

## MANDILLA GOLD PROJECT PRE-FEASIBILITY STUDY AND MAIDEN ORE RESERVE

## Pre-Feasibility Study delivers a compelling case for the development of the Mandilla Gold Project with Stage 1 average gold production target of 95koz per annum over the first 12 years

## **HIGHLIGHTS**

- Astral Resources NL (ASX:AAR) is pleased to announce the results of the Pre-Feasibility Study (PFS or Study) for development of its 100%-owned Mandilla Gold Project (Mandilla), which includes the satellite Feysville deposits, located near Kalgoorlie in the Eastern Goldfields region of Western Australia<sup>1</sup>.
- The Mandilla Gold Project presents a rare development opportunity for a wholly owned project of scale and quality in a tier one jurisdiction.

#### PFS highlights Mandilla as a robust, large-scale, high-quality development opportunity:

- The PFS establishes a production target of 1.4 million ounces of gold across a life-of-mine (LoM) • of 19 years (13 years of mining) at an all in sustaining cost (AISC) of \$2,085 per ounce.
- The base case presents as a compelling economic proposition, modelled using a gold price of A\$4.250:
  - Forecast to generate over \$2.8 billion of free cashflow (pre-tax)
  - Forecast revenue of approximately \$6.0 billion
  - Rapid payback period (pre-tax) of less than 1 year
  - Pre-tax NPV8 of approximately \$1.4 billion
- When modelled using a gold price of \$5,000 per ounce, the PFS is:
  - Forecast to generate over \$3.9 billion of free cashflow (pre-tax)
  - Forecast to generate revenue of \$7.1 billion
  - Rapid payback period (pre-tax) of nine months
  - Pre-tax NPV8 of \$2.0 billion
- Projected gold production target averaging 95koz per annum at an average grade of 1.13g/t Au over the project's first 12 years of operation (Stage 1), followed by Stage 2 with a projected gold production target averaging 42koz per annum at an average grade of 0.50g/t Au over the remaining 6.5 years when treating lower grade stockpiles.
- 2.75Mtpa carbon-in-pulp (CIP) processing plant and associated infrastructure identified as the optimal commercialisation strategy for Mandilla, with CIP processing flow sheet achieving average gold recovery of 95.5%.
- In addition to the production target, Astral has estimated a Maiden Probable Ore Reserve Estimate (ORE) of 36.6 million tonnes at 0.9g/t Au for approximately 1.1 million ounces of gold, inclusive of:
  - Mandilla Probable ORE of 34.3 million tonnes at 0.9g/t Au for approximately 1.0 million ounces of gold; and



<sup>&</sup>lt;sup>1</sup> This announcement should be read in conjunction with the attached Pre-Feasibility Study, which forms part of this announcement.



- Feysville Probable ORE of 2.3 million tonnes at 1.2g/t Au for approximately 88 thousand ounces of gold.
- Total estimated pre-production capital requirement of \$227 million, inclusive of process plant and non-process infrastructure costs of \$180 million and pre-production mining costs of \$47 million.
- PFS is based on the Mineral Resources & Ore Reserves defined at Mandilla and Feysville. Further upside potential exists from ongoing exploration at Mandilla and Feysville targeting resource growth together with Brownfields exploration at the recently acquired Spargoville Gold Project which currently hosts a Mineral Resource Estimate of 3 million tonnes at 1.4g/t Au for 139 thousand ounces of gold<sup>4</sup>, as a potential future mineralisation source.

#### Astral Resources' Managing Director Marc Ducler said:

*"The Pre-Feasibility Study confirms Mandilla as a compelling gold development opportunity in a tier one mining jurisdiction.* 

"The PFS demonstrates the potential for Mandilla to be a long-term, high margin project, with a life of mine production target of approximately 1.4 million ounces at an all in sustaining cost of approximately \$2,085 per ounce over an almost 19-year project life, underpinned by a maiden gold ore reserve of approximately 1.1 million ounces.

At a gold price assumption of A\$4,250, the project generates life-of-mine pre-tax free cash flow of over \$2.8 billion, an average of more than \$150 million per annum. At a gold price of A\$5,000, the life-ofmine pre-tax free cash flow jumps to \$3.9 billion, an average of over \$200 million per annum.

*"Importantly, Stage 1 of the project delivers average annual gold production of approximately 95 thousand ounces at a grade of 1.13g/t Au which would entrench Astral as a genuine Australian mid-tier gold producer.* 

"Given the outstanding economic outcomes of this PFS, Astral is now firmly on the pathway to its goal of becoming a significant Kalgoorlie gold producer. Astral is targeting completion of a Definitive Feasibility Study in June 2026.

"In parallel with the DFS, Astral will work on converting more Inferred Mineral Resources to Indicated while also targeting resource growth exploration at its Mandilla, Feysville and Spargoville Projects. It is well worth noting that, despite currently having a gold resource of approximately 139,000 ounces, the PFS does not currently contemplate any ore being sourced from the Spargoville Project recently added as part of our Maximus acquisition"



#### **Cautionary Statement**

The Pre-Feasibility Study ("**PFS**" or "**Study**") referred to in this announcement has been undertaken by Astral Resources NL (**Astral** or the **Company**) in conjunction with various independent consultants, to determine the viability of a standalone development, including open pit mining and processing at the Mandilla Gold Project (comprising of the Mandilla and Feysville deposits) in Western Australia (**Project** or the **Mandilla Gold Project**).

The total Life of Mine Production Target (and forecast financial information derived from the Production Target) referred to in this announcement is underpinned by approximately 75% by Probable Ore Resources, approximately 5% by Indicated Mineral Resources which were not converted to Ore Reserves and the remaining approximately 20% by Inferred Mineral Resources.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target itself (or the forecast financial information) will be realised.

The proportion of Inferred Mineral Resources underpinning the Life of Mine Production Target is not the determining factor in project viability. The Inferred Mineral Resources do not feature as a significant proportion early in the mine plan (refer to Chart 1 below) and the payback period for the Mandilla Gold Project is less than one year.

The Company confirms that the Ore Reserves estimates and Mineral Resources estimates have been prepared by Competent Persons in accordance with the requirements of the JORC Code.

This announcement has been prepared in compliance with the JORC Code 2012 Edition (JORC 2012) and the ASX Listing Rules. All material assumptions on which Life of Mine Production Target and the forecast financial information is based have been provided in this announcement and are also outlined in the attached JORC 2012 table 1 disclosures.

While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the production target or estimated outcomes indicated by the PFS (such as the financial forecasts) will be achieved. The production target and estimated outcomes indicated by the PFS (such as the financial forecasts) are also subject to various risk factors. See the Cautionary Statements and Forward Looking Statements at the end of this announcement.

Given the uncertainties involved and detailed in this announcement, investors should not make any investment decision based solely on the results of the PFS.



Astral Resources NL (ASX: AAR) (Astral or the Company) is pleased to announce the results of a compelling Pre-Feasibility Study (PFS or Study) for its flagship Mandilla Gold Project (Mandilla) (comprising of the Mandilla and Feysville deposits) in Western Australia (Project or the Mandilla Gold Project).

The project is in a Tier 1 location, situated in the northern Widgiemooltha greenstone belt, 70 kilometres south of the significant mining centre of Kalgoorlie and 20 kilometres west of Kambalda in Western Australia.

