1: CSS Material Ass	-				
Basis	Project level, pre and	d post-tax, excludi	ng any debt financing			
Development period (Months)	18	18				
Mine life (Years)	20.7	20.7				
Annual throughput	15 MTPA					
Power cost	\$0.10 kWh					
Production rate	Between approximat	ely 60 to 92 M/Lb'	s of Cu per year			
Exchange rate	USD/AUD: 1.39					
Tax and royalty rates	27.5% and 2.5%					
Metal Prices / Recoveries	USD	AUD	Recovery			
Copper \$/Lb1	2.75	3.82	92%			
Silver \$/Oz	17.37	24.14	80%			
Moly \$/Lb	8.00	11.12	90%			
Gold \$/Oz	1,206	1,676	60%			
Float Concentrate %	25%					
Ore Resources (LoM) / Grade						
Total ore MTn	310					
Indicated Resource / %	302	97.5%				
Inferred Resource / %	8	2.5%				
Grade Cu / CuEq	0.26%	0.30%				
Treatment / Refining Inputs	AUD					
Transport \$/Tn	88.00					
Smelting \$/Tn	85.00					
Refining \$/Lb	0.09					
By-product charges \$/lb	1.40					
Reclamation costs A\$M	\$46	-				
Capital Costs (+/- 30%)	AUD	-				
Mining \$M	70					
Processing \$M	250					
Owners \$M	50					
EPCM & Contingency \$M	70					
	440					
Operating Costs (+/- 30%)	AUD					
Mining Tn	2.36					
Processing Tn	6.85					
Administration Tn	0.22					

Table	1.	CSS	Material	Assumptions

Note 1 - A long-term price of \$2.75/lb Cu has been utilised in the study, which is lower than the "Street Consensus Copper Price Estimate" median of US\$2.96 (BMO Report: 14 June 2016 of 44 brokers)

The key outputs from the financial model based on the assumptions detailed herein are reported for the first 5 years of the modelled operation and for the life of mine below and in more detail in Section 10.

		Project	
Project			
Initial LoM	Years	21	
NPV at a Discount Rate of 7% - (Excl. Tax)	A\$M	800	
- (Incl. Tax)		520	
Internal Rate of Return - (Excl. Tax)	%	31%	
- (Incl. Tax)		23%	
Payback Period after Tax	Years	3	
Capital Cost	A\$M	440	
Production		LoM	1st 5 Yrs
Treatment throughput	p.a.	15	
Strip ratio	t:t	1.0	1.0
Quantity Ore Treated	Mt	310	76.0
Copper Eq. Grade	%	0.30%	0.33%
Recoveries Cu	%	92%	92%
Cu sold	KT Cu	710	190
	Mlb Cu	1,600	400
Revenue and Cash Flow			
Average Base Price	\$Lb Cu	US\$2.75	
Net Revenue	A\$ Billion	7.1	1.6
Operating cash flow		2.0	0.4
Net cash flow after tax		1.5	0.2
Total Cash Costs USD		1.50	1.40

#### Table 2: CSS Financial Model Summary

Note 1: Differences within the release may occur due to rounding.

An expanded summary of the sections within the Calingiri Scoping Study follow.

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# 1. Summary

## 1.1 Overview and KPI's

The CSS describes the Mineral Resource estimation and economic analyses to a Scoping Study level for Calingiri, located 120km northeast of Perth in Western Australia. Calingiri consists of 17 tenements covering 760 sq. km. Calingiri is held by Quadrio Resources Limited. This company is a wholly owned subsidiary of Caravel, an Australian listed company. The key outputs are detailed in Table 2 above.

# 1.2 Forward Program

As part of the proposed PFS, further evaluation of the project will be undertaken including:

- Diamond core drilling to provide representative sample material for metallurgical testwork designed to confirm metal recovery and concentrate grade and process design inputs.
- Detailed engineering design
- Geotechnical assessment of open pit design parameters and of the new process plant site
- Additional drilling both to evaluate extensions to existing resources and to test numerous exploration targets
- Hydrogeological logical assessment of water supply requirements.
- Permitting and government approvals
- Further financial modelling

# 2. Introduction

The Scoping Study Report was prepared by CSA Global in conjunction with Caravel, with further contributions commissioned by Caravel and from independent consultants to review the following aspects of the Project:

- Mineral Resource Estimate CSA Global Pty Ltd - Calingiri Copper Project, April 2016
- Mining Study Report CSA Global Pty Ltd – Calingiri Copper Project, May 2016
- Process Plant Capital Cost Estimate Dalesford Pty Ltd – Capital Estimates for the Processing Plant, June 2016
- Power Supply Capital Cost Estimate and Operating Cost Mr Kenneth Clark – Power Supply and Associated Capital Cost Estimates, May 2016
- Tailings Management Design and Capital Cost Estimate
   D E Cooper & Associates Pty Ltd Calingiri Copper Project Tailings Management –
   Preliminary Concepts, May 2016
- Metallurgical Testwork Preliminary SGS Laboratories - metallurgical testwork (various 2010-2013)
- Metallurgical Testwork Advanced
   Arnofio Flotation Services Preliminary Rougher Testing on Caravel Minerals Bindi Copper
   Ore, February, April and June 2016
- Process Plant Design Criteria

Andrew Briggs, QP, BSc(Eng), ARSM, FSAIMM, PEng(NAPEG) – Process Design Criteria, May 2016

- Mining Study Review
  John Gregory, BSc(Hons) Min Eng, CEng, MIMM MAusIMM: external Mine Engineer –
  Review of the mining parameters and optimisation
- Scoping Study Peer Review
   Dan Ryan, external Project Engineer Overall peer review of the Scoping Study inputs and
   reporting

Further contributions were generated by the staff and directors of Caravel.

Unless otherwise stated all units used in this report are metric. Copper assay values are reported as percentages and molybdenum and silver assay values are reported in parts per million (ppm) unless some other unit is specifically stated. Where units of currency are used, these are in AUD dollars (abbreviated to \$ or A\$) unless specifically stated as being in USD Dollars (abbreviated to US\$).

#### 3. Property Description and Location

The Calingiri Project is located 120km NE of Perth within the northern Wheatbelt region of Western Australia. Access from Perth is either via the Great Northern Highway and the Calingiri-Wongan Hills Roads or via the Great Eastern Highway and Goomalling Road (Figure 1). The project is accessible year round via the sealed road network, with some local access via gazetted gravel roads. There is nearby railway infrastructure, used to transport grain products, connecting to the ports of Fremantle and Kwinana (Figure 2).

