



# MT CARBINE BANKABLE FEASIBILITY STUDY

2023 ECONOMIC UPDATE

MAY 2023



## Document History

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# 1. Requirement for Update

EQ Resources Limited (“EQR” or the “Company”) completed a bankable feasibility study (BFS) in December 2021 for the Mt Carbine Expansion Project and an Economic Update in 2022.

The BFS was separated into two distinct phases. Phase 1 focused on minimal capital expenditure (capex), incremental improvements to increase the mine’s productivity and profitability focusing solely on the mining and processing of the low grade stockpile (LGS).

Phase 2 focused on the activities and works required to dewater and commence mining of the open pit as well as the crushing and screening plant and processing plant to be upgraded to further reduce operating costs and increase the tungsten recovery.

Following the release of the BFS and Economic Update, another diamond drill campaign has been completed, resulting in increased mine reserves and optimization of the mining methodology. Alongside changes to the operational philosophy of the project, this necessitates an update to the BFS and Economic Update to present a more realistic economic outlook for the Mt Carbine Expansion Project.

The key changes and updates to the underlying economic inputs are summarised below and detailed in subsequent sections of this update.

## Phase 1 - Complete

As detailed in the ASX Release “[Strong BFS Update Delivers 59% Increase in NPV](#)” by the Company on the 9<sup>th</sup> of November 2022.

## Market Analysis

Since completion of the Economic Update, the ammonium paratungstate (APT) price has been sustained at the levels anticipated in that report. Market participants generally price tungsten according to metric ton units (MTU) of ammonium paratungstate (APT). This is the primary raw material traded in the market.

As set out in the Economic Update, the Government has placed its confidence in the development of the project through the allocation of AU\$6M grant funding, significantly lowering the cost of capital and therefore development of Phase 2 of the Project. First drawdowns were received in December 2022 with the next drawdown set for June 2023. There will be one final drawdown thereafter at approximately 10% of the grant value. Ordering of equipment, engineering, and construction of the Phase 2 plant is ongoing.

## Geology

The geological knowledge at Mt Carbine has been expanded to include a total of 96 holes for 24,337m of diamond drilling. The Mineral Resource has been updated to include the Phase II drilling program which has been highlighted in the two press statements ‘Significant Iron Duke Discovery And Potential For Additional Pit Expansion’ dated 13 February 2023, and ASX announcement ‘Drilling Confirms High-Grade Mineralised System in Western Extension’ dated 27 February 2023). The cut-off grade remains the same as the August 2022 Mineral Resource Estimate (MRE) with a cut-off grade of 0.05% WO<sub>3</sub>.

The Indicated resource has increased significantly with the additional infill holes, particularly west of the December 2022 BFS pit design. The optimised pit has been expanded westwards in this indicated ore to now allow 7 years of open cut mine life at a mine strip ratio of 3.9:1. The total planned pit has been expanded to include mining of 23.1Mt of material down to level 220m RL.

## **Mining**

After completion of the BFS, EQR has engaged Golding Contractors (Golding) on an early contractor involvement (ECI) basis.

Golding have reviewed and updated the pit shell, mine design and fleet selection and provided updated contractor rates based on current market conditions. The notable changes to the mining assumptions from the previous BFS include:

- Strip ratio from open pit mine is 3.9:1 based off the revised cut-off grade and pit expansion.
- Increase of the open pit area by 25% based off the improved ore reserves compared to the last Economic Update.

Mining costs remained unchanged.

## **Processing**

The processing plant design has been optimised to maximise the overall process plant throughput potential from expanded crushing and screening operations. This is achieved by:

- Increase ROM throughput to a nominal 350tph operating on a 24/7 basis on the Crushing and Screening plant. This will double the annual throughput of the crushing plant targeting the consumption of the LGS over a shorter period of time and reduce OPEX through economies of scale.
- Increase XRT Sorting Capacity by one TOMRA XRT Sorter to allow for additional feed material from the increased head feed rates.
- Increase capacity of the Gravity Processing plant through minor process changes, mainly the installation of the following:
  - Installation of a larger wet screen at the Gravity Plant, increasing capacity of up to 150tph to have contingency capacity included in the design.
  - Installation of an additional tables feed preparation circuit for the jig concentrate. Phase 2 saw the upgrade of the circuit, the Phase 2A design sees the inclusion of a second circuit installed adjacent to the ongoing installation of the upgraded tables feed preparation circuit.

## **Infrastructure**

The power infrastructure scope has been upgraded in this Economic Update through a power line upgrade to the site. This upgrade is required to facilitate the Gravity Plant equipment upgrades required to double the plant throughput capacity of the low grade stockpile material. The power upgrade is not required initially, and is planned to be installed after approximately two years of mining when a higher proportion of low grade material is planned to be mined.

## **Approvals**

The Environmental Authority (EA) amendment submission has been completed and received by the Company as a minor amendment. No further approvals are required to support the mining and plant expansions described in this Economic Update.

## 2. Geology and Resources

The Mt Carbine mining area is confined within two Mining Leases (ML), ML4867 and ML 4919 totalling 366.39 hectares. The mining licenses are surrounded by EQR’s Exploration Tenements (EPM) EPM 14872, EPM 14871 and EPM 27394 covering an additional 115 km<sup>2</sup>.

A map of the tenure boundaries is shown in Figure 1.

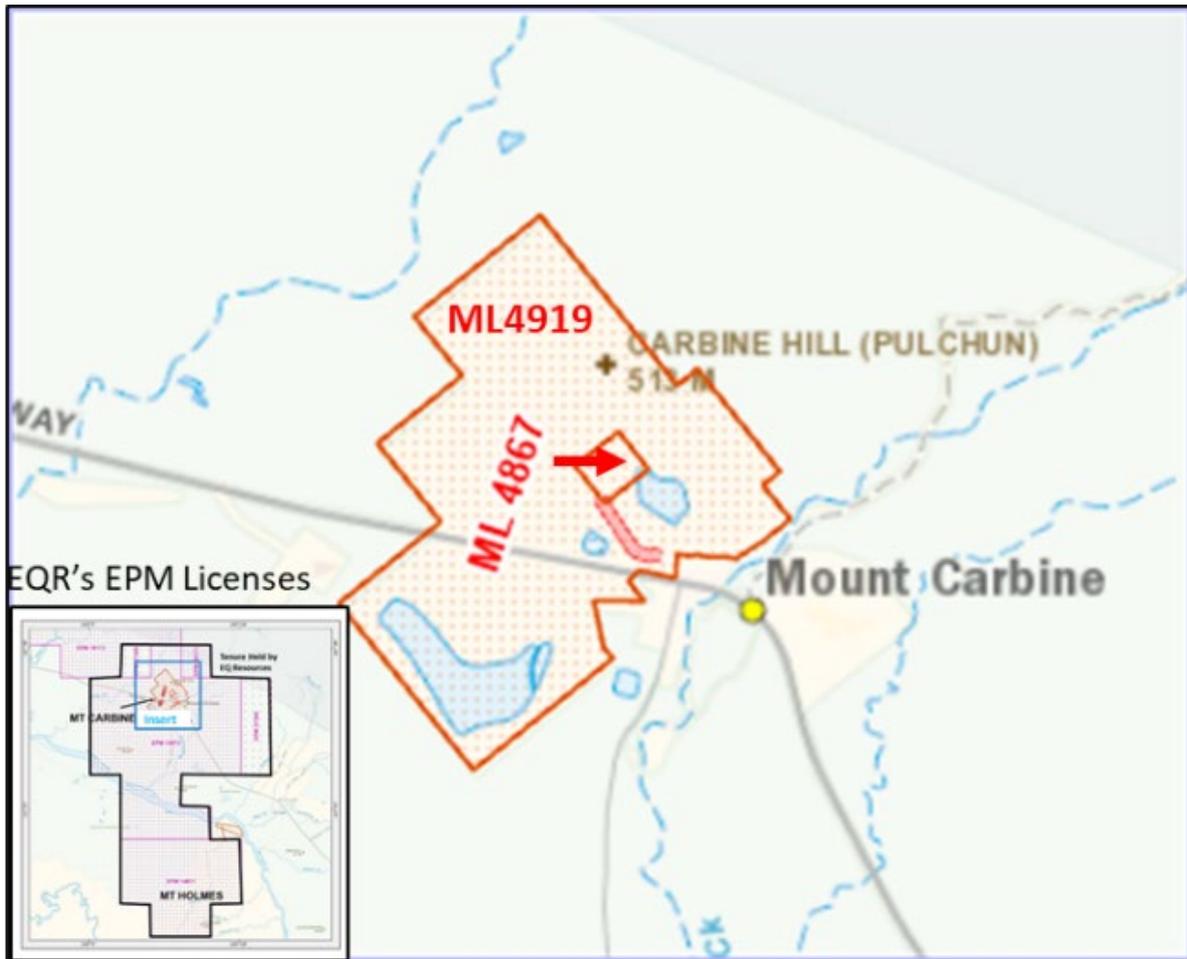


Figure 1: Mt Carbine Lease Boundaries and Surrounding Exploration Tenements

ML4867 (358.5 Ha) was first granted on 25 July 1974 and has been continually renewed until today. The latest renewal of 19 years expired on 31 July 2022, upon which time EQR has submitted a renewal application for a further 19 years (granted until 31 July 2041). The renewal is based on the new resources / reserves and the Mt Carbine Bankable Feasibility Study that outlines the planned future mining activity. ML4919 (7.891 Ha) was first granted on 24 August 1974 and has been continually renewed with the latest 19 year renewal expiring on 31 August 2041.

A summary of the current licenses and status is provided in Table 1.

State	Ownership	Area	Status	Interest Held at Year End	Expiry Date
<b>Queensland, Australia</b>					
ML 4867	Mt Carbine Quarries Pty Ltd (wholly owned subsidiary of the Company)	358.5 ha	Granted	100%	31/07/41
ML 4919	Mt Carbine Quarries Pty Ltd (wholly owned subsidiary of the Company)	7.891 ha	Granted	100%	31/08/41
EPM 14871	EQ Resources Limited	10 sub-blocks	Granted	100%	12/12/2025
EPM 14872	EQ Resources Limited	21 sub-blocks	Granted	100%	11/12/2025
EPM 27394	EQ Resources Limited	4 sub-blocks	Granted	100%	01/06/2025

ML = Mining Lease;  
EPM = Exploration Permit for Minerals (QLD);  
EL = Exploration Licence (NSW)

Table 1: Mt Carbine License Register

## 2.1. Regional Geology

The Mt Carbine mine site is located within the Siluro-Devonian Hodgkinson sedimentary province. The thick sedimentary sequence was complexly folded and regionally metamorphosed prior to and during extensive granitic intrusions in the Carboniferous and Permian. The regional geology is shown in Figure 2.

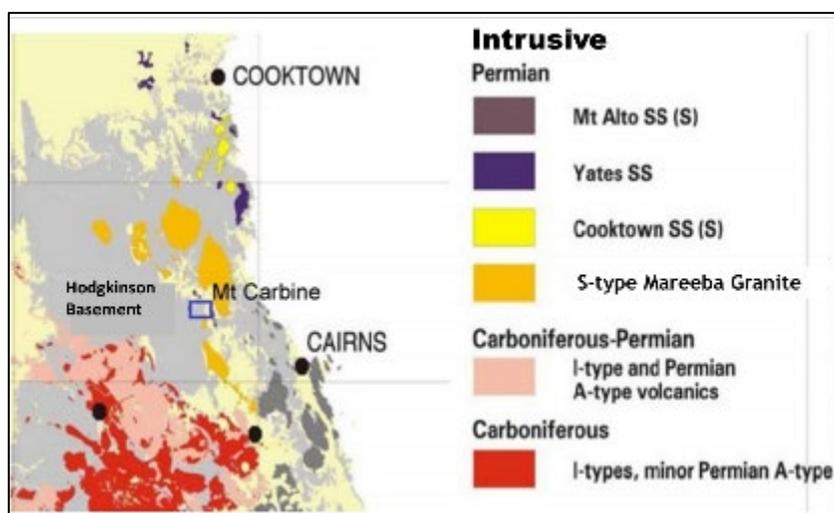


Figure 2: Regional Geological Setting of Mt Carbine

Within the permit north-north-west trending Hodgkinson Formation turbidite and siltstones are intruded by the Mareeba Granite dated at 277My, and the Mt Alto Granite, dated at 271±5My (Bultitude et al., 1999). Contact metamorphic aureoles marked by formation of cordierite Hornfels surround the granite intrusive and numerous acid to intermediate dykes intrude the metasediments. In the western portion of the tenement, a prominent metabasalt-chert ridge is a significant Hodgkinson formation stratigraphic component.

## 2.2. Mineralisation

The Mt Carbine ore deposit is made up of sheeted veins that occur as distinct white quartz-tungsten veins of 5-200cm in width with the main ore zone occurring between the Reduced Levels (RL's) of 100 to 350m RL. The veins occur in multiple sets of sheeted veins that make distinctive 'package' zones. The individual veins in the 'packages' are often from 0.5m to 5m apart, whereas between packages the vein separation is typically 10-20m. The better mineralised zones of the Iolanthe, Bluff & Johnson packages, typically have from 10-15 veins that make up the vein zone. Internally in the vein zone package, veins do merge and bifurcate, pinch and swell and truncate, but for the most part are sheeted in their format. This is demonstrated on the global project scale where subparallel veins are repeated over more than 500m width and >1km strike with a total of 7 vein packages so far identified and mapped out.

The Mt Carbine tungsten deposit consists of a number of vertical to sub vertical sheeted quartz veins ranging in width up to 7m but averaging around 50cm. Only about 20% of the quartz veins are mineralised due to an early barren quartz event and a later mineralising quartz event. Economic minerals are the tungsten minerals of scheelite and wolframite mineralisation that occur in the ratio of 1:4 respectively.

A typical section through the centre of the deposit has over 35 quartz veins ranging from 10cm to 7m in width with 5-8 zones of overprinting mineralised quartz veins of 10 -150cm widths. These high grade veins containing rich quartz - feldspar tungsten minerals and have been designated as "King Veins".

The tungsten occurs as coarse crystalline varieties of Wolframite up to 10cm crystal size and with varying degrees of intergrown scheelite that is volumetrically less significant. Tungsten minerals can form up to 50% of the quartz vein zone, as intersected and with such a coarse nature to the mineralisation causes a nugget effect to the mineralisation. In a later retrograde stage a scheelite overprinting event occurs that is represented mostly as fine scheelite replacing wolframite on fractures and progressive wholesale replacement.

The Scheelite-Wolframite ratio is seen to increase to the grid north and grid east of the deposit and this mostly reflects the host rocks change to a more calcareous metavolcanic-chert horizon. In general the veins are persistent and strong and cross all rock types. The occurrence of the veins is thought to be a conjugate veins set as the result of movement on faults occurring on the fold nose of an isoclinal fold. The sheeted parallel nature to the veins locally have jogs along strike resulting in movement of local structures during tungsten deposition. Examples of mineralisation in core samples are shown in Figure 3 and Figure 4.



Figure 3: King Veins Showing Coarse Vein Textures of Wolframite Crystals



Figure 4: Core Showing Late Replacement of Wolframite by Fine Network Retrograde Scheelite

The mineralisation interpretation is that there are two primary mineralising events with the first phase being a pervasive gaseous front that forms broader scale silicification / veining and deposits a lower grade background level of tungsten mineralisation. A rich brine fluid then entered later through later fracturing of the now silicified host rock. These brine veins (king veins shown above) are recognised to have higher temperature and higher salinities in fluid inclusion work attesting to their direct magmatic origin. Conversely the gaseous veins result in fluid inclusions with more gases and a composition showing mixing with groundwater has occurred. The king veins can be as high as 50%  $WO_3$  but typically are in the 1-2%  $WO_3$  range.

Along the grid E-W strike to the mineralisation, the veins have been grouped into lenses, where one or more of the high-grade king veins are close enough to define a composite value above a cut off of 2m 0.25%  $WO_3$ .

An indicative cross section through the open pit indicating vein locations is shown in Figure 5 and Figure 6 showing Indicated Resources in red and Inferred Resources in green.