Mandilla hosts a Mineral Resource of **42Mt at 1.1 g/t Au for approximately 1.43Moz** of contained gold<sup>2</sup> consisting of the Theia, Iris, Hestia and Eos deposits with an Ore Reserve of **34.3Mt at 0.9 g/t Au for approximately 1.0Moz** of contained gold (*refer to section 4.1.4 of the attached PFS*).

The PFS incorporates the mining and processing of Mineral Resources from Astral's nearby Feysville Project (**Feysville**). Feysville is located within the north-north-west trending Norseman – Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton, approximately 14 kilometres south of the KCGM Super Pit in Kalgoorlie.

Feysville hosts a Mineral Resource of **5Mt at 1.2** g/t Au for approximately **196koz** of contained gold<sup>3</sup> consisting of the Kamperman, Think Big and Rogan Josh deposits with an Ore Reserve of **2.3Mt at 1.2** g/t Au for approximately **88koz** of contained gold (*refer to section 4.2.4 of the attached PFS*).

Following the acquisition of Maximus Resources Limited (ASX: MXR) (**Maximus**) during May 2025, Astral now holds 100% of the Spargoville Project, which includes approximately 144km<sup>2</sup> of primarily contiguous tenure to Mandilla. Spargoville hosts a Mineral Resource of **3Mt at 1.4 g/t Au for approximately 139koz** of contained gold<sup>4</sup> consisting of the Wattle Dam, Eagles Nest, Larkinville, Hilditch and 5B deposits The PFS does not contemplate any contribution of ore from Spargoville but does utilise the Spargoville tenure for locating infrastructure and the associated operational footprint.

The location of Astral's Mandilla, Feysville and Spargoville projects in relation to Kalgoorlie and other nearby gold projects is set out in Figure 1.

Astral intends to immediately proceed with a Definitive Feasibility Study (DFS) for Mandilla.

<sup>&</sup>lt;sup>2</sup> Mandilla JORC 2012 Mineral Resource Estimate: 31Mt at 1.1g/t Au for 1,034koz Indicated Mineral Resources and 11Mt at 1.1g/t Au for 392koz Inferred mineral Resources (refer to Astral ASX announcement dated 3 April 2025). That Indicated Mineral Resource is inclusive of the part of that Indicated Mineral Resource which has now been estimated as Ore Reserves in this announcement at the Mandilla Project.

<sup>&</sup>lt;sup>3</sup> Feysville JORC 2012 Mineral Resource Estimate: 4Mt at 1.3g/t Au for 144koz Indicated Mineral Resources and 1Mt at 1.1g/t Au for 53koz Inferred Mineral Resources (refer to Astral ASX announcement dated 1 November 2024). That Indicated Mineral Resource is inclusive of the part of that Indicated Mineral Resource which has now been estimated as Ore Reserves in this announcement at the Feysville Project.

<sup>&</sup>lt;sup>4</sup> Spargoville JORC 2012 Mineral Resource Estimate: 2Mt at 1.3g/t Au for 81koz Indicated Mineral Resources and 1Mt at 1.6g/t Au for 58koz Inferred Mineral Resources (refer to Astral ASX announcement dated 7 May 2025).





Figure 1 – Map illustrating the location of the Mandilla, Feysville and Spargoville Projects.

## **Study Highlights**

- 2.75Mtpa carbon-in-pulp (CIP) processing plant and associated infrastructure identified as the optimum commercialisation strategy for Mandilla, with CIP processing flow sheet achieving average gold recovery of 95.5%.
- Projected production target of approximately 1.41 million ounces of gold across a life-of-mine (LoM) of 19 years (13 years of mining) at an average grade of 0.90g/t Au, including:
  - Projected gold production averaging approximately 95 thousand ounces per annum at an average grade of 1.13g/t Au over the project's first 12 years of operation (**Stage 1**)



- Projected gold production averaging approximately 42 thousand ounces per annum at an average grade of 0.50g/t Au over the remaining 6.5 years when treating lower grade stockpiles (Stage 2)
- All-In Sustaining Costs (AISC) over the LoM average approximately \$2,085 per ounce (payable metal), comprising:
  - LoM mining: approximately \$1,098/oz
  - LoM processing: approximately \$681/oz
  - o LoM general and administrative: approximately \$118/oz
- Total estimated pre-production capital and working capital of approximately \$227 million, comprising:
  - Processing plant and non-process infrastructure of approximately \$180 million; and
  - Pre-production mining and G&A costs of approximately \$47 million.
- The base case LoM financial forecast outcomes are compelling, calculated using a gold price assumption of A\$4,250, which reflect the quality of the Project:
  - Forecast to generate revenue of approximately \$6.0 billion
  - Pre-tax and undiscounted free cash flow of approximately \$2.8 billion
  - Cumulative EBITDA of approximately \$3.1 billion
  - Pre-tax and unleveraged Net Present Value (**NPV**<sub>8</sub>) of approximately \$1.4 billion
  - Pre-tax and unleveraged Internal Rate of Return (**IRR**) of approximately 101%
  - Rapid payback period (pre-tax) of less than 1 year
- The LoM financial forecast outcomes when calculated using a gold price assumption of A\$5,000, reflects the significant upside presented in the current gold price environment:
  - Forecast to generate revenue of approximately \$7.1 billion
  - Pre-tax and undiscounted free cash flow of approximately \$3.9 billion
  - Cumulative EBITDA of approximately \$4.2 billion
  - Pre-tax and unleveraged Net Present Value (**NPV**<sub>8</sub>) of approximately \$2.0 billion
  - Pre-tax and unleveraged Internal Rate of Return (IRR) of approximately 136%
  - Rapid payback period (pre-tax) of nine months
- Maiden Probable Ore Reserve Estimate (ORE) of 36.6 million tonnes at 0.9g/t Au for approximately 1.1 million ounces of gold, inclusive of:
  - Mandilla Probable ORE of 34.3 million tonnes at 0.9g/t Au for approximately 1.00 million ounces of gold; and
  - Feysville Probable ORE of 2.3 million tonnes at 1.2g/t Au for approximately 88 thousand ounces of gold.

## Key Study Outcomes and Summary

Astral's in-house team has been assisted by leading independent consultants to develop the PFS including:

- Como Engineers
- Cube Consulting
- Soil & Rock Engineering
- Kewan Bond
- Entech Mining engineering
- Significant Environmental services
- Native Vegetation Solutions



- Terrestrial Ecosystems
- Resources WA

The Company has determined that a 2.75 million tonne per annum carbon-in-pulp (**CIP**) processing plant and associated infrastructure proposed to be located at Mandilla as the optimum commercialisation strategy for the Project.

The Life of Mine (**LoM**) financial model for the Project was completed on a 100% basis, based on the key assumptions in Table 1 below.

The material assumptions that underpin the Production Target case and forecast financial information for the Project are detailed in the PFS document, which is included in, and forms part of, this announcement.

Assumptions	UOM	Stage 1	Stage 2	Total LoM
Mining Duration	Years	12.50	0.75	13.25
Processing Duration	Years	12.00	6.50	18.50
Waste Mined	kt	318,814	7,736	326,550
Mineral Resource Mined	kt	47,287	3,518	50,806
Plant Throughput	ktpa	2,750	2,750	2,750
Mine Production Target				
Material Mined	kt	47,287	3,518	50,806
Au Grade	g/t	0.92	0.71	0.91
Au Ounces Contained	koz	1,401	80	1,481
Processing Physicals				
Material Processed	kt	33,022	17,784	50,806
Au Grade	g/t	1.13	0.50	0.91
Ounces Contained	koz	1,196	285	1,481
Ounces Recovered	koz	1,141	273	1,414
Average Annual Production	koz	95	42	76

Table 1 - Key physicals assumptions

At a gold price revenue assumption of A\$4,250 per ounce, which is lower than the gold spot price over the previous six months and almost A\$1,000 per ounce less than the current spot gold price, the Project is forecast to generate an unleveraged pre-tax IRR of approximately 101%, an undiscounted and pre-tax free cash flow of over \$2.8 billion and an unleveraged and pre-tax NPV<sub>8</sub> of approximately \$1.4 billion (refer to the range of possible economic values determined in the Sensitivity Analysis provided below).