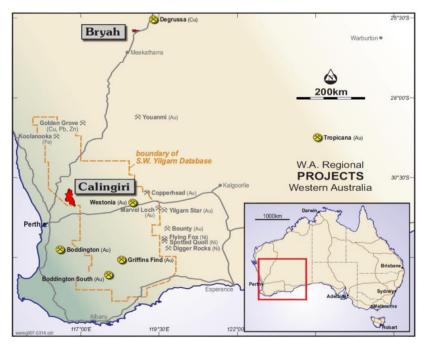
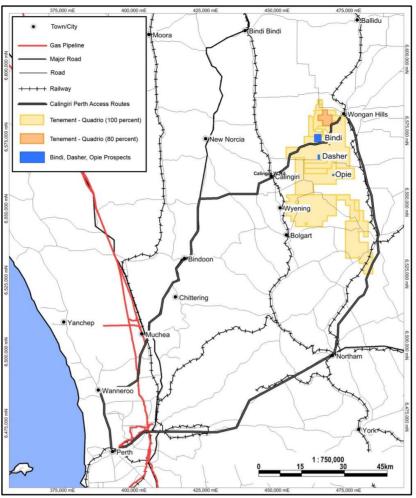


Figure 1: Location of the Calingiri Copper Project



**Figure 2: Location and Access** 



Figure 3: RC Drill Rig on-site at Bindi

Caravel holds 15 Exploration licences (EL) and 2 Prospecting licences (PL) that constitute the project area which comprises an area of 760km. The Company own all licences (100%) with the exception of one tenement (E70/2343) that is 80% owned, with Geodex Resources Pty Ltd retaining a 20% free carried interest until a decision to mine. There are no reported Mineral Resources for Tenement E70/2343.

## 4. Geology and Mineralisation

The Calingiri Project is located in the southwestern corner of the Archean Yilgarn craton. The granitic, volcanic and sedimentary rocks that comprise the craton formed principally between 3.02 and 2.62 Ga, and can be divided into a number of distinct terranes and domains, based on stratigraphic, structural, geochemical and geochronological constraints.

The Calingiri mineralised trend extends southward from the southern tip of the Wongan Hills Greenstone Belt (host to the Ninan mineralisation), and into an area dominated by granite and granitegneiss (host to the Bindi, Dasher and Opie deposits, as presented in Figure 4).

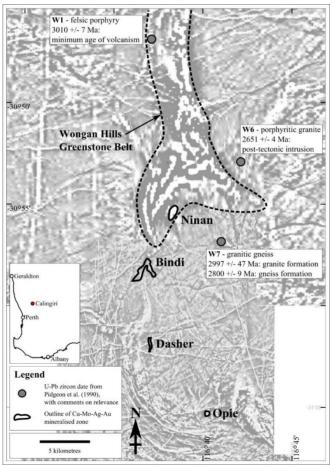


Figure 4: Local geological setting on magnetic image

The mineralisation at Bindi, Dasher and Opie is of a common style. The typical mineralisation consists of chalcopyrite, pyrite ± molybdenite ± magnetite, disseminated within a coarse-grained, quartz-

feldspar-garnet-biotite gneiss. Garnet abundance has a broad spatial association with mineralisation. The garnet-biotite gneiss, and associated mineralisation, typically forms tabular zones in the order of 50–150m true thickness (up to 200m) through the core of the main prospects.

The mineralised zones at Dasher and Opie dip moderately to the east and north, respectively, while the Bindi mineralisation is interpreted to be folded, resulting in the Bindi West (west-dipping) and Bindi East components (dip currently uncertain). Drilling has identified amphibolite lenses at all prospects, and some post-mineralisation granite and pegmatite intrusions. Post-mineralisation dolerite dykes of assumed Proterozoic age are common.

The sulphide mineralisation is developed in fresh bedrock generally at depths of 5m - 50m beneath a regolith cover of in situ saprolitic clays. There is a variable 1m - 10m thick layer of sands and gravels beneath a thin soil horizon.

#### 5. Mineral Resources

Mineral Resource estimation for the Bindi, Dasher and Opie Prospects has been carried out by CSA Global. The Mineral Resource is classified as a combination of Indicated and Inferred, and has been reported in accordance with The JORC Code (2012 Edition), with geological evidence sufficient to assume geological and grade continuity for the Indicated Mineral Resource. Classification of the Mineral Resource estimates was carried out taking into account the geological understanding of the deposit, quality of the sampling and density data and drill hole spacing.

Mineral Resource classification took into account the geological confidence of the interpretation, the results of the interpolation performance and the engineering assessment of recoverability of resources.

The Mineral Resource was reported above a 0.25% copper cut-off as shown in Table 3.

Consolidated Indicated and Inferred Resource Estimate (0.25% Cut-off)							
Classification Tonnes (MT) Cu % Cu Eq % * Cu Metal (T)							
Indicated	187	0.34	0.38	626,300			
Inferred	64	0.34	0.38	218,000			
Total	251	0.34	0.38	844,300			

Table	3:	Resource	Estimate
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\* See Appendix 3 for details of CuEq% calculation and parameters

Three additional Mineral Resource estimates were also released including a total of 143 Mt @ 0.38% for 549,800 tonnes copper at a higher cut-off grade of 0.30% and 530 Mt @ 0.27% for 1,407,900 tonnes copper at a lower cut-off grade of 0.15%. Details of the individual resource estimates for the Bindi, Dasher and Opie deposits, at various cut-off grades, are provided in Appendix 3.

# 6. Mining

Caravel requested CSA Global to undertake a Mining Study on three Mineral Resource estimates for Calingiri which consists of the Bindi, Dasher and Opie polymetallic deposits. The purpose of the study was to identify the mining potential and development opportunities using agreed economic parameters.

The study investigated the economic potential for mining the deposits using open-cut methods with the most recently completed Mineral Resource block models and applying the most current economic inputs, selling prices, recoveries, operating costs and associated parameters.

The deposits all host four elements, namely copper (Cu), molybdenum (Mo), silver (Ag) and gold (Au).

