CARAVEL
MINERALS

CARAVEL COPPER PROJECT

SCOPING STUDY INFORMATION BOOKLET

MAY 2019

Caravel Minerals Limited (Caravel or the Company)

DISCLAIMER AND CAUTIONARY STATEMENTS

The Scoping Study referred to in this announcement is based on further studies following a scoping study released in 2016. This study remains at the level of a Scoping Study based on preliminary technical and economic study of the viability of developing the Caravel Copper Project by constructing an open cut mine and processing facility to produce copper concentrate for export. This Study does not meet all requirements to support estimation of Ore Reserves or provide assurance of an economic development case.

The Company has reasonable grounds for disclosing a Production Target, given that in the first five years of production 95% of the mill feed is scheduled from the Indicated Resource category. Approximately 75% of the Life-of-Mine (LOM) Production Target is in the Indicated Mineral Resource category, and 25% is in the Inferred Mineral Resource category. There is a lower level of geological confidence associated with Inferred Mineral Resources.

While the Company considers all the material assumptions in this Study to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated will be achieved.

To achieve the range of Caravel Copper Project outcomes indicated in the Scoping Study, funding of in the order of an estimated $481 million will likely be required by the Company.

Based on this Scoping Study, there are reasonable grounds to believe that this amount can be financed at a future date. Financing would most likely be undertaken via a combination of debt and equity, similar to a number of comparable Australian projects funded in the past 24 months.

Debt may be secured from several sources including Australian banks, international banks, the high yield bond market and resource credit funds.

Discussions with potential project financiers have commenced and the information from the Scoping Study will be provided to potential financiers will allowing these discussions to advance.

In the interim it is also possible that the Company could pursue other strategies to provide alternative funding options including undertaking a partial project sale or other corporate transaction, seeking a joint venture partner or offtake partner financing.

Caravel Minerals has ongoing dialogue with various potential financing and investment partners. These parties include mining investment funds, diversified Australian miners and international copper smelting companies.

Several factors that will influence the ability of Caravel to secure financing including copper offtake agreements and favourable prevailing market conditions (being both the copper market and the wider equity and debt market).

It is possible that funding may be dilutive to, or otherwise affect the value of the Company's existing shares.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Previously Reported Information

This document includes information that relates to the Caravel Copper Project Mineral Resource which was prepared in accordance with the requirements of the JORC Code (2012). This information was included in the Company's previous announcements as follows:

18 February 2019	Metallurgical Test Work Confirms High Recoveries
29 April 2019	Caravel Copper Resource and Project Update

These announcements are available at the Company's website **www.caravel minerals.com.au**

Forward-looking Statements

This report contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this report, are considered reasonable. Such forward-looking statements are not a guarantee of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and the management. The Directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this report will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Directors have no intention to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this report, except where required by law or the ASX listing rules.

CARAVEL
MINERALS

This Scoping Study was prepared by Caravel Minerals with assistance from the following advisors:

MSP Engineering	Engineering
Knight Piesold	Tailings
Dempers & Seymour	Geotechnical Engineering
Western Wildlife	Fauna
Mattiske Consulting	Flora
Trepanier	Resource
Orelogy	Mining
Wayne Trumble	Energy
ALS Laboratories	Metallurgical Testwork
Aurifex	Metallurgy
Qube Bulk	Transport
Braemer ACM	Shipping
Blueprint Environmental	Approvals

CORPORATE DIRECTORY

DIRECTORS & COMPANY SECRETARY

Wayne Trumble Non-Executive Chairman
Alasdair Cooke Executive Director
Steve Abbott Managing Director
Alexander Sundich Non-Executive Director
Daniel Davis CFO & Company Secretary

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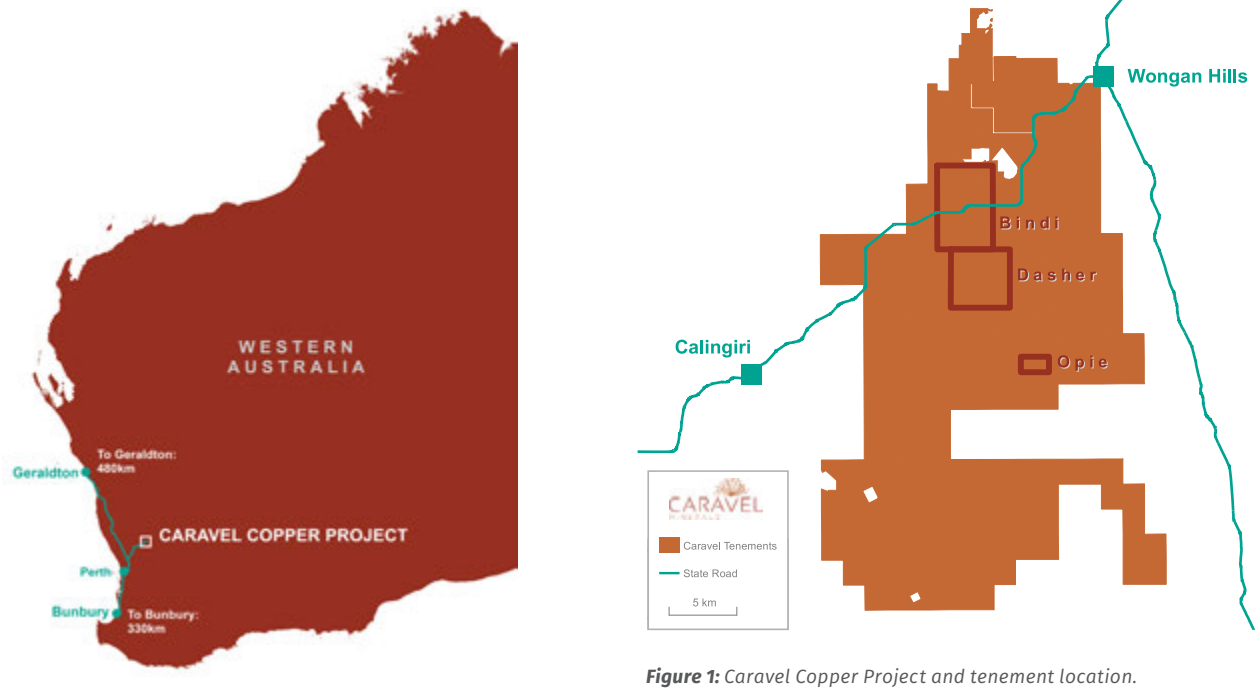


Figure 1: *Caravel Copper Project and tenement location.*

CARAVEL MINERALS

Caravel Minerals is a copper exploration and development company that is pioneering the discovery of a new porphyry copper district in Western Australia's Central Wheatbelt, 150km north east of Perth.

Caravel holds 13 exploration licences covering 640km^2 of the mineralised corridor, covering the entire area of the known porphyry district.

Caravel has defined a Mineral Resource of 1.86Mt contained copper (at 0.15% Cu cut-off) and has prepared this updated Scoping Study to incorporate the substantial 32% increase in resource size since a preliminary Scoping Study was released in 2016. The size of the resource (based on contained copper) is now the largest in Western Australia and in the top ten largest copper projects in Australia. On the basis of the current study parameters, the project has an estimated initial mine life of 23+ years.

This Scoping Study is based on a range of new investigations completed by Caravel since April 2018, and provides a higher level of confidence for the project becoming a large-scale, long-life, low to mid cost copper producer. In addition to the significant increase in resources, the new study incorporates significantly more detailed levels of investigation in metallurgical processing, process plant engineering, environment, stakeholders and logistics.

Although the current resources have been increased substantially, there remains excellent potential to further expand these resources at existing prospects and other known mineralised areas lying along the same trend as the existing deposits. Exploration throughout the mineralised corridor will continue and will potentially further increase the project scale and life.

The Project's location in the Wheatbelt region of WA (Figure 1) provides access to substantial, well-established infrastructure and creates a unique opportunity for towns and communities in the area to diversify the local economy.

Engagement to date indicates communities are receptive to a new mining project and the company will hold further discussions as the project progresses.

PROJECT OVERVIEW

Caravel Mineral's 100% owned Caravel Copper Project is an undeveloped conventional open-cut mining and processing Project located in the Wheatbelt region of Western Australia, approximately 150km north-east of Perth.

The Project's current copper mineral resource is 662Mt at 0.28% Cu providing 1.86Mt contained Cu (using 0.15% Cu cut off).

This Scoping Study is based on the following parameters:

- Initial mine production of 16Mtpa of ore for the first 5 years[1], with a ramp-up to 30Mtpa commencing in year 6.
- Copper production of ~45,000 tonnes per annum (years 1 – 5) and ~65,000 tonnes per annum (years 6 – 23).
- Copper concentrate by-product credits for molybdenum (Mo), gold (Au) and silver (Ag).
- Starter pits at Bindi (first 5 years) to ensure early access to higher-grade ore delivering 75Mt of ore at a strip ratio of 0.5:1[2] to the mill for processing.
- Mining at Dasher commencing in year 10.
- 95% of material in the production schedule for the first 5 years is in the Indicated resource category.
- Over the full 23-year mine life, the Bindi and Dasher deposits will produce 576Mt of ore at a strip ratio of 1.1:1[2].
- Mining of the Bindi and Dasher deposits is assumed to finish in year 20 at which point the mill will process material from the accumulated low-grade stockpiles.
- A total of 75% of the overall material in the production schedule is currently in the Indicated resource classification category, while 25% is Inferred (including 0.2% unclassified).

Copper concentrate from the Project will be transported using the existing public road network to a WA port. Ports at Geraldton and Bunbury are capable of concentrate handling and export and have been confirmed by studies as the most viable options for the Project.

Peak construction workforce is estimated at approximately 500 and stable operations workforce estimated to be around 250.

The Project's location will utilise established infrastructure including roads, grid power, telecommunications and local towns.

This Scoping Study has been prepared to demonstrate the Project's potential to become a large-scale, long-life, low to mid-cost copper project and to support further feasibility studies towards development.

[1] *Ramp up from year 6 onwards, reaching 30Mtpa from year 8*
[2] *After prestrip of clay and gravels*

PROJECT FINANCIALS

- Pre-tax NPV of between A$0.74B and A$1.37B with a Base Case of **A$1.05B** (range based on +/- 30% of Base Case NPV) and post-tax IRR of 20% based on US$3.00/lb Cu and an exchange rate of $0.72.
- Free cashflow generation of **A$3.1B** on net revenues of **A$10.6B** over the 23-year mine life.
- Initial development capital **repaid within 4 years** from start of production.
- C1 cash costs of **US$1.45/lb** after by-product credits.
- The Project is in the **second quartile** of copper producers for the first 5 years of operation.
- Initial capital expenditure for a throughput of 16Mtpa for the first 5 years is estimated at A$481M.
- Capital expenditure of A$256M in year 5 for ramp-up to 30Mtpa commencing in year 6.

COPPER OUTLOOK

Long-term copper fundamentals remain strong

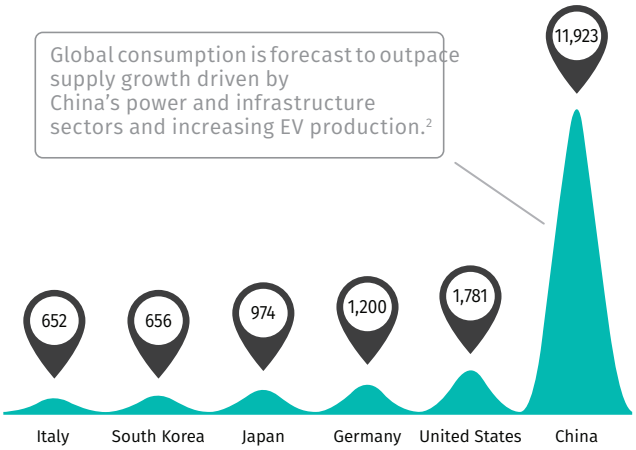
Supply Constrained

- ↓ Grade decline and resource depletion.
- ↓ Lack of exploration success resulting in a shortage of quality assets.
- ↓ Environmental constraints.
- ↓ Emerging shortage of high-quality copper concentrate.