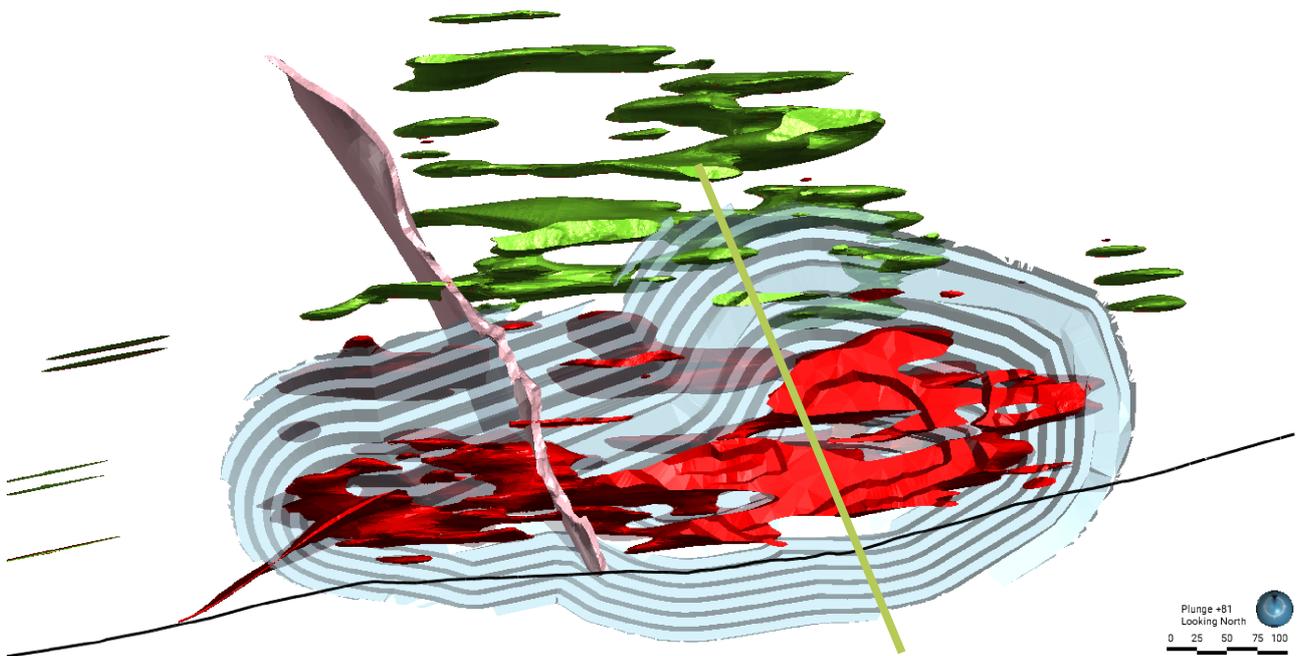


Figure 5: Open Pit Cross Section Location

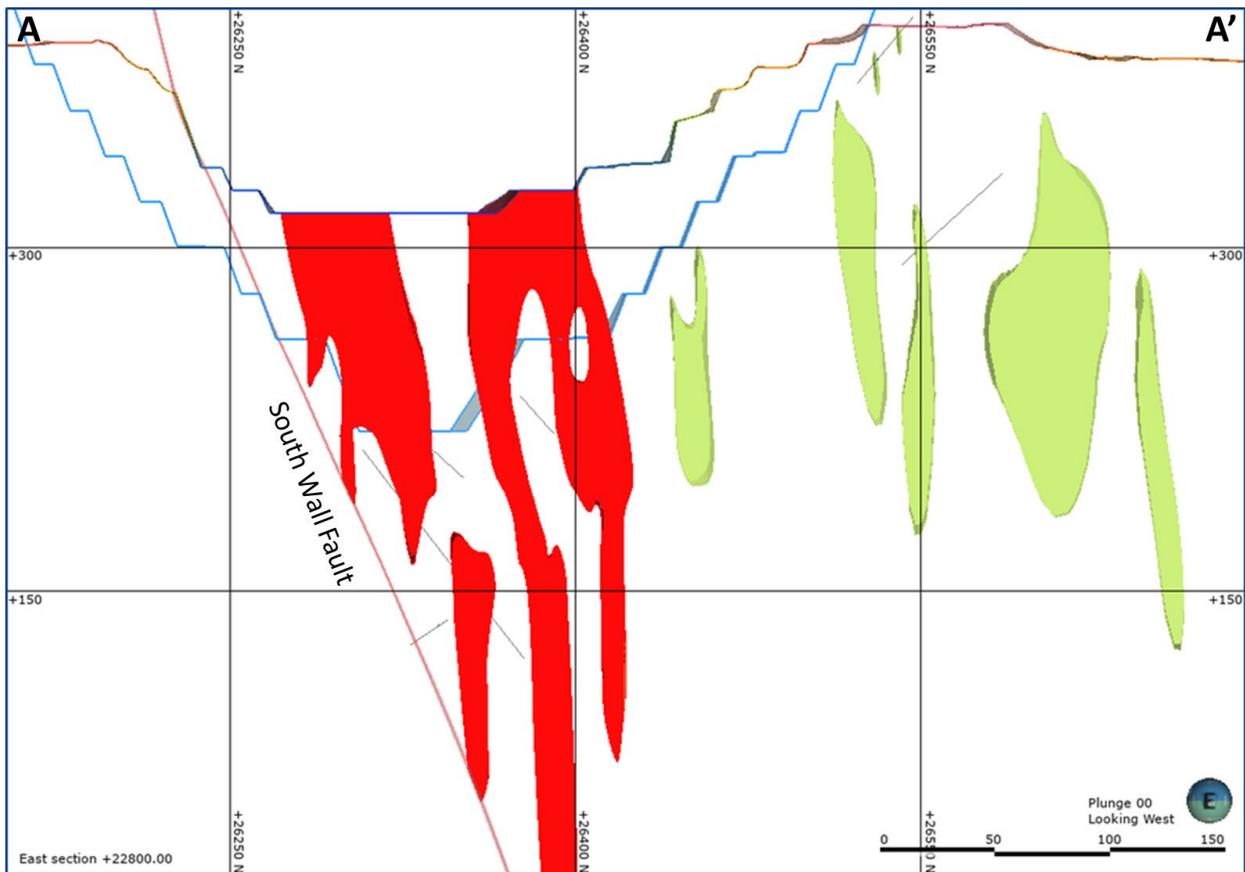


Figure 6: Typical Ore Section Through Open Pit

### 2.3. Resource Estimation

EQR completed a resource update calculation that was released on April 4 2023 with significant high-grade mineralisation intersected (see ASX announcement ‘Drilling Results Highlight Significant Iron Duke Discovery

and Potential For Additional Pit Expansion' dated 13 February 2023, and ASX announcement 'Drilling Confirms High-Grade Mineralised System in Western Extension' dated 27 February 2023).

The differences from previous Resources Estimates completed by the Measured Group (see EQ Resources website 'Technical Reports; 2021 Resource Report December dated 3<sup>rd</sup> December, 2021 & 2022 Resource Report July dated 21<sup>st</sup> July, 2022) is principally the details of variogram modelling. The variogram of the Measured Group was a single variogram applied to the entire resource whilst EQ Resources work showed that the veins moved orientation in the western portion of the deposit. The procedure to install a variable orientation estimation was to outline the vein trend from surface mapping of the veins, historical underground workings maps and the orientation of the veins in the diamond drill core using high quality vein orientation measurements.

The database for the estimate has grown to 96 drill holes for 24,337m of diamond drilling that has all been geologically and geotechnical logged, and photographed. Approximately 22% of the core has been assayed with all veins being included. Core was split using diamond saw cut along the same determined orientation to keep the consistency of sampling. All samples were prepared to recommended powder before a fusion disk XRF-15b analysis by ALS in Brisbane.

Lithological, structural and assay data from the 96 diamond core drill holes, which are spaced between 20m and 75m apart, were used to build the mineralisation wireframes which is used to constrain the block model. Checks of the documentation describing the sampling, sample preparation, QA/QC protocols and analytical procedures used for all the drilling phases were completed by the Competent Person responsible for the estimate.

No compositing of core sample intervals was undertaken in the field. Samples were composited within the mineralisation envelopes for geological modelling. Data spacing was considered sufficient for the estimation of WO<sub>3</sub> grades by ordinary kriging. Mineralisation was modelled as three-dimensional blocks of size 5m x 5m x 1m. No assumptions were made regarding the modelling of selective mining units but veins were mapped into their orientation domains and modelled using variable orientation estimation variography.

The following validation checks were completed on the block model:

- Drill holes used for the estimation plotted in expected positions;
- Flagged domains intersections lay within, and corresponded with, domain wireframes;
- Determine whether statistical analyses indicated that grade cutting was required;
- Volumes of wireframes of domains matched volumes of blocks of domains in the block model; and
- Visually plot of grades in the block model against drill holes.

The MRE was completed on the basis that the in-situ Mineral Resource will be mined by either open-cut or underground mining methods. Given the proximity of the modelled orebody to the current open pit, the MRE has been deemed by the Competent Person to pass the "reasonable prospects for eventual economic extraction test" (RPEEE).

### ***Cut-offs***

No upper cut-off grades were applied to the Mt Carbine Resource Estimate. The Competent Person established to his satisfaction that the high-grade zones recorded in the drill results were present in the mineralized zones and could be correlated between sections. A lower cut of 0.05% WO<sub>3</sub> was used to determine the resource and to define the geological boundaries to the mineralized zones. The Competent Person completed an assessment of tonnes by grade table to assist in the determination of the cut-off grade.

The updated MRE uses the same 0.05% WO<sub>3</sub> cut-off as defined in our previous Resources and Reserves Statements (see November 2022 Economic Update). The lower grade portion of these Resources is designated for storage into the Company's low-grade stockpiles which are currently being mined at a grade of 0.075% WO<sub>3</sub>, whilst the >0.08% WO<sub>3</sub> portion is marked into the Company's In-situ Resources Category.

Table 2: Variable cut-off grades for Mineral Resource Estimate (In-situ)

Cut-off (% WO <sub>3</sub> )	Tonnes (Mt)	Grade (% WO <sub>3</sub> )	WO <sub>3</sub> (mtu)
0	35.83	0.25	8,957,737
<b>0.05*</b>	<b>32.33</b>	<b>0.27</b>	<b>8,855,518</b>
<b>0.08**</b>	<b>28.74</b>	<b>0.30</b>	<b>8,623,212</b>
0.1	26.53	0.32	8,423,949
0.15	21.32	0.36	7,774,790
0.2	16.61	0.42	6,952,182
0.25	12.72	0.48	6,079,893
0.5	3.37	0.85	2,878,938
0.75	1.30	1.25	1,634,882
* Cut-off used to define Low Grade Stockpile (0.05-0.08% interval)			
** Cut-off used to define ROM Stockpile (>0.08% WO <sub>3</sub> )			

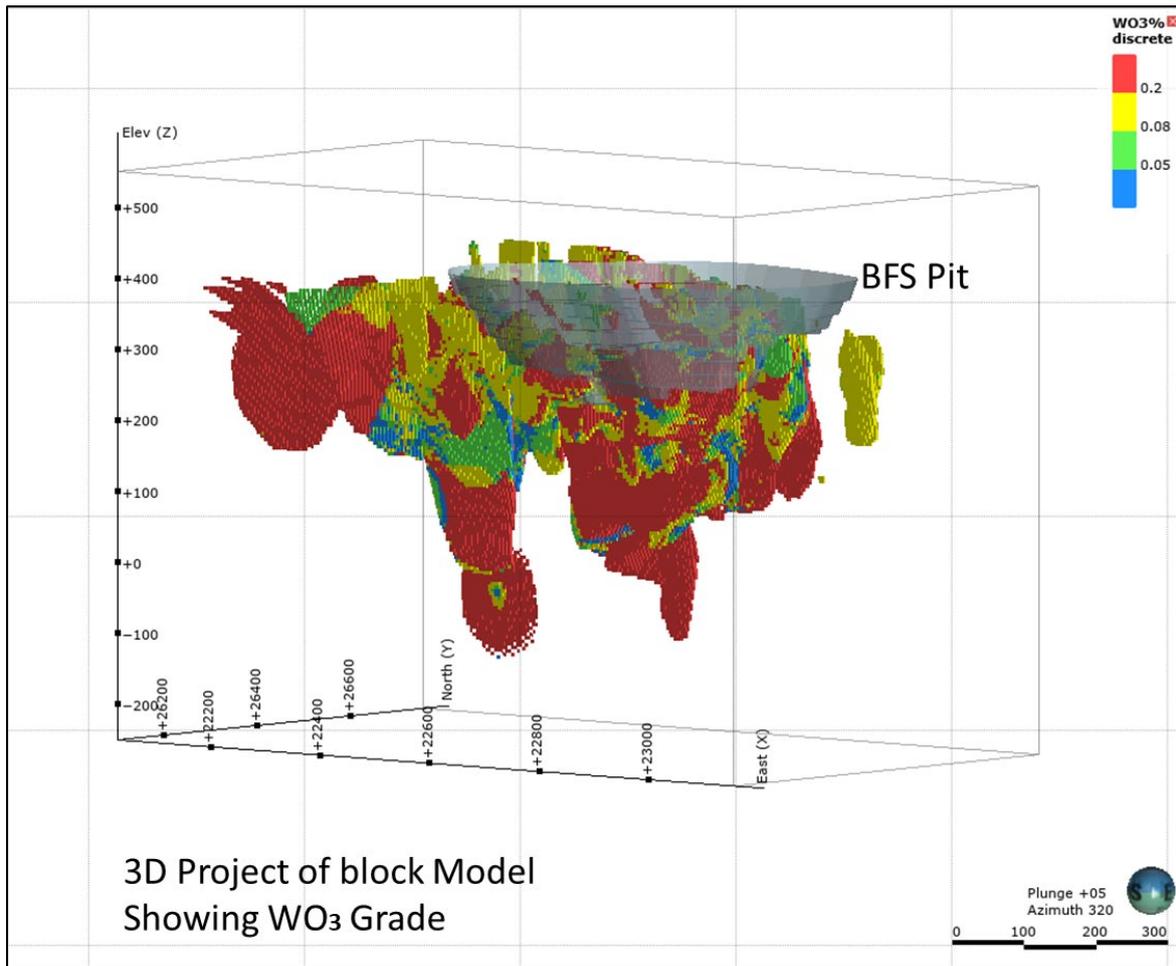


Figure 7: 3D perspective view of the block model showing tungsten (WO<sub>3</sub>) grades

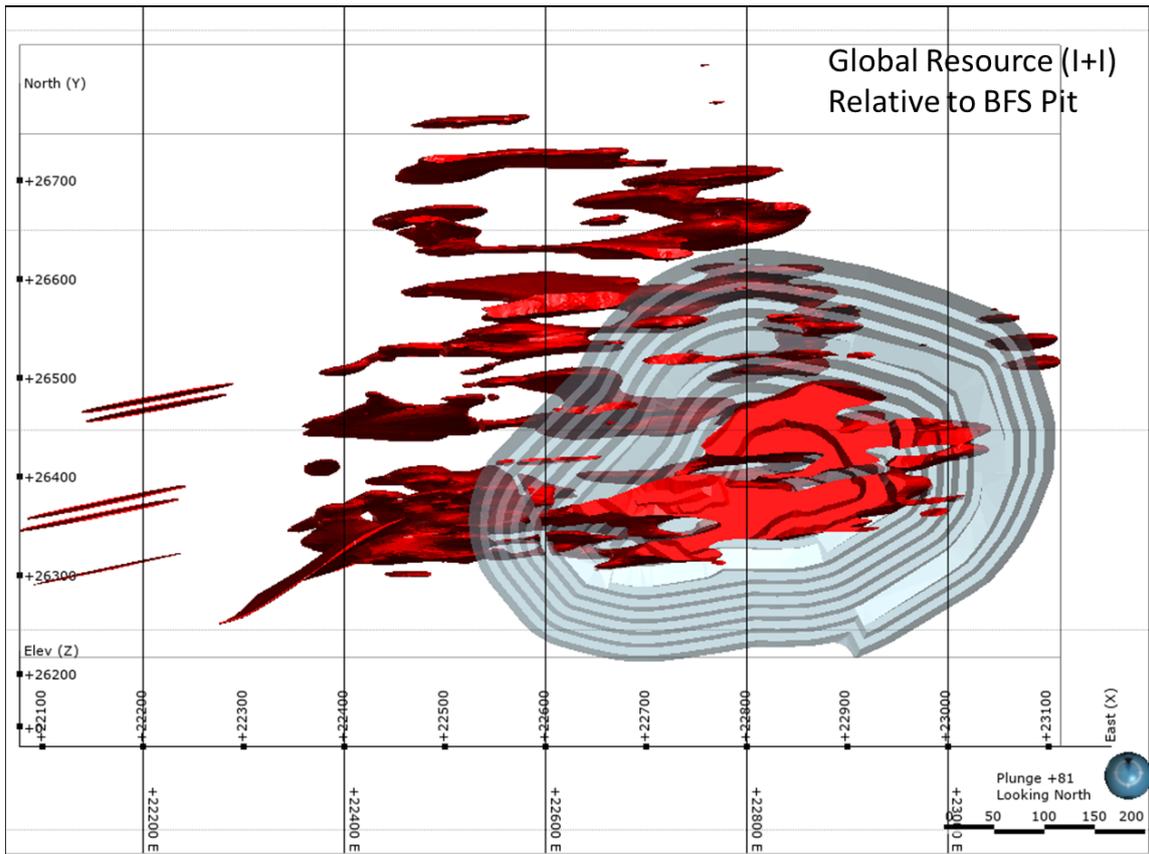


Figure 8: Plan view showing the global resource shape (Indicated + Inferred)

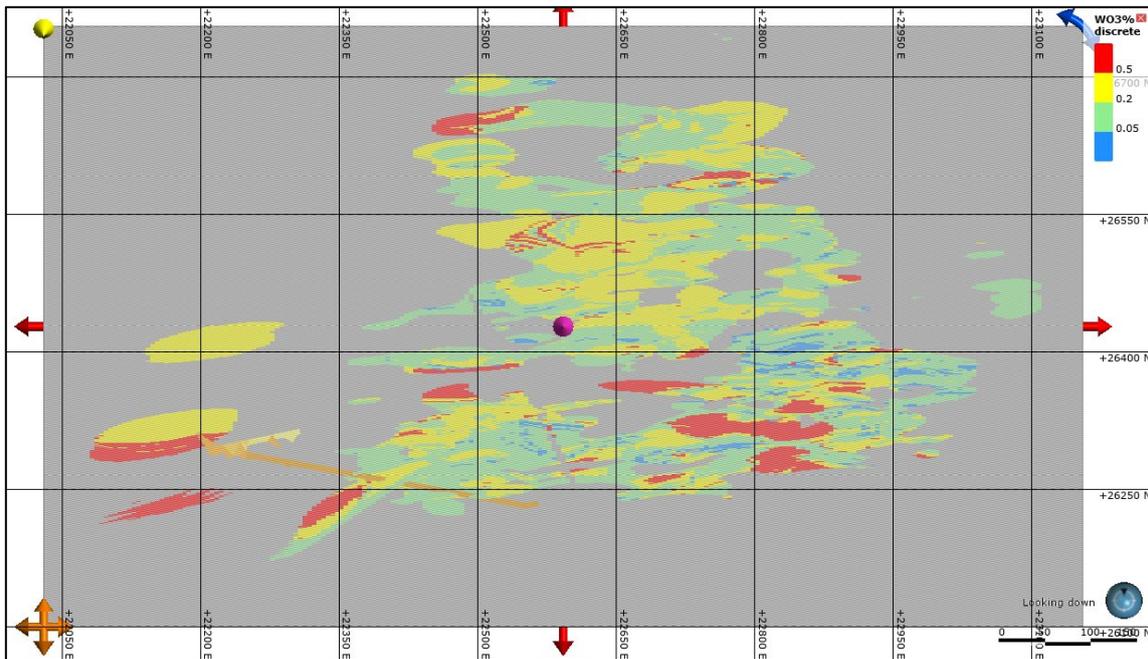


Figure 9: Plan of Block Model showing Tungsten Grades (WO3 %) for entire resource