**Table 4: Summary by Pit Optimisation** 

The Calingiri Copper pit optimisation results are summarised in Table 4

Scenario	Unit	Bindi	Dasher	Opie	Total / Average
Pit Shell	#	35	47	32	
Revenue Factor	RF	0.88	1.00	1.00	
Total Mined – Rock	Mt	431.9	145.4	41.2	618.7
Total Mined – Waste	Mt	189.9	93.2	25.0	308.6
Strip Ratio (S/R)	W:O	0.8	1.8	1.5	1.0
Indicated Feed Tonnes	%	98.5	94.4	91.7	97.5
Process Feed	Mt	241.9	52.1	16.3	310.1
Process Feed Grade - Cu	%	0.254	0.291	0.284	0.262
Process Feed Grade - Mo	%	0.0053	0.0066	0.0038	0.0054
Process Feed Grade - Ag	g/t	1.11	1.84	1.95	1.27
Process Feed Grade - Au	g/t	0.0365	0.0296	0.0474	0.0357
Metal Produced - Cu	kt	565.4	139.6	42.5	747.5
Metal Produced - Mo	kt	11.5	3.1	0.6	15.2
Metal Produced - Ag	k-oz	6,889	2,466	817	10,172
Metal Produced - Au	k-oz	170	30	15	215
Indicative Mining unit rate	\$/t	2.35	2.33	2.27	2.32
Indicative Processing unit rate	\$/t ore	7.86	8.16	8.56	7.95

Note 1: The table above reflects adjustments for ore losses and diluted grade. Differences may occur due to rounding.

Note 2: Metal produced is defined as before smelting recovery

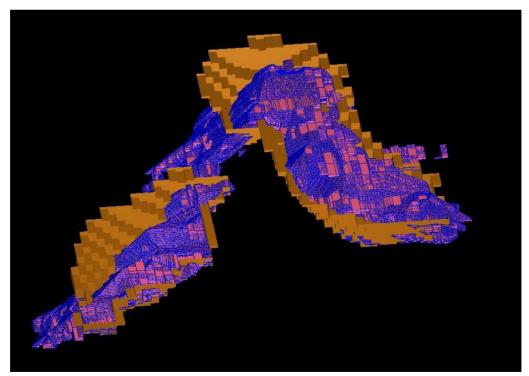
The above results include both Indicated and Inferred material. However, the proportions of Inferred material are small (Bindi 1.5%, Dasher 5.6% Opie 8.3% - overall 2.5%).

The low amount of inferred material (2.5%) within the mining schedule is further emphasised in that only 1.1% of inferred material falls within the first six years of the schedule (2018 - 2023 inclusive).



The following graph's summarise the total tonnes and strip ratio by year over the LoM (15 Mtpa) (Figure 5).

Figure 5: Calingiri Total Ore, Waste and Strip ratio over the LoM



The chosen pit shells for Bindi, Dasher and Opie are shown below in these screen captures:

Figure 6: Bindi oblique with Cu>0.2%

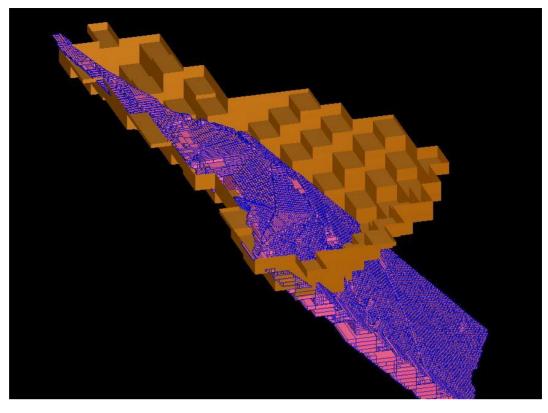


Figure 7: Dasher oblique with Cu>0.2%

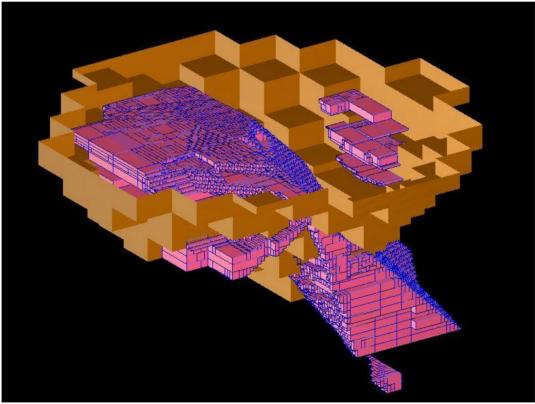


Figure 8: Opie oblique with Cu>0.2%

All three deposits exhibit high tonnage and low grade copper with minor contributions from molybdenum, silver and gold.

The aim of the Mining Schedule is to deliver 15 Mtpa to the plant whilst maintaining a smooth annual mining movement. Bindi requires a pre-strip of the surficial transported sands and gravels and regolith clays, which are developed to maximum depths of 50m, in its first 12 months to 18 months before being able to sustain the plant feed requirements. At Dasher, where plant feed material is at much shallower depths, the pre-strip requirement is considerably less. Each of the chosen pit shells were broken into 10m benches that were fed into the scheduler to determine the most suitable mix of material.

# 7. Plant Design and Mineral Processing

# 7.1 General

The proposed plant design for the Calingiri Copper Project is based on well understood and proven technology. The flowsheet has been established based on metallurgical testwork (see Section 7.3 for more detail) performed at the SGS Laboratories and Arnofio Metallurgical Laboratories in Perth between 2010 and 2016. Metallurgical testwork performed to date has been principally directed at flotation.

Preliminary capital and operating cost estimates have been developed for a process plant treating 15.0 Mt/a of sulphide ore.

The proposed process flowsheet consists of:

- Crushing and ore stockpiling
- Grinding
- Flotation
- Concentrate handling
- Molybdenum Recovery
- Tailings disposal
- Reagent mixing, storage and distribution
- Water and power supply
- Other services

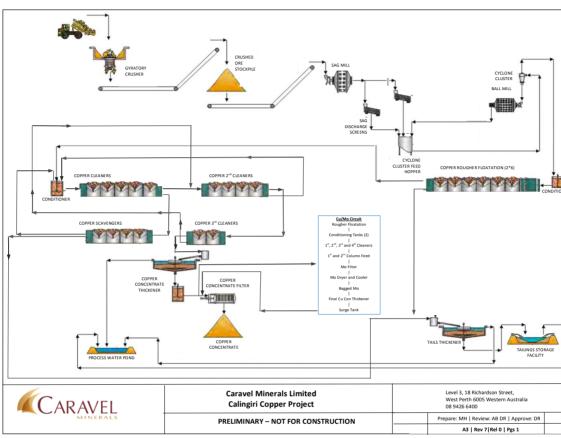
Detailed plant design is based on preliminary data:

- Process design criteria.
- Equipment lists (preliminary).
- Process flow diagrams (PFDs) (Hand Marked)

Mill availability has been designed conservatively at 91.3% (8,000 h/a) equating to a mill feed rate of 1,875 t/h.

The following sections describe the basis of the Calingiri plant using a SAG/ball mill circuit.

# 7.2 Plant Design



The hand marked process flow diagram is shown below in Figure 9.