The financial forecast summary for the Project is detailed in Table 2 below.



Key Financial Assumptions		
Gold Price Assumed	A\$/oz	4,250
Discount Rate	%	8
Foreign Exchange	AUD:USD	0.65
Key Project Metrics		
Payable Metal	Koz	1,414
Gold Revenue	A\$M	6,011
Mining Costs – Total	A\$M	1,594
Mining Costs – Pre-Production (capitalised)	A\$M	-40
Mining Costs	A\$M	1,553
Processing (including Maintenance, Transport, Insurance & Refining)	A\$M	963
General and Administrative Costs	A\$M	166
Royalties	A\$M	187
Project EBITDA	A\$M	3,142
Depreciation and Amortisation	A\$M	307
Net Profit Before Tax	A\$M	2,835
Capital		
Pre-Production Capital Expenditure (incl. contingency)	A\$M	180
Pre-Production Costs - Mining/General & Administrative	A\$M	47
Sustaining Capital	A\$M	80
LOM Capital	A\$M	307
Project Returns		
FCFF (Pre-tax)	A\$M	2,835
FCFF (Post-tax)	A\$M	2,012
Pre Tax NPV @ FID (8.0%)	AUD M	1,400
Pre Tax IRR (at FID)	%	101%
Pre Tax payback - From first Au production	Years	0.92
Post Tax NPV @ FID (8.0%)	AUD M	1,001
Post Tax IRR (at FID)	%	86%
Post Tax payback - From first Au production	Years	1.00
Equity NPV @ FID (8.0%)	AUD M	1,001
Post Tax IRR (at FID)	%	86%
Capital Intensity (Steady State)	AUD/oz p.a.	2,381
Pre-Tax NPV/Pre-Production Capital	X	6.16
Post-Tax NPV/Pre-Production Capital	Х	4.41

Table 2 – LOM financial fe	orecast summary
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Notes:

<sup>1</sup> – Payback period is calculated from the start of gold production.

<sup>2</sup> – Capital intensity is calculated by dividing pre-production capital by average annual payable metal over the Stage 1 period.

## **Production Target**

The total recovered gold metal over the life of the Project is forecast to be approximately 1,414koz. A breakdown of the schedule of payable gold by Resource category (Indicated and Inferred) across the life of the Project is included at Chart 1.

Approximately 80% of the Mineral Resources scheduled for extraction across LoM are classified as Indicated, with the balance classified as Inferred. This provides confidence in the Project being able to pay back the predevelopment capital from the higher confidence Indicated category.





Chart 1– Tonnes material processed by Mineral Resource category

The Study projects gold production averaging approximately 95koz per annum at an average grade of 1.13g/t Au over the project's first 12 years of operation (Stage 1). Gold production averaging approximately 42koz per annum at an average grade of 0.50g/t Au is projected over the remaining 6.5 years, when treating lower grade stockpiles (Stage 2).

The projected annual processing throughput and average grade is displayed in Chart 2.



Chart 2 – Annual processing throughput



## **Configuration and Site Layout**

The open pits, waste rock dumps (**WRD**), processing facilities and support infrastructure are all located on the company's extensive tenement package.

Water and power supply options and other logistics have been assessed as part of the PFS.

The Mandilla processing plant has been designed based on processing 2.75 million tonnes per annum of ore.

Design criteria have been prepared to provide the key design parameters for equipment selection and engineering for a three-stage crush, single-stage grinding, gravity and CIP process plant. The design criteria incorporate the main details for the ore and the processing plant.

The design crushing throughput rate is 413tph, equating to 76% availability (day and nightshift operation).

Design milling rate is 344tph based on availability of 91.3% to process 2.75Mtpa. The following process plant description is based on the Process Design Criteria and flowsheets. The processing circuit includes the following major equipment areas:

- Primary jaw crusher
- Secondary cone crusher
- Tertiary cone crusher
- Crushed ore screening
- Milling via single stage ball mill
- Cyclone classification
- Gravity separation
- Gravity concentration and intensive leaching of gravity concentrate
- Leaching and adsorption of cyclone overflow
- Elution circuit and carbon regeneration
- Services and reagents

Figure 2 below shows the conceptual layout of the Mandilla mine site including roads and proposed processing area. Figure 3 shows the conceptual layout of the proposed satellite Feysville operation.





Figure 2 – Mandilla Site Layout including IWL-TSF



Figure 3 – Feysville Site Layout



## **Sensitivity Analysis**

The Project is financially robust with a short payback period and strong free cashflows. The Project's unleveraged and pre-tax NPV is most sensitive to changes in gold price, gold grade and operating costs, while it is more resilient to changes in the discount rate, metal recovery and capital costs as shown in Chart 3 below.



Chart 3 – NPV sensitivity analysis (unleveraged, pre-tax)

Changes to the Australian dollar gold price, either by US dollar gold price variation or AUD:USD exchange rate fluctuations, would have a direct impact on revenue and derived cashflow. The forecast impact on key metrics across a range of Australian dollar gold prices is provided in Table 3 below.

Gold Price	AUD/oz	3000	3250	3500	3750	4000	4250	4500	4750	5000
NPV Pre-Finance, Pre-tax	AUD M	475	660	845	1,030	1,215	1,400	1,584	1,769	1,954
Pretax IRR	%	40%	52%	65%	77%	89%	101%	113%	124%	136%
Payback	Years	2.08	1.58	1.33	1.17	1.00	0.92	0.83	0.75	0.75
Annual EBITDA	AUD M	77.2	95.7	114.3	132.8	151.3	169.8	188.3	206.8	225.4
LOM EBITDA	AUD M	1,429	1,771	2,114	2,456	2,799	3,142	3,484	3,827	4,169
Free Cashflow	AUD M	1,122	1,464	1,807	2,149	2,492	2,835	3,177	3,520	3,862
LOM Revenue	AUD M	4.243	4.597	4.950	5.304	5.658	6.011	6.365	6.718	7.072

Gold Price	AUD/oz	5250	5500	5750	6000	6250	6500	6750	7000
NPV Pre-Finance, Pre-tax	AUD M	2,139	2,324	2,509	2,694	2,878	3,063	3,248	3,433
Pretax IRR	%	147%	158%	169%	180%	191%	202%	213%	224%
Payback	Years	0.67	0.67	0.58	0.58	0.58	0.50	0.50	0.50
Annual EBITDA	AUD M	243.9	262.4	280.9	299.4	318.0	336.5	355.0	373.5
LOM EBITDA	AUD M	4,512	4,854	5,197	5,540	5,882	6,225	6,567	6,910
Free Cashflow	AUD M	4,205	4,547	4,890	5,233	5,575	5,918	6,260	6,603
LOM Revenue	AUD M	7,426	7,779	8,133	8,486	8,840	9,194	9,547	9,901



## **Capital Costs**

Capital costs include all pre-production costs up until the completion of commissioning, including all pre-production site, process plant, tailings dam, and mining development costs as well as sustaining capital post-production start-up.