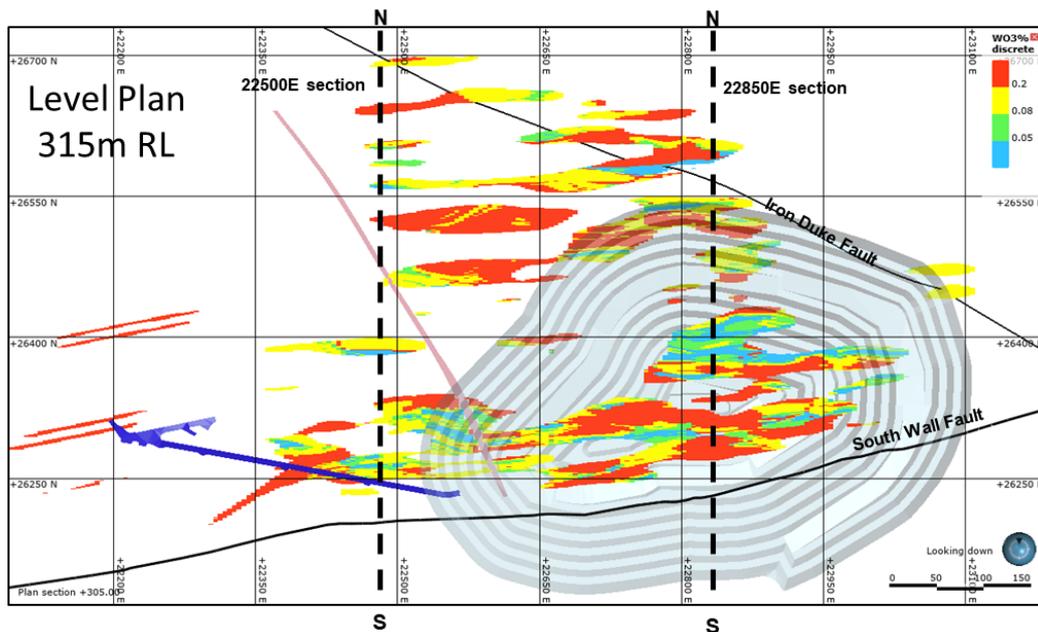


Figure 10: Plan of Block Model showing Tungsten Grade with Pit Overlay

## 2.4. Reserve Estimation

A review of the updated resources was undertaken by the Measured Group (Optimal Mining). The resource statement is summarised in Table 3.

Table 3: Updated Resource and Reserves

<b>Mt Carbine Mineral Resources</b>				
<b>Orebody</b>	<b>Resource Classification</b>	<b>Tonnes (mt)</b>	<b>Grade (WO<sub>3</sub>%)</b>	<b>WO<sub>3</sub> (mtu)</b>
<b>Low Grade Stockpile</b>				
	Indicated	10.126	0.075%	759,450
<b>In Situ</b>				
In Situ LG (0.05-0.08%)	Indicated	2.75	0.07%	178,517
	Inferred	0.83	0.06%	53,789
	<i>Total</i>	<i>3.58</i>	<i>0.07%</i>	<i>232,306</i>
	<b>Total</b>	<b>13.71</b>	<b>0.07%</b>	<b>991,756</b>
In Situ (+0.08%)	Indicated	18.06	0.30%	5,405,901
	Inferred	10.68	0.30%	3,217,311
	<b>Total</b>	<b>28.74</b>	<b>0.30%</b>	<b>8,623,212</b>
<b>Total Indicated</b>		<b>30.94</b>	<b>0.21%</b>	<b>6,343,868</b>
<b>Total Inferred</b>		<b>11.51</b>	<b>0.28%</b>	<b>3,271,100</b>
<b>Total I + I Resource</b>		<b>42.45</b>	<b>0.23%</b>	<b>9,614,968</b>
<b>Mt Carbine Ore Reserves</b>				
<b>Reserve Category</b>	<b>Rom Tonnes (Mt)</b>	<b>WO<sub>3</sub>%</b>	<b>Contained WO<sub>3</sub> (mtu)</b>	
Open Cut - Proved	-	0.28%	1,660,400	
Open Cut - Probable	5.93	<b>0.28%</b>	<b>1,660,400</b>	
<b>Open Cut - Total</b>	<b>5.93</b>	<b>0.28%</b>	<b>1,660,400</b>	
LGS - Proved	-	-	-	
LGS - Probably	9.77	0.075%	732,750	
<b>LGS - Total</b>	<b>9.77</b>	<b>0.075%</b>	<b>732,750</b>	
Total Proved	-	-	-	
Total Probable	15.7	0.152%	2,393,150	
<b>Total</b>	<b>15.7</b>	<b>0.152%</b>	<b>2,393,150</b>	
Notes				
1. Total estimates are rounded to reflect confidences and resource categorisation Exploration Results, Mineral Resources and Ore Reserves (JORC,2012) published by the Joint Ore Reserve Committee (JORC)>				
3. No uppercut was applied to individual assays for this resource, a lower cut of 0.05% was applied with the section 0.05-0.08% being designated as LG In situ. This is the grade where distinct zones of mineralisation occur.				
4. Drilling used in this methodology was all diamond drilling with 1/2 core sent according to geological intervals to ALS for XRF15b analysis				
5. Resource estimation was completed using the kriging methodology				
6. Indicated spacing is approximately 30 x30m, inferred is approximately 60 x 60m.				

The reserve statement highlights the following:

- Increase in probable reserves by 481,957 Mtu in a new larger pit;
- Increased in the open cut mine life of 2.5 years for a total of 7 years of open cut mining; and
- Strip ratio remains excellent at 3.9:1 for the waste:ore ratio.

Details of the new mining schedule and updated parameters are included in the Section 3.

## 2.5. QAQC

EQR continued its rigorous QAQC program with >10% of its sampling being blanks, standards or duplicates. ALS Laboratory in Brisbane completed all the assaying using the analysis method of ME-XRF15b for tungsten and associated minerals with results shown in Figure 11.

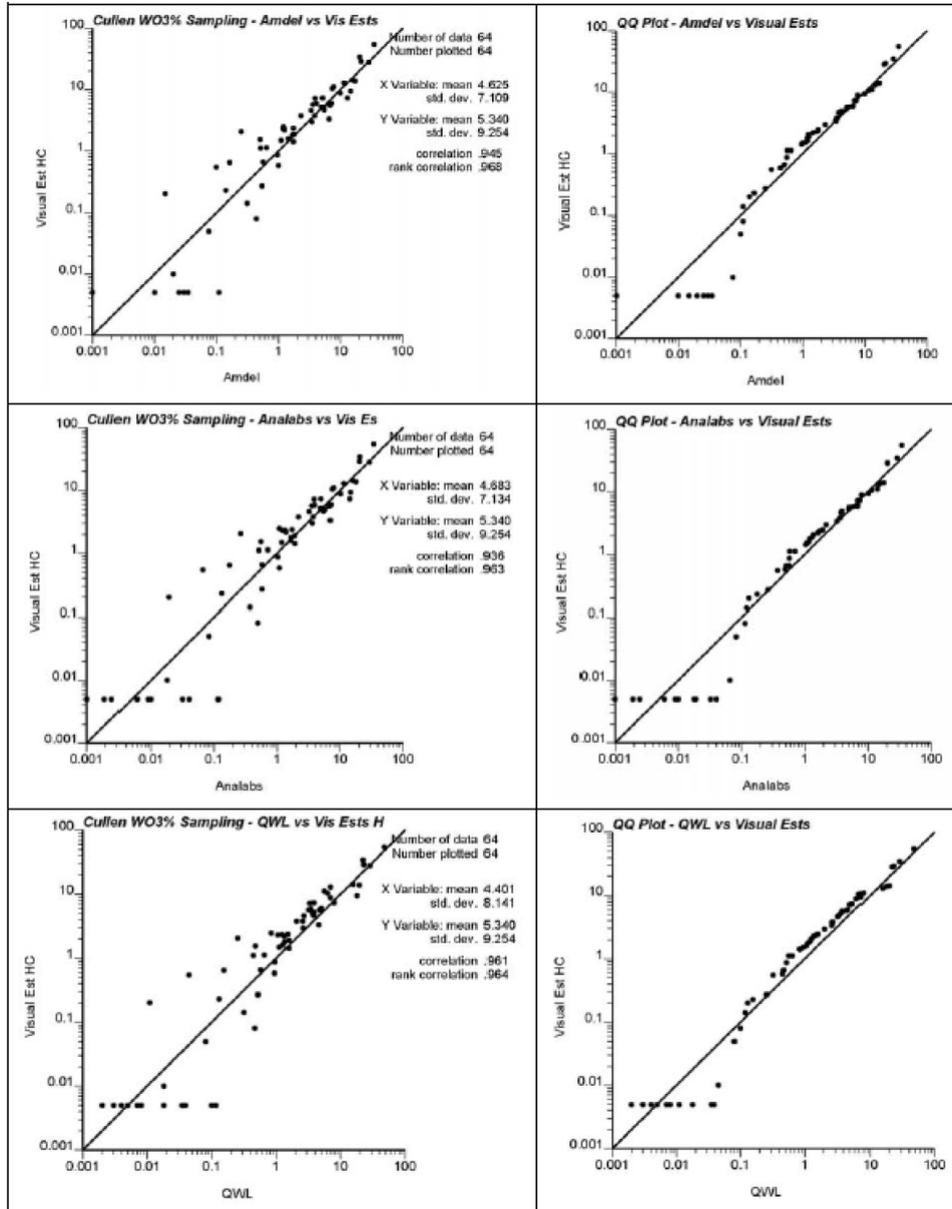


Figure 11: QAQC Results

A review of the QAQC protocol by the Measured Group had the following conclusion (extract 5.3 from Reserve Statement Published in September 2022).

The laboratory employed the required industry standards for sample preparation and the techniques of analyses were appropriate for the level of tungsten mineralisation. The results of the QA/QC study verified that no systematic assay bias was present in the samples supporting the resource estimate. Extensive QA/QC analyses involving comparisons of visual estimates against XRF WO<sub>3</sub>% assay results over the same sample intervals have shown a consistent linear relationship with no issues that would impact resource estimation.

### 3. Mining

#### 3.1. Operational Overview

The Mt Carbine mine is a surface operation, with two sources of tungsten ore available – an in-situ open pit resource and a historical low-grade stockpile, locations as shown in Figure 12. Ore Reserves are 5.93Mt at 0.28% WO<sub>3</sub> and 9.77Mt at 0.075% WO<sub>3</sub> for open Pit and LGS respectively.

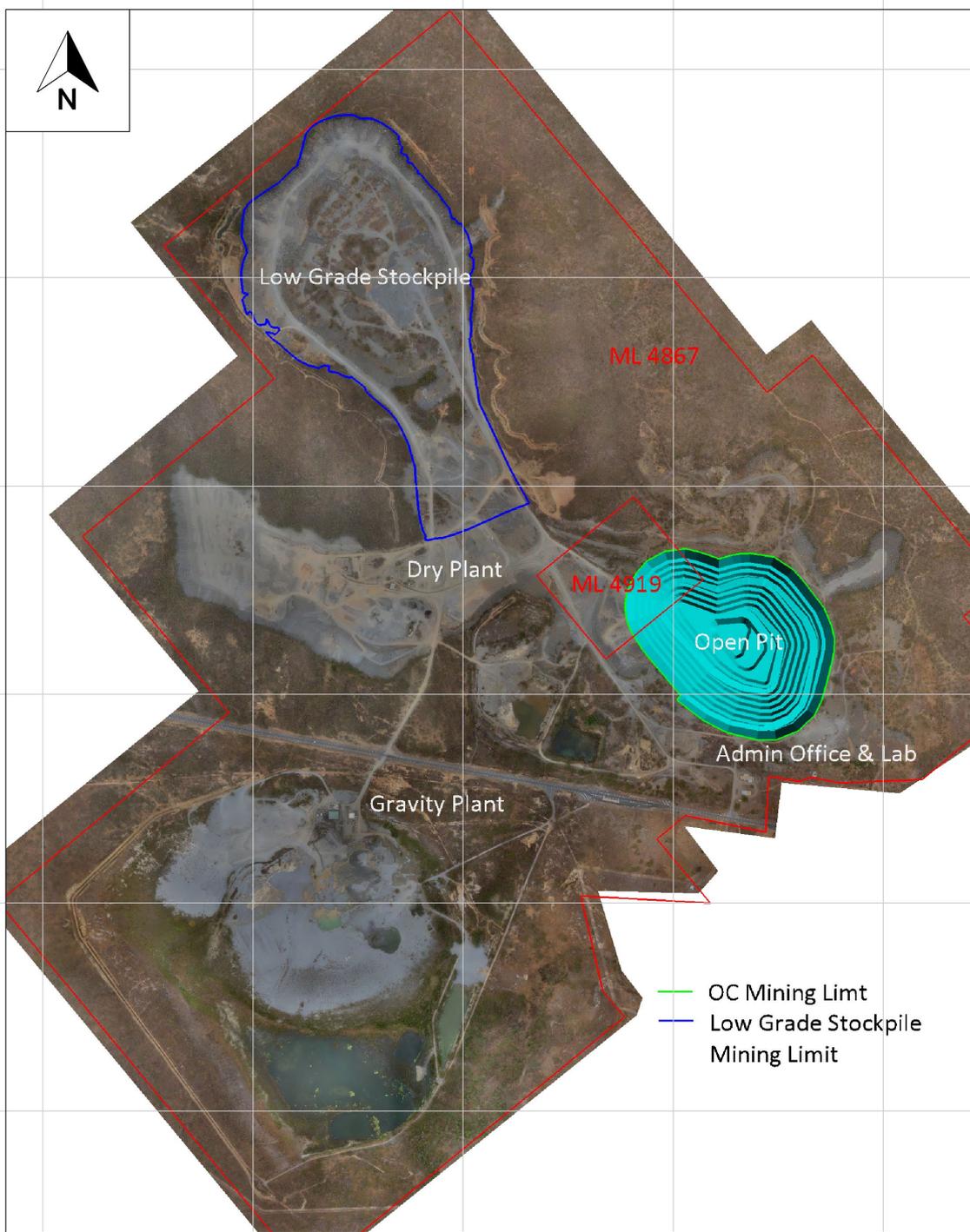


Figure 12: OC and LGS Mining Limits

The increase to Ore Reserves has a calculated ROM strip ratio of (waste to ore tonnes) 3.9:1

The updated Ore Reserve was used to inform the optimisation process using an updated set of criteria to account for rising tungsten price as well as rising costs. The Ore Reserves are limited to a practical pit shell based on current economic limits using ramps of suitable widths and gradient.

The planned open pit is essentially a deepening by 95m of the current historical open pit from a 315m RL down to a 220m RL pit floor. The footprint of the new pit is an increase by 25% in size compared the pit used in the previous Economic Update. The extension will extract a total of 23.1Mt of rock in the current design. The design of the new pit is shown in Figure 13.



Figure 13: Isometric View of Ore Reserves Pit Shell

Extraction from both sources will be undertaken by conventional excavator and truck fleets. Selective ore mining practices will be employed in the in-situ open pit, with bulk ore mining of the LGS occurring due to local grade variability and lack of historical records.

Ore from both sources will be treated at a wet processing plant prior to concentrate production at the gravity plant. Through this process, ore grade to the gravity plant is significantly improved, with an associated reduction in mass.

The primary operational constraints are as follows:

- Processing plant capacity of ~408kt per annum; and
- Mobile fleet capacity of ~4.9Mt per annum total material movement.

Based on these constraints a life of mine (LOM) schedule has been developed. Following regulatory approvals, a six -year contract mining operation of the in-situ reserves will be undertaken, with supplementary LGS feed at an increased rate for a further five years. Upon depletion of the in-situ reserves, ore feed will revert solely to the LGS.

It is planned to continue to drill to the west as well as evaluate underground mining to supplement the depletion of the open pit in-situ ore. This will be the subject of further study and is not considered in this mine schedule.

Table 4 includes the primary physical metrics of the LOM schedule.

Table 4: LOM Primary Physical Metrics

Variable	Unit	Annual Minimum*	Annual Maximum	LOM
Total Mined Tonnes	t	1,357,998	4,059,523	23,191,597
Mined Ore Tonnes	t	525,253	1,406,799	15,757,941
Mined Waste Tonnes	t	1,357,998	4,475,921	17,203,638
Gravity Wet Plant Feed	t	424,000	408,000	1,200,000
Produced Concentrate	t	2,377	8,074	38,433

\*Annual minimum excludes 2022, as production will not be in place for the full year duration as calculated in the updated financial model.