Figure 9: Schematic Calingiri Flowsheet

# 7.3 Mineralogy and Metallurgy

The Calingiri mineralisation is characterized by simple ore mineralogy. All of the copper is in the form of chalcopyrite. Pyrite is the only other significant sulphide (cpy:py variable 3:1 to 1:1). All sulphides, including molybdenite, are relatively coarse grained. The gangue is dominantly silicates (quartz, feldspar, epidote, chlorite, garnet) with minor magnetite. As with the sulphides, the granulite facies metamorphic overprint gives a dominantly coarse grained texture.

These mineralogical characteristics are believed to be highly favorable for both relatively high metallurgical recovery and the potential for the production of high quality concentrates from standard flotation flow sheets.

Initial metallurgical testwork has been undertaken, by SGS Laboratories and Arnofio Metallurgical Laboratory, on representative bulk samples, collected from RC drilling samples from each of the Bindi, Dasher and Opie Prospects. Results indicate consistently high (90% plus) copper and molybdenum

recoveries at all grind sizes (106, 150 and 212 microns). The figures below show that the rougher flotation recovery of Cu is relatively insensitive to primary grind size and pH and similar results were obtained for Mo..

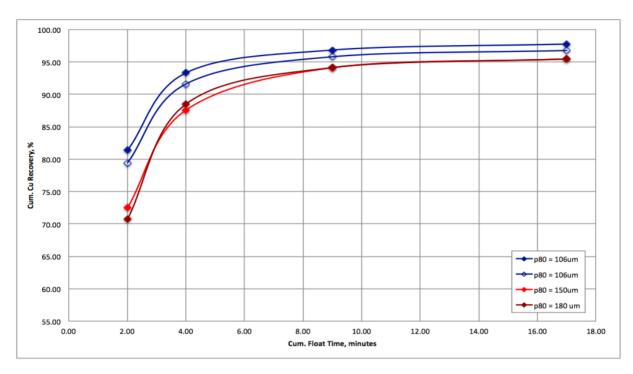


Figure 10: Copper Kinetic Curves for Rougher Flotation Testing of Grind Size on Bulk Bindi Copper Ore

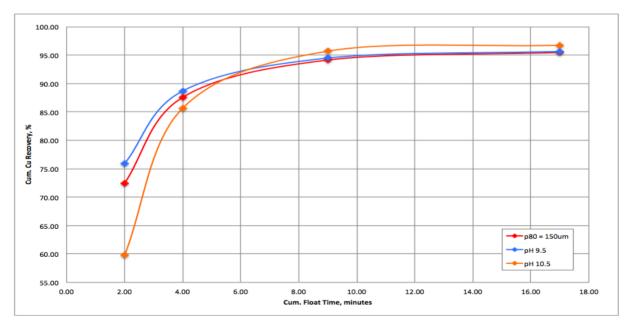


Figure 11: Copper Kinetic Curves for Rougher Flotation Testing of Flotation pH on Bulk Bindi Copper Ore

The use of RC samples, while giving good representation of average grades, is not ideal as the samples are significantly ground to an unrepresentative grain size in the drilling process. Accordingly, until representative diamond core samples are available, only rougher testwork has been carried out.

However, the results to date are believed to provide a reasonable basis for recovery and concentrate grade assumptions.

#### 7.4 Processing and Production

The following plant areas have been referenced in the process design data in the CSS:

- Area 10 Crushing
- Area 20 Grinding
- Area 35 Flotation
- Area 40 Concentrate handling
- Area 45 Molybdenum (Moly) Recovery
- Area 65 Tailings disposal
- Area 90 Reagents
- Area 95 Services

The total production and CuEq grade over the LoM is shown in Figure 12.

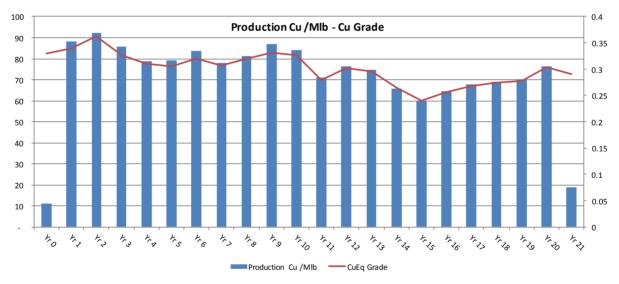


Figure 12: Calingiri Annual Copper Production and CuEq over LoM

#### 8. Infrastructure

#### 8.1 General

The Calingiri Project is located 120km NE of Perth within the northern wheatbelt region of Western Australia. Access from Perth is either via the Great Northern Highway and the Calingiri-Wongan Hills Roads or via the Great Eastern Highway and Goomalling Road. The project is accessible year round

via the sealed road network, with some local access via gazetted gravel roads. There is nearby railway infrastructure, used to transport grain products, connecting to the ports of Fremantle and Kwinana.

## 8.2 Power Supply

A preliminary report was prepared by an external engineering consultant, Mr Kenneth Clark. He concluded that the plant and mine power requirements are estimated to be around 45MW, and it will be necessary to design and construct an upgraded or new powerline and substation system linking the plant to the Western Power ("WP") SWIS (South Western Interconnect System). There is a WP substation at Moora, which is supplied at 132kV from Muchea in the South and Three Springs in the North. Both of these locations are linked to a new 330kV powerline which connects Perth with Geraldton, and therefore the power limitation at Moora depends only on the capacity of the two 132kV powerlines and not on the overall WP grid network capacity.

In meetings with WP, they have advised that the existing powerline from Moora to Wongan Hills, close to the proposed minesite, is constructed to 132kV standards although energised only to 33kV The conductor, which is called 'Grape' has a short distance current rating of 350A, which is higher than the required current capability of 207A (45MW), however over the line length of approximately 90km the power transfer capacity will be reduced due to the surge impedance of the line. A power system study will be required to determine the actual power transfer capacity of the line and any measures necessary to increase the capacity. A number of assumptions have been made to help select a suitable power supply system.

A new 132kV powerline feeder bay would be installed at Moora and connected to the existing powerline to Wongan Hills where a new 132/33kV substation would be constructed comprising a powerline incomer bay, two transformer bays and a powerline bay feeding the powerline to Calingiri. The transformers will each be rated at 132/33kV 33MVA, which is a standard for WP. A 33kV switchboard would be installed to provide 33kV to the village and neighboring farms.

A new 132kV steel pole powerline would be constructed from Wongan Hills, terminating at the new plant substation which would comprise a 132kV powerline incomer bay and three transformer bays each including a 33kV 33MVA transformer to supply the plant via a 33kV indoor switchboard.