Capital costs are primarily derived from quotes and budget pricing from suppliers in addition to some estimates based on recent actual pricing from similar Western Australian mines. The capital cost estimate is detailed in Table 4 below.

Table 4 - Capital cost estimate							
Pre-Production Capital	Source	\$m					
Processing Plant	Como Engineers	121.38					
Non-Process Infrastructure	Como Engineers	17.12					
Owner's Costs	Como Engineers	8.82					
Tailings Storage Facility	Soil & Rock Engineering	15.02					
Earthworks and Roads	RFQ/In-house	2.90					
Other (Light Vehicles, Communications etc.)	In-house/other studies	0.65					
Contingency	Como Engineers	14.52					
Pre-Production Mining & G&A	In-house/RFQ	46.70					
Total Pre-Production		227.11					
Sustaining Capital		\$m					
Sustaining Capital (incl Process & NPI)	In-house/other studies	22.50					
Tailings Storage Facility	Soil & Rock Engineering	2.49					
Water Diversion Bund	RFQ/In-house	6.00					
Earthworks and Roads	RFQ/In-house	7.20					
Mine Closure & Site Rehabilitation	Kewan Bond	41.60					
Total Sustaining		79.79					
Total LOM Capital		306.90					

The PFS is aimed at identifying the capital costs to an accuracy of +/- 25%.

## **Operating Costs**

Operating costs are derived from a number of sources including direct quotations and budget pricing supplied by suppliers, estimates based on similar WA mining operations, and pricing derived from processing plant suppliers scaled by accepted methods.

Operating costs cover all on-site costs directly associated with mining, processing and administration, plus all other costs related to sustaining production of the operation over the LoM, including state and third-party royalties, sustaining capital and other non-production costs.

The PFS is aimed at identifying the operating costs to an accuracy of +/-20%.



#### Table 5 - Operating costs summary

Operating Costs <sup>1</sup>	\$ million	\$/t Milled	\$/oz
Mining <sup>2</sup>	\$1,553	\$30.81	\$1,098
Processing (incl. Maintenance, Transport, Insurance & Refining)	\$963	\$18.95	\$681
General & Administrative (Site)	\$166	\$3.28	\$118
C1 Cash Cost <sup>3</sup>	\$2,682	\$52.80	\$1,897
Royalties	\$187	\$3.69	\$132
Sustaining Capital	\$80	\$1.57	\$56
All-in Sustaining Cost (AISC) <sup>4</sup>	\$2,949	\$58.05	\$2,085

Notes:

<sup>1</sup> – Operating costs presented in the table above were calculated based on recovered gold.

<sup>2</sup> – Excludes pre-production mining costs.

<sup>3</sup> – C1 cash cost includes mining, processing (including transport, insurance and refining costs) and site G&A costs.

<sup>4</sup> – All-in Sustaining Cost (AISC) per ounce payable includes C1 cash cost, royalties and sustaining capital costs. It does not include corporate costs, exploration costs and non-sustaining capital costs.

#### **Ore Reserve**

A maiden probable Ore Reserve estimate of 36.6 million tonnes at 0.9g/t Au for approximately 1.08 million ounces of gold has been declared, as per Table 6 below.

Table 6 –	Group Or	e Reserves
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		Probable		Total Ore Reserve						
Project	Tonnes	Grade	Metal	Tonnes	Grade	Metal				
	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)				
Mandilla	34.3	0.9	1,000,000	34.3	0.9	1,000,000				
Feysville	2.3	1.2	88,000	2.3	1.2	88,000				
Total	36.6	0.9	1,082,000	36.6	0.9	1,082,000				

Ore Reserves are a subset of Mineral Resources.

Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.

The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

The Ore Reserves for Mandilla are reported at a cut-off grade of 0.30 g/t Au lower cut-off and Feysville are reported at a cut-off grade of 0.40 g/t Au lower cut-off.

A summary is provided below of information material to understanding the reported Ore Reserve estimate, with full details provided in the PFS, which forms part of this announcement. This announcement has been compiled in compliance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code – 2012 Edition) (**JORC Code**) and the ASX Listing Rules (including ASX Listing Rule 5.9).

#### Classification – Ore Reserve Estimate

The main basis of classification of Ore Reserves is the underlying Mineral Resource classification. All Probable Ore Reserves derive from Indicated Mineral Resources in accordance with JORC (2012). There are no Measured Mineral Resources within the deposits, therefore no Proved Reserves have been reported. The results of the Ore Reserve estimate reflect the Competent Person's view of the deposit. No Inferred Mineral Resources are included in the Ore Reserves.



#### Classification Criteria – Mineral Resource Estimate

The Mineral Resource Estimate used for the conversion to an Ore Reserve for the Mandilla deposit is that which was announced in Astral's ASX announcement dated 3 April 2025. Below is the classification summary from the announcement.

Classification of Mineral Resources uses two main criteria as follows:

- Confidence in the Au estimate
- Reasonable prospects for eventual economic extraction.

Assessment of confidence in the estimate of gold included guidelines as outlined in JORC (2012):

- Drill data quality and quantity
- Geological domaining (for mineralised domain)
- The spatial continuity of Au mineralisation
- Geostatistical measures of Au estimate quality.

In summary, the more quantitative criteria relating to these guidelines include data density and the kriging search pass used, as follows:

- The Indicated Mineral Resource has a nominal drill spacing of 40mN x 20mE or closer (10mEx 10mN in grade control drilled areas in the paleochannel), not more than 20 m laterally beyond drilling, and using search pass 1
- The Inferred Mineral Resource is material within the mineralised domain, but not meeting the criteria for Indicated.

The MRE used for the conversion to an Ore Reserve for the Feysville deposit is that which was announced in Astral's ASX announcement dated 1 November 2024. Below is the classification summary from the announcement.

For Think Big, Resource categories are based on overall confidence in the estimate, which was guided by drill spacing, Ordinary Kriging (**OK**) quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. Indicated Resources were assigned to the portion of the of the deposit where drill spacing is generally 20m x 15m and OK metrics show high quality. Inferred Resources have been assigned to remaining areas of the mineralisation where drill data becomes sparse and geological uncertainty increases.

For Kamperman, Resource categories are based on overall confidence in the estimate, which was guided by drill spacing, OK quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. The Indicated Mineral Resource is restricted to the main north and south lodes, and the supergene zones where drill spacing is typically 25 mN x 25 mE and the estimates have good Kriging metrics such as slope of regression greater than 50%. The Inferred Mineral Resource is the other material within the mineralised domains, but not meeting the criteria for Indicated (generally greater than 30 mN x 30 mE drilling or containing less than ~50 samples). Domains informed by less than 30 samples or a single drillhole including Domains 5, 7, 11, 16 and 17 have remained unclassified. All mineralised domains north of 6,57,7320mN are also unclassified due to lack of sampling.

For Rogan Josh, Resource categories are based on overall confidence in the estimate, which was guided by drill spacing, OK quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. The Indicated Mineral Resource is restricted to the supergene zones and has a nominal drill spacing of 40 mN x 20 mE and good Kriging metrics such as slope of regression greater than 50%. The Inferred Mineral Resource is the other material within the mineralised domains, but not meeting the criteria for Indicated (generally greater than 40 mN x 40 mE drilling or containing less than ~50 samples). This includes all the sub-vertical domains. There is a portion of the supergene zones that have not been classified due to sparse sampling data and lack of confidence in the grade continuity.