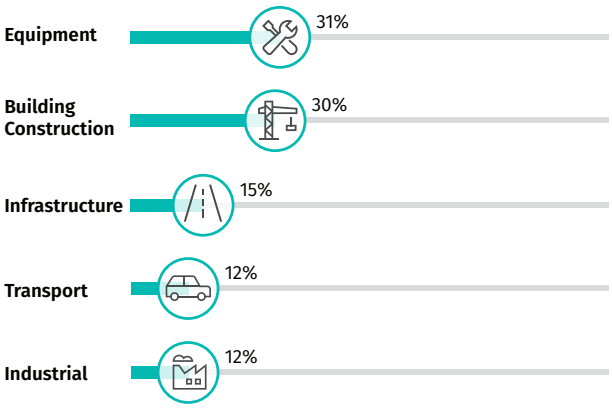
Demand Growth

- ↑ China accelerating infrastructure development.
- ↑ Rising living standards globally.
- ↑ Urbanisation of India's 1.2 billion+ citizens.
- ↑ Electrification of transport.
- ↑ Growth in renewable energy technology.

Key Copper Consumer Markets (Kt)[1]



Global Uses of Copper[1]



STRENGTHENING PRICE ENVIRONMENT

- With inventories near record lows, prices are forecast to rise significantly to just under US$7,000 in 2019 (in real terms).
- Copper is forecast to be around US$8,500 by 2021, before easing back in subsequent years.[1]
- Caravel has used a long-term price of US$6,612 per tonne for financial modelling.

[1] Source: Australia Department of Industry, Innovation and Science: Resources and Energy Quarterly - March 2019.
[2] "Copper supply and demand outlook" Fitch Solutions - www.mining.com 6 January 2019.

PROJECT HIGHLIGHTS

TOTAL RESOURCES
1.86MT
CONTAINED COPPER
662Mt @ 0.28% Cu
(0.15% Cu cut-off)

COPPER IN CONCENTRATE
~45KTPA Y1-Y5
~65KTPA Y6-Y23

LOW STRIP RATIO
0.5:1 (Y1-Y5)
1.1:1 (LOM)

WA #2
BEST MINING INVESTMENT JURISDICTION
Fraser Institute 2018

23-YEAR MINE LIFE

EXCELLENT METALLURGY
~92%
Cu RECOVERY

CLEAN CONCENTRATE
>25%
Cu: CHALCOPYRITE

BASE CASE
PRE-TAX NPV
A$1.05B
7% Discount Rate

C1 CASH COSTS
US$1.45/lb
AFTER BY-PRODUCT CREDITS

<4 YEAR PAYBACK
A$481M
(initial capital)

PROJECT ADVANTAGES

- Low capital intensity.
- Simple open-pit bulk mining proposition.
- Availability of local workforce.
- Good community support.
- Access to grid power at low cost.
- Good access to two established export ports suitable for concentrate handling and export.
- WA's largest undeveloped copper project.

GEOLOGY AND EXPLORATION

The Caravel Copper Project is situated within a 30km long regional copper trend defined by surface geochemical soil sampling. Continuous anomalous copper and molybdenum values are only disrupted where surficial alluvial channels cross the trend.

Outhwaite (2017) describes in detail age dating work and the tectonic history of the project area. Host granites and associated mineralisation have been dated at around 3.0 Ga, with subsequent deformation and metamorphism around 2.7 Ga, coincident with the regional deformation and gold mineralisation at Kalgoorlie and the wider Yilgarn goldfields, as well as the Boddington gold deposit.

Copper occurs almost exclusively as chalcopyrite sulphides associated with quartz veins. Copper grade is largely determined by the frequency and thickness of the veins, which may be semi-massive chalcopyrite up to several cm thick, though mostly the sulphide veins are more attenuated and in the range of mm thick following the main foliation. The frequency of veins or sulphide bands also varies on the scale of meters and tens of meters, where copper grades may range up to 0.6% over thicknesses of tens of meters with lower grades or waste in between. Molybdenite, pyrite and pyrrhotite may also accompany the chalcopyrite, though in much lower amounts. Garnet and magnetite are also commonly associated with mineralisation, possibly as products from metamorphism of the primary alteration assemblages.

The mineralised zones have undergone higher strain than adjacent barren granites in the footwall. In the higher strain zones, the mineralised veins have been transposed into the dominant foliation, as shown in Figure 2.

The transposed veins, aligned with the main foliation, have then undergone further folding, as part of the regional deformation event that created the overturned fold, which defines the west and east limbs of the Bindi deposit. The same folding may be observed in core as illustrated in Figure 3.

The style of mineralisation at the Caravel Copper Project has been described as a deformed, Archaean porphyry copper. The granite host rock, the inferred pre-metamorphic mineral assemblages and general scale and style are all consistent with the porphyry copper model. The broader geological setting is also consistent with a porphyry style of mineralisation, with the 30km mineralised trend following the margins of granite batholith of similar scale, referred to as the Wongan Batholith in Figure 4.

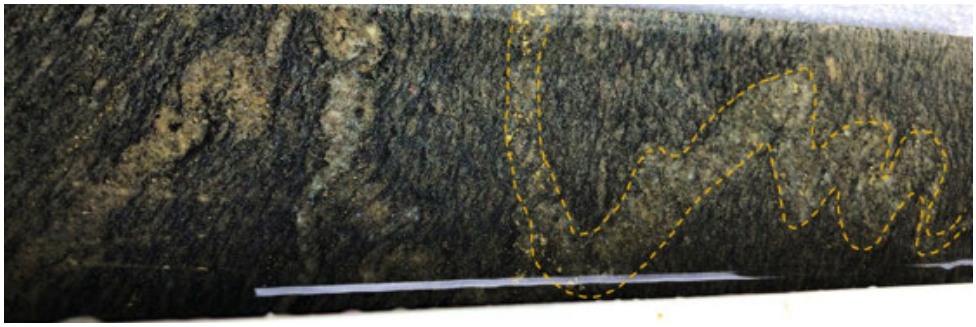


Figure 2. *Drill core showing early veins being transposed into dominant foliation.*

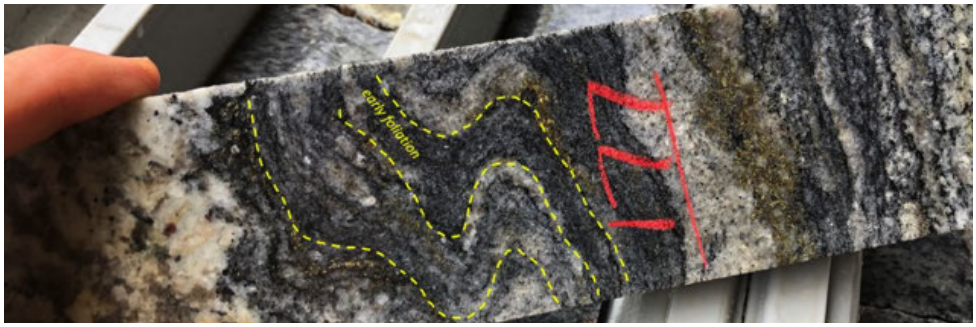


Figure 3. *Drill core showing late folding of early foliation and veins.*

At the regional scale, the Wongan Batholith lies on a major boundary between the Boddington and Lake Grace domains of the SW Terrane of the Yilgarn craton. Relatively little research has been undertaken on this significant boundary, which appears to be a 3.0 Ga Archaen magmatic arc that has subsequently closed when the SW Terrane collided with the Yilgarn, resulting in the regional 2.7 Ga deformation event. The Caravel deposits are believed to have formed in the volcanic arc that developed on this margin during subduction convergence prior to that collision event.

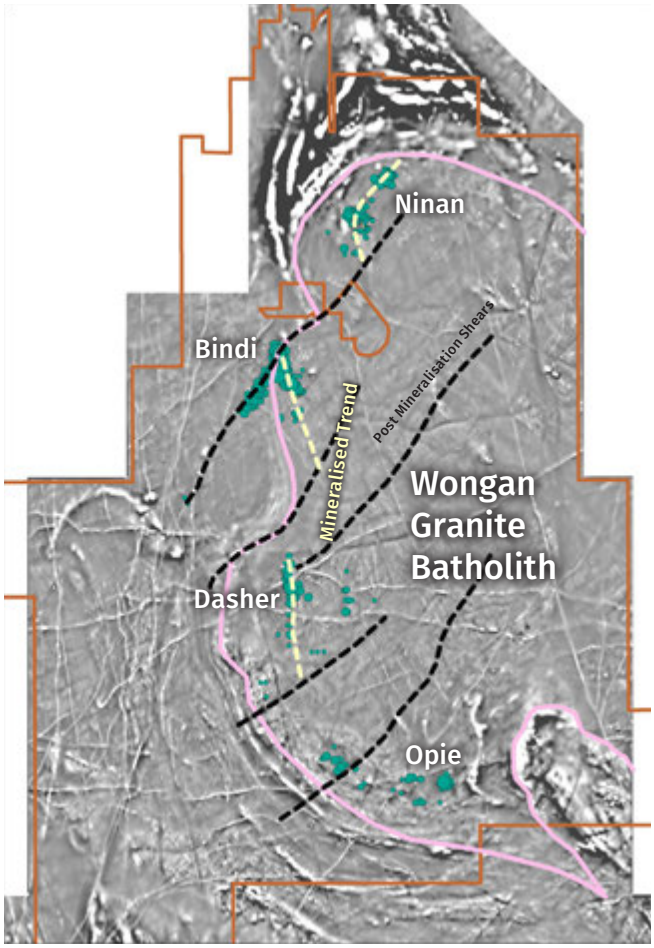


Figure 4. *Aeromagnetic image of the Caravel Project area showing outline of the Wongan Batholith and location of main deposits.*

Exploration History

Between 2005 and 2013 Dominion Mining, and subsequently Kingsgate Consolidated, collected and analysed approximately 200,000 regional roadside soil geochemical samples throughout the WA Wheatbelt primarily looking for gold. From this data areas of anomalous copper were identified at what is now the Caravel Copper Project, leading to the first discovery of mineralisation in 2010 when RC drilling undertaken by Caravel intersected pervasive chalcopyrite-molybdenite mineralisation over widths of up to 250 metres.

Further systematic regional exploration programs including aircore drilling and ground-based IP geophysical surveys were completed by Caravel Minerals, which acquired the project from Dominion. Subsequent RC drilling, and limited diamond core drilling between 2013 and 2015 resulted in the discovery and delineation of a large system of copper mineralisation with significant associated molybdenum, and to a lesser extent associated silver and gold. Further infill drilling between September 2015 and March 2016 resulted in the estimation of a maiden JORC Resource. A preliminary Scoping Study was published on what was termed the 'Calingiri Project'.

The Calingiri Project (Cu, Mo, Au, Ag) was recognised by the WA Government in 2017 and included in the Geological Survey of Western Australia Major Projects map. The Project was renamed to the Caravel Copper Project in 2018.

MINERAL RESOURCES

The Mineral Resource incorporates over 10 years of drilling data acquired through exploration campaigns completed by Caravel from 2009 to January 2019.

In April 2019, the Company announced a 32% increase (by contained copper at 0.15% Cu cut-off) to an earlier Mineral Resource reported in 2016. The Caravel Copper Project Mineral Resource (at a 0.15% cut-off) now totals 662 million tonnes at 0.28% Cu, for 1.86 million tonnes of contained Cu and is shown in Table 1. The new Mineral Resource is the basis of this Scoping Study.

The combined reporting of Caravel's three existing deposits at Bindi, Dasher and Opie, at cut-off grades ranging from 0.15 - 0.30% Cu, is included in Table 2. These tonnages and grades are consistent with similar deposit types elsewhere in the world.

This Scoping Study only considers mining of the Bindi and Dasher deposits.

Table 1: Caravel Copper Project[1] Mineral Resource (using 0.15% Cu cut-off).

CATEGORY	Mt	Cu (%)	Mo (ppm)	Cu (T)
Measured	-	-	-	-
Indicated	393.4	0.29	57	1,128,800
Inferred	268.6	0.27	52	734,000
Total	**661.9**	**0.28**	**55**	**1,862,800**

Note – appropriate rounding applied

Table 2: Caravel Copper Project[1] Combined Mineral Resource at Various Cu Cut-off Grades.

Cu Cut-Off (%)	Mt	Cu (%)	Mo (ppm)	Cu (T)
0.15	661.9	0.28	55	1,862,800
0.20	488.5	0.32	63	1,563,600
0.25	372.1	0.35	69	1,301,600
0.30	248.5	0.39	77	962,200

Note – appropriate rounding applied

[1] Caravel Copper Project combines Bindi, Dasher and Opie deposits.