# 8.3 Water Supply

Based on the experience of the extensive exploration drilling and in discussion with experienced WA based hydrologists, it has been demonstrated that there is abundant water within a perched water table, generally located within the upper part of the regolith, possibly at the contact between the upper sands and gravels and the underlying saprolitic clays generally at depths of 10m-15m. This water is generally of good quality. Drilling has also encountered significant groundwater within fresh bedrock – it generally requires high air pressure to keep drilling samples dry and multiple, large sumps are needed to contain

water during drilling. This water is probably associated with fractured rock aquifers and is of mixed quality. Ultimately the fresh rock aquifers may be the main long term source of supply. The Company has a reasonable basis to conclude that there will not be an issue with water supply but will undertake hydrogeological investigations and studies as part of the PFS.

#### 8.4 Transport

There are sealed roads and railway lines with close proximity to the project site. They are in good order and suitable for purpose. There are a number of ports located within Western Australia that are suitable for the shipping of copper concentrate.

## 8.5 Site Communication

The project is located in a first-world highly developed and populated region where telephone and highspeed data infrastructure is in place.

For internal communication there will be a system of radio communications for the mining operation as well as supervision in the process plant.

The process plant and offices will be provided with an IT network linking to the group network. The network will be used for process control, e-mail, Internet and for intercompany access.

# 8.6 Tailings Management

A preliminary assessment and report was prepared by an external engineering consultants, D E Cooper & Associates Pty Ltd. The tailings storage facility (TSF) will be constructed as part of the overall project infrastructure. The TSF will be progressively developed over the 20 year life of the project. The storage will be conventional with the tailings discharged sub aerially forming long beaches with the water associated with the tailings flowing to the central decant for recovery. The tailings water plus rainfall runoff will be returned to the process plant for re-use.

A number of options were considered by the consultant and a 4 cell option where the project will use four (4) smaller (relatively) cells (with two operating for the first 10 years and then the second two operating for the next 10 years) was recommended. Each pair of cells would have the combined area of 600 ha. Each 300 ha cell would have a diameter of around 1 950 m, with a combined embankment length of 12 000 m or around 50% more than for a single 600 ha cell. The initial embankment construction for two 300 ha cells would therefore be likely to be more expensive than for a single 600 ha cell.

However, water recovery would be improved and the efficiency of the initial embankments would also be improved i.e. the dish losses would be less even with conventional peripheral discharge. Noting the first pair of cells would have to be constructed prior to commissioning of the plant – assuming a start-

up throughput of 15 Mt/a - as the RR would be too high if only a single 300 ha cell was available. No estimates of water recovery are available at this time however it could expect that there would be an improvement over the single 600 ha cell. An annual figure of 25% recovery should be used at this stage when calculating the make-up water requirements.

The smaller cells would also be more efficient in terms of initial storage capacity i.e. the dish losses would be lower. The pair of 300 ha cells, with 7.5 m high embankments, would provide for approximately 2 years storage.

The embankments would then need to be raised. Based on experience at the Thunderbox Gold Mine, having two operating cells would make embankment construction significantly more efficient as all of the pipework could be removed on the first cell, allowing the embankment to be raised, while all of the tailings are placed into the second cell. A typical embankment cross section is given on Figure 13

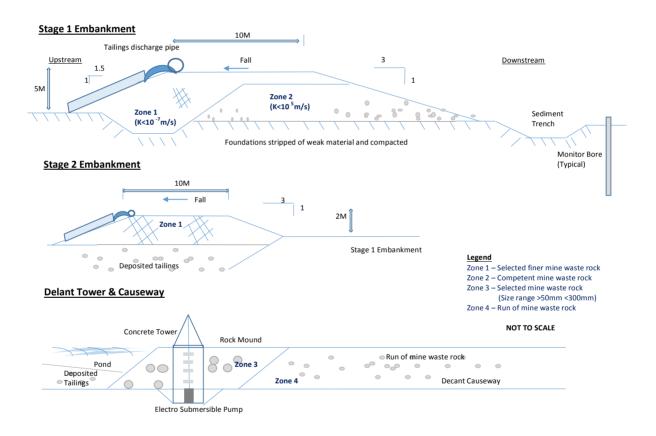


Figure 13: Typical embankment cross section

# 9. Capital and Operating Costs

# 9.1 Introduction

The project consists of the development of a new copper mine and minimal infrastructure, approximately 120 km northeast from Perth, Western Australia.

Capital and Operating Costs have been determined by:

- Dalesford Pty Ltd Capital Estimates for the Processing Plant and Associated Infrastructure
- Kenneth Clark Power Supply and associated Capital Cost Estimates
- D E Cooper & Associates Pty Ltd Calingiri Copper Project Tailings Management Preliminary Concepts
- Andrew Briggs, QP, BSc(Eng), ARSM, FSAIMM, PEng(NAPEG) Process Design Criteria
- CSA Global scheduled mining capital and operating costs
- Dan Ryan Independent peer review
- Caravel Some equipment OEM costs, water, owner's infrastructure

All costs are quoted as at June 2016 in AUD with the exception of Operating Costs per Lb Cu that are quoted in USD. The overall capital estimates are considered to have an accuracy of  $\pm 30\%$ .

# 9.2 Total Capital Costs

The capital cost has been developed by highly experienced estimators. Project capital cost is based on costs derived from similar recent projects with similar flowsheets, quantities have been prorated from completed projects, budget estimates obtained directly from suppliers and service providers. This includes relevant major equipment. The main access roads are in place.

The overall initial construction capital and mining equipment build-up is summarised in . A value is also provided for the initial operating costs.

Capital Items	Est. Cost \$/M
Process plant, first fill & spares	250
Mining capital & pre-strip	70
Tailings disposal	10
Bulk water supply	10
Power supply & substation	20
Owner's and other outlays	10
EPCM	30
Contingency	40
Project Capital	440
Sustaining capital (life-of-mine)	110

The capital cost estimate for a 15 Mt/a **process plant** and site infrastructure was externally developed based on an engineering, procurement and construction management (EPCM) contracting strategy. The plant area includes: crushing, stockpiling, milling, flotation both Cu and Mo, concentrate handling, tailings disposal, various reagents, plant infrastructure, spares, first fills, commissioning and temporary facilities as defined in the scope of work set out herein.

The estimate for scope of work is: A\$440M (including EPCM and contingency).

The capital estimate is structured to encompass the following major categories.