		Indicated			Inferred		Total Mineral Resource		
Project	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)
Mandilla <sup>2</sup>	31	1.1	1,034,000	11	1.1	392,000	42	1.1	1,426,000
Feysville <sup>3</sup>	4	1.3	144,000	1	1.1	53,000	5	1.2	196,000
Spargoville <sup>4</sup>	2	1.3	81,000	1	1.6	58,000	3	1.4	139,000
Total	36	1.1	1,259,000	14	1.2	502,000	50	1.1	1,761,000

The preceding statement of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures

The Mineral Resources for Mandilla, Feysville and Spargoville are reported at a cut-off grade of 0.39 g/t Au lower cut-off and is constrained within pit shells derived using a gold price of AUD \$3,500 per ounce for Mandilla and Spargoville and AUD\$2,500 per ounce for Feysville.

#### Mining Method & Other Mining Assumptions

The selected mining method used to extract the Ore Reserves is via conventional open pit bench mining, utilising mining-class excavators of back-hoe configuration and rear-dump haul trucks. This is an industry-standard method used widely in Western Australian gold operations. Drilling and blasting of hard material will be necessary to achieve efficient mining productivity and has been accounted for in the Pre-Feasibility Study.

Mining dilution and recovery factors (ore loss) were accounted for via regularisation of the MRE model. Regularisation is a commonly used technique to account for the predicted ore losses and dilution that will occur during mine production. The models for Mandilla were regularised to a block size of 5m(x) by 6.25m(y) by 5m(z), and the models for Feysville were regularised to a block size of 5m(x) by 5m(z). The block size selected for regularisation is considered appropriate for the orebody geometry, planned method of extraction and fleet size contemplated in the Pre-Feasibility Study. In the view of the Competent Person, mining dilution and ore loss is adequately accounted for via the regularisation process, as such no further dilution or ore loss factors were applied.

The Ore Reserves are supported by a Pre-Feasibility study. The outcomes of the study indicate a technically achievable and economically viable mine plan. All material modifying factors have been considered and applied when converting the Mineral Resource to an Ore Reserve.

A mining production, stockpiling and process feed schedule was completed using the detailed final and staged pit designs for the Reserve Case. This schedule treated all material classified as inferred as waste and forms the basis of the reported Ore Reserves for the project. The results of the Reserves Case schedule demonstrate that the project is economically viable considering all relevant factors, test work and design criteria, culminating in a financial analysis with favourable economic metrics.

All Ore Reserves are planned to be extracted solely via open pit methods, with no extraction via underground methods contemplated in the Pre-Feasibility Study.

#### Processing

The Mandilla processing plant is a 2.75million tonne per annum carbon-in-pulp process plant.

The design crushing throughput rate is 413tph, equating to 76% availability (day and nightshift operation).

Design milling rate is 344tph based on availability of 91.3% to process 2.75Mtpa. The following process plant description is based on the Process Design Criteria and flowsheets. The processing circuit includes the following major equipment areas:

- Primary jaw crusher
- Secondary cone crusher



- Tertiary cone crusher
- Crushed ore screening
- Milling
- Cyclone classification
- Gravity separation
- Gravity concentration and intensive leaching of gravity concentrate
- Leaching and adsorption of cyclone overflow
- Elution circuit and carbon regeneration
- Services and reagents

A total of 42 gravity and leach test were performed across Mandilla and Feysville which resulted in the following key observations:

- Gravity recovery across the four Mandilla deposits is very high averaging above 70%.
- The gravity recovery at both Rogan Josh and Kamperman is high averaging above 40%.
- The combined gravity and leach gold extraction results for Mandilla are very high averaging 97.6% at 150µm grind size.
- The combined gravity and leach gold extraction results for Rogan Josh and Kamperman are high averaging 91.1% and 94.4% respectively at 150µm grind size.
- Overall gold recovery for the purposes of the PFS is 96% for Mandilla, 90% for Rogan Josh and 96% for Kamperman. The Think Big overall gold recoveries were set at 89% in oxide and 86% in the transitional. The fresh ore zone at Think Big was not contemplated in the PFS as previous metallurgical testing had indicated poor gold recoveries at coarse grind sizes.

Detailed multi-element assays were completed on all composite samples used for metallurgical testing, with the following key observations:

- Levels of metals that are deleterious to cyanide leaching, such as Ni, Pb, Cu and Te are low in all but two of the 25 bulk samples collected to date for metallurgical testing.
- Elevated Cu was observed in two of the five sections tested at Kamperman, Kamperman represents less than 5% of the gold production contemplated in the PFS and will be blended into the process plant, mitigating any impacts from increased cyanide consumption as a result of the elevated Cu.
- Arsenic and sulphides concentrations are low in the samples, suggesting that potential gold locked in pyrite/arsenopyrite is low, this is confirmed by the very low residual gold in the solid tails.
- Organic carbon concentrations are low or below detection limit. This indicates that preg-robbing is not expected to be prevalent.

#### Cut-off Grade

Economic cut-off grades were calculated and applied to the estimate, based on relevant input assumptions. These cut-offs are 0.3g/t for Mandilla and 0.4g/t for Feysville.

The cut-off grade was calculated using the assumed:

- Gold sell price
- Royalty costs
- Processing costs including G&A and grade control
- Transport costs
- Processing recovery

#### **Estimation Methodology**

The Mineral Resource Estimate used for the conversion to an Ore Reserve for the Mandilla deposit is that which was announced in Astral's ASX announcement dated 3 April 2025. Below is a repeat of the estimation section in the announcement.

Estimation of the fresh rock mineral resource for Theia, Iris and Eos was by the non-linear method Localised Uniform Conditioning (LUC) using Datamine software. The LUC estimation process was as follows:



- Drill hole data was selected within mineralised domains and composited to 2 m downhole intervals in Datamine software – the majority of the raw sample lengths were 1 m (91% of samples within the mineralised domains), but the variability of the data was reduced significantly by using 2m composites.
- The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the transported, oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries (with the exception of the surficial transported cover). Note that at Eos, mineralisation is on the oxidised/transitional boundary (i.e. no fresh rock).
- Therefore the fresh, transitional and oxidised zones were combined for variography and estimation, with a hard boundary for the northern paleochannel and the transported cover. As each of the deposits are spatially and statistically separate, then hard domain boundaries were used between them.
- Variography was performed on data transformed to normal scores, and the variogram models were back-transformed to original units. The Gaussian anamorphosis used for the normal scores transform was also subsequently used for the discrete Gaussian change of support model required for Uniform Conditioning. Variography was performed for the separate deposits (the northern paleochannel is considered a separate deposit).
- The variogram models had high nugget effects at Theia, Iris and Hestia (~70 to 80% of total sill), with a ranges of 60 to 100m. At Eos, the nugget effect is moderate (50% of total sill), with ranges of 120 m horizontally and 10 m vertically. For the northern paleochannel, the nugget is moderate to high (70%), with ranges of 20 m horizontally and 4 m vertically.
- Estimation (via Ordinary Kriging a necessary precursor step for UC) was into a non-rotated block model in MGA94 grid, with a panel block size of 20 mE x 25 mN x 5 mRL this is about the average drill spacing in the main well-drilled part of the Project. Localisation of the grades was into Selective Mining Units (SMU) block of 10 mE x 12.5 mN x 2.5 mRL (8 SMUs per panel).
- A minimum of 8 and maximum of 16 (2 m composite) samples per panel estimate was used, with a search ellipse radius of 100 m x 100 m x 40 m (oriented in the same directions as the variogram models) for Theia and Iris, with a shorter radius of 20 m in the minor direction for Eos.
- The use of a maximum number of composites of 16 effectively limits the search ellipse radius to 20 m in the well-drilled (~Indicated) part of the Project.
- The panel estimates used the 'distance limited threshold' technique, where uncapped samples are used for a very local estimate, and capping (threshold) is used beyond this local distance. The thresholds used were 40 ppm for Theia, 9 ppm for Iris and Eos, 6 ppm for Hestia and 40 ppm for the northern paleochannel. These thresholds were based on inflections and discontinuities in the histograms and log-probability plots, and on metal quantities above thresholds.
- The UC process applies a Change of Support correction (discrete Gaussian model) based on the composite sample distribution and variogram model, conditioned to the Panel grade estimate, to predict the likely grade tonnage distribution at the SMU selectivity.
- The Localising step was then run, and the resulting SMU models for each deposit were combined using Datamine.
- Estimates of Au grades were validated against the composited drill hole data by extensive visual checking in cross-section, plan and on screen in 3D, by global (per deposit comparisons of input data and model, and by semi-local statistical methods (swath plots). All methods showed satisfactory results.