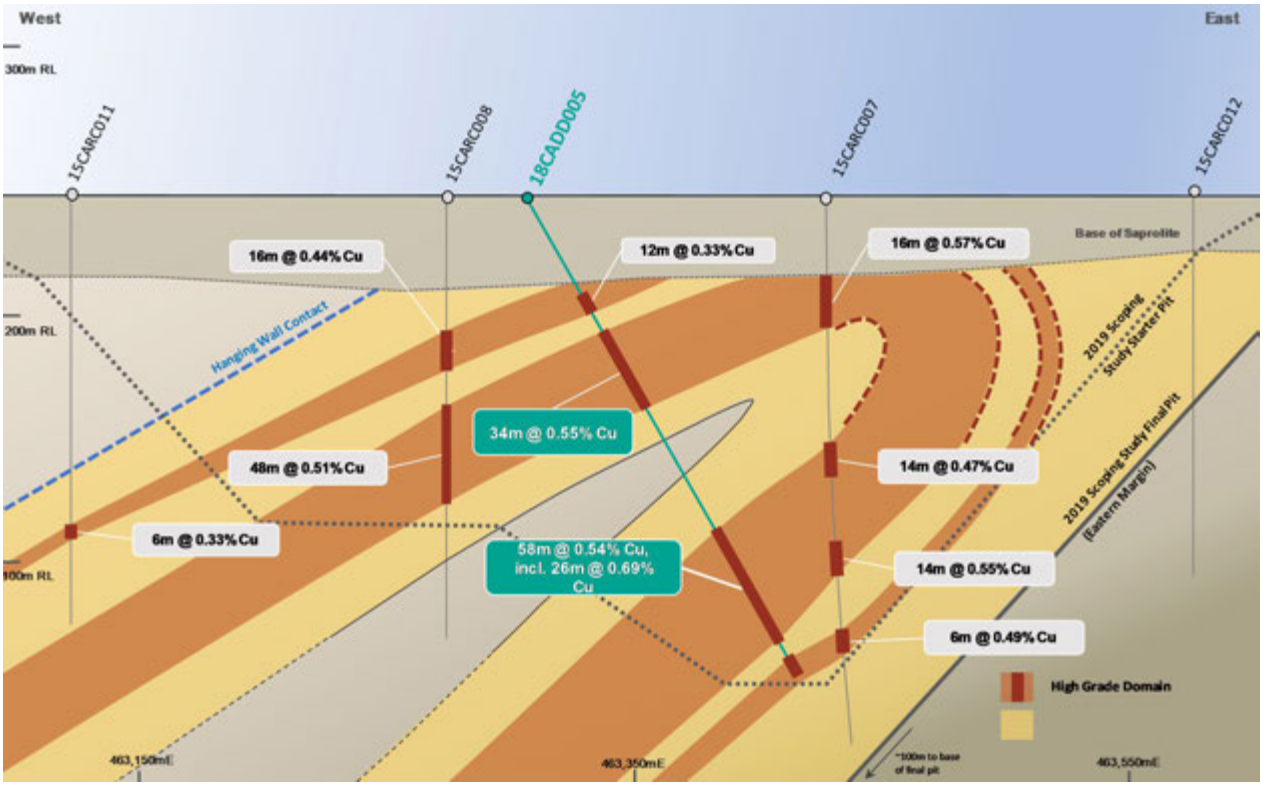


Figure 5: *Typical cross-section (6,574,300mN) in the Bindi fold hinge.*

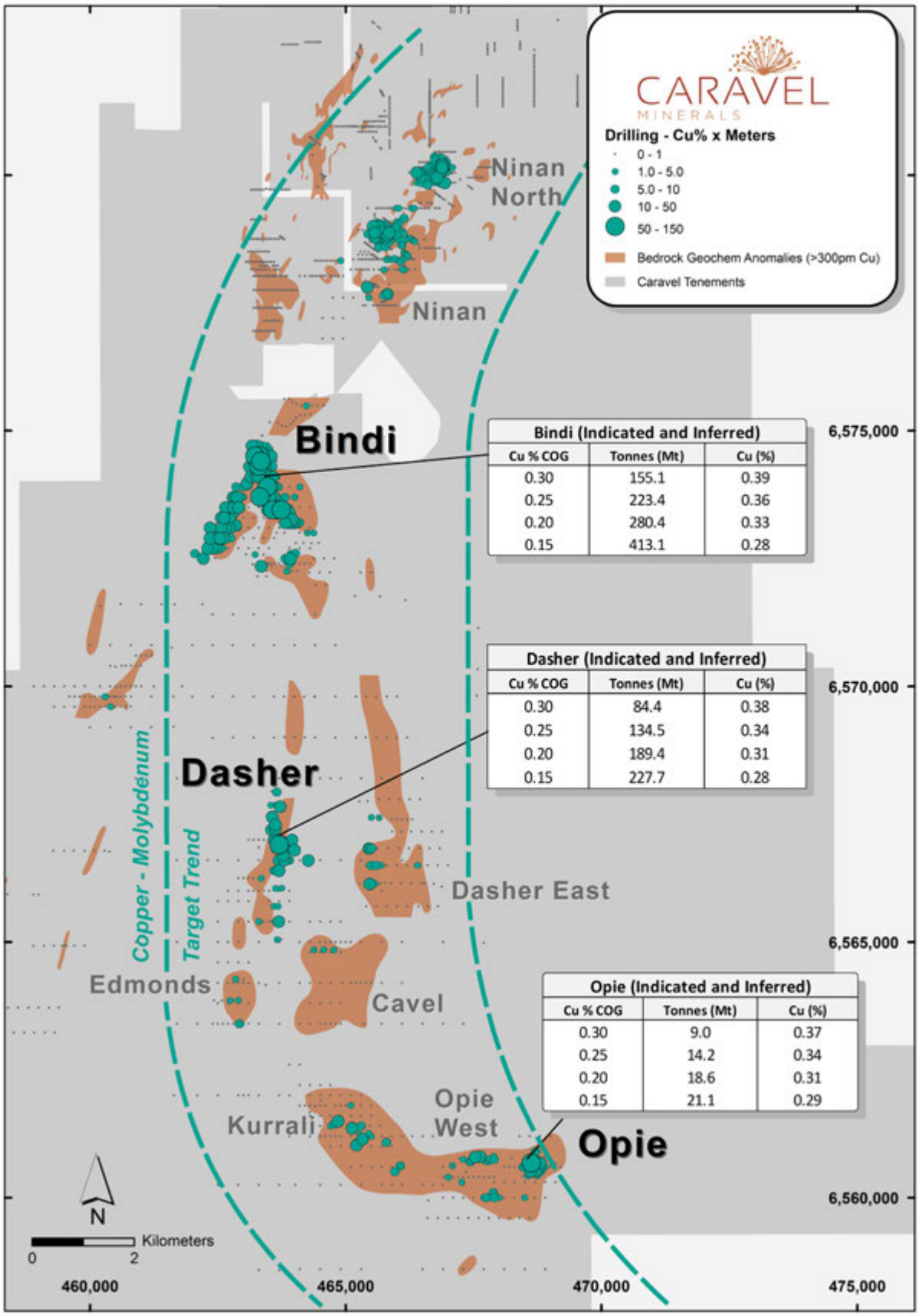


Figure 6: *Caravel Copper Project Resources and prospects with drilling (Cu% x m = aggregate of intervals >0.15% Cu, max 4m internal waste) and bedrock geochemical anomalies (>300ppm Cu).*

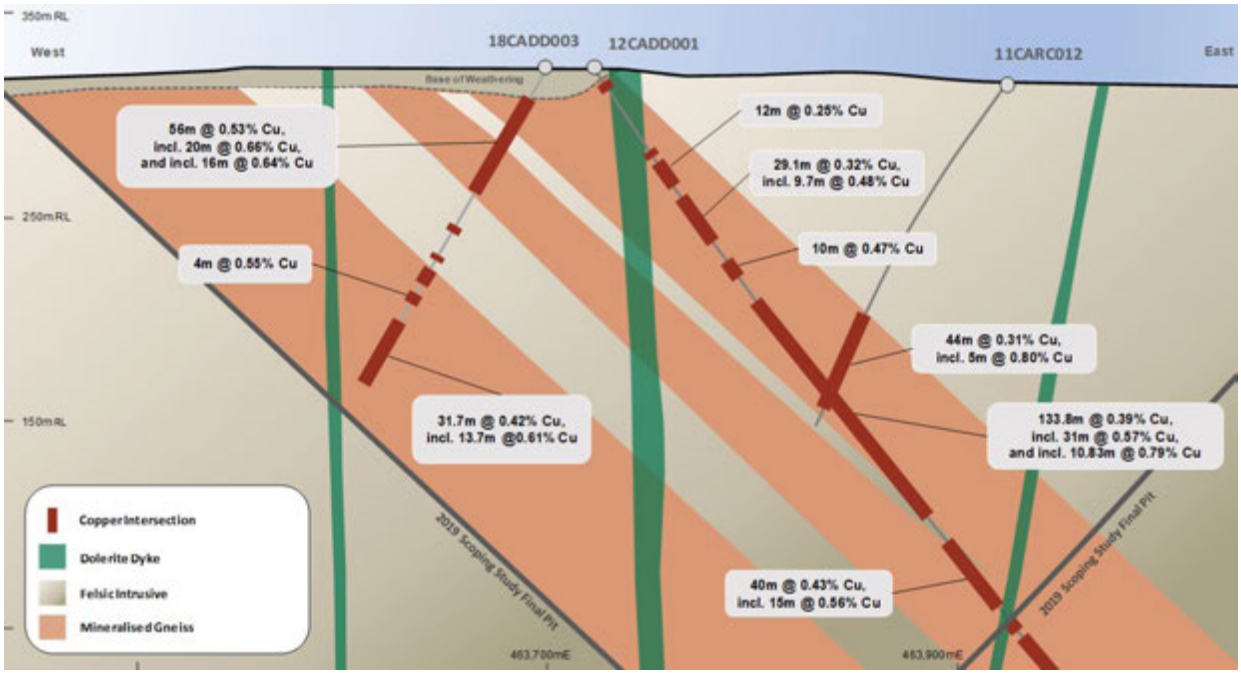
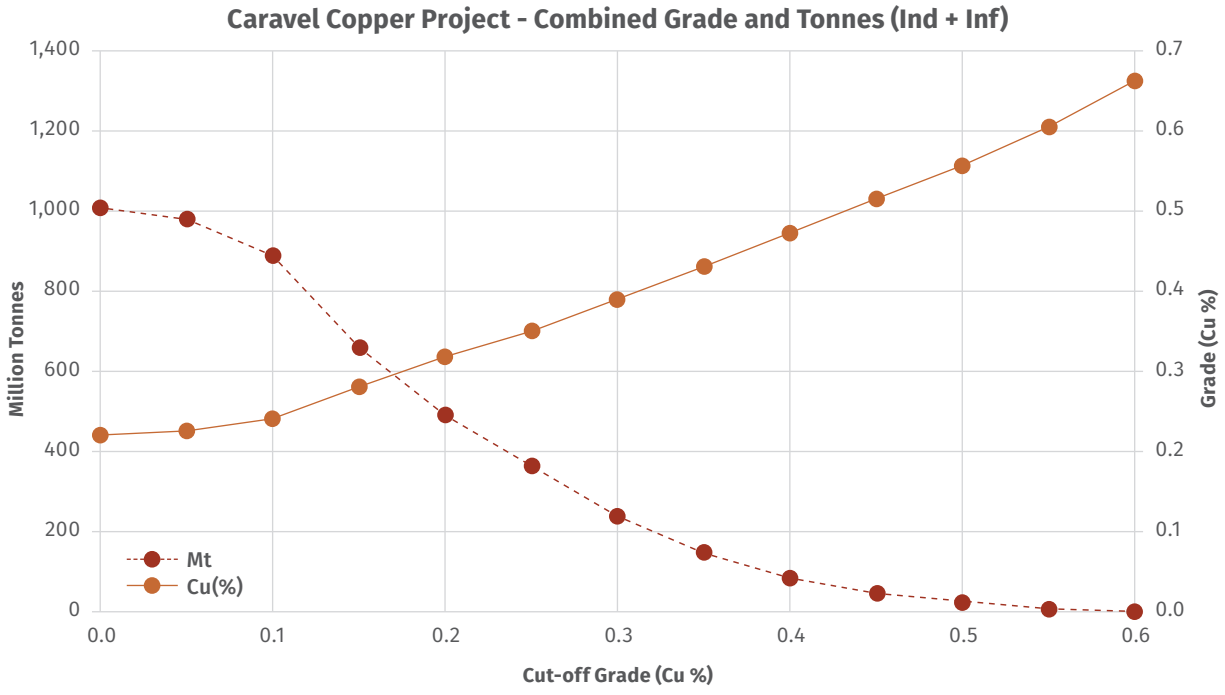


Figure 7: *Typical cross-section through Dasher (6,566,900mN).*



Note – combines Bindi, Dasher and Opie deposits.