- Direct capital costs include expenditures incurred during the implementation of the project for the construction of the process plant and infrastructure complete with all associated plant and equipment. The costs include permanent materials and equipment, freight to site, contractors' construction labour, equipment, supervision, overheads and profit, temporary construction facilities, construction mobile equipment, accommodation of construction labour and contractor mobilisation and demobilisation
- Indirect costs are those expenditures covering temporary construction facilities, engineering, procurement and construction management (EPCM) services and owner's costs

The estimate has been prepared in accordance with and conforms to the requirements for a Scoping Study.

# 9.3 Operating Costs

Operating costs were determined based on estimates from metallurgical testwork, first-hand experience from similar operations, first principles, contractor estimates and current supplier costs, and are considered to be estimated to  $\pm 30\%$  with effective date of June 2016. All costs are presented in AUD (A\$) with the exception of Cash Costs that are presented in USD (US\$).

The life-of-mine average cost per run-of-mine (ROM) tonne is \$10.09/t or US\$1.49/lb. These average unit costs are summarized by major cost items in Table 6. The highest unit costs are mining cost and processing cost.

ltom	Cost	Cost	Cost	Cost (US\$/lb Cu	%
Item	(A\$/t of ore Yr. 1-5)	(A\$/t of ore LoM)	(US\$/lb Cu Yr. 1-5)	LoM)	of Cost
Mining	4.58	4.43	0.59	0.63	42%
Processing	6.85	6.85	0.89	0.98	66%
G&A	0.22	0.22	0.07	0.08	6%
Metal Credits	-3.86	-3.69	-0.50	-0.53	-35%
TC/RC	2.57	2.28	0.33	0.33	22%
Total	10.36	10.09	1.40	1.50	

 Table 6: Summary of Total Operating Costs

Note 1: Differences to the Scoping Study report and within the release may occur due to rounding.

#### 9.3.1 Process Plant

The average life-of-mine (LOM) process operating cost has been estimated for the design ore type assaying 0.3% Cu, based on testwork data, material costs and rates derived from data supplied by manufacturers, contractors and consultants.

The process operating costs for the Calingiri Project reflect a throughput of 15 Mt/a. The accuracy of the operating cost estimates is  $\pm 30\%$  and reflects the plant operating at design capacity.

A breakdown of the process plant operating costs is illustrated in Table 7 including details of total annual cost, cost per tonne of ore crushed and cost per pound of Cu produced.

Item	A\$M/a	A\$/t ore	US\$/Ib Cu
Reagents	26	1.73	0.25
Liners and Balls	22	1.46	0.21
Maintenance	7	0.48	0.07
Labour Costs	12	0.83	0.12
Power	30	1.97	0.28
Consumables	4	0.23	0.03
Total	101	6.70	0.96

#### Table 7: Summary of Process Operating Costs

#### 9.3.2 Mine Operating Costs

A base mining cost of \$2.00/t mined was applied for this study. To this base cost, a mining cost adjustment factor of \$0.05/t/10m was applied. This is considered the localised industry norm for an earthmoving contractor to be utilised on a large mining project for this region.

The following battery limits were applied to the above mining costs:

- All load and haul activity (including all ancillary equipment and consumables)
- All drill and blast activity (including all magazines, drill rigs and consumables and pre-splitting)
- Fuel usage costs relating to the above mining equipment
- All service and maintenance relating to the above plant
- All fixed costs relating to contractor workshops, offices, staffing, vehicles and overheads
- Clearing and grubbing and topsoil removal
- Pit dewatering activities
- Rehabilitation costs were also added to mining costs within the pit optimisation

# 10. Economic Analysis

### 10.1 Financial Model Outcomes

The key outputs from the financial model based on the assumptions detailed herein are reported for the first 5 years of the modelled operation and for the life of mine in Table 8

Table 8: CSS Finan	icial Model Summ	ary	
		Project	
Project			
Initial LoM	Years	21	
NPV at a Discount Rate of 7% - (Excl. Tax)	A\$M	800	
- (Incl. Tax)		520	
Internal Rate of Return - (Excl. Tax)	%	31%	
- (Incl. Tax)		23%	
Payback Period after Tax	Years	3	
Capital Cost	A\$M	440	
Production		LoM	1st 5 Yrs
Treatment throughput	p.a.	15	
Strip ratio	t:t	1.0	1.0
Quantity Ore Treated	Mt	310	76.0
Copper Eq. Grade	%	0.30%	0.33%
Recoveries Cu	%	92%	92%
Cu sold	KT Cu	710	190
	Mlb Cu	1,600	400
Revenue and Cash Flow			
Average Base Price	\$Lb Cu	US\$2.75	
Net Revenue	A\$ Billion	7.1	1.6
Operating cash flow		2.0	0.4
Net cash flow after tax		1.5	0.2
Total Cash Costs USD		1.50	1.40

Table 8.	CSS	Financial	Model	Summary
Table 0.	CDD	<b>F</b> manual	MUUUU	Summary

Note 1: Differences to the Scoping Study report and within the release may occur due to rounding. . FX: US\$1.00 to A\$0.72

# 10.2 Sensitivity Analysis

Sensitivity analyses have been undertaken on key parameters within the financial model to assess the impact of changes upon project pre-tax and post-tax cash flows, NPV and IRR (Table 9)

In assessing the sensitivity of the project returns, each of the parameters has been varied independently of the others. Accordingly, combined positive or negative variations in any of these parameters may have a more marked effect on the forecast positive or negative economics of the project than will the individual variations considered.

Table 9. Sensitivity of Financial Widdening Analysis										
Parameter/ Variation	Val	ue	Pre-tax NPV (A\$M. DR 7%)	Post-tax NPV (A\$M. DR 7%)						
Cu Price	Cu Price	(US\$/lb)								
-20%	2.2	20	250	130						
-10%	2.4	18	520	330						
Base	2.7	75	800	520						
10%	3.0	)3	1070	720						
20%	3.3	30	1350	930						
Capital Costs	Capital Co	ost (A\$M)								
20%	53	0	720	460						
10%	49	0	760	490						
Base	44	0	800	520						
-10%	40	0	840	560						
-20%	36	0	880	590						
Operating Costs (C1)	Avg Cash Co	sts (US\$/lb)								
	First 5 Years	Life of Mine								
20%	1.30	1.30	580	370						
10%	1.30	1.40	690	450						
Base	1.40	1.50	800	520						
-10%	1.50	1.60	910	600						
-20%	1.60	1.70	1010	680						
Note 1: Differences to the Scoping Study report and within the release may occur due to rounding.										