For the Hestia deposit ordinary kriging was used. The ordinary kriging process was as follows:



- Cube specified an ellipsoidal search neighbourhood with first-pass composite search ranges set to 90 m of the estimation block centre for the major, 30 m for the semi-major and 15 m for the minor search direction.
- The variography anisotropy axes for the input semi variogram models were specified to be the same as the interpolated search orientation.
- Cube also specified an expanding search distance algorithm whereby blocks not estimated in the primary search were estimated by doubling the search range for the secondary pass.
- Finally, any blocks not estimated in the second pass were estimated by quadrupling the primary search distances for the tertiary grade estimation pass.
- For the primary and secondary estimation passes Cube specified that a minimum of eight and maximum of 20 composites were required for a block to be estimated in each search.
- For the tertiary pass the minimum and maximum requirements were set to three and 20 composites respectively.
- All blocks in the mineralised lode wireframes were estimated in three estimation passes. For the transported cover domains, which are essentially non-mineralised except for a small part of Theia and the Eos paleochannel, ordinary kriging was used to estimate grades into the panels – localisation of the grades into the SMU blocks was not undertaken.

The MRE used for the conversion to an Ore Reserve for the Feysville deposit is that which was announced in Astral ASX announcement dated 1 November 2024. Below is a repeat of the estimation section in the announcement.

Estimation of the mineral resources was by OK implemented in Datamine software (version 2.0.66.0) using the following process:

- Drill hole data was selected within mineralised domains and composited to 1 m downhole intervals in Datamine software – the majority of the raw sample lengths were 1 m (98% of samples within the mineralised domains).
- The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries.
- Therefore, the fresh, transitional and oxidised zones were combined for variography and estimation, with hard boundaries used for the mineralised domains.
- Variography was performed on data transformed to normal scores, and the variogram models were back-transformed to original units.
- The variogram models had moderate to low nugget effects, with ranges of 40m to 75m at Think Big, ranges of 70m to 150m at Rogan Josh and ranges of 40m to 60m at Kamperman.
- For Think Big, estimation was into a block model rotated by -40 degrees to align with the strike of the mineralised domains, with a parent cell size set to 10m in the east, 15m in the north orientation and 5m in elevation which approaches the industry rule of thumb of half the drill spacing. Sub blocking was allowed to reflect the volumes at wireframe boundaries however estimation occurred at the parent block size using hard boundaries. For Rogan Josh, the block model was not rotated and used a parent block size set to 20m in the east and north orientations and 5m in elevation. The Kamperman block model was not rotated and used a parent block size set to 10m in the east and north orientations and 5m in elevation.
- OK parameters included a minimum of eight and a maximum of 20 or 24 samples required for each block estimate, with search ellipse radii set to the effective range of the respective variogram models (oriented in the same directions as the variogram models), a three-pass sample search of incrementally expanding search ranges and block discretisation grid of 5x5x3 nodes.



- Global top caps were applied to Domains with extreme outliers. The effect of using top caps was
  tested during the estimation process by running two estimates and found that capping was required
  to prevent the spreading of high gold grades. The conservatively applied top caps generally
  correspond with the 97.5 percentile of the grade distribution for each domain.
- Estimates of Au grades were validated against the composited drill hole data by extensive visual checking in cross-section, plan and on screen in 3D, by global (per deposit comparisons of input data and model, and by semi-local statistical methods (swath plots). All methods showed satisfactory results.

#### Material Modifying Factors

Mandilla is situated in the northern Widgiemooltha greenstone belt, approximately 70 kilometres south of the significant mining centre of Kalgoorlie and approximately 20 kilometres west of Kambalda in Western Australia. Mandilla's geographical location provides easy and relatively low-cost access to products and materials needed for continuous operations.

Feysville is located within the north-north-west trending Norseman – Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton, approximately 14 kilometres south of the KCGM Super Pit in Kalgoorlie.

The Mandilla and Feysville projects have undergone the essential geotechnical studies to meet Pre-Feasibility Study (PFS) requirements, ensuring that the proposed pits are designed with slope stability and safety in mind.

Environmental approvals are underway, with submissions forecast to be submitted in the 4th quarter of 2025.

Infrastructure requirements, including the construction of processing plants and transportation networks, have been planned and integrated into the project design.

These comprehensive measures ensure that the projects are well-prepared to meet regulatory standards and operational demands.

The Company will be reliant on third-party and other regulatory approvals to enable it to proceed with the development of the Project. There is no guarantee that the required approvals will be granted and delays in project permitting may delay the project from commencing production in the proposed timeframe. Early engagement with regulators to raise awareness of the project and the planned scope will commence during the early stages of the DFS workstreams.

## Funding

The PFS estimates a funding requirement of approximately A\$227 million to cover the capital and operating costs from the commencement of plant construction to the end of plant commissioning and the commencement of gold production. It is expected that the funding requirement will be met with a mixture of debt and equity, which will need to be raised prior to project construction commencing.

The Company considers there is a reasonable basis to conclude that the project funding will be available when required, on grounds including the following:

- The Project has strong technical and economic fundamentals which are forecast based on the PFS to provide an attractive return on capital investment and generates significant free cashflows at conservative gold prices (well below current spot gold price). This provides a strong platform to source debt and equity funding.
- The Company has a strong track record of raising equity funds as and when required to further the exploration and evaluation of Mandilla.



There is, however, no certainty that the Company will be able to source funding as and when required (nor any certainty as to the form such capital raising may take, such as equity, debt, hybrid and/or other capital raising). Typical project development financing would involve a combination of debt and equity. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

## **Recommendation and Forward Work Plan**

The Board of Astral has approved this Pre-Feasibility Study.

The PFS provides justification that Mandilla is a commercially viable stand-alone gold mining operation and, accordingly, the Board of Astral is supportive of progressing the Project to a Definitive Feasibility Study (**DFS**). A Final Investment Decision (**FID**) is targeted for the September 2026 Quarter.