Operations of the open pit mining will comprise the following:

- A primary fleet of 1 x 190t class excavator and 13 x 55t articulated dump trucks. The focus of this fleet will be open pit waste movement and some LGS ore mining depending on scheduling
- The operation will undertake mining on a 12hr x 7-day a week basis, with processing to be operated on a 24hr x 7-day a week operation. Management personnel will be on a standard 5-day work week.

### 3.2. Material Characterisation

Material to be extracted at Mt Carbine can be divided into two main lithologies – hornfels and metasediments. The weathered profile of the two rock types varies considerably, the hornfels is ~2-4 metres, whilst the metasediments have a deep (up to 30 metres) weathered profile, particularly adjacent to the South Wall and Iron Duke Faults. As such, weathered metasediments can be classified as a separate ‘material type’.

Characteristics of the material types is detailed in Table 5.

Table 5: Material Characteristics

Material	Estimated Hardness	Unconfined Compressive Strength (MPa)	Insitu Density	Loose Density	Swell Factor (%)	Contaminants (PAF/NAF)	Comments
Hornfels	R4 to R5	62.5 to 91	2.74	2.28	20	8% of Material has >3% sulphides	Waste Storage Facility needed for 0.1Mt of material
Meta-sediment	R3 to R4	4 to 91	2.74	2.28	20	Low sulphide content with no contaminants	Likely to slake and desiccate based on field observations

Figure 14 outlines the material within the open pit. Light Green indicates metavolcanics, grey indicates metasediments, red, yellow and dark green indicates high grade lenses.

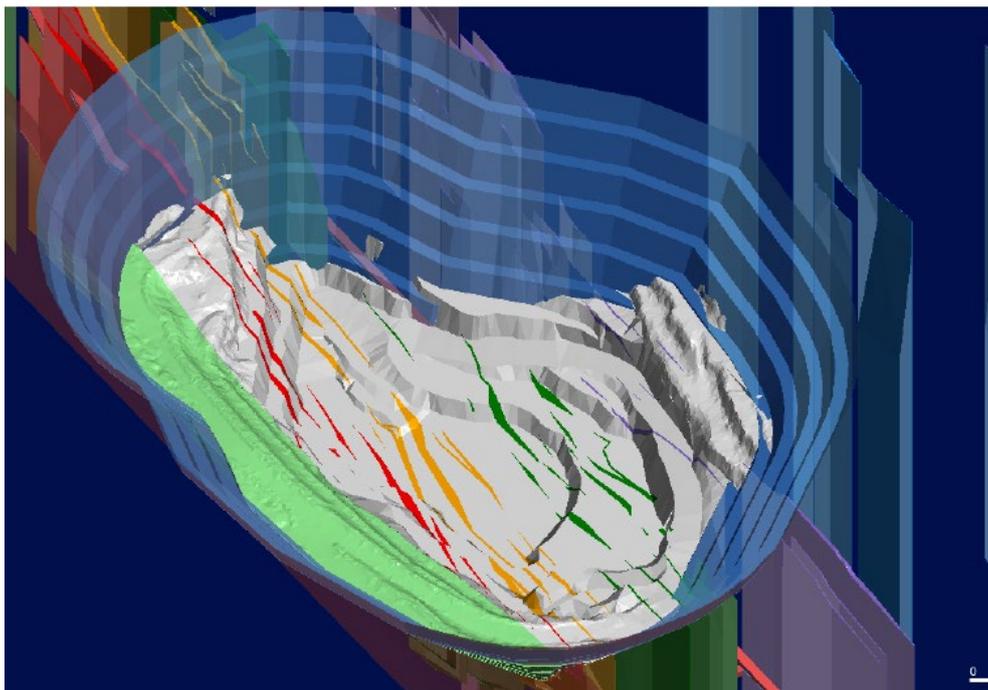


Figure 14: Open Pit Material Characterisation

The other material characteristic of note is the high quartz content of the tungsten bearing veins. The prevention of silicosis (a lung disease caused by inhaling large amounts of crystalline silica dust) has become a priority of QLD regulatory bodies and the operational management plan includes respirable dust controls. These controls include specific drill and blast practices and dust suppression through water spraying.

### 3.3. Hydrogeology

A series of groundwater bores were drilled around the Mt Carbine local area in 2011, providing a good groundwater monitoring network for the mining operation. Sampling and analysis of the network was undertaken by hydrogeological consultants Rob Lait & Associates, with a report “*Report on Carbine Tungsten Groundwater Study*” delivered in December 2012.

The findings of the report are as follows:

- There is low hydraulic conductivity within the Hodgkinson Formation aquifers and minimal groundwater inflow is expected into the open pit.
- Testing of groundwater samples indicates the open pit water is better quality than the surrounding groundwater aquifers.

Based on these findings, groundwater is not considered a major risk from either a ground stability or contamination perspective and will be managed via a typical suite of operational controls – pumping, sediment settling dams, dilution, reuse, and approved discharge if necessary.

### 3.4. Geotechnical

The current pit excavation provides a good opportunity for understanding the future open pit geotechnical performance for the area. Additionally, the underground development has provided further insight into the rockmass condition and has several consultant investigations completed over the years. The previous work has developed a broad understanding, albeit over many decades, during which time changes in geotechnical data collection methodologies and evaluation techniques have evolved.

The geotechnical dataset supporting the basis of the open pit pit shell is as follows:

- RQD and defect information from 79 diamond drill holes across deposit;

- Two images and a PowerPoint presentation of the above drill hole information; and
- Four geotechnical reports, entitled as follows:
  - GCPL – MC – 160421 – *Preliminary Geotechnical Assessment of Ground Conditions & Remedial Support (2021)*;
  - HCOVGlobal – *Brief Review & Structural Assessment/Scoping of Iron Duke – Petersens – Mt Carbine EPM 14872 (2020)*;
  - Golder Associates – *Report to R.B Mining Pty. Ltd. On Mt Carbine Mine Review of Rock Mechanics (1984)*; and
  - HD042 – Piteau & Associates – *Slope Stability Analysis & Design of the Open Pit Slopes (1982)*.

### 3.4.1. Current Data Evaluation

Defect and RQD logging of the 79 diamond drill holes (over 20,000 metres of core) was completed by EQ Resources geological personnel. The data was compiled into a three-dimensional model in Leapfrog software and corresponds well with historical fault, shear and fractured zones.

The majority of the fractures observed are associated with the South Wall Fault, being found in the 10-15m zone of foot wall. The South Wall Fault is well exposed in the existing pit and has over eighty intersections recorded in exploration drilling to date. It varies from 0.5 to 2.0m in thickness and is marked by a clay filled fault gouge.

Figure 15 illustrates the defect logging completed and alignment with historical defect mapping.

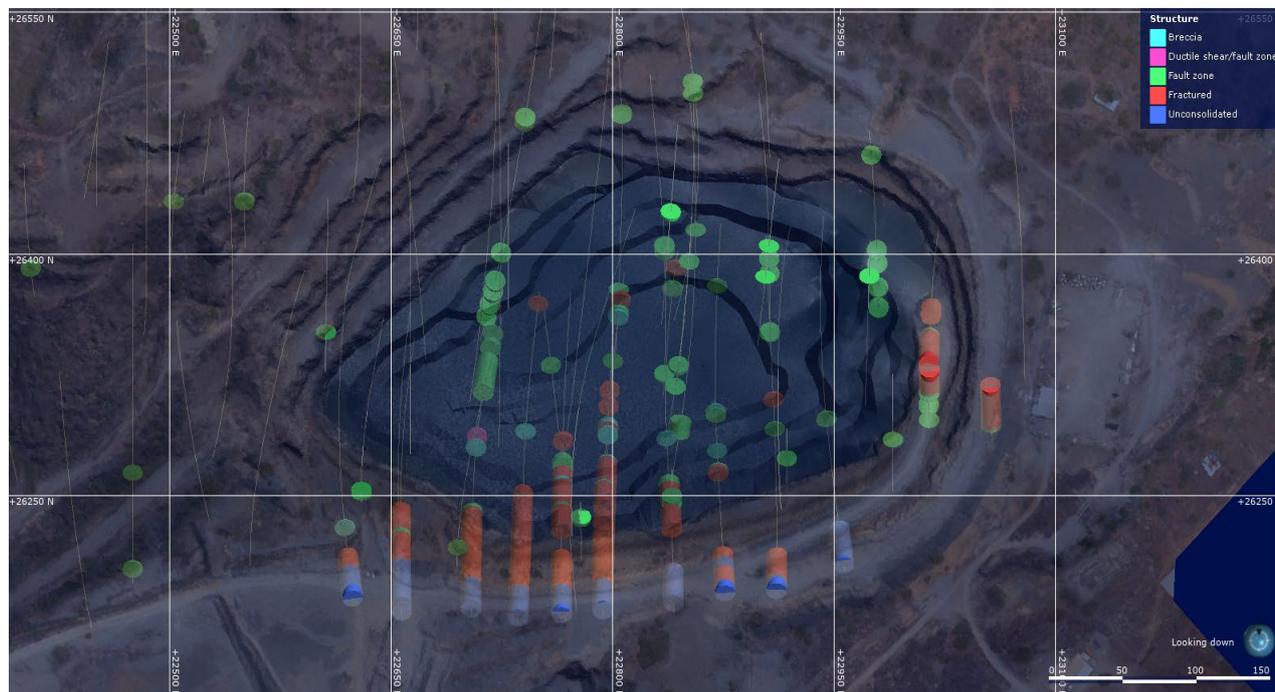


Figure 15: Defect Logging and Structural Model of Exploration Drill Holes (plan view)

### 3.4.2. Current Pit Design

Geotechnical parameters of the current pit design and ground stabilisation requirements are included in Table 6 and Table 7.

Table 6: Geotechnical Parameters of Open Pit Pit Design

Parameter	Value	Comment
Bench Height (m)	20	Suitable in hornfels material north of the South Wall Fault, see Table 9 for mechanical ground stabilisation requirements south of the fault.
Bench batter angle (°)	70	
Bench width (m)	8	
Ramp angle (%)	10	
Inter-ramp slope angle (°)	70	

Table 7: Ground Stabilisation Requirements for Southern Pit Wall

Toe Elevation (m)	Length of pit wall (m)	Area (m <sup>2</sup> )	Horizontal Spacing	No. of Rows	Min. bolt length (m)	No. of bolts	Bolting metres (m)
380	261	2463	3	2	10	174	1740
360	491	9820	3	4	10	655	6547
340	453	9060	3	6	10	906	9060
320	413	8260	3	5	10	688	6883
300	349	6980	3	5	10	582	5817
280	333	6660	3	5	10	555	5550
260	270	5400	3	5	10	450	4500
240	211	4220	3	5	10	352	3517
220	51	1020	3	5	10	85	850
<b>Total</b>	<b>2832</b>	<b>53,883</b>				<b>4446</b>	<b>44,463</b>

The key element of the current pit design is the requirement for mechanical ground stabilisation on the southern wall, behind the South Wall Fault. The ground stabilisation is based off the work completed by Piteau (1982) and comprises the following:

- Horizontal groundwater drainage holes (up to 20m long) at the base of each bench, with associated drainage channel.
- Vertical 10m twin strand cable bolts, two rows at 3 metres spacing, above the 380RL.
- Inclined (-10°) 10m twin strand cable bolts, four rows at 3 metres spacing, above the 360RL.
- Inclined (-10°) 10m twin strand cable bolts, six rows at 3 metres spacing, above the 340RL
- Below the 340RL, 10m twin strand cable bolts, five rows at 3 metres spacing for all benches
- Cable bolt loading above the 340RL is 20 tonne, below the 340RL is 50 tonne.

### 3.5. Mine Production

A LOM mining schedule was developed on the existing Joint Ore Reserves Committee (JORC) Reserves from the LGS and in-situ orebody. The considerable inferred resources in the in-situ orebody were excluded from the schedule.

Key drivers for mining schedule development were:

- Utilising all the gravity plant annual capacity to realize maximum revenue for the project
- Optimising the volume and timing of high-grade ore from the in-situ orebody to the processing plant

A number of scenarios with ranged input variables were analysed to deliver an optimized LOM mining schedule.

The LOM schedule consists of three main components:

- 2022 – continued mining from the LGS, allowing for open pit regulatory approvals, infrastructure upgrades. The mining contractor Golding Contractors has been awarded the mining contract with mobilisation planned for Q1, 2023.
- Four years of in-situ open pit mining to deplete the current JORC Reserves, with supplementary feed from the LGS to maximize gravity processing plant throughput.
- Approximately ten years of mining to deplete the remaining LGS reserves.

A pit optimisation model was established in the Deswik mine planning software package. The package utilises pseudo flow algorithms to determine the economic pit limit based on several input parameters, including:

- Operational parameters such as loss, dilution, recovery,
- Processing parameters such as recovery, moisture adjustments, grade adjustments, etc.
- Geotechnical parameters to define the overall pit wall angles,
- Unit cost rates for all processes,
- Revenue assumptions.

Mining shall occur on day shift only delivering a maximum of 4.9Mt per annum from the open pit operation. The annual mine production schedule is shown in Table 8.

Table 8: Annual Production Schedule

Year	Waste (t)	Ore (t)	Waste and Ore (t)	Mtu (insitu)	Concentrate (t)
2022	-	166,000	166,000	12,450	198
2023	891,205	975,947	1,867,153	352,109	4,290
2024	3,479,514	873,178	4,352,692	171,361	4,030
2025	2,888,633	1,656,332	4,544,965	320,811	5,105
2026	2,942,936	1,992,000	4,934,936	507,726	8,074
2027	3,818,614	1,992,000	5,810,614	178,672	2,842
2028	2,491,380	1,992,000	4,483,380	264,403	4,205
2029	811,234	1,992,000	2,803,234	287,858	4,578
2030	-	1,992,000	1,992,000	149,400	2,377
2031	-	1,992,000	1,992,000	149,400	2,377

Year	Waste (t)	Ore (t)	Waste and Ore (t)	Mtu (insitu)	Concentrate (t)
2032	-	464,167	464,167	34,812	554

The economic pit limit shells generated by the pit optimisation model were then converted into practical pit shells and stages. Each stage was designed using the parameters shown in Table 9.

Table 9: Open Pit Design Parameters

Item	Value	Units
Final Wall Batter Angle	70	degrees
Final Wall Bench Height	20	m
Final Wall Bench Width	8	m
Access Ramp Width	20	m
Access Ramp Maximum Grade	10	%

Internal dig solids were created in Deswik and then imported into a schedule in the Spry scheduling package. All LGS dig solids plus the out-of-pit dump solids were created and imported into the schedule. The Spry scheduling model including all dig scheduling, dumping and haulage modelling which provided accurate truck hours and numbers as the pit progressed.

Geotechnical reports and the existing open pit walls have guided the overall final pit wall design parameters for 20m high benches with a 70-degree batter and 8m wide catch benches. Haul ramps have been designed for the 55t trucks at a maximum gradient of 10% with dual lane ramps being 20m wide and single lane ramps 14m wide. All material mined is hauled out of the pit with ore trucked to the ROM stockpile or direct fed to the crusher and waste trucked to the out of pit dumps.

Due to the resource model including a lower grade halo around higher grade mineralised veins, a minimum width of 2m was applied to determine if ore blocks could be recovered. Any blocks that did not pass this assessment were converted to waste and regarded as losses. Any remaining ore blocks that were adjacent to a waste block had an edge loss and dilution width of 0.36m applied along the ore/waste boundary.

Cut off parameters Ore Reserves for the Mt Carbine open pit are reported using a ROM cut-off grade of 0.08% WO<sub>3</sub>. The cut off was based on the lowest grade ore that still generated a positive cash flow from the pit optimisation calculations using a WO<sub>3</sub> APT sales price of US\$340/mtu and BFS level cost inputs.

The monthly concentrate production profile from the gravity processing plant is shown in Figure 16.

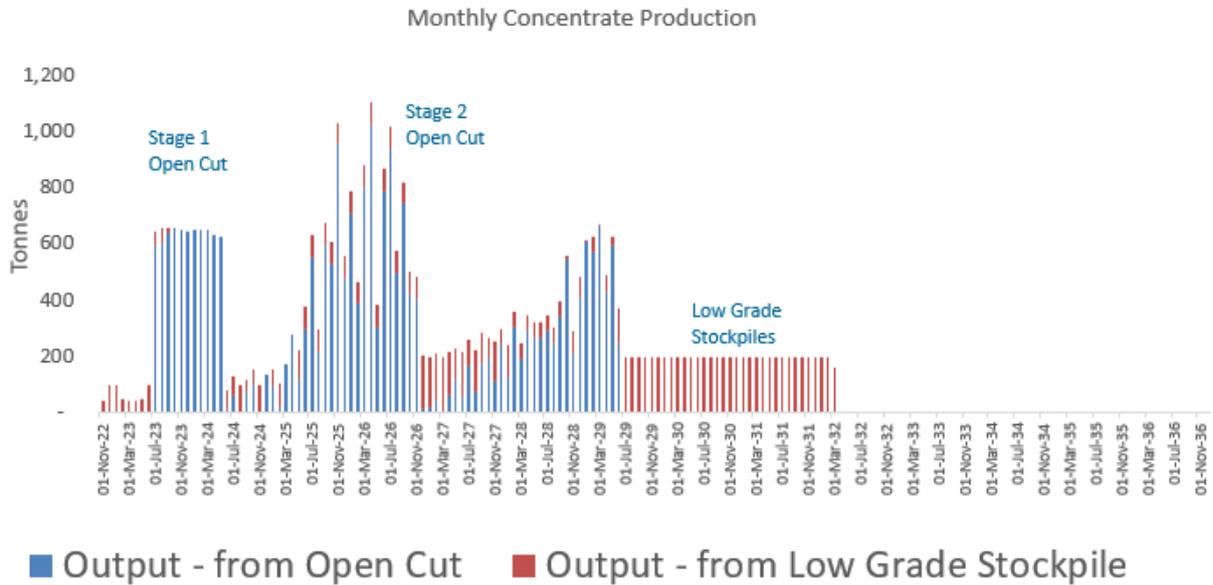


Figure 16: Concentrate Production Profile

### 3.6. Waste Dumps

Due to the in-situ orebody shape (tungsten grade and width increasing with depth), the initial mining Stage 1 (year 1) has an extraction of 776,000t of ore from the bottom of the pit whilst completing approximately 4.62Mt of waste stripping on the perimeter of the pit. This is followed by three years of Stage 2 mining where 3.32Mt of waste is extracted for 3.75Mt of ore.