#### Table 9: Sensitivity of Financial Modelling Analysis

#### **CAUTIONARY STATEMENT**

The results of the economic analysis are based on forward-looking information that are subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Forward-looking information includes commodity prices and exchange rates; the proposed mine production plan; projected plant head grade and recovery rates; uncertainties and risks regarding the estimated capital and operating costs; uncertainties and risks regarding cost estimates and completion schedule for the proposed Project infrastructure, including the need to obtain additional permits and governmental approval. See also Appendix 2 and page 2 additional Cautionary Statement.

#### 11. Project Implementation

The overall management of the Calingiri Project will be the responsibility of Caravel, who will appoint an Engineering Contractor to be responsible for development of the treatment plant and associated infrastructure and services that are the subject of the CSS.

Development of the associated mining operations during this period is assumed to be the responsibility of Caravel.

For the purposes of the study, it has been assumed that after a decision has been taken to proceed, Caravel, will award a contract for implementation of the Project on an Engineering, Procurement and Construction Management (EPCM) basis.

The engineer will execute the engineering, design and procurement from its home office and will maintain direct construction management from the plant site.

The Principal's Project Team will be headed by an Owner's Representative who will oversee the contract. The composition of the team will vary as the project proceeds through the design phase into construction and commissioning.

The EPCM contractor's project team will be headed by the Project Manager who will manage work to be performed under the terms of the contract. Composition of the team will vary as the Project proceeds through the design phase into construction and commissioning.

The project schedule has not been developed at this point in the project but will be based on a fast track approach being adopted by both the Principal and Contractor, with minimum allowance for all disciplines. The grinding mills, flotation cells and concentrate filter are expected to be the items of equipment with the longest lead times and should be ordered as early as possible.

#### 12. Interpretation

A preliminary assessment of the project risks including economic, engineering and other technical risks was undertaken and reported in the CSS. A summary of those risks are listed in Table 10

Item	Assessed Risk to Project
Copper price	Moderate
Operating cost overrun	Low to Moderate
Mining contractor rates and under-performance	Low to Moderate
Mine operating costs overrun (sustained increase in labour / materials costs)	Low to Moderate
Timely availability of water supply	Low to Moderate
Operating cost over-run	Low
Resource under performs	Low to Moderate
Scheduling and production time not achieved	Low to Moderate
Adequacy of power supply	Low to Moderate
Qualified personnel availability	Low to Moderate
Ramp-up schedule over-run	Low to Moderate
Capital cost over-run	Low to Moderate
Mobile equipment poor availability	Low
Late completion of mine pioneering works	Low
Failure to achieve plate throughput	Low
Project construction delays	Low to Moderate
Project funding	Low
Foreign exchange variation	Low
Geo-political and environmental	Low
Permits refused or seriously delayed	Low
Royalty and Tax rate increases	Low

Table 10: Non-Resource / Mining Economic and Technical Risk Assessment

**Copper price** risk has been assessed as moderate as the project is sensitive to price changes as detailed in Section 10. A long-term price of \$2.75/lb Cu has been utilised in the study, which is lower than the "Street Consensus Copper Price Estimate" median of US\$2.96 (BMO Report: 14 June 2016 –

44 Brokers). There has historically been a converse relationship between the copper price and the strength of the AUD against the USD. There has therefore been a natural, market driven hedge that can negate to some extend the impacts of material changes in the price of copper.

**Project funding** risk has been assessed as low. This conclusion has been reached after considering many factors including the importance of the Calingiri Project long-term farm-in partner, First Quantum Minerals Limited. They are a highly regarded and rapidly growing global resources group operating six mines and developing five projects worldwide. FQM currently produces copper, nickel, gold, zinc and platinum group metals across Australia, Africa and Europe. In addition, they are developing projects in Zambia, Peru and Panama. FQM's recent market capitalisation is in excess of C\$6 billion with both capacity and capability to fund the project. Additionally, and as detailed in the table above and further in the CSS, a low or low to moderate risk was attributed to many modifying factors including mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

**ENDS** 

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#### **Appendix 1. Competent Person's Statement**

The information in this report that relates to Mineral Resources is based on information and supporting documentation compiled by Mr David Williams and Tony Poustie. Mr David Williams, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy is employed by CSA Global Pty Ltd, an independent consulting company. Mr Tony Poustie, a Competent Person, who is a Fellow of the Australasian Institute of Mining and Metallurgy is a full-time employee of Caravel Minerals Limited. Mr Williams and Mr. Poustie have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Williams and Mr Poustie consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Where the Company refers to the Mineral Resources in this report (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the resource estimate with that announcement continue to apply and have not materially changed.

#### Appendix 2. Forward Looking and Cautionary Statements

This announcement has been prepared in compliance with the current JORC Code 2012 Edition and the ASX Listing Rules. All material assumptions on which the forecast financial information is based have been included in this announcement, and are also outlined in Appendix 3.

The Company notes that an Inferred Mineral Resource has a lower level of confidence than an Indicated Mineral Resource and that the JORC Code 2012 advises that to be an Inferred Mineral Resource it is reasonable to expect that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration. Based on advice from relevant Competent Persons, the Company is confident that a significant portion of the Inferred Mineral Resources that accounts for 2.5% of the total resource will be upgraded to Indicated Mineral Resources with further exploration work. The low amount of inferred material (2.5%) within the mining schedule is further emphasised in that only 1.1% of inferred material falls within the first six years of the schedule (2018 – 2023 inclusive).

The Calingiri Project geology and mineralisation are well understood across all three deposits: Bindi, Dasher and Opie. This provides Caravel with a high level of confidence it understands the lithology and mineralisation characteristics of the deposits that comprise the project.

The Company believes it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any Production Targets and economic evaluation based on information contained in this announcement and in particular:

- In relation to Mineral Resources, the Company confirms that all material assumptions and technical parameters that underpin the relevant market announcement continue to apply and have not materially changed.
- Caravel has a small but highly experienced board with a proven track record in discovering, developing and mining in Western Australian and globally. In particular Mr Peter Alexander, Non-Executive Director of Caravel, was previously the Managing Director of Dominion Mining Limited, where he oversaw its substantial growth from a small explorer to a mid-cap gold mining company, at which time it was acquired by Kingsgate Consolidated Limited and where Mr Alexander remains as a Non-Executive Director. Further, Mr Marcel Hilmer, Caravel's CEO has an extensive career in developing copper and uranium projects in Africa and elsewhere with First Quantum Minerals and Forsys Metals.
- Caravel's executive team also includes Mr Tony Poustie, a fellow of the Australian Institute of Mining and Metallurgy. He is a geologist with 47 years international experience in mineral exploration, resource definition, project evaluation and development, and mining. He was General Manager Exploration from 1998 until the takeover of Dominion by Kingsgate Consolidated Limited in 2011, when he took on the role of Chief Geologist.