The forward work plan will include:

- Exploration and evaluation activities are continuing at the Mandilla, Feysville and Spargoville Gold Projects. Exploration activities will include:
  - $\circ~$  In-fill drilling to convert addition inferred mineral resources to the higher confidence indicated category
  - o Extensional drilling targeting further resource growth
  - o Greenfields exploration drilling at Feysville and Spargoville.
- A sample grade control drill program will be conducted over a portion of the proposed Stage 1 and Stage 2 pits at the Theia deposit to further de-risk the earlier stages of the Project.
- Continue metallurgical testwork programs.
- Commence permitting and seek all necessary approvals.
- Investigate alternative water supply options.
- Execute Native Title Agreements with the claimant group.
- Progress discussions for project financing.
- Delivery of a DFS by June 2026.

#### Attachments

- PFS Report
- JORC Table 1

#### Approved for Release

This announcement has been authorised for release by the Board.

For further information:

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#### **Cautionary statements and disclaimers**

The information in this announcement is in summary form and does not purport to be complete nor does it contain all the information in relation to the Company. It should be read in conjunction with the Company's other periodic and continuous disclosure announcements lodged with the ASX at www.asx.com.au.

While the information contained in this announcement has been prepared in good faith, neither the Company nor any of its shareholders, directors, officers, agents, employees, consultants or advisers give, have given or have authority to give, any representations or warranties (express or implied) as to, or in relation to, the accuracy, reliability, completeness or suitability of the information in this announcement, or any revision thereof, or of any other written or oral information made or to be made available to any interested party or its advisers (all such information being referred to as "Information") and liability therefore is expressly disclaimed.

Accordingly, to the maximum extent permitted by law, neither the Company nor any of its shareholders, directors, officers, agents, employees, consultants or advisers, take any responsibility for, or will accept any liability whether direct or indirect, express or implied, contractual, tortious, statutory or otherwise, in respect of the accuracy or completeness of the Information or for any of the opinions contained herein or for any errors, omissions or misstatements or for any loss, howsoever arising or out of or in connection with the use of this announcement. Each party to whom this announcement is made available must make its own independent assessment of the Company and the announcement after making such investigations and taking such advice as may be deemed necessary. Any reliance placed on the announcement is strictly at the risk of such person relying on such announcement.

All references to \$ in this announcement are to Australian dollars.

## **Forward Looking Statements**

This announcement contains certain "forward-looking statements" such as statements and forecasts which include (without limitation) financial forecasts, production targets, industry and trend projections, statements about the feasibility of the Project which are based on the Company's assumptions and judgement of current expectations about future events and results. Such statements include, but are not limited to, statements with regard to capacity, future production and grades, estimated costs, revenues and reserves, the construction costs of new projects and projected capital expenditures, the outlook for minerals and metals prices and the outlook for economic conditions and may be (but are not necessarily) identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage". Where the Company expresses or implies an expectation of belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions are disclosed.

However, forward-looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements.

Such risks include, but are not limited to resource risk, development risks, gold price volatility, currency fluctuations, production risks, occupational health and safety risks, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as social, political and operational risks in Australia and government regulation and judicial outcomes.

For a more detailed discussion of such risks and other factors, see the risks section of the PFS, the Company's Annual Reports, as well as the Company's other announcements. Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances



after the date of this announcement, or to reflect the occurrence of unanticipated events, except as required under applicable securities laws.

The Pre-Feasibility Study referred to in this announcement is based on technical and economic assessments to support the estimation of Mineral Resources and Ore Reserves. Those estimates have been prepared by a competent person in accordance with JORC Code 2012 and all production targets are based on those Mineral Resources and Ore Reserves and all material assumptions relation to those production targets and related forecast financial information are set out in this announcement.

Whilst Astral Resources believes it has reasonable grounds to support the results of the Pre-Feasibility Study, there is no assurance that the intended development referred to will proceed as described. The production targets, related forecast financial information and other forward-looking statements referred to are based on information available to the Company at the time of release and should not be solely relied upon by investors when making investment decisions. Material assumptions and other important information are contained in this announcement. Astral Resources cautions that mining and exploration are high risk and subject to change based on new information or interpretation, commodity prices or foreign exchange rates. Actual rates may differ materially from the results or production targets contained in this announcement. Further evaluation is required prior to a decision to conduct mining being made.

Mineral Resource and Ore Reserve estimates are necessarily imprecise and depend on interpretations and geological assumptions, minerals prices, cost assumptions and statistical inferences (and assumptions concerning other factors, including mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors) which may ultimately prove to be incorrect or unreliable. Mineral Resource and Ore Reserve estimates are regularly revised based on actual exploration or production experience or new information and could therefore be subject to change. In addition, there are risks associated with such estimates, including (among other risks) that minerals mined may be of a different grade or tonnage from those in the estimates and the ability to economically extract and process the minerals may become compromised or not eventuate. The Company's plans, including its mine and infrastructure plans, and timing, for the Project, are also subject to change. Accordingly, no assurances can be given that the production targets, financial forecasts or other forecasts or other forward-looking statements or information will be achieved.

#### **Competent Persons Statements**

#### Mandilla

The information in this announcement that relates to the maiden Ore Reserves for the Mandilla Gold Project is based on information compiled by Mr Mitchell Rohr, who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Rohr is an independent consultant employed by Cube Consulting. Mr Rohr has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rohr consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resources for the Mandilla Gold Project reported in this announcement were announced in the Company's ASX announcement dated 3 April 2025 titled "Group Mineral Resource Increases to 1.62 million ounces with Indicated Resources at the Mandilla Gold Project Exceeding One Million Ounces". The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 3 April 2025 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially



changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

The information in this announcement that relates to metallurgical test work for the Mandilla Gold Project reported in this announcement were announced in the Company's ASX announcements dated 28 January 2021, 6 June 2022, 17 September 2024 and 5 March 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcements dated 28 January 2021, 6 June 2022, 17 September 2024 and 5 March 2025 and all material assumptions and technical parameters in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

#### Feysville

The information in this announcement that relates to the maiden Ore Reserves for the Feysville Gold Project is based on information compiled by Mr Mitchell Rohr, who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Rohr is an independent consultant employed by Cube Consulting. Mr Rohr has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rohr consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resources for the Feysville Gold Project reported in this announcement were announced in the Company's ASX announcement dated 1 November 2024 titled "Astral's Group Gold Mineral Resource Increases to 1.46Moz with Updated Feysville MRE". The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 1 November 2024 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

The information in this announcement that relates to metallurgical test work for the Feysville Gold Project reported in this announcement were announced in the Company's ASX announcement dated 22 May 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 22 May 2025 and all material assumptions and technical parameters in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

#### Spargoville

The information in this announcement that relates to the Mineral Resources for the Spargoville Project reported in this announcement were announced in the Company's ASX announcement dated 7 May 2025 titled "Astral's Group Gold Mineral Resource Increases to 1.76Moz with the inclusion of Spargoville Gold Project". The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 7 May 2025 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form



and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

## **Non-IFRS financial measures**

This announcement contains certain financial measures (such as NPV and IRR) that are not recognised under International Financial Reporting Standards (**IFRS**). Although the Company believes these measures provide useful information about the Company's financial forecasts, they should not be considered in isolation or as a substitute for measures of performance or cash flow prepared in accordance with IFRS. As these measures are not based on IFRS, they do not have standardised definitions and the way the Company calculates these measures may not be comparable to similarly titled measures used by other companies. Consequently, undue reliance should not be placed on these measures.



# PRE-FEASIBILITY STUDY MANDILLA PROJECT

June 2025

astralresources.com.au

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## 1. Introduction

Astral Resources NL (Astral of the Company) presents the design and financial evaluation outcomes of the Pre-Feasibility Study (PFS) for its flagship Mandilla Gold Project (Mandilla) (comprising of the Mandilla and Feysville deposits) in Western Australia (Project or the Mandilla Gold Project).