Figure 8: *Grade vs. Tonnage curves for the combined Caravel Copper Project Mineral Resource.*

Previously Reported Information: *This information relates to the Caravel Copper Project Mineral Resource which was prepared in accordance with the requirements of the JORC Code (2012). This information was included in the Company's previous announcement as follows: ASXannouncement dated 29 April 2019 Caravel Copper Resource and Project Update or see www.caravelminerals.com.au*

The information in this report that relates to Mineral Resources for the Bindi and Dasher deposits 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 Competent Persons 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.

Resource Growth Potential

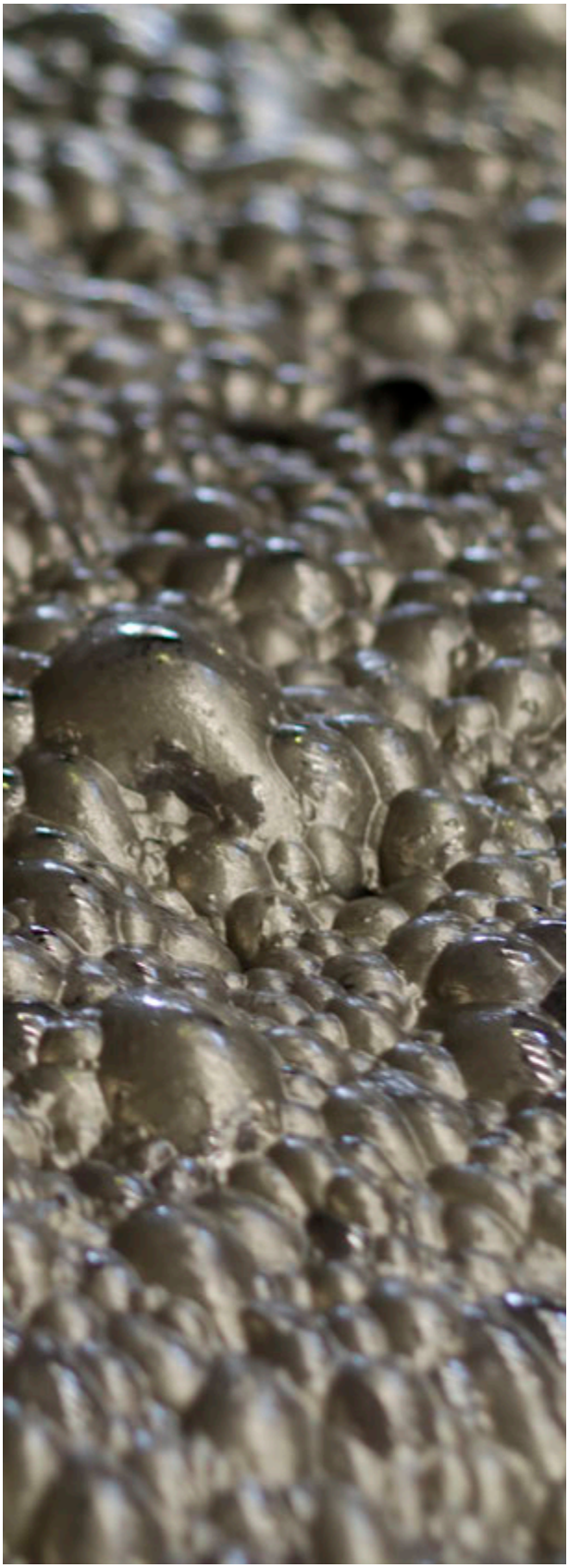
Caravel has defined a large Mineral Resource base that underpins this Scoping Study and will be the basis for future feasibility studies. Potential exists to define further resources through extensional drilling at the currently defined deposits, as well as at several other prospects within the Company's tenement holding.

A 2019 reverse circulation (RC) drill hole targeting down-dip extensions at Bindi East intersected over 200m of copper mineralisation. Drilled to a vertical depth of 290m, 19CARC004 showed increasing copper grades at depth[1]. In addition, the Bindi East and West limbs both remain open to the south. The Company believes that there is a high probability that further drilling would identify additional mineable resources at Bindi.

At Dasher, copper mineralisation was previously thought to have been truncated to the west by younger granites, but a recent diamond hole intersected mineralised gneiss in the footwall[2]. If confirmed with additional drilling, this footwall zone may add significant additional resources to Dasher.

Further drilling may also allow for delineation of Mineral resources at the advanced Ninan prospect (located 5km northeast of Bindi, 80% owned by Caravel) where previous drilling intersected 52m @ 0.51% Cu, 41m @ 0.54% Cu and 126m @ 0.26% Cu and 0.18 g/t Au[3].

In addition, the Company has identified several prospects including Kurrali, Dasher East and Opie West, where previous drilling has intersected significant copper mineralisation and where further drilling may lead to the delineation of Mineral Resources (Figure 6).



[1]See ASX announcement 20 February 2019
[2]See ASX announcement 14 January 2019
[3]See ASX announcement 9 April 2015

MINING OPERATIONS

Caravel engaged Orelogy Pty Ltd (Orelogy) to undertake mining studies for the Scoping Study. Dajolin Mine Management Services were engaged through MSP Engineering to provide oversight and peer review.

Only the Bindi and Dasher deposits were considered in the current study phase. The mining study assumes traditional open-pit mining with all mining activities to be performed by a mining contractor. An owner-operator model using the latest technology has potential to deliver significant cost savings and will be evaluated as part of further feasibility studies.

Mining Parameters

To determine the most appropriate bench height, block size and loading equipment, a trade-off study was completed by Orelogy. Results showed the best combination to be 500t excavators loading 180t capacity trucks on 5 metre flitch heights, and blasting on a 10 metre bench height. With a selective mining unit of 12.5 x 12.5 x 5m, the overall ore loss and dilution are estimated to be 4.4% and 4.7% respectively.

Grade control of ore will be by RC drilling at 15 metre centres on 30m benches.

Geotechnical Investigation

The Bindi Deposit is covered by up to 50m of overburden, some of which may be suitable for use during Project construction. The Dasher deposit has minimal overburden. Below the overburden the orebodies exhibit sharp transitions to fresh sulphide ore.

Caravel engaged Dempers & Seymour Pty Ltd to undertake geotechnical analysis for the Project. Diamond core drill holes were logged, and data was evaluated according to Laubsher's Mining Mass Rating Classification System to determine preliminary inter ramp pit slope angles. The assessment concluded that the fresh rock exhibits good to very good geotechnical characteristics with pit walls between 49 – 55 degrees recommended (Table 3).

Table 3: Preliminary Pit Slope Angles

Weathering Profile	Inter Ramp Slope Angle Bindi	Inter Ramp Slope Angle Dasher
Highly Weathered	34 - 35	33
Transitional	43 - 43	44
Fresh	49 - 55	55

[1] Ramp up in Year 1
[2] Future feasibility studies will optimise mill through-put with mine fleet selection
[3] After prestrip. Low grade stockpile included as ore in calculation

Pit Optimisation

Pit optimisations were carried out to identify and quantify potential mining inventories within optimal pit shells. The open pit optimisation was undertaken utilizing Dassault Systèmes Australia (Geovia) Whittle™ software, which generates a series of nested pit shells using "Revenue Factors" based on a set of financial and other parameters such as costs and metal prices. The pit shells (Figure 9) giving the highest undiscounted cashflow values for a given set of optimisation parameters were selected for scheduling.

The aim of the mine production scheduling was to generate a practical, realistically achievable schedule which maximises value within the applied constraints that:

- Meets mill feed requirements.
- Includes ramp-up considerations for mine operations as well as the processing plant.
- Avoids excessive and unachievable vertical advance rates.

Strategic scheduling and cut-off grade optimisation were undertaken using the Maptek EVOLUTION™ - STRATEGY (EVO-STRAT) tool, which uses algorithms to determine the highest possible NPV. To maximise value, scheduling allowed for lower grade ore to be stockpiled so that higher grade ore with higher values can be treated sooner.

Results

A life-of-mine annual production schedule was completed based on a throughput of 16Mtpa of ore for the first 5 years[1], with a ramp-up to 30Mtpa[2] commencing in Year 6 (Figure 10). The schedule envisages the Bindi deposit will be mined during the initial stages of the Project with mining at Dasher commencing in Year 10.

Starter pits were generated to ensure early access to higher-grade ore whilst minimising waste stripping. The starter pits at Bindi account for the first 5 years of mining (Figure 10), during which 75Mt of ore (at 0.31% Cu) will be delivered to the mill for processing at a strip ratio of 0.5:1[3]. A total of 95% of material in the production schedule for the first five years is in the Indicated Resource classification and 5% is in the inferred category (including 0.2% unclassified).

Over the 23-year project life the Bindi and Dasher deposits will produce 576Mt of ore (at an average grade of 0.25% Cu) and a strip ratio of 1.1:1[3] (Figure 11). Mining of the current resources is assumed to finish in year 20 at which point the mill will process material from the accumulated low-grade stockpiles. A total of 75% of the overall material in the production schedule is currently in the Indicated resource classification category, while 25% is Inferred (including 0.2% unclassified).

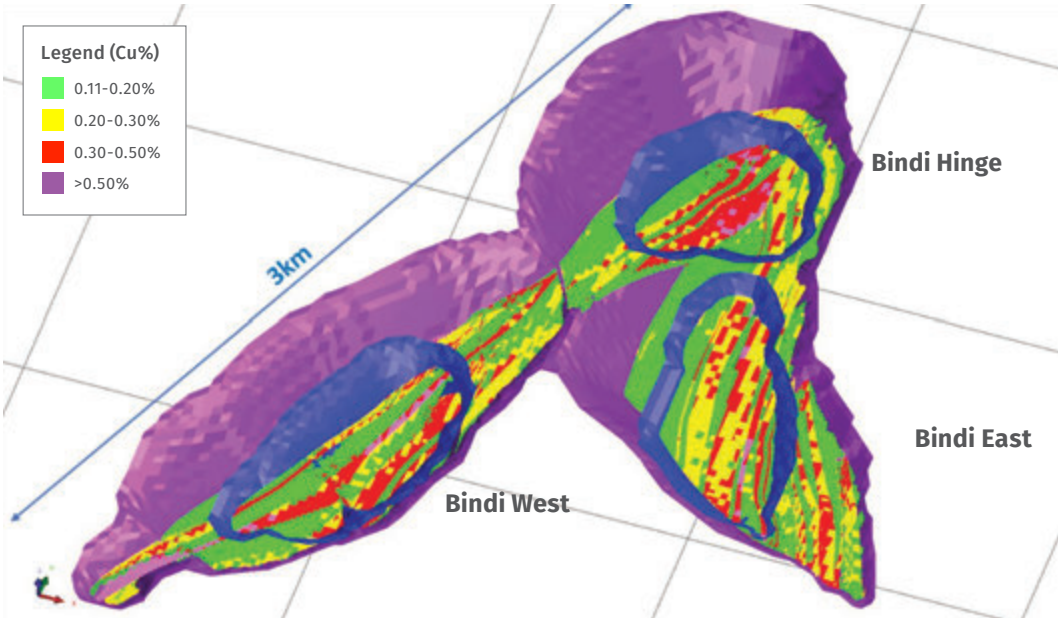


Figure 9: *Bindi Deposit optimised starter pit shells (blue) and final pit shell (purple).*

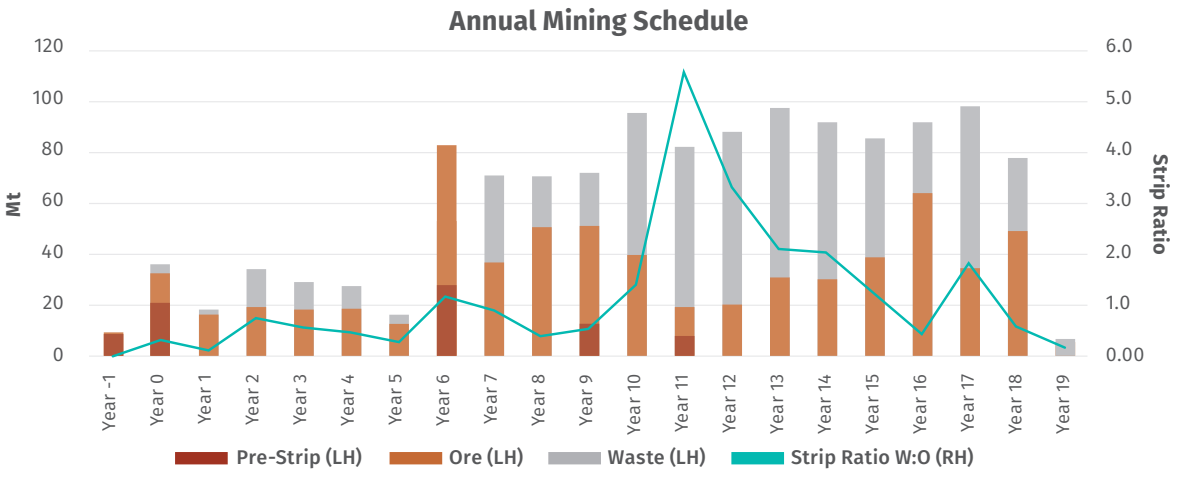


Figure 10: *Caravel Copper Project annual mining schedule.*

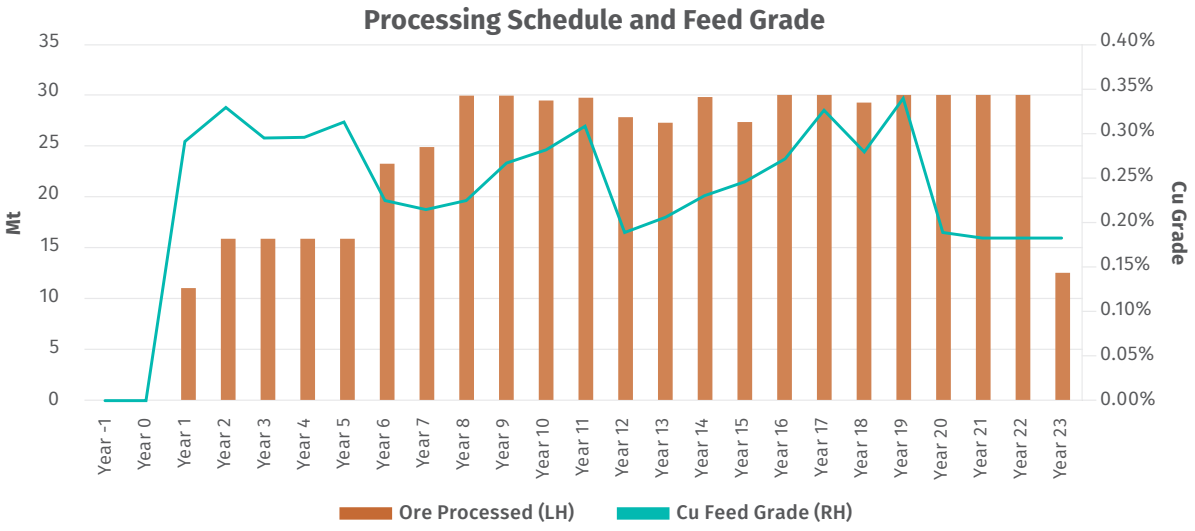


Figure 11: *Caravel Copper Project annual processing schedule.*

METALLURGY

Mineralogy

Copper mineralisation at the Caravel Copper Project is almost entirely course grained chalcopyrite. Molybdenite is also coarse grained and separate from other sulphides. The gangue is dominantly silicates (quartz, feldspar, epidote, chlorite, garnet, biotite, sillimanite) 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 favourable for metallurgical recovery, and the potential for the production of high-quality concentrates from standard flotation flowsheets.

A comprehensive metallurgical program utilising diamond core from the Bindi and Dasher deposits is ongoing. Testwork reported below has been carried out by ALS Metallurgy and JK Tech.

Comminution

Bond work index and SMC (comminution) testing has been completed on a number of composited samples. Table 4 below summarises the results.

The rock testing data shows the ore to be generally both competent and hard, though within normal range for comparable deposits. The relatively low UCS levels and high spread of results within the impact tests may indicate the presence of planes of weakness in the rock at a coarser size relative to harder competent ore at finer particle sizes.

Table 4: Rock Breakage Functions

		BOND				SMC								
Test	**USC**	**Impact**	**Rod**	**Ball**	**Abrasive Index**	**Dwi**	**Mia**	**Mih**	**Mic**	**A**	**b**	**Axb**	**ta**	**SCSE**
Unit	MPA	kWh/t	kWh/t	kWh/t		kWh/m³	kWh/t	kWh/t	kWh/t					kWh/t
Data Points	6.0	30.0	4.0	7.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max	132	12.9	15.0	19.8	0.3	7.2	20.6	15.4	8.0	100.0	0.6	51.2	0.5	10.0
Min	60	3.6	13.3	15.7	0.2	5.3	16.0	11.3	5.8	79.3	0.4	37.2	0.4	8.9
Avg	109	6.4	13.9	18.4	0.3	6.31	18.4	13.5	7.0	89.4	0.5	43.9	0.4	9.6

Flotation

The majority of flotation testwork has been carried out on two master composite samples from holes 18CADD001 and 18CADD002 along with some individual sample testing for variability. The samples, at head grades between 0.28 – 0.51% copper, have been subjected to several rougher and preliminary cleaner flotation tests utilising different reagent regimes and grind sizes (106µm and 150µm) at the ALS Metallurgy laboratory in Perth, Western Australia.

Rougher recoveries varied between 90% to 99% with the average of 95.5%. These recoveries exceeded the previous test results carried out on RC samples as part of the 2016 Calingiri Project Scoping Study which were around 92%.

The majority of the recent tests were carried out at a grind size of 106µm, although those carried out at 150µm continued to show high recoveries, averaging 95.8% (versus 96.6% for 106µm). This data indicates that a coarse rougher grind may be possible (Figure 12).

The results also showed rapid kinetics, with 92% (nominal) of the copper recovered in the first 4 minutes of the tests (Figure 13).

The tests demonstrated that the copper minerals were highly hydrophobic and require low reagent doses to obtain high recoveries allowing for low processing costs.

Preliminary cleaner flotation test work has suggested that a high-grade copper concentrate can be produced. The latest batch testing after regrind has produced grades between 26.4 - 29.2% at recoveries of 80.3 – 89.7%. These figures are expected to improve as cleaner conditions are optimised and as locked cycle testing is undertaken.

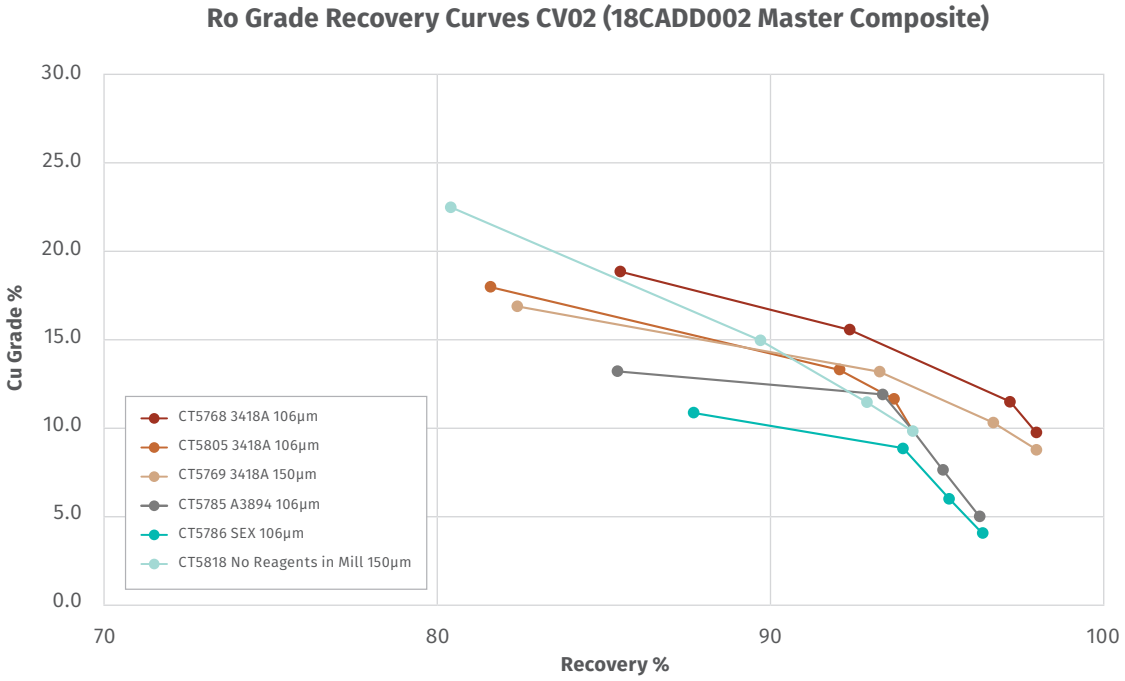


Figure 12: *Example of rougher recoveries from CV02 Master Composite.*

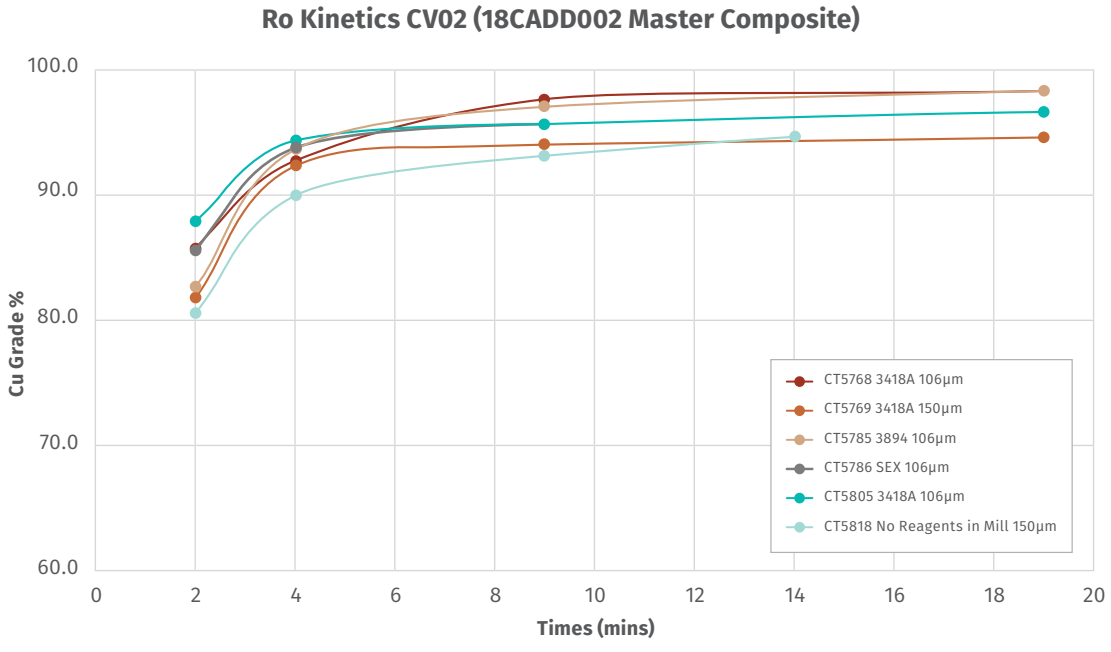


Figure 13: *Example of rougher kinetics from CV02 Master Composite.*

MINERAL PROCESSING

Caravel Copper Project process design was undertaken by MSP Engineering, which specialises in the evaluation, engineering design, project management and construction of mineral processing facilities and infrastructure.

MSP Engineering completed a process optimisation study in late 2018/early 2019 to determine the optimum process route to treat the Project's ore. The study resulted in a standard crush, grind, float flowsheet for the production of copper concentrate for export. Figure 14 indicates the proposed process flowsheet.

The study also produced a site layout (Figure 15) suitable for start-up operations and future expansion. The description below outlines the equipment flowsheet for treating the ore at 16Mtpa and expanding to 30Mtpa from year 6 onwards.

Primary Crushing

A large 60-110E gyratory crusher capable of treating 30Mtpa will be utilised for primary crushing. Ore will be direct dumped from the mine by haul trucks or by front end loader into a feed pocket and crushed in the gyratory crusher. Crushed ore will be extracted by apron feeder and discharged to the crushed ore stockpile via the crusher discharge conveyor.

Secondary Crushing

Ore from the crushed ore stockpile will be conveyed to two secondary screens, with a top deck opening of 100mm and a bottom deck opening of 50mm. The oversize from the screens will be sent to two cone crushers with a closed side setting of 45mm in closed circuit with the screens. The undersize from the screens will be conveyed to the feed bin for the high pressure grinding roll.

High Pressure Grinding Roll (HPGR)

The HPGR will be in closed circuit with flake breakage and wet screening to prepare a 2 to 4mm product to feed a ball mill. Undersize from the screens will be fed to the ball mill cyclone cluster.

Grinding

A large ball mill in closed circuit with a cyclone cluster will grind the ore in preparation for feed to the flotation circuit.

Flotation

Cyclone overflow from the ball mill will report to a conventional copper flotation circuit consisting of roughing, regrind and three stages of cleaning with scavenging. Tailings from the flotation circuit will be pumped to the tailings thickener.

Concentrate Handling

Sulphide flotation concentrate will be pumped to the concentrate thickener where the thickened underflow will report to an agitated concentrate filter feed tank. Two vertical plate pressure filters will filter the concentrate on a batch basis to a moisture content of 10%. Filter cake will discharge to a conveyor and then be transferred to the concentrate storage shed.

Molybdenum (Moly) Recovery

Initial test work has indicated that a separate, small flotation circuit consisting of roughers, scavengers and cleaning stages would treat the Cu/Mo concentrate to produce a clean Mo concentrate. The Mo flotation tails would be the final Cu concentrate.

Tailings Disposal

The updated scoping study has investigated tailings disposal storage methods and locations in relation to the revised site layout. The study has produced preferred options for tailings disposal and storage, which will be further modelled in future feasibility studies.

The tailing dam design will be integrated with the mine waste rock storage to minimise impact on the landscape and ensure integrity of the tailing empoundment.

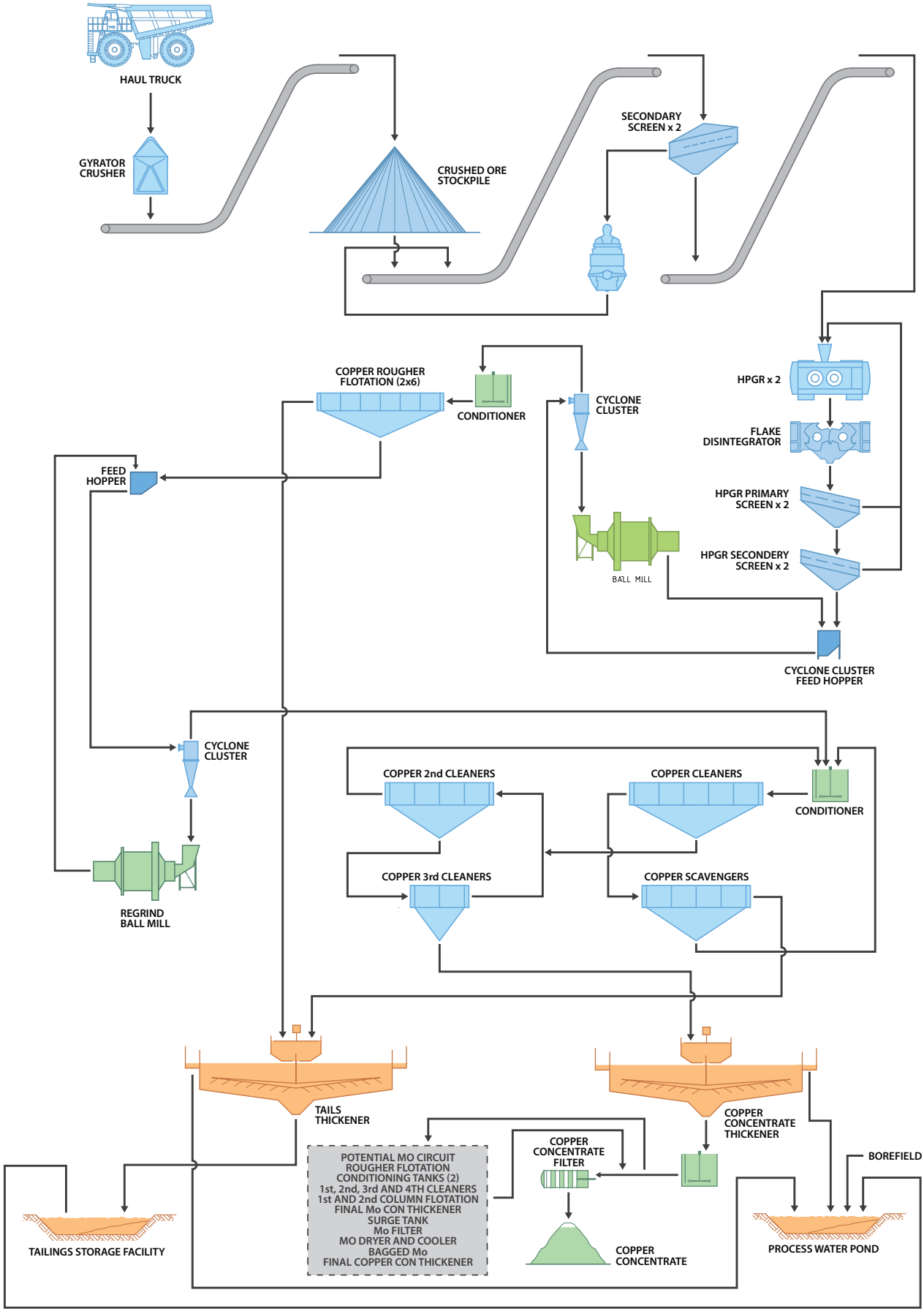


Figure 14: *Process plant flowsheet.*

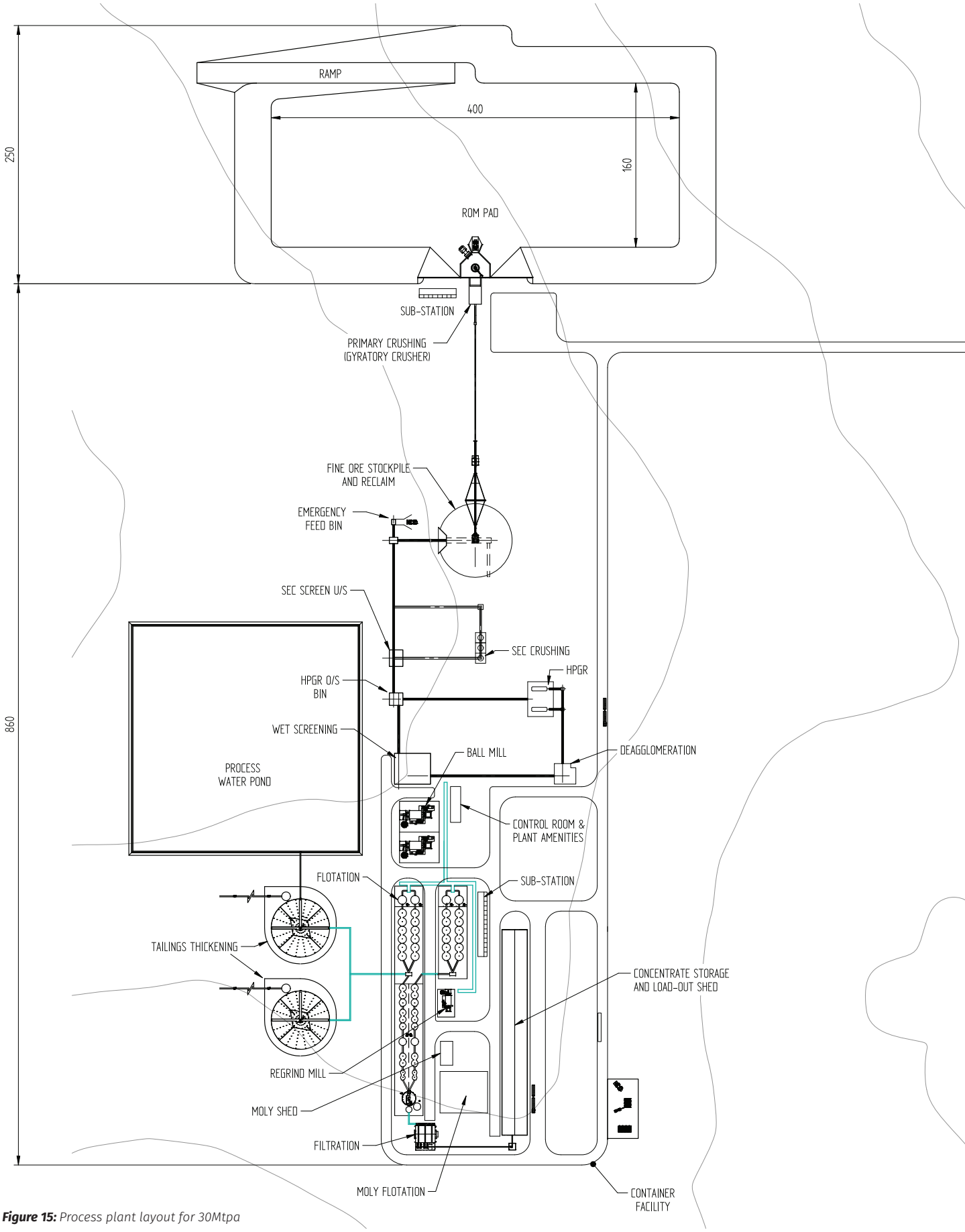
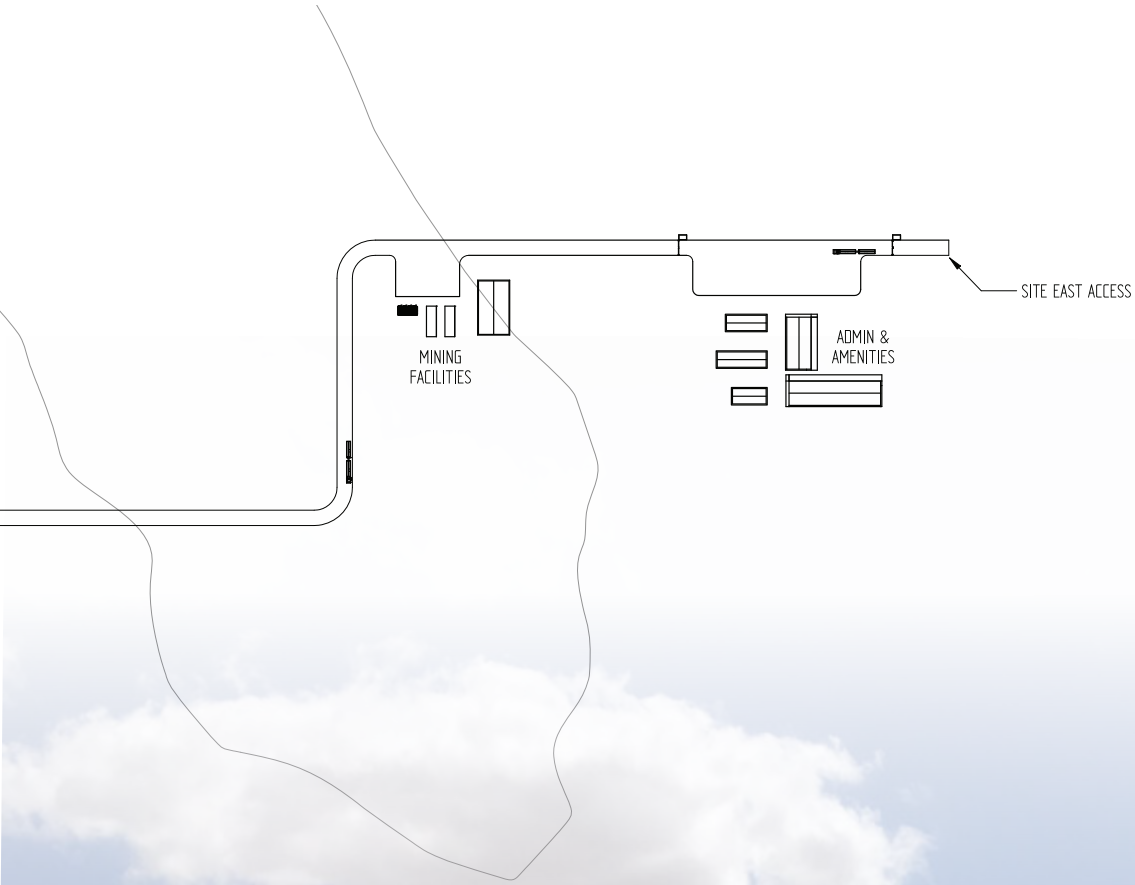


Figure 15: *Process plant layout for 30Mtpa*



PROCESS PLANT LAYOUT

ORE SORTING TECHNOLOGY

The ore sorting testwork is not sufficiently detailed to allow use in the current study. However, the results to date demonstrate the potential to substantially increase the grade of ore fed to the mill.