Total rock extracted from the pit in the Stage 1 and 2 pits is 14.4Mt of which 3.54Mt will be run through the beneficiation plant to reduce the material to 1.2Mt of ore for wet processing. Of the 14.4Mt, 91.6% of the material (13.2Mt) is quarry suitable material and will be stored at site, within the quarry approved boundary for future feed stock material.

The dump locations are illustrated in Figure 17.

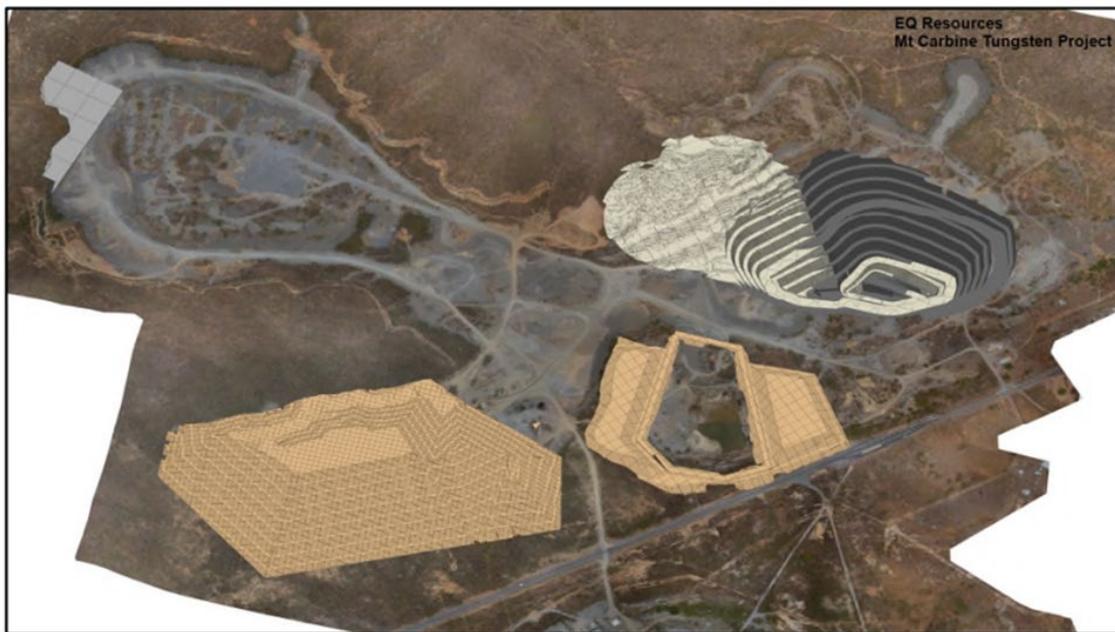


Figure 17: Dump Locations

### 3.7. Mining Method

Following early extraction of the Stage 1 high grade zone at the bottom of the pit further pit development adheres to a conventional top-down approach, with pit floor reached at 220RL.

Production scenarios were developed using Spry value optimisation software, with the main constraints being mobile fleet capacity, particle ore sorting capacity and gravity plant capacity. No constraint on the gravity plant head grade was applied.

As the open pit mining will be a contract mining operation, particular emphasis is placed on delivering a schedule with consistent year-on-year physical metrics. Scenarios with varying mobile fleet capacities (2-4Mtpa) were scheduled and analysed against the following criteria:

- Overall project cash flow;
- Volume and year on year consistency of ore flow to the gravity plant; and
- Year on year consistency of total material movement.

The base case for equipment selection was the existing EQR mobile fleet of 90t excavator and 50t articulated dump trucks for the following reasons:

- Small footprint and good performance in tighter working areas;
- Utilisation flexibility between the LGS and open pit; and
- Simplification of fleet maintenance (and associated infrastructure) requirements.

A mining method assessment determined that medium sized excavators and accompanying trucks are the most optimal fleet for restarting the existing open pit. Benches will be blasted in 10m heights and mined off in 3.5m fitches by a 190t class excavator loading 55t rigid rear dump trucks. The mine fleet used as the basis of the design is shown in Table 10.

Table 10: Contractor Mining Fleet Details

Machine	Type	Qty	Annualised Hours	Comments
Excavator	EX1900	1	2960	Day shift only. Maintenance on night shift where possible
Excavator	ZX450	1	As required	Production assistance for tight spots or small ore bands
Loader	LH980	2	As required	Used for LG stockpile rehandle to ROM with CAT773 trucks. Second for redundancy
Truck	CAT773	13	2960	Main pit production 7-8 truck limited. 2 trucks from LG rehandle and ROM activities
Dozer	D9	2	As required	1 dump and 1 pit dozer. Dump dozer covers LG if required
Drill	ROC F9	1	As required	Top hammer drill rig or similar

The equipment productivities assumed are included in Table 11.

Table 11: Equipment Productivities

Component	Productivity rate per hour (t)	Operating hours (hr)	Annual capacity (t)
LGS Mining fleet	331	3,024	1,000,000
OC Mining fleet	824	6,048	5,000,000
Crushing & Screening	200	6,804	1,500,000
Ore Sorting	120	6,804	648,000
Gravity Plant	60	6,804	408,000
Front End Loaders	350	6,048	2,110,000

Mining of both the LGS and open pit shall be performed using conventional excavator and truck operations. Similar sized fleets are utilised in both areas, providing flexibility for mine design, scheduling and operational execution.

Extraction from the LGS is a straightforward load and haul process. Mining will be completed by a 190t excavator working on four metre flitches, with a fleet of Cat773 rigid dump trucks hauling material to the crushing and screening plant.

After year 1, mining will be undertaken from top to bottom on 20m metre benches, commencing in the south-eastern section of the LGS and progressing to the north-west. As the LGS thickens, multiple benches will be excavated producing a conventional strip-mining arrangement.

Similarly, open pit mining will be undertaken in a standard drill and blast, load and haul configuration.

Bench geometry will be slightly smaller than the LGS, with a 4-metre height and minimum 20-metre width.

Approximately 8.62 million tonnes of material require blasting in 2023 and 2024, tapering off to 5.6 million tonnes in 2025-27. To maintain sufficient blasted inventory, a minimum 100kt of blasted material is required on a weekly basis. Mining blocks will be a minimum 20x20x30 metres in size, equating to 12,000bcm or 33,000 tonnes. Accordingly, at least 3 blocks will be blasted weekly to maintain the required inventory.

## 4. Processing

### 4.1. Overview

The site processing infrastructure remains split into two distinct areas on the site. Adjacent to the LGS is the crushing, screening and sorting area, where run of mine (ROM) material is screened and sized. +6,-40mm material is sorted using XRT sorting equipment where approximately 10% of the XRT sorter feed is then crushed and stockpiled for feeding into the processing plant. The remaining 90% of material is barren of tungsten and utilized as quarry material.

-6mm material is pumped to the Gravity Processing Plant (the “Gravity Plant”) and the XRT sorter concentrate is trucked and fed into the processing plant located on the opposite side of the Mulligan Highway. The processing plant is dry fed and produces a tungsten product and waste tailings material.

The locations of the crushing, screening and sorting area, and processing area is shown in Figure 18.



Figure 18: Processing Infrastructure Locations

The scope of the processing infrastructure modernisation and expansion for each of the is split into two distinct phases, these are summarised below.

## 4.2. Crushing Screening and Sorting Area

### 4.2.1. Phase 1 - Completed

The details of the Phase 1 plant can be found in the ASX Release [“Strong BFS Update Delivers 59% Increase in NPV”](#) by the Company on the 9<sup>th</sup> of November 2022.

### 4.2.2. Phase 2 Overview

The process design philosophy for Phase 2 for the crushing, screening and sorting plant was to achieve the following process outcomes:

- Construct a new crushing, screening and sorting plant adjacent to the existing plant - ongoing.
- Increase ROM throughput to a nominal 350tph to allow day shift only operations (ore sorter circuit and processing plant to operate 24/7) to reduce the overall operating costs of the operation – planned to change, see below.
- Reduce material rehandling through combining the crushing and screening circuit with the ore sorting circuit – still planned.
- Increase maximum feed size from 700mm to 1000mm through introduction of a jaw crusher – still planned.

The Phase 2 design has now been amended as follows in addition to upgrades reported in the Economic Update:

- Increase ROM throughput to a nominal 350tph operating on a 24/7 basis on the Crushing and Screening plant. This will double the annual throughput of the crushing plant targeting the consumption of the LGS over a shorter period of time and reduce OPEX through economies of scale.
- Increase XRT Sorting Capacity by one TOMRA XRT Sorter to allow for additional feed material from the increased head feed rates.
- Increase capacity of the Gravity Processing plant through minor process changes, mainly the installation of the following:
  - Installation of a larger wet screen at the Gravity Plant, increasing capacity of up to 150tph to have contingency capacity included in the design.
  - Installation of an additional tables feed preparation circuit for the jig concentrate. Phase 2 saw the upgrade of the circuit, the Phase 2A design sees the inclusion of a second circuit installed adjacent to the ongoing installation of the upgraded tables feed preparation circuit.

The Phase 2 crushing, screening and sorting circuits were designed in accordance with the design criteria in Table 12.

Table 12: Phase 2 Crushing, Screening and Sorting Design Criteria

Description	Criteria	Unit
<b>General</b>		
Ore Type	Dry and clean ore	
Ore Hardness	7	Mpa
Ore Abrasiveness	0.79	Ai
Maximum Lump Size	750	mm
Design Life	20	Years

Description	Criteria	Unit
Plant Size	2,000,000	tpa

The Phase 2 crushing, screening and sorting plant is shown in Figure 19.

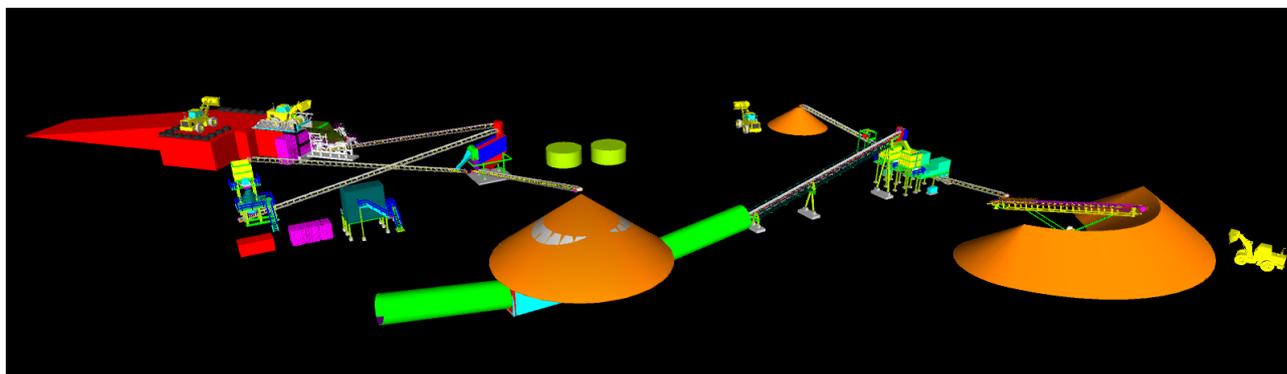


Figure 19: Phase 2 Crushing and Screening and Sorting Circuit

## 4.3. Processing Area

### 4.3.1. Phase 1 - Completed

The details of the Phase 1 plant can be found in the ASX Release [“Strong BFS Update Delivers 59% Increase in NPV”](#) by the Company on the 9<sup>th</sup> of November 2022.

### 4.3.2. Phase 2 - Ongoing

#### Overview

Based on the current recovery data, the existing processing plant is performing well and the approach to the plant upgrades was to maintain the plant circuitry and process as much as possible while improving the plant recovery performance to support the higher grade feed through the introduction of a scavenging circuit and additional tables capacity.

#### Operational Review

Ausenco attended the Mt Carbine site on two occasions. The first visit was in May 2021, where preliminary review of operating data and circuit configuration was conducted. Following the site visit several recommendations were made to improve the reliability and recovery of the operation and to collect data to confirm the tungsten losses and flowrates through the circuit.

A second site visit was performed at the beginning of September to further review the operation and to perform a plant sample campaign to confirm the operating parameters and performance for the plant. Two plant surveys were performed by Ausenco personnel during the visit to provide a snapshot of operational performance and to form the basis of engineering work.

Initial review of the site operating data showed that the Mt Carbine plant had an average tungsten shift recovery of approximately 47% between January and May 2021 producing a concentrate grade of 49% WO<sub>3</sub> during the same period.

Analysis of the operating and shift samples showed that the key issue in the plant recovery was in the jigging circuit, associated with high losses from lower grade material. This data is shown in Figure 20.

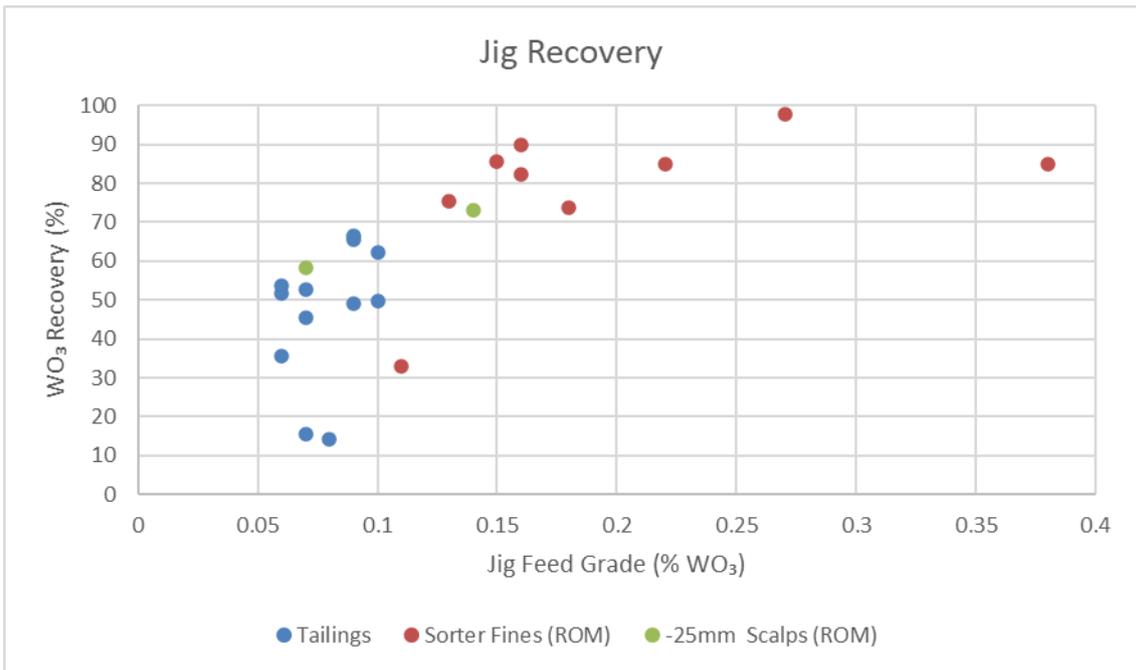


Figure 20: Jig Recovery vs Feed Grade by Feed Type

A subsequent review of overall plant recovery by ore feed showed two distinct periods of performance. Since the decision not to retreat tailings was made, plant recovery has increased and the range of performance outcomes has also decreased.

Based on the data below recoveries on ‘fresh’ ore are ~25% higher than those with tailings mixed, averaging 85% WO<sub>3</sub> recovery vs 60% which is clearly shown in Figure 21. The goal of the upgrades is to consistently produce above 80% recovery from the plant through scavenging the jig tailings and increasing the capacity of the table recovery circuit.

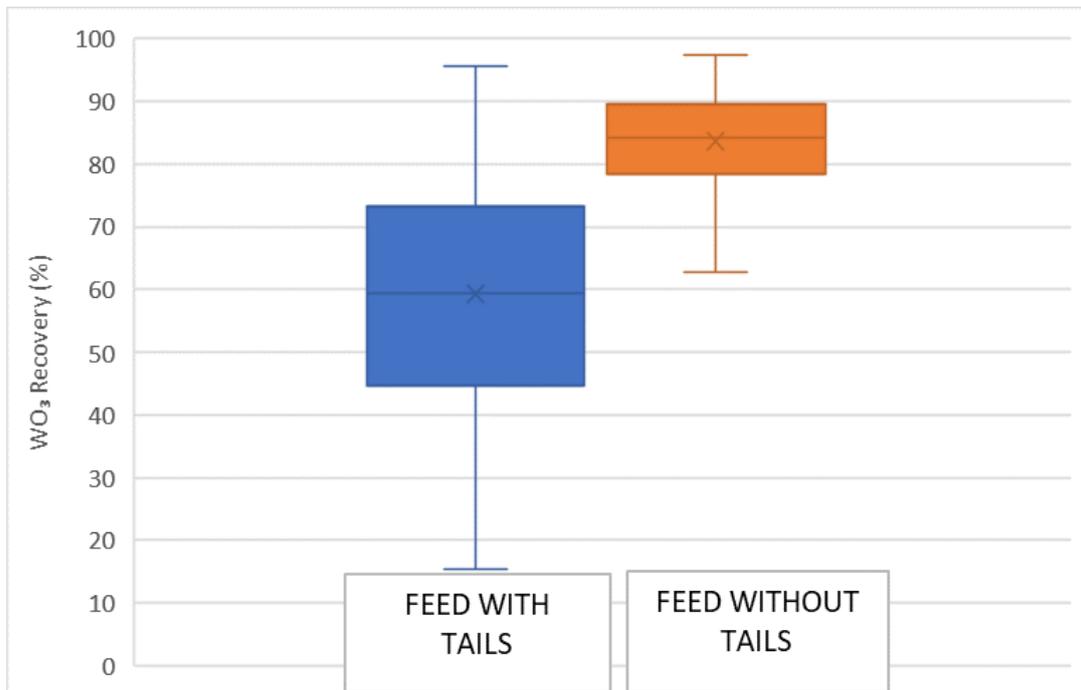


Figure 21: Plant Recovery Comparison with Tails and without Tails

## Planned Improvements

The Phase 2 scope has been designed to ensure that the plant recovery does not reduce through the introduction of high grade ore from the open pit.