Mandilla is situated in a Tier 1 location, situated in the northern Widgiemooltha greenstone belt, 70 kilometres south of the significant mining centre of Kalgoorlie and 20 kilometres west of Kambalda in Western Australia.

Mandilla hosts a Mineral Resource of **42Mt at 1.1 g/t Au for 1.43Moz** of contained gold<sup>1</sup> consisting of the Theia, Iris, Hestia and Eos deposits with an Ore Reserve of **34.3Mt at 0.9 g/t Au for 1.00Moz** of contained gold (refer to section 4.1.4).

The PFS incorporates the mining and processing of ore from Astral's nearby Feysville Project (**Feysville**). Feysville is located within the north-north-west trending Norseman – Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton, approximately 14 kilometres south of the KCGM Super Pit in Kalgoorlie.

Feysville hosts a Mineral Resource of **5Mt at 1.2 g/t Au for 196koz** of contained gold<sup>2</sup> consisting of the Kamperman, Think Big and Rogan Josh deposits with an Ore Reserve of **2.3Mt at 1.2 g/t Au for 88koz** of contained gold (refer to section 4.2.4).

Following the completion of an off-market takeover of Maximus Resources Limited (ASX: MXR) (**Maximus**) during May 2025, Astral now holds 100% of the Spargoville Project (**Spargoville**), which includes approximately 144km<sup>2</sup> of primarily contiguous tenure to Mandilla. Spargoville hosts a Mineral Resource of **3Mt at 1.4 g/t Au for 139koz** of contained gold<sup>3</sup> consisting of the Wattle Dam, Eagles Nest, Larkinville, Hilditch and 5B deposits The PFS does not contemplate any contribution of ore from Spargoville but does utilise the Spargoville tenure for locating infrastructure and the associated operational footprint.

The location of Astral's Mandilla, Feysville and Spargoville projects in relation to Kalgoorlie and other nearby gold projects is set out in Figure 1.

Astral intends to immediately proceed with a Definitive Feasibility Study (**DFS**) for Mandilla. The key areas of focus during the DFS stage are listed in Table 1.

	Definitive Feasibility Study			
Study Area	+ / - 10% accuracy			
	10% design / engineering			
Drilling	<ul> <li>Conduct grade control drilling at Theia within a 100m x 100m panel to understand the MRE response to closer spaced drilling.</li> </ul>			
	<ul> <li>Sterilisation drilling for waste dumps and infrastructure locations.</li> </ul>			
Mineral Resources	<ul> <li>Upgrade Inferred Mineral Resources to the higher confidence Indicated category where it makes economic sense to do so.</li> </ul>			
Geotechnical	<ul> <li>Upgrade Geotechnical confidence at Eos, Hestia and all of Feysville to DFS level.</li> </ul>			
H. of second second	Continue exploration of suitable water supply for Mandilla.			
Hyrdrogeology	<ul> <li>Additional groundwater assessment at Theia to support dewatering to a DFS level.</li> </ul>			
Mine Planning	• Conduct medium to short term mine planning for Stage 1 and Stage 2 to support debt funding.			
Metallurgy	<ul> <li>Viscosity testing for agitator sizing, tailings cyanide speciation, further comminution variability testing ongoing gravity and leaching testwork.</li> </ul>			
Process Plant	Detailed plant design and tender.			
Tailings Storage Facility (TSF)	• Definitive TSF design.			
Other Infrastructure	Detailed non-process infrastructure design and tender.			
Approvals & Permitting	Submit approvals and permitting applications.			

#### Table 1 – DFS Focus Areas



<sup>&</sup>lt;sup>1</sup> Mandilla JORC 2012 Mineral Resource Estimate: 31Mt at 1.1g/t Au for 1,034koz Indicated Mineral Resources and 11Mt at 1.1g/t Au for 392koz Inferred mineral Resources (refer to Astral ASX announcement dated 3 April 2025). That Indicated Mineral Resource is inclusive of the part of that Indicated Mineral Resource which has now been estimated as Ore Reserves in this announcement at the Mandilla Project.

<sup>&</sup>lt;sup>2</sup> Feysville JORC 2012 Mineral Resource Estimate: 4Mt at 1.3g/t Au for 144koz Indicated Mineral Resources and 1Mt at 1.1g/t Au for 53koz Inferred Mineral Resources (refer to Astral ASX announcement dated 1 November 2024). That Indicated Mineral Resource is inclusive of the part of that Indicated Mineral Resource which has now been estimated as Ore Reserves in this announcement at the Feysville Project.

<sup>&</sup>lt;sup>3</sup> Spargoville JORC 2012 Mineral Resource Estimate: 2Mt at 1.3g/t Au for 81koz Indicated Mineral Resources and 1Mt at 1.6g/t Au for 58koz Inferred Mineral Resources (refer to Astral ASX announcement dated 7 May 2025).



*Figure 1 – Map illustrating the location of the Mandilla, Feysville Spargoville Projects.* 

## 2. Location & Tenure

#### 2.1. Mandilla

Mandilla is situated in the northern Widgiemooltha greenstone belt, 70 kilometres south of the significant mining centre of Kalgoorlie and 20 kilometres west of Kambalda in Western Australia. The location of Mandilla in relation to Kalgoorlie and other nearby gold projects is set out in Figure 1.



Mandilla is comprised of the tenements outlined in Table 2 below. The tenements are in good standing with the Western Australian Department of Mines, Energy, Industry Regulation and Safety (**DEMIRS**).

Tenement Number	Beneficial Percentage Interest	Status	Title Registered to
M15/96	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/633	100% gold rights only	Granted	Astral Resources NL
E15/1404	100%	Granted	Astral Resources NL
E15/1958	100%	Granted	Mandilla Gold Pty Ltd
P15/6759	100%	Granted	Mandilla Gold Pty Ltd
P15/6760	100%	Granted	Mandilla Gold Pty Ltd
P15/6766	100%	Granted	Mandilla Gold Pty Ltd

Mandilla is covered by existing Mining Leases which are not currently subject to any third-party royalties other than the standard WA Government gold royalty. Astral is currently negotiating with a Native Title claimant group with respect to a Native Title Agreement for both Feysville and Mandilla. The negotiations are advanced and for the purposes of the PFS, Astral has modelled a royalty rate inclusive of the WA Government gold royalty of between 3.0% - 3.5% dependent on quarterly gold production.

#### 2.2. Feysville

Feysville is located within the north-north-west trending Norseman – Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton, approximately 14km south of the KCGM Super Pit in Kalgoorlie.

The project is situated in the geological / structural corridor, bounded by the Boulder Lefroy Fault, which hosts the world class plus million-ounce deposits of Mt Charlotte, Fimiston, New Celebration, Victory-Defiance, Junction, Argo and Revenge / Belleisle and St Ives.

The Feysville deposits occur within granted Prospecting Licenses P26/3951 (Think Big), P26/3950, P26/3949, P26/3943 (Rogan Josh), and P26/4633 (Kamperman). AAR have applied for a mining license M26/846 that encompasses the Think Big and Rogan Josh deposits. All tenements, with the exception of P26/4390 are 100% owned by Feysville Gold Pty Ltd, a wholly owned subsidiary of Astral. Tenement P26/4390 is 100% owned by Astral Resources NL.

Feysville is comprised of the tenements outlined in Table 3 below. The tenements are in good standing with the Western Australian Department of Mines, Energy, Industry Regulation