The copper minerals in the Caravel Copper Project ores occur in quartz-sulphide veins within an unmineralised host rock. This may make the ore amenable to ore sorting technology, where crushed ore is separated into mineralised (ore) and non-mineralised material (waste), to produce a smaller tonnage of higher-grade ore feed product for delivery to the processing plant (Figure 16).

Bulk samples of Caravel ore underwent sorting testwork in 2017, to establish proof of concept for use of ore sorting technology.[5]

Testwork Results

Two phases of ore sorter trials were conducted by TOMRA Sorting using TOMRA's X-ray Transmission (XRT) sorting machine.

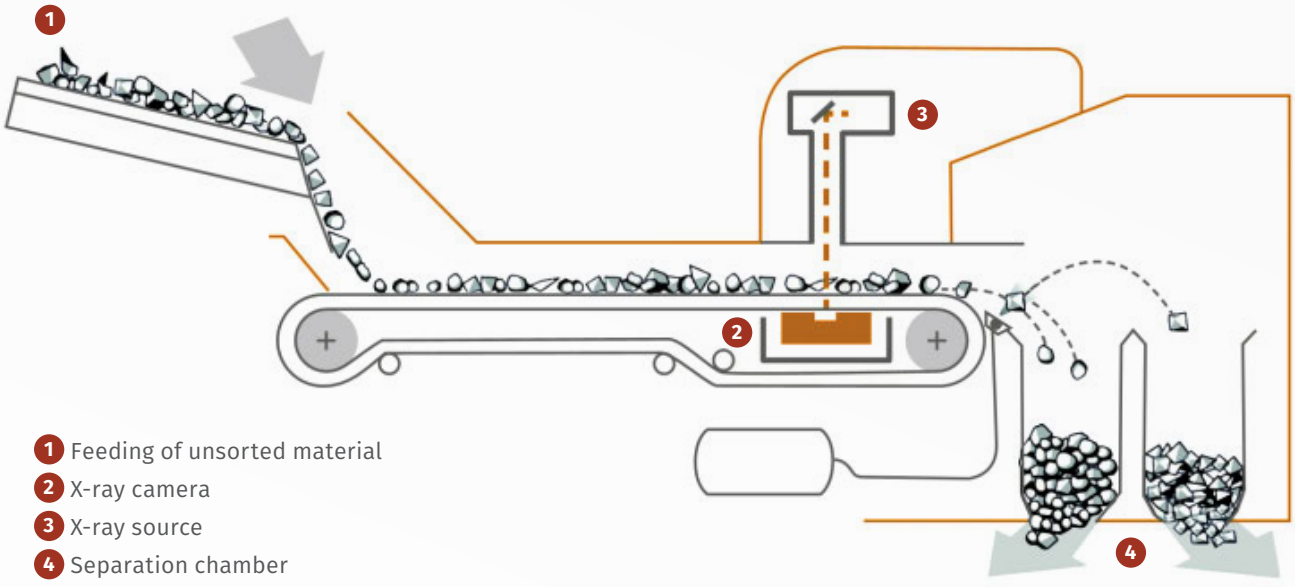
Tests on Bindi ores showed copper grades increased from a 0.27% Cu feed grade to around 0.7% Cu in the sorted product, within about 30% of the original mass. Around 70% of the feed material was rejected at an average grade around 0.09% Cu, below the expected marginal cut-off for processing.

Further Testwork

In the context of the planned plant expansion in year 6 where the mining rate increases to 30Mtpa, it may be possible to use ore sorting to treat crushed ore. This could reduce volumes by 50% and maintain the 16Mtpa feed to the existing 16Mtpa mill.

This would allow a substantial increase in copper production at relatively small additional capital cost, as well as substantially reducing requirements for additional water, power and tailings storage.

Further work is required to optimise the sorting parameters and evaluate capital and operating costs. Operating performance at new large-scale ore sorting installations, which are currently under consideration will help establish greater confidence in the performance of this technology at large scale operations.



1. Feeding of unsorted material
2. X-ray camera
3. X-ray source
4. Separation chamber

Figure 16. *Ore sorting flow diagram.*

INFRASTRUCTURE AND SERVICES

The Project's location in a region with existing infrastructure is highly beneficial to its economics.

The Project is located adjacent to a Main Roads WA RAV 7.3 road network linking the mine to a range of WA export ports (Figure 17) and provides multiple transport and trucking configuration options. Preliminary transport studies have confirmed that the ports of Geraldton or Bunbury are viable for the handling and export of copper concentrate.

Unlike many remote mining operations, the Caravel Copper Project will not require the construction of long haulage roads to the public road network. A fly-in fly-out workforce and the associated air transport infrastructure is not required for standard operations due to proximity (150km) to the Perth metropolitan area and availability of a regional workforce.

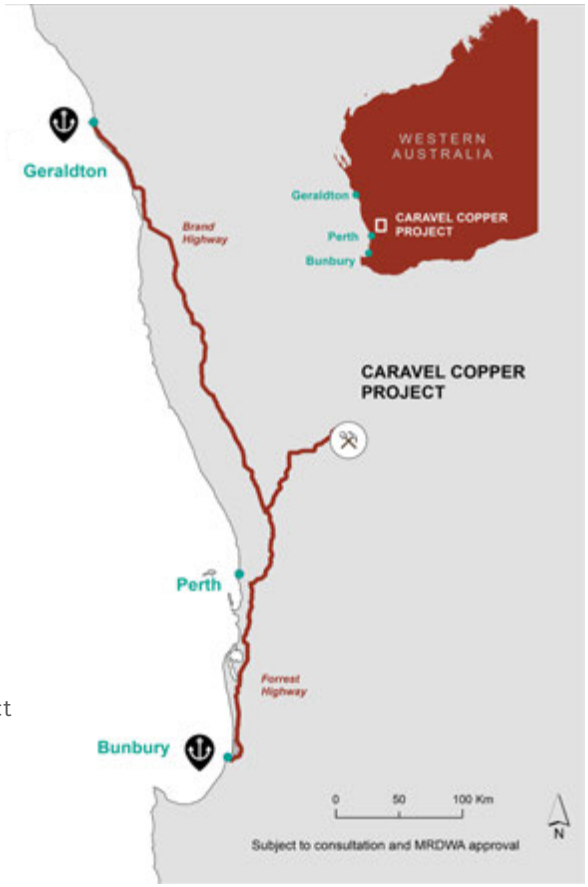


Figure 17. *Project location near existing public roads and potential export ports*

Image courtesy of **www.wongantourism.com.au**

Power

Plant and mine power requirements are estimated to be around 45MW for 16Mtpa, which has the potential to be supplied from the Western Power South Western Interconnect System (SWIS).

The town of Wongan Hills and nearby farms are supplied with power at 33kV by overhead powerlines. The existing powerline from Moora to Wongan Hills, close to the proposed minesite, is constructed to 132kV standards and is energised to 33kV.

Future feasibility studies will further investigate the lowest cost power supply options including a mix of alternative fuel options, such as liquified natural gas and other energy options for mining fleet fuel solutions.

Energy supply and pricing in Western Australia is currently characterised by stagnant demand coupled with the increasing supply, including from renewable energy sources. The growth of renewable generation in Western Australia is in line with changes observed in other electricity systems and is being reflected in pricing regimes.

Wholesale electricity prices in the WA market are currently averaging (on daily basis) between $0.04-0.05/kWh ($40-50/MWh). Over the next few years an additional 300 MW of capacity is planned to be connected to the WA grid in the areas north of Perth. On this basis the wholesale prices are not expected to increase, therefore the study has assumed electricity costs of around $0.08/kWh.

This is a significant saving to operating costs compared to off-grid projects where diesel generation costs are in the range $0.20-0.30/kWh.

Water

Water supply is anticipated to be sourced from a remote borefield and pumped to site via a pipeline to be constructed by the Company. Potential water sources have been investigated by the study team through desktop reviews and initial consultations. Provision has been made in the financial model for costs associated with the construction and operation of a remote borefield.

Potential sources

Paleochannels: Caravel Minerals has completed desktop reviews of paleochannels that extend through the Wheatbelt and determined a number of prospective channels that may be capable of contributing a significant volume of water to the Project. Modelling and field work are planned to evaluate the long-term sustainability of water supply from the channels.

Perth Basin: Caravel Minerals has identified aquifers with available licensable allocation to supply project water requirements.

ENVIRONMENT AND APPROVALS

The Project is located on freehold cropping farmland, part of which is degraded salt affected land, with ~92% of the conceptual footprint already cleared for agricultural use.

Baseline environmental survey work commenced in September 2018 to obtain data to a standard for use in future or potential environmental impact assessments (EIA). Early completion of surveys allows project design to protect and plan for improvement of environmental value,s and the timely preparation of required documentation for future approvals processes.

The Project has been presented to the Department of Mines, Industry Regulation and Safety and will undergo further definition based on technical feasibility studies, before being discussed with other regulatory authorities. Caravel Minerals continues to progress technical environmental studies.

Mining Lease

The Caravel Copper Project will require grant of a Mining Lease before mining operations commence. The application will be prepared in line with the Project's definition that will result from further feasibility work, including consultation and discussions with stakeholders.

Native Title and Heritage

The Project area is located within the Yued Native Title area, which includes the towns of Leeman, Jurien Bay, Cervantes, Two Rocks, Toodyay, Gingin, Calingiri, Dalwallinu, Coorow and Moora and is represented by the South West Land and Sea Council (SWALSC).

The Yued Native Title area is part of the South West Native Title Settlement (covering 200,000 square kilometres, including the Project area) which resolves all native title claims in the South West of Western Australia in exchange for a settlement package.

The status of the settlement was last confirmed as the Native Title Registrar registering each of the South West Native Title Settlement Indigenous Land Use Agreements (ILUAs) on 17 October 2018.

Caravel Minerals has signed heritage protection agreements with the South West Land and Sea Council representing the Yued Traditional Owners.

STAKEHOLDERS AND SOCIAL SUSTAINABILITY

Caravel Minerals has consulted widely with key stakeholders in the preparation of this Scoping Study, and consultation will be ongoing as the project moves through various feasibility studies, permitting and development.

Future social impact studies will be undertaken to integrate local community and other stakeholder priorities into project planning and management systems, and to identify opportunities for the broader community to participate in the project.

Local Landowners

Caravel has land access agreements in place with private landowners and maintains ongoing liaison regarding:

- Project status.
- Exploration drilling programs.
- Scope and purpose of environmental technical studies.
- Access arrangements.
- Project feasibility milestones and development concepts.

The Company has been pleased to partner with landowners to perform exploration over the past 10 years, and looks forward to continuing discussions regarding the Project's progression.

The Caravel Copper Project will create an estimated 500 jobs during the 2-year construction phase and 250 skilled, long-term jobs during the 23-year project life.

The Project will create new social and economic opportunities for surrounding local communities including increased revenue for local governments in the form of rates, local spend on goods and services and relocation of employees to towns. The Project will also deliver royalties and payroll taxation income for the State of Western Australia.

Local Community

The Project is located on a sealed road between the towns of Wongan Hills (16km) and Calingiri (23km).

The Project is well-serviced by local infrastructure with direct access to power, mobile telephone networks, a hospital, police station, primary and high schools and a range of community and sporting facilities.

The region has a skilled workforce, though the Project anticipates requiring more employees to work on construction and operations. Shires and towns are receptive and supportive of economic growth and population migration into the area.

Other Key Stakeholders

Caravel Minerals has briefed or communicated with a range of government, non-government and community stakeholders - including landholders, regulators, state government agencies, local government organisations, interested church bodies, elected representatives, local residents and business owners, industry professionals and consultants. Stakeholder discussions are ongoing.

FEASIBILITY AND DEVELOPMENT

Project execution is contingent on securing funding that maximises the benefits to all shareholders. The financing strategies would include consideration of a range of factors including:

- Securing a fully funded solution.
- Minimising potential dilution to existing Caravel Minerals shareholders.
- Obtaining flexible funding solutions to ensure the continuation of exploration activities and capturing potential development opportunities.

A primary aim of the updated Scoping Study has been to demonstrate that the Caravel Copper Project has positive economics and strong potential to become a large-scale, long-life, low to mid-cost producer.

Based on this Scoping Study, there are reasonable grounds to believe that the Caravel Copper Project can be financed via a combination of debt and equity, similar to a number of comparable projects in Western Australia, which have been funded in the past 24 months.

Debt may be secured from several sources including Australian banks, international banks, the high yield bond market, resource credit funds, and in conjunction with product sales agreements.

There are several factors that will influence the Company's ability to secure funding, including (but not limited to) a requirement to have copper offtake agreements and favourable prevailing market conditions (being both the copper market and the wider equity and debt market).

It is also possible that the Company could pursue other strategies to provide alternative funding options, including undertaking a corporate transaction, seeking a joint venture partner or asset sales.

Indicative Forward Work Program

Following the release of this Scoping Study, the forward work program involves completion of a Pre-feasibility Study (PFS) and Definitive Feasibility Study (DFS). Subject to funding, these may commence in conjunction with advancing several opportunities to enhance financial metrics of the Project.

Completion of a PFS is expected to take approximately 6 months and a DFS including permitting is expected to take a further 18-24 months. The targeted timeframe to reach a decision to mine is in mid-2021.

FINANCIALS

Initial capital expenditure ("capex") for a throughput of 16Mtpa of ore for the first 5 years is estimated at **A$481M**. Additional capex of A$256M in year 5 is required to ramp-up to 30Mtpa commencing in year 6. Capital expenditure is detailed in Table 5.

Sustaining capital has been estimated at A$6.6M per annum.

Table 5: Caravel Copper Project Capital Costs

Capital Expenditure	Initial A$m	LOM A$m
Process Plant (direct costs)	274	424
Site Infrastructure	33	34
Tailings Storage (incl surface water mgt)	21	28
EPCM	36	59
Project Indirects	5	8
Corporate and Owners	8	8
Contingency	45	67
Mining Capital & Pre-strip	59	149
Sustaining Capital	-	153
Rehabilitation	-	50
Total Capital Expenditure	**481**	**979**

Operating Costs

For the first five years of operation, estimated C1 Cash cost of US$1.45/lb Cu (after by-product credits) place the Caravel Copper Project in the second quartile of copper producers. Operating costs are detailed in Table 6.

Mining Estimate

The total ore excavated for the project is 1,290 million tonnes with an average mining operating cost of $2.27/t mined over the life of the mine. Costs have been estimated assuming contractor mining.

Processing and G&A Estimate

Processing, operating and site and administration cost estimates are $5.67 on average for for life of mine.

Table 6: Caravel Copper Project Operating Costs

Operating Costs US$[1]	$/lb Sold	
	1st 5 years	LOM
Mining Costs	0.52	0.71
Processing Cost	0.68	0.77
Site & General Administration	0.09	0.07
Logistics	0.12	0.17
Treatment and Refining Costs	0.27	0.26
By-Product Credits[2]	**(0.22)**	**(0.21)**
Operating Costs (C1 Cash Costs)	**1.45**	**1.77**

[1] *A long-term FX value of A$1 = US$0.72 was used in converting USD to AUD*

[2] *Grade, commodity pricing and payability for the by-product credits were as follows:*
Molybdenum 40ppm, US$10/lb and 47.5%
Silver 1.45g/t, US$16/oz and 61.8%
Gold 0.022g/t, US$1,270/oz and 31.4%

Investment Evaluation

A discounted cashflow analysis has been undertaken for the Caravel Copper Project using the base case production target of 16Mtpa of ore to the mill at 0.31% Cu and strip ratio of 0.5:1 for the first 5 years, expanding to 30Mtpa thereafter for a LOM feed grade of 0.25% C, and a strip ratio of 1.1:1. A long-term copper price of US$3.00/lb and AUD:USD exchange rate of US$0.72 was used in the analysis, which were selected by the Company as suitable estimates based upon conservative long range forecasts.

A summary of the results of the cashflow modelling is presented in Table 7.

Table 7: Sensitivity Analysis of Pre-tax NPV

Life Of Mine Financial Economics (A$)	
Revenue (net of payability and TCs/RCs) 1	**$10,645m**
Net Cash Flow (pre-tax)	**$3,142m**
Pre-tax NPV of between A$0.74B and A$1.37B (range based on +/- 30% of Base Case NPV)	**$1,054m**
Post-tax NPV (7% discount rate)	**$705m**
Pre-tax IRR	**24%**
Post-tax IRR	**20%**
Capital Payback Period	**4 years**

Strong Project Economics

- **Pre-Tax NPV of AU$1.05 billion** (7% real discount rate) and **post-tax IRR of 20%** has been estimated using long term price of US$3.00/lb Cu.
- Over a 23-year mine life, the Project is expected to generate a **positive cumulative cash flow of AU$3.1B** on net revenues of AU$10.6B.
- The Project is expected to repay up-front development capital within 4 years from the start of production.

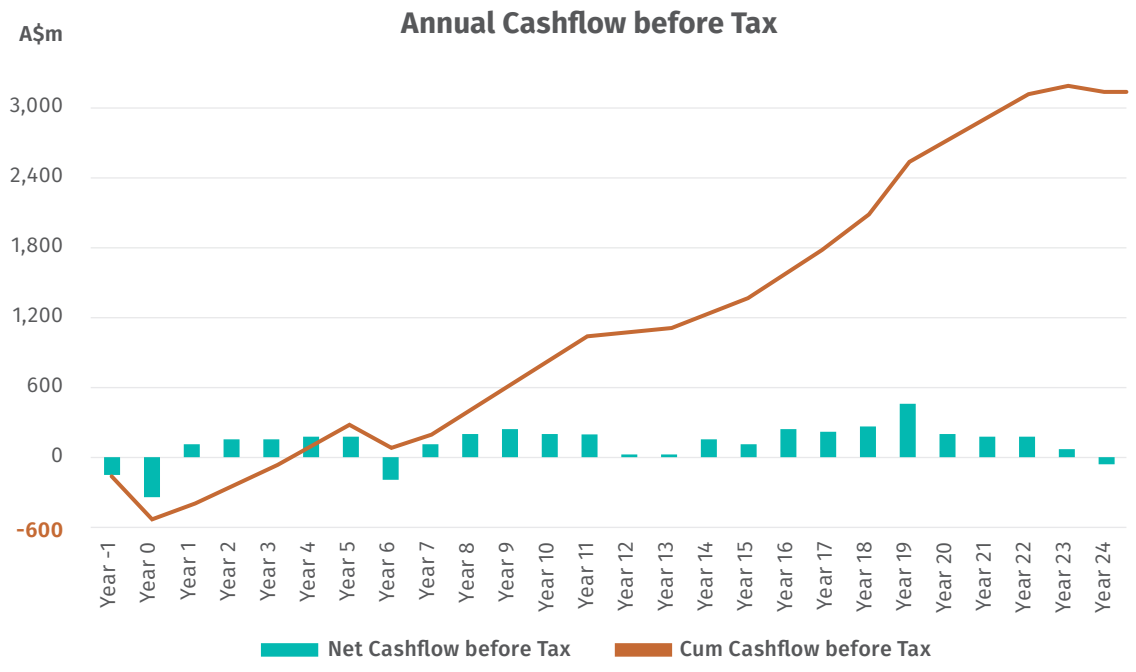


***Figure 18:** Annual cashflow before tax.*

Sensitivity

Sensitivity analysis has been performed on pre-tax NPV. Key Project Sensitivities were flexed between a range of -15% to +15% in 5% increments (Table 8). The analysis indicates that the Project is most sensitive to exchange rates, copper price and copper grade recoveries.

Table 8: Pre-tax NPV Sensitivity Against Base Case

Model Inputs	-15%	-10%	-5%	Base	+5%	+10%	+15%
Capital Costs	946	982	1,018	1,054	1,090	1,125	1,161
Mining Costs	861	925	990	1,054	1,118	1,182	1,246
Milling Costs	863	926	990	1,054	1,117	1,181	1,245
Operating Costs	568	730	892	1,054	1,216	1,378	1,539
Price	394	614	834	1,054	1,274	1,494	1,714
Cu Grade/Recovery	397	616	835	1,054	1,273	1,492	1,711
USD/AUD	344	580	817	1,054	1,291	1,527	1,764

Table 9: Pre-tax NPV Sensitivity Against Base Case Discount Rate

Model Inputs	5%	Base (7%)	10%
Discount Rate	1,360	1,054	608

Caravel Minerals considers 7% to be an appropriate discount rate based upon the Australian risk-free interest rate, low risk profile of Western Australia as reported by Fraser Institute and the Project's proximity to major infrastructure.

The tornado chart highlights the sensitivity of pre-tax NPV at -10% and +10% of Key Project Sensitivities against the A$1,054m base case scenario.

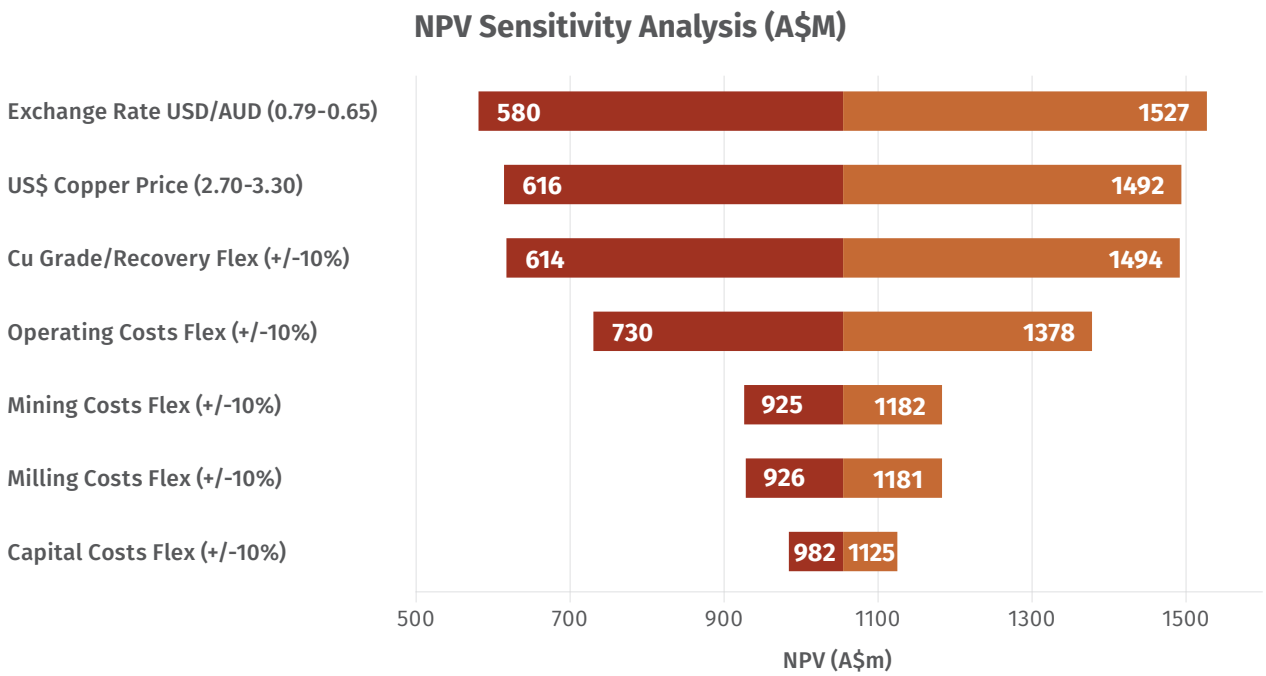


Figure 19: *NVP sensitivty analysis.*

CARAVEL ACKNOWLEDGES THE FOLLOWING STUDY PARTICIPANTS

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