To support the higher head grade, a scavenging circuit will be introduced to minimise potential losses from the jig circuit. Additional tables will be included to account for the increased  $WO_3$  grade in the feed.

Upgrades to the circuit have been developed based on an incremental and modular approach to design, with the additional facilities targeting the areas of major losses from the existing circuit. Where possible, changes to existing equipment have been minimised to reduce interruption to the existing operation, however due to capacity constraints upgrades to some equipment and pumps are required.

The basis for design (Table 13) for the updated Gravity Plant is summarised below for the first year of production which sees a significantly higher grade feed as compared to subsequent years as per the mining plan:

- Plant nominal capacity of 60 t/h treating ore with a feed size of P95 -6mm
- Capacity to treat ore with feed grades into the front end of the circuit (jigs) of up to 0.5%  $WO_3$
- Capacity to treat 16 t/h of ore sorter product at 0.85%  $WO_3$  into the table circuit, with the balance of feed from the jigging circuit.
- Operate at average tungsten recovery of 77% from ROM feed to the Jig,
- Design flexibility to process 16 t/h of ore sorter product direct to the table circuit. Under this case, the circuit has been designed for 92% overall recovery which represents the maximum for design case.

Table 13: Design Basis

Criteria	Units	Design
Plant Throughput	t/h	60
Feed Size (P95)	mm	6
Design Feed Grade	% $WO_3$	0.5
Overall Recovery (nominal)	%	79.5
Overall Recovery (max for design for table circuit)	%	92%

The main strategy to improve recovery through the circuit is based in increasing current jig capacity to increase jig residence time. Review of the operating parameters and flow through the jigs highlighted that losses in the coarse fraction are most likely due to the low residence time in the jig and also due to the interstitial void of the ragging used.

As an additional means of recovery improvement, the two jigs will treat different size fractions (coarse and fine) which allows individual operating parameters and ragging to be optimised for each size fraction, being:

- Jig Duplication
- Jig Scavenging

In addition to recovery improvements, equipment was checked for capacity constraints. At higher head grades, the table circuit will become overloaded and require additional tables to remain within design loading rates.

The forecast feed grade from April 2024 to December 2026 will average 0.18%  $WO_3$ . The reduction is grade results from a combination of the pit pushback for the Western Extension as well as increasing the proportional volume of the LGS into the plant, lowering the head grade overall. Thereafter, when processing the LGS only, the feed grade is 0.08%  $WO_3$ .

With the infrastructure from Phase 2 already in place (jig duplication, tables feed preparation increased capacity and additional shaking tables), the Gravity Plant throughput capacity can be doubled to 120tph through some strategic capital additions, these being:

- Additional wet screen at the front end of the plant
- Addition of standby wet screen (screen already purchased) and rolls crusher as feed preparation for the tables circuit.
- Additional TOMRA XRT Sorter for the increased feed capacity requirements
- Operate the Phase 2 crushing plant on a 24/7 basis

### **4.3.3. Timing of Phase 2 Additional Upgrades**

Since the completion of the BFS, the timing of the implementation of the gravity processing plant has been updated. The additional components of the scope are described below. Both of these additions would be planned to be in use from May 2025.

#### **Large Wet Screen Prior to Jig**

EQR plans to purchase a new large Techroq Vibrating Screen, that is fit for purpose. This will feed the two jigs that are placed side by side in front of the current wet screen. Provisional space allocation for the larger footprint requirement has been accounted for during the ongoing Phase 2 upgrades.

#### **Tables Feed Preparation**

The Company intends to use a Schenk screen with a larger rolls crusher in place of the current smaller wet screen and rolls crusher. The Company is currently completing an upgrade to the Gravity Plant under Phase 2 that sees this exact upgrade happening, next to the current functional table feed preparation circuit. In December 2024, the company will place the order for the large Techroq Wet Screen and begin the upgrades to the second tables feed preparation circuit.

#### **Additional TOMRA XRT Sorter**

As the head feed rate to crushing and screening plant will increase, a third sorter will be required to handle the additional throughput from the crusher with the sorters running at maximum capacity. Throughput tonnages are currently verified through the operational TOMRA XRT Sorters on site. There is a TOMRA XRT Sorter that has been identified for implementation. Negotiation of commercial terms is ongoing.

## 5. Infrastructure

### 5.1. On Site Infrastructure

#### 5.1.1. Overview

Mt Carbine is currently operating and is well serviced with existing on-site infrastructure to support its operations.

The site infrastructure strategy for the project is to continue utilising as much as possible the existing site infrastructure and only construct new infrastructure if required to support new or upgraded facilities.

As the overall changes to the footprint and capacity of the mining and associated crushing, screening, XRT sorting and processing infrastructure is minimal, there are only minor site infrastructure modifications required to support the upgraded facility.

#### 5.1.2. Existing Site Infrastructure

The site is already supported by well-established infrastructure supporting the current mine and quarry operations. The facilities include:

- Site access roads;
- Office buildings;
- Car park;
- Laboratory;
- Ablutions facilities;
- Crib areas;
- Power;
- Workshops;
- Site dams & drainage;
- Water supply pipelines;
- Safety and first aid equipment and
- Phone and internet connectivity.

#### 5.1.3. Site Infrastructure Scope (Phase 1)

The details of the Phase 1 plant can be found in the ASX Release [“Strong BFS Update Delivers 59% Increase in NPV”](#) by the Company on the 9<sup>th</sup> of November 2022.

#### 5.1.4. Site Infrastructure Scope (Phase 2)

The following changes have been added to the Phase 2 scope of work based on the decision to increase the crushing plant feed rate from May 2025:

- Modification to the tables feed preparation structure to allow a larger wet screen and rolls crusher;
- Power line upgrade to allow ~2.5MW feed to the site to support the processing and infrastructure upgrades required to double the Gravity Plant capacity to 2Mtpa on low grade stockpile material.

## 6. Operations Management

### 6.1. Operating Philosophy

The Mt Carbine site is a mature operating site that has been running since the gravity plant started hot commissioning in February 2020. The EQR CEO is involved through strategically guiding the operation and Company from an explorer to a fully-fledged operation. The EQR CEO has over 30 years' of experience in managing mining operations through North America, Europe, and Africa. This experience has aided the development of a cohesive hands-on management approach and operations team development and restricted the reporting chain to ensure employees are empowered in their roles for efficient decision making and optimal outcomes.

EQR is an equal opportunity employer with support for bullying and harassment in the workplace as it works to build a team of skilled individuals from surrounding communities. The operation has an extensive Health and Safety Management system that protects employee's physical safety.

The operations are guided by the Integrated Management System (IMS) which addresses the intended outcomes of ISO 9001:2015 Quality Management Systems, ISO 14001:2015 Environmental Management Systems and IOS 45001:2018 Occupational Health and Safety Management Systems. The application of the Integrated Management System Manual (IMSM) will:

- Demonstrate EQR's ability to consistently provide quality quarry products that meets customer requirements and tungsten concentrate to meet the requirements of CRONIMET Australia Pty Ltd, CRONIMET Asia Pty Ltd and its downstream customers;
- Enhance customer satisfaction;
- Enhance environmental performance;
- Continually improve occupational safety and health;
- Achieve legal and other requirements; and
- Deliver on quality, environment, safety, and health objectives.

#### 6.1.1. Operations Roster

The Operations Roster for Phase 1 is well established and has been used at the Mt Carbine site since 2020 as set out in the BFS.

#### 6.1.2. Operational Approach (Phase 2)

The operating philosophy for Mt Carbine at completion of the Project will split between owner-operated and contract operated.

The open pit mining inclusive of drill and blast remains to be contract mined. The reasoning for this is that the skill requirement for the mining is outside of EQR's core capability, and to retain a lean organisational chart, contract mining was deemed to be the most sensible approach for the operations.

Given the inherent interrelation between the open pit mining and the LGS mining (a constant feed to the crushing and screening plant is required, though the source between the LGS and the open pit will alternate to suit the mine plan). Once the Open Cut mining is complete, the contracting method for the mining of low-grade stockpiles shall be re-evaluated. Currently the Mt Carbine operational team self-perform the mining of the LGS, no major risks have been identified in resuming this method for mining the remaining LGS at the completion of the open pit mining.

The battery limit for the contract mining will be the discharge of the ROM material either in the crushing and screening plant feed bin or adjacent. The basis of the feasibility study has allowed for the crushing and screening plant to be owner operated. The Crushing and Screening will remain operational on a 24/7 basis,

seeing the 24/7 roster continue to be employed. This will maximise the throughput capacity of the installed infrastructure.

The gravity processing plant circuitry along with the XRT Sorter circuitry remain largely unchanged and the operating philosophy, for this reason, will also remain unchanged.

EQR will retain responsibility for the overall safety of the site through the SSE and the IMS as a guiding document for the site. EQR will also be responsible for the development of the quarterly mine and production planning along with the ore quality management. All these costs have been accounted for in the EQR financial modelling. More detailed mine planning will be the responsibility of the contract miner appointed at the relevant time in the future.

## 6.2. Maintenance

The full-time maintenance team will comprise of the following positions:

- 1 x Maintenance Superintendent;
- 1 x Maintenance Foreman;
- 2 x Fitter;
- 1 x Boiler Maker;
- 1 x Boiler Maker Apprentice; and
- 2 x Electricians.

### 6.2.1. Mining

All maintenance on the mining equipment shall be the responsibility of the mining contractor. Mining equipment owned by EQR shall be provided for use free of charge to the contractor where required to reduce overall mining costs. The contractor shall be responsible for the maintenance of the free issued equipment in accordance with an approved maintenance schedule.

Until the mining contractor takes on the maintenance of the heavy earth moving equipment, a maintenance contractor will continue to complete heavy vehicle maintenance at site while the LGS mining is ongoing. This arrangement has been proven to work as it is currently being used on site.

### 6.2.2. Crushing, Screening and Processing

The day-to-day maintenance of the crushing and screening plant and the gravity processing plant will largely be undertaken by the maintenance team that is on site on a full-time basis. The team is highly skilled in the repair and maintenance of the plant and equipment and are currently providing all standard maintenance for the crushing, screening, and gravity processing plant. Any additional maintenance requirements will be outsourced to specialist contractors as and when required.

Preventative Maintenance will be completed on an ongoing basis with each section of the processing plants, crushing and screening, sorting and the gravity plant receiving a planned 12hr shut down weekly to undertake required maintenance tasks. Any specialty jobs will have the relevant contractor brought in to complete the work. Capital projects will be outsourced to contractors as and when required to ensure the maintenance team stay focused on the maintenance of the crushing and screening plant.

To manage the maintenance at the Mt Carbine operations, EQR will continue its subscription with FIIX Maintenance Management software, this provides for the detailed tracking of maintenance and inventory for the site along with cost allocations to the plant and equipment used by the mine and associated analysis and reporting.

### **6.2.3. Mobile Machinery**

Mobile machinery will be serviced at regular hour service intervals of 250, 500, 1,000, 2,000, 3,000, 5,000 and 6,000. This will be completed by an external service provider such as Toddy's Machinery Maintenance Pty Ltd that specialises in work of this nature. A service schedule will be put in place to ensure work is completed according to required scheduled service intervals to maximise life of machines and their continued operational capabilities.

## **6.3. Transport and Logistics**

There are no changes since the Economic Update.

## **6.4. Procurement and Supply**

There are no changes since the Economic Update.

## **6.5. Administration**

There are no changes since the Economic Update.

## **6.6. Health and Safety**

### **6.6.1. Eliminating Hazards & Reducing Risks**

Risk planning and management is central to the Company's activities, EQR's operations are only conducted when the risk is within acceptable limits and as low as reasonably practicable (ALARP).

The risk planning and management processes developed and implemented at the Mt Carbine site aim to provide a logical and systematic method of identifying, analysing, evaluating, treating, monitoring, and communicating risks.

The following hierarchy of controls is applied to mitigate risk to a level which is ALARP:

- Elimination/Removal;
- Substitution;
- Engineering/Isolation Control;
- Administration;
- Personal Protective Equipment; and
- Human Behaviour.

The hierarchy of control is to be used to control hazards identified for all risk management processes. Less reliable control measure (e.g., administrative, PPE or safe behaviour controls) should only be implemented as part of a holistic control strategy in addition to controls from the other, more effective categories, or on their own where the level of current risk is ALARP.

### **6.6.2. Risk Management – Principles and Guidelines**

EQR's risk management is developed to comply with relevant legislation applicable to mining and processing operations in Queensland.

### **6.6.3. Management of Change**

EQR Change Management (EQ RESOURCES-SAF-PRO-0034) procedure outlines processes for the prevention of non-compliances resulting from changes in the workplace at the Mt Carbine operations.

#### **6.6.4. Procurement**

All purchasing of materials, equipment and services are undertaken to ensure that any safety and health considerations are considered. Hazards are to be identified and assessed prior to the hire or lease of equipment or the supply of services or goods. Verification must be supplied that the delivery of equipment or supply of services complies with appropriate safety and health specifications, the Procurement Officer on site is responsible for this task.

#### **6.6.5. Contractor Management**

Contractors are pre-approved according to Contractor Management Procedure (EQ RESOURCES-SAF-PRO-0017) prior to attending site. Contractors approved by the SSE receive an induction before working on site. The induction covers site procedures necessary for that contractor's role.

If a contractor is required for a short-term emergency task on the mine site (such as repairs to phone lines) then that contractor will receive the visitor's induction and remain under the supervision of a fully inducted person during their time on site.

All contractors are required to provide and maintain a safe and healthy work environment and are responsible, as a minimum, for performing work to EQR safety and health standards.

#### **6.6.6. Safety and Health Monitoring**

It is essential to assess performance to evaluate progress against the requirements, targets, objectives, and to establish plans for continuous improvement.

To properly assess needs EQR:

- Conducts a systematic review of the corporate guidelines, standards, systems, and processes to verify the current standards and controls in place;
- Conducts audits and assessments at determined frequencies to measure the level of compliance and progress to the standards, and assist in the correction and prevention of any systemic issues;
- Reviews performance and accountability processes to indicate progress or deviations for early corrections; and
- Ensure procedures for Management Review and Health and Safety Objectives detail the processes to be applied.

#### **6.6.7. Safety and Health Compliance**

Periodic, at least annual, evaluation of compliance with applicable legal and other requirements will be planned to use the EQR internal and external audit schedule, in addition, legal compliance system Safety Law provides regular updates (at least monthly) to legal and other requirements.

#### **6.6.8. Environment**

The Environmental Programs (EPs) (maintained by EQR) are used to establish, implement, control, and maintain processes to meet the requirements of the IMS and implement the environmental objectives identified by the Company. The Environmental Monitoring and Reporting System (EMRS) records information pertinent to the implementation of the IMS governing the operations. The data is used to identify potential environmental risks that require management to assess achievement of the environmental objectives.

#### **6.6.9. Roles, Responsibilities and Authorities**

EQR's SSE has responsibility to ensure that the IMS is implemented. Tasks have been assigned by the SSE to Department Managers. The Department Managers may delegate the task to other personnel; however, the responsibility remains with the Department Manager. Safety, Health, Environmental & Training Manager

supports the SSE and other managers in meeting the quality, environment, safety, and health objectives, and have responsibility for monitoring the implementation of the quality, environment, safety and health procedures.

Table 14: Roles and Responsibilities

Roles	IMS Responsibilities
Site Senior Executive	<ul style="list-style-type: none"> <li>• Establish and communicate overall direction.</li> <li>• Develop quality, environment, safety and health policies.</li> <li>• Consider quality, environment, safety, and health requirements.</li> <li>• Develop quality, environment, safety, and health objectives.</li> <li>• Appropriately resource quality, environment, safety, and health management.</li> <li>• Ensure quality, environment, safety, and health compliance.</li> <li>• Promote continual improvement.</li> <li>• Identify interested party needs and expectations.</li> <li>• Review the operation of the IMS.</li> <li>• Conform to IMS requirements.</li> <li>• Promote customer focus throughout the Company.</li> </ul>
Operations Manager	<ul style="list-style-type: none"> <li>• Consider quality, environment, safety, and health requirements.</li> <li>• Develop quality, environment, safety, and health objectives.</li> <li>• Appropriately resource quality, environment, safety, and health management.</li> <li>• Ensure quality, environment, safety, and health compliance.</li> <li>• Promote continual improvement.</li> <li>• Identify interested party needs and expectations.</li> <li>• Review the operation of the IMS.</li> <li>• Conform to IMS requirements.</li> <li>• Promote customer focus throughout the Company.</li> </ul>
Department Foreman	<ul style="list-style-type: none"> <li>• Implement quality, environment, safety, and health procedures.</li> <li>• Review the operation of the IMS.</li> <li>• Conform to IMS requirements.</li> <li>• Participate in Management reviews.</li> <li>• Ensure loaded product meets physical and chemical specifications.</li> </ul>
Safety, Health, Environment & Training Manager	<ul style="list-style-type: none"> <li>• Monitor and report on overall IMS performance .</li> <li>• Review the operation of the IMS.</li> <li>• Identify and deliver training requirements.</li> </ul>

Roles	IMS Responsibilities
	<ul style="list-style-type: none"> <li>• Communicate and correspond with relevant regulators/local government regarding quality and environmental management.</li> <li>• Conform to IMS requirements.</li> <li>• Develop quality and environmental policy.</li> <li>• Ensure the IMS conforms to the relevant ISO Standards.</li> <li>• Maintain quality and environmental management system changes.</li> <li>• Ensure loaded product meets physical and chemical specification.</li> <li>• Develop safety and health policy.</li> <li>• Maintain safety and health management system changes.</li> <li>• Report on the performance of the safety and health management system to management.</li> </ul>
All Personnel	<ul style="list-style-type: none"> <li>• Conform to IMS requirements.</li> <li>• Discuss quality, environment, safety, and health improvement ideas with management.</li> <li>• Stop the process when the quality of the product is compromised, the environment has or can be affected, or the safety and health of workers is at risk.</li> <li>• Participate in quality, environment, safety, and health improvement programs.</li> </ul>

## 6.7. Control of Records

Records shall be kept of all tasks and activities which relate to the IMS and to operational aspects which have the potential to affect the quality of the product, safety and health of people or the environment.

The records to be kept, shall include records required by acts, regulations, statutory codes of practice, and required by Australian Standards referenced in acts, regulations, and statutory codes of practice.

## 6.8. Accommodation

Employment will continue from the local region, so that the employees can work on a drive in, drive out (DIDO) basis. Employees are currently doing this, and it has worked fine for all parties involved. Certain personnel that live in more distant locations, for example Cairns, rent a space at the Mt Carbine Caravan Park, next to the mine site, for the duration of their shift and commute to their place of residence at the conclusion of their swing. The Mt Carbine Motel also offers operators and contractors nightly rates with meals included for those working on shift or performing contracts in the area.

## 6.9. Emergency Response Plans

EQR’s Emergency Response Management Plan (EQ RESOURCES-SAF-PLN-0003) minimises the level of risk to life, property, and the environment due to an emergency situation.

The EQR Emergency Response Management Plan describes the immediate actions required by designated site personnel.

All personnel are required to undergo site and specific area inductions to familiarise themselves with locations of emergency equipment and evacuation points. Emergency contact details and procedures are provided during their induction.

## 7. Capital Cost Estimate

### 7.1. Estimate Update

Total CAPEX is \$26,291,011 including additional capital of \$7.76m required for the Gravity Plant expansion. The additional capital costs have been developed by Turner & Townsend JukesTodd which has been based on a range of inputs including firm market pricing, unit costs from the current project and engineering estimates.

The summary of the additional costs associated with the Gravity Plant expansion are provided in Table 15.

Table 15: Gravity Plant Upgrade Capital Cost Summary

WBS Code	WBS Descriptions	Cost (AUD)
20000	Processing	\$2,550,500
30000	On-site Infrastructure	\$841,665
40000	Off-site Infrastructure	\$2,000,000
70000	Project Indirects	\$637,070
80000	Owner's Costs	\$442,339
90000	Contingency	\$1,294,315
	<b>Total</b>	<b>\$7,765,889</b>

The accuracy of the capital cost estimate is considered to be in accordance with Budget / Authorisation Estimate as defined by AACE 47R-11 Standard: Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Mining and Mineral Processing Industries.

Updates to the BFS estimate have been included when more accurate pricing has been obtained post BFS closure.

### 7.2. Estimate Basis

#### 7.2.1. Direct Costs

Consultants were engaged to provide engineering and estimating services for their relevant scopes in accordance with a AACE 47R-11 Class 3 estimate.

The consultants engaged to provide input into the estimate are listed in Table 16.

Table 16: Estimate Contributors

Estimate Scope	Consultant
Crushing and Screening Plant Sorting Plant Tailings Dewatering Plant	Mincore
Processing Plant	Ausenco
High Voltage Power Upgrade	Woodburn Electrical
Site Infrastructure Project Management	JukesTodd
Approvals and Rehabilitation	NRA Environmental Consultants

The basis of the estimating methodologies for the various scope components are summarised below in Table 17.

Table 17: Direct Cost Estimate Methodology

Description	Base Case
Earthworks	Consultant in-house database of costs for recently completed projects.
Buildings	Recent historic equivalent purchases by EQR.
Concrete Works	Priced from consultant in-house database and compared to previous Mt Carbine project actual costs.
Major Mechanical Equipment (packages over \$10k)	Budget quotes from OEMs based on equipment datasheets.
Minor Mechanical Equipment (packages under \$10k)	Consultant in-house database of costs for recently completed projects.
Structural Steel Supply	Consultant in-house database of costs for recently completed projects.
Platwork	Consultant in-house database of costs for recently completed projects.
Structural, Mechanical and Plate Work Installation Costs	Unit man-hours per tonne of steel and equipment.
Piping	Consultant in-house database of costs for recently completed projects.
Electrical Control and Instrumentation supply	Factored from historic projects and checked using reference projects.
First Fills and Spares	Factored from historic projects and checked using reference projects.
HV Upgrade	Firm quote from local contractor familiar with the site and project.
SCADA Replacement	Firm quote from local contractor familiar with the site and project.
Container Workshops	Consultant in-house database of costs for recently completed projects.
Engineering	Budget estimates provided by engineering consultants delivering the relevant study scope.
Mobile Equipment	Firm pricing from OEM suppliers or advertised available second hand prices.

### 7.2.2. Indirect Costs

The basis of the estimating methodologies for the indirect cost components are summarised below in Table 18.

Table 18: Indirect Cost Estimate Methodology

Description	Base Case
Approvals	Known government fees and budget pricing for consultant activities.

Description	Base Case
Project Management	First principles manhour build-up against the execution schedule.
Contingency	Risk ranging was performed on the capex items and a Monte Carlo simulation was performed to develop a P90 contingency estimate.
Escalation	Given the short duration of the Project, escalation was not included in the capital estimate.

### 7.3. Estimate Summary

Estimate summaries at WBS level 1 are provided in Table 19 for the total budgeted Phase 2 project costs.

Table 19: Estimate Summary

WBS Code	WBS Descriptions	Cost (AUD)
10000	Mining	\$4,229,528
20000	Processing	\$12,844,031
30000	On-site Infrastructure	\$1,619,691
40000	Off-site Infrastructure	\$2,000,000
70000	Project Indirects	\$1,423,394
80000	Owner's Costs	\$1,333,297
90000	Contingency	\$2,841,070
	<b>Total</b>	<b>\$26,291,011</b>

## 8. Operating Cost Estimate

### 8.1. Basis of Estimate

#### 8.1.1. Accuracy of Estimate

All operating costs are presented in real terms as of 15 May 2023. All cost assumptions were derived from cost data from varying sources:

- Mining costs were developed using a combination of existing real mining cost data combined with contractor pricing (Golding Contractors);
- Crushing screening and sorting pricing from existing data combined with consultant pricing (Mincore); and
- Processing plant pricing from existing data combined with consultant pricing (Ausenco).

Based on the alignment between contract data, and DAS Mining Solutions equipment data base, the order of accuracy for mining equipment has been determined to be between -10%/+15%. This order of accuracy also applies to the crushing, screening, sorting, and processing opex costs based on current expenditure at Mt Carbine.

#### 8.1.2. Source Documentation

For the compilation of the operating cost estimate, all activities were identified relating to the extraction of ore from the open pit mine and LGS to loading of trucks at the mine gate. Cost estimates were then developed for each activity benchmarked against the following:

- First principles estimates;
- Consultants' data derived from similar external projects;
- Use of actual costs from the existing operation; and
- Contracts currently in place at Mt Carbine.

The activities were separated into:

- Mining activities to deliver ore to the ROM pad;
- Crushing, screening, and sorting;
- Processing; and
- Other site related costs.

### 8.2. Key Assumptions

The key assumptions utilised in the operating cost estimate are included in Table 20.

Table 20: Operating Cost Estimate Key Assumptions

Item	Assumption
<b>Base Data</b>	Products or services used in more than one function of the operation were identified and used as standard cost assumptions. These items include diesel fuel, explosives, and electricity.
<b>Diesel Fuel Prices</b>	The fuel price is based on the current average prices of existing operations at Mt Carbine. The wholesale cost of diesel fuel was estimated at AUD2.101. Upon application of the diesel rebate (after GST removal) of AUD0.401/L, the diesel price used for opex costs was AUD1.70.

Item	Assumption
<b>Explosives Costs</b>	Estimates were provided for drill and blast costs by Golding. to include drilling, emulsion supply, loading, stemming, and shot firing and included in the all in \$6.00/t rate.
<b>Electricity</b>	The electricity price is based on the forecast provided by the current mine supplier (Ergon). Forecasted data is based on recent historical usage and was considered the most accurate. The electricity price used for opex costs was AUD0.19 per kWh.
<b>Exchange Rates</b>	<b>The base case AUD/USD foreign exchange forecasts assumed, for the duration of the operations is an average of 0.68.</b>

### 8.3. Operating Cost Summary

All operating costs are presented in real terms as of 15 May 2023 in Table 21. Further details pertaining to the development of the mining and processing scope and costs can be found in Chapter 4: Mining and Chapter 5: Processing.

\*Processing unit costs decrease after plant capacity increases, as indicated below

Table 21: Summary of Operating Costs per Tonne

Operating Cost Item	Cost (USD)	
<b>Operating costs of FCA (real) steady state life of mine (C1 cash cost)</b>	<b>104/mtu</b>	
<b>Operating Cost Components</b>	<b>Cost (AUD)</b>	<b>After Plant capacity increases</b>
Mining Costs		
<ul style="list-style-type: none"> <li>Open pit mining costs of for mining of the open pit by a contractor</li> </ul>	6.00/t	
<ul style="list-style-type: none"> <li>LGS Mining for 24/hr operations (Phase 1)</li> </ul>	2.48/t	
<ul style="list-style-type: none"> <li>LGS Mining for 12/hr operations (Phase 2)</li> </ul>	1.69/t	
Mine Closure/Rehabilitation & Ancillary Equipment	0.26/t	
Dry processing costs	2.00/t (feed)	1.30/t*
Ore Sorting costs	1.30/t (feed)	0.85/t*
Gravity processing plant costs incl. by-product management	12.15/t (feed)	8.00/t*
Other costs based on internal estimates, lease vehicles, grade control, sampling, drilling and lab testing, contractor mobilisation to site, maintenance facility cost and contractor demobilisation.	1.671/t	

## 9. Investment Evaluation

### 9.1. Summary

Investment evaluation of the Project has been undertaken to support EQR in the determination of the viability of the Mt Carbine Expansion Project.

The overall valuation has been completed to the standard required by EQR to put forward the business case for an investment approval request and support the necessary project financing required to deliver the project.

A financial model for evaluating the Project has been created by Rock Financial Advisory (Rock), where the key outputs examined are net present value (NPV) and internal rate of return (IRR).

Since the original model, the key changes in the latest model have been made:

- a) Incorporation of a new mining schedule as defined in EQR's most recent Mineral Reserve Estimate, released by Optimal Mining dated 15 May 2023, which resulted in an additional 2Mt ore and 7,600t of concentrate for sale (compared to the November 2022 Economic Update). The methodology of using the LGS to top up crushing/screening and gravity processing plant to utilise available capacity has been retained;
- b) Selective processing so that the high-grade and medium-grade ore from the open-pit is processed first, and all other ore stockpiled. Once processed, the low grade from the open-pit is processed, and finally the low grade stockpile is processed.
- c) Doubling of plant capacity (from 83kt/ month to 166 kt/month, or 1Mtpa to 2Mtpa) commencing May 2025, and an additional \$7.9m capital expenditure added to the model to pay for this (spent over the 4 months preceding the capacity increase);
- d) The doubling of capacity also triggers a 30% drop in the three processing related unit costs (providing a double benefit of more tonnage earlier and cost reduction);
- e) The doubling of the plant capacity shortened the LOM by circa 4 years (from a mid 2036 end date, to now ending early 2032); and
- f) Some minor changes in forecasts of Tungsten price, FX and APT payable:
  - Tungsten price (in USD) was decreased in 2024, and increased in later years;
  - AUD:USD increased (reduced AUD revenue) in 2023, and decreased it (i.e. improved AUD revenue) slightly in 2027 and 2028 based on revised macroeconomic indicators; and
  - APT payable has improved slightly, in 2025 and 2026, based on discussions with CRONIMET Asia Pte Ltd as the customer.

The changes and impacts to the financial outcomes are summarised in Figure 22.

CY (ending 31 Dec.)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>W03 APT Price USD/t Con.</b>										
assumptions last year	34,000	35,000	35,500	36,500	36,750	37,000	37,250	37,250	37,250	37,250
assumptions now	34,000	34,500	35,500	36,500	37,500	37,500	37,500	37,500	37,500	37,500
difference	-	(500)	-	-	750	500	250	250	250	250
<b>AUD/USD Exchg Rate : Inputs</b>										
assumptions last year	0.65	0.67	0.67	0.67	0.70	0.70	0.70	0.70	0.70	0.70
assumptions now	0.67	0.67	0.67	0.67	0.68	0.69	0.70	0.70	0.70	0.70
difference	0.02	0.00	0.00	0.00	-0.02	-0.01	0.00	0.00	0.00	0.00
<b>W03 APT Price AUD\$/t Con.</b>										
derived from above	52,147	52,239	52,985	54,478	52,500	52,857	53,214	53,214	53,214	53,214
derived from above	50,746	51,493	52,985	54,478	55,147	54,348	53,571	53,571	53,571	53,571
difference	(1,401)	(746)	-	-	2,647	1,491	357	357	357	357
<b>APT Payable : Base Case</b>										
assumptions last year	70.00%	70.00%	70.00%	72.50%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
assumptions now	70.00%	70.00%	72.00%	73.50%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
difference	-	-	0.02	0.01	-	-	-	-	-	-

Figure 22: Financial Assumptions Impacts to Economic Update

All other fundamentals and principles have been held across the models with certain parameters being upgraded as set out in Section 8 – Operating Costs.

The financial model was created using inputs based on both actual operating history of the project over 2022/2023 to date, as well as forecasts from site-staff and consultants.

The financial model reflects only the activity in this feasibility study and does not include any underground mining which will be the subject of further studies.

The key outputs from the model can be seen in Table 22 below. Note that these are presented as pre-tax and ungeared returns (NPV and IRR).

Table 22: Investment Evaluation Key Outputs

Description	Financial Model
NPV (pre-tax and ungeared)	\$307.1 million (measured from 1 November 2022 in order to keep on same basis a NPV reported last year)
IRR	477%
Payback Period	NA – project funded through positive cashflow
Discount Rate	8.00%

The NPV has increased by circa \$98M since the last November 2022 Economic Update, which reported an NPV of \$209M (using the same 8% discount rate). The key reasons for this increase are the changes outlined above. And in addition to the cost improvements, bringing forward the revenue (from doubling of capacity) also further improves the NPV, due to the time value of money.

The IRR has increased by 80% (397% last year, to 477% now), for same reasons the NPV has increased. The macroeconomic, operational, and strategic factors presented in this section underpin the comprehensive financial model analysis completed for the basis of this economic study.

The economic model was developed to incorporate critical financial impacts required to undertake the development and operation of the project including estimated capital expenditures and deferred capital, revenues generated, and operational expenditures. Tax payable and funding options are contained in the financial model, but not included in the NPV and IRR reported.

The project has been generating revenue since last year, and based on current assumptions, the project is estimated to generate cashflows, starting 1 June 2023 of:

- \$450M before any capex, tax or financing;
- \$324M after adding on capex, and GST and equipment finance costs (which are akin to operating costs);

It is noted that tax is not payable until mid 2025- thus further increasing early post-tax cashflows.

Based on current modelling, the best economics of the open pit are in calendar year (CY) 2026, delivering a pre-tax cash flow of \$121M in that year. This is the best year due to:

- The quantum of ore: 1.992m tonnes of ore fed into plant (the most ore feed in any year because capacity has doubled midway in the previous year) at an average blended grade of 0.25%. The low strip ratio of that year is also a factor, as well as APT payable increases from 72% in CY2025 to 73.5% in CY2026.
- CY 2027 also has high ore throughput due to doubled plant capacity, however average blended grade of plant feed is lower at 0.08%

On depletion of the current ore reserve accessible through open pit mining, that has been modelled for the purposes of this document, the intention is to extract additional ore from pit extensions that will be firmed up by additional drilling and underground mining activities. A scoping study on the underground mining option was completed April 2022 with a positive outlook on the underground potential and further definition will be undertaken in the future. Should an economic solution be defined for the potential underground ore reserves, the positive economics and strong cash flow is expected to continue.

## 9.2. Methodology

The financial model was built on the various inputs as described above.

- The valuation and the design were based on a 15-year LOM, from 1 January 2022 to December 2036. The LOM is now until April 2032.
- Typical finance calculations have been added to arrive at a range of valuation measures as well as being a cashflow forecasting tool, which can show cash balances for the LOM. The assumptions used in the financial model are summarised in Table 23 and Table 24.

Table 23: Financial Model Revenue Parameters

Calendar Year	Price USD/ t	AUD/USD	Price AUD\$/t	APT Payable
2022	\$ 34,000	0.620	\$ 54,798	0.700
2023	\$ 34,000	0.670	\$ 50,746	0.700
2024	\$ 34,500	0.670	\$ 51,493	0.700
2025	\$ 35,500	0.670	\$ 52,985	0.720
2026	\$ 36,500	0.670	\$ 54,478	0.735
2027	\$ 37,500	0.680	\$ 55,147	0.750
2028	\$ 37,500	0.690	\$ 54,348	0.750
2029	\$ 37,500	0.700	\$ 53,571	0.750
2030	\$ 37,500	0.700	\$ 53,571	0.750
2031	\$ 37,500	0.700	\$ 53,571	0.750
2032	\$ 37,500	0.700	\$ 53,571	0.750
2033	\$ 37,500	0.700	\$ 53,571	0.750
2034	\$ 37,500	0.700	\$ 53,571	0.750
2035	\$ 37,500	0.700	\$ 53,571	0.750
2036	\$ 37,500	0.700	\$ 53,571	0.750

Table 24: Financial Model Parameters

Item	Assumption
Valuation date	A valuation date of 1 November 2022 has been used (in order to keep NPV and IRR on same basis as the November 2022 BFS ).
Inflation Rates	All data is in real dollars as at May 2023 i.e. no inflation has been applied, thus no CPI index used
Discount Rate	The pre-tax NPV uses a discount of 8.00%
Discount Period	1 November 2022 to 30 April 2032
Other Revenue Parameters	<ul style="list-style-type: none"> <li>Concentrate production with a minimum of 50% WO<sub>3</sub>, within product specifications. As the project progresses and higher-grade ores are accessed, higher grade concentrates will be produced;</li> <li>Base Price: calculated on a metric tonne unit (mtu) of WO<sub>3</sub> contained in a dry metric tonne delivered FCA Mt Carbine (INCOTERMS 2010);</li> <li>Index: London Metal Bulletin (LMB) European APT;</li> <li>Payment terms: 95% payment upon delivery of product and 5% balance payment upon final settlement based on weighing and assay results.</li> <li>Recovery through plant: <ul style="list-style-type: none"> <li>Ore sorter product - 90%</li> <li>Gravity processing plant - 79.5%</li> </ul> </li> </ul>
Royalty Payable	<ul style="list-style-type: none"> <li>2.7% of gross tungsten revenue to Queensland State Government</li> <li>3% to Regal Resources Royalties Fund with a buy back clause after recovery of the first stage royalty (and prior to the 7th anniversary of the execution of definitive agreements) and a payment of \$2.75 million reducing the Royalty to 1.5%.</li> <li>Paid to Traditional Owners: Nil</li> <li>Paid to other parties: Nil</li> </ul>
Timing	<p>1 November 2022- 30 April 2032, with</p> <ul style="list-style-type: none"> <li>open pit mining from July 2023 to June 2029 (6 years)</li> <li>LG Stockpile fed selectively into plant when capacity available (i.e. in months when not enough ore from open pit to fill plant)</li> <li>and quarry revenue occurs at all times</li> </ul> <p>All key capex spent over 2023 and 2024 (with some already spent in 2022)</p>
Native Title Compensation	No payments are applicable
Rehabilitation	A cost of \$0.20/tonne of open pit ore mined has been included

As this document reports only a pre-tax and pre-funding NPV, assumptions with regards to financing, interest rate, depreciation, and income tax rate (which all feed into tax payable), do not affect the NPV reported. However, for information, basic details are shown in Table 25.

Table 25: Tax Assumptions

Item	Details
Financing	<ul style="list-style-type: none"> <li>\$10M of funding via a royalty has been included in the model: \$5M received in November 2022, and \$5M in March 2023.</li> <li>Approximately \$4M of yellow goods and XRT Sorter under equipment finance at 5% over 3 to 5 years</li> </ul>

Item	Details
Depreciation	<p>Depreciation has been calculated as follows:</p> <ul style="list-style-type: none"> <li>Accumulated depreciation and amortization of \$13.4m, which is further depreciated/amortized over remaining LOM of 8.3 years.</li> <li>All other capex that is yet to be spent is depreciated on a linear basis over the remaining 8.3 years</li> </ul>
Corporate Income Tax	<ul style="list-style-type: none"> <li>Corporate Income tax of 25%</li> <li>Carry forward tax losses as at time of writing of \$3.70M</li> </ul>

### 9.3. Taxation

The Project falls under the Australian taxation system and is an incorporated Australian legal entity that is taxed as part of the EQR consolidated group.

For simplicity, the financial analysis in this chapter utilises stylised Australian tax rules to estimate tax payable:

- Capital costs and certain expenses are capitalised during construction as assets and depreciated for tax using a straight-line depreciation over the remaining LOM;
- All expenses incurred by the project during operations are assumed to be tax deductible;
- All interest expenses incurred in financing the project are assumed to be tax deductible;
- The company has received \$10M royalty financing, however such funding is not treated as debt, as it is not a “financial arrangement” under ASIC. Rather it is deemed a prepayment of offtake/concentrate, and thus any payments back to the royalty provider are not tax deductible;
- Inclusion and modelling of tax losses to date;
- The impact of GST has been included in the economic evaluation.

### 9.4. Financial Analysis

The Project Base Case is premised on a stand-alone project with a remaining LOM of 8.91 years (from date of writing). EQR has designed, constructed, financed and manages the project and makes the following assumptions:

- The open pit mining shall be operated by a mining contractor who will provide all mining equipment;
- The Company’s current earth moving fleet is used for mining of the LGS and the removal of waste;
- The dry and wet processing plants are being operated by the Company and capacity will be doubled in May 2025, with general site infrastructure being upgraded as required. Capital costs for the project will therefore be limited, with ample capacity to support a feed processing rate of 1 Mtpa (increasing to 2Mtpa after May 2025), split between the LGS and the open pit mining operations.

This analysis has been based on the assumptions listed in the previous sub-sections and the following:

- Mining method which operates open pit mining and low-grade stockpile mining;
- Average of 3,800 tpa of minimum 50% WO<sub>3</sub> concentrate sold on a FCA basis;
- Capital costs of \$19m remaining (from 1 June 2023 onwards and after inclusion of additional CAPEX for doubling of plant capacity);
- Tungsten concentrate production has an estimated C1 Cash Cost of AUD\$152/mtu (USD\$104/mtu), over the remaining LOM, and this has decreased by more than 10% from the last cash cost reported in November 2022, due to economies of scale of putting through more ore, as well as the doubling of plant capacity which triggers a 33% decrease in any processing related unit costs

Mining costs broken down as follows:

- Mining costs of \$6.26/t (real), for mining of the open pit by a contractor;
- LGS Mining for 24/hr operations at \$2.48/t, and for 12 hr operations is \$1.69/ t. Model assumes \$2.48/t all years;
- All costs summarised below, based on estimates provided as detailed in Section 8.
- Three unit costs related to processing (in grey below) decrease by 30% after plant capacity doubles, and all others remain the same:

	Unit costs (AUD\$/ t)	
	<i>before plant capacity doubles</i>	<i>After</i>
Additional Opex: lab costs, geology sampling, grade control - OC	\$ 0.830	same
Additional Opex: lab costs, geology sampling, grade control -LGStockpile	\$ 0.088	same
OC Mining cost	\$ 6.263	same
Low Grade stockpile Mining cost	\$ 2.481	same
Dry Processing cost	\$ 2.005	\$ 1.323
Ore Sorting cost	\$ 1.300	\$ 0.858
Gravity Plant cost	\$ 12.145	\$ 8.016
Gravity plant tailings cost	\$ 0.340	same
Rehabilitation & Closure cost	\$ 0.200	same
FEL cost	\$ 0.945	same
Ancillary cost: Only to Open Cut	\$ 0.060	same

- Logistics and marketing costs are for the CRONIMET account and are reflected in the APT payable received for concentrates sold from the Project.

## 9.5. Sensitivity Analysis

### 9.5.1. NPV Sensitivity

The base case NPV is \$307m and Figure 23 below illustrates the Project's NPV is most sensitive to the FX rate.

Table 26: NPV Sensitivity

Sensitivity Level	Parameter	Details
Most sensitive to	AUD/ USD exchange rate	<p>The AUD / USD exchange rate has the most positive effect on the NPV, producing the highest NPV on the graph below of \$534 million, when it is decreased by 20% (i.e. a weak AUD increases the AUD revenue).</p> <p>The exchange rate also had the highest negative effect as well, with the NPV decreasing from \$307m to \$190m, from a 20% increase in the exchange rate.</p>
Somewhat sensitive to	Revenue inputs	<p>Changes that affect calculation of the base Revenue (before converted to AUD\$) have the 2nd highest effect on the NPV</p> <p>Note that these four inputs all behave in exactly the same manner (as they are all part of the same formula) being, Tungsten price, APT Payable, Con Grade, Recovery, and thus they all appear as one line below : dark blue, which is "hiding" the other 3 lines</p>
Least sensitive to	Capex	<p>Changes in capex have the least effect on the NPV (hence the nearly flat line below), which is logical as capex is small at circa \$19M (remaining to be spent), versus Revenue of \$746M which is a much larger base.</p>

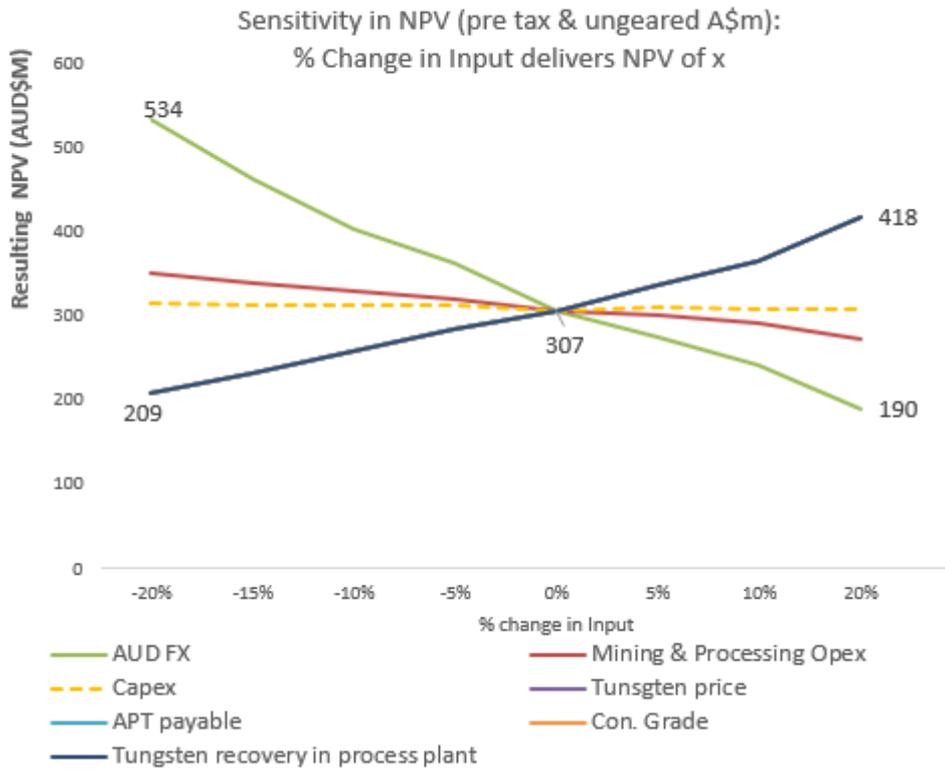


Figure 23: Sensitivity of the NPV to Changes in Key Assumptions

### 9.5.2. IRR Sensitivity

The base case IRR is 477%. Changes in the NPV sensitivity inputs, had the same effect on the IRR, in that changes in the AUD/ USD FX rate have the most effect on IRR, and changes in the four inputs to revenue, all have equal second highest effect, and capex changes have the least effect. This is shown in Figure 24.

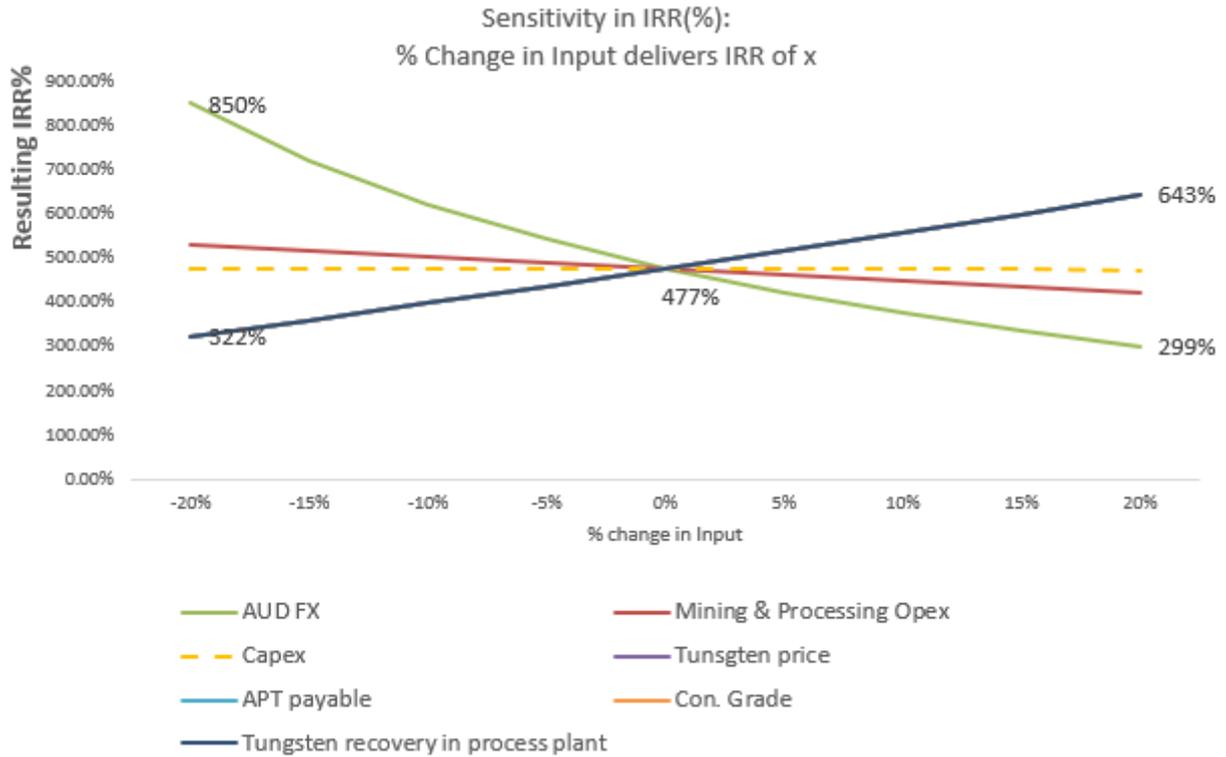


Figure 24: Sensitivity of the IRR to Changes in Key Assumptions

### 9.5.3. Breakeven Analysis

The model has been tested to determine the change required in key inputs to reach a “breakeven” level, by flexing / changing one input at a time.

A breakeven level can be defined numerous ways, and for the purpose of this analysis, it’s defined as an IRR of 0% return.

In this testing:

- The four revenue inputs would require the least change to deliver an IRR of zero; and
- And the AUD / USD would require the least change to reduce the IRR to zero.

The findings of the breakeven analysis were:

- The AUD would have to increase by 96% across all years. This would mean the AUD increasing from base case (average LOM) level of 0.68 to 1.33 (a level that has not been seen in 30 years); and
- Conversely, the capex would have to increase by 2100% (capex is a small contributor to cashflow thus can withstand much larger increases before it affects cashflows).

The breakeven analysis is summarised in Table 27.

Table 27: Breakeven Analysis

Assumption	Change Required to reach IRR of Zero
Capex	2100%
Mining & Processing Opex	180%
AUD	96%
Tungsten Price	-58%

## 10. List of Abbreviations

Abbreviation	Description
ADT	Articulated dump truck
ALARP	As low as reasonably practicable
APT	Ammonium paratungstate
AUD	Australian dollar
Capex	Capital expenditure
CEO	Chief Executive Officer
CMOC	China Molybdenum Co Ltd
CPI	Consumer Price Index
CRONIMET	CRONIMET Australia Pty Ltd
CSEP	Community and Stakeholder Engagement Plan
E&I	Electrical and instrumentation
EMRS	Environmental Monitoring and Reporting System
EOW	End of waste
EP	Environmental Program
EPC	Engineer, procure, construct
EQR	EQ Resources Limited
ESG	Environment, Social Governance
FCA	Free carrier
FEL	Front end loader
FX	Foreign exchange
GHG	Greenhouse gas
GST	Goods and services tax
HGZ	High-grade ore zone
IMS	Integrated Management System
IMSM	Integrated Management System Manual
IRR	Internal rate of return
JORC	Joint Ore Reserves Committee
JT	JukesTodd
JV	Joint venture
LGS	Low grade ore stockpiles
LMB	London Metal Bulletin

Abbreviation	Description
LOM	Life of mine
ML	Mining Lease
MTCRM	Mt Carbine Retreatment Management Pty Ltd
MTU	Metric tonne unit - one mtu equates to 10kg. The term is used as the pricing basis for APT
OC	Open pit
Opex	Operating expenditure
RL	Relative level
Rock	Rock Financial Advisory
ROM	Run of mine
SCADA	Supervisory control and data acquisition
SDG	Sustainable Development Goals
SHMS	Safety and health management system
SMP	Structural, mechanical, piping
SSE	Site Senior Executive
W	Tungsten
XRT	X-ray transmission

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