- The Calingiri Project long-term farm-in partner, First Quantum Minerals Limited are a highly
  regarded and rapidly growing global resources group operating six mines and developing five
  projects worldwide. FQM currently produces copper, nickel, gold, zinc and platinum group
  metals across Australia, Africa and Europe. In addition, they are developing projects in Zambia,
  Peru and Panama. FQM's recent market capitalisation is in excess of C\$6 billion with both
  capacity and capability to fund the project.
- The project is located on granted Exploration and Prospecting Licences and no Native Title claims exist within the area of the proposed development.
- Mr Paul O'Callaghan, BEng (Mining) M.AusIMM is a full time employee of CSA Global Pty Ltd, and has sufficient relevant experience to advise Caravel on matters relating to mine design, mine scheduling, mining methodology and mining costs for the project. Mr O'Callaghan is satisfied that the information provided in this ASX announcement has been determined to a Scoping Study level of accuracy and, based on the data provided by Caravel and external consultants, considers that there is a reasonable likelihood that progress to a Pre-feasibility Study can be justified.
- Mrs Rachel Morgan-Jones, Principal of Arnofio Flotation Services, with over 20 years of experience as a specialist bench scale flotation consultant, has sufficient experience to advise Caravel on matters relating to metallurgical testwork programs and outcomes relating to grade and recoveries. Supplementing these works, additional laboratory tests were undertaken by SGS Laboratories between 2010 to 2013.
- Mr Peter Rooke, Principal of Dalesford Pty Ltd, a process engineer with over 30 years' experience with capital cost estimates for a significant number of projects in Australia and globally and with sufficient experience to advise Caravel on the design and capital cost estimates for the project's processing plant.
- Mr Doug Cooper, Principal of D.E Cooper and Associates, a geotechnical engineer with over 40 years' experience has sufficient experience to advise Caravel on matters relating to geotechnical matters relating to open pit mines for the project.
- The Company has a Technical Cooperation Agreement with First Quantum Minerals and considerable additional assistance was provided by suitably qualified employees in the areas of resource definition, human resources, process plant design, mining schedules and capital and operating costs.

# Appendix 3. Indicated and Inferred Resource Tables and Copper Equivalent Calculation and Parameters

	Indicated and Inferred Resource Estimate (0.30% Cut-off)									
Prospect	Classification	Tonnes (MT)	Cu %	Mo ppm	Ag ppm	Au ppb	Cu Eq %	Cu Metal (T)		
Bindi	Indicated	71	0.39	64	1.3	22	0.42	274,591		
BITU	Inferred	7	0.35	43	1.4	21	0.36	24,467		
Dasher	Indicated	27	0.38	87	2.4	15	0.43	103,430		
Dasilei	Inferred	29	0.39	89	2.1	33	0.45	114,171		
Opie	Indicated	7	0.37	40	2.3	48	0.42	27,026		
	Inferred	2	0.37	35	2.1	32	0.41	6,113		
Totals	Indicated	106	0.38	68	1.7	22	0.42	405,047		
	Inferred	38	0.39	78	2.0	20	0.43	144,751		

	Indicated and Inferred Resource Estimate (0.25% Cut-off)									
Prospect	Classification	Tonnes (MT)	Cu %	Mo ppm	Ag ppm	Au ppb	Cu Eq %	Cu Metal (T)		
Bindi	Indicated	137	0.33	59	1.3	21	0.37	452,678		
Billui	Inferred	15	0.31	40	1.3	21	0.31	45,461		
Dasher	Indicated	38	0.35	79	2.2	15	0.40	134,841		
Dastier	Inferred	47	0.35	96	1.9	29	0.40	163,812		
Onio	Indicated	12	0.34	39	2.1	42	0.38	38,760		
Opie li	Inferred	3	0.33	35	2.1	28	0.37	8,749		
Totals	Indicated	187	0.34	62	1.5	21	0.38	626,279		
	Inferred	64	0.34	80	1.8	27	0.38	218,022		

	Indicated and Inferred Resource Estimate (0.20% Cut-off)									
Prospect	Classification	Tonnes (MT)	Cu %	Mo ppm	Ag ppm	Au ppb	Cu Eq %	Cu Metal (T)		
Bindi	Indicated	235	0.29	55	1.20	19	0.33	672,417		
ыпш	Inferred	32	0.26	36	1.2	18	0.26	84,644		
Dasher	Indicated	47	0.33	72	2.1	14	0.37	155,310		
Dasher	Inferred	69	0.31	81	1.6	24	0.35	212,594		
Opie	Indicated	15	0.31	39	2.0	38	0.35	47,178		
Opie	Inferred	3	0.31	33	2.0	26	0.35	10,362		
Totals	Indicated	297	0.29	57	1.4	19	0.33	874,905		
	Inferred	105	0.29	65	1.5	22	0.32	307,600		

Indicated and Inferred Resource Estimate (0.15% Cut-off)									
Prospect	Classification	Tonnes (MT)	Cu %	Mo ppm	Ag ppm	Au ppb	Cu Eq %	Cu Metal (T)	
Bindi	Indicated	319	0.26	52	1.15	18	0.30	821,014	
ыпш	Inferred	52	0.23	33	1.1	16	0.23	120,018	
Dasher	Indicated	54	0.31	68	2.0	13	0.35	167,562	
Dasilei	Inferred	83	0.29	74	1.5	23	0.33	237,266	
Opie –	Indicated	18	0.29	40	2.0	36	0.33	51,210	
	Inferred	4	0.30	33	1.9	26	0.34	10,845	
Totals	Indicated	390	0.27	53	1.3	18	0.30	1,039,787	
	Inferred	139	0.26	57	1.4	20	0.29	368,129	

See ASX announcement of 4 April 2016 for JORC Table 1.

- Metal equivalent values were calculated using the formula: Cu ppm + (Mo ppm\*2.73) + (Ag ppm\*77.9) + (Au ppb\*4)
- Assumed commodity prices were Cu (\$2.87/lb), Mo (\$8.00/lb), Ag (\$17.37 / Oz) and Au (\$1,206/Oz)
- Prices in USD; sourced from consensus reports supplied by the Bank of Montreal in March 2016
- Assumed recoveries are 92% (Cu), Mo (90%), Ag (80%) and Au (60%). Supported by initial metallurgical
  results suggesting copper along with the associated potential metal by-products; molybdenum, silver and
  gold can be readily recovered via conventional flotation processes
- In estimating Au grades a nominal value of 1 ppb Au has been applied where samples had not been analysed for Au
- It is the company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold
- There may be some minor rounding errors in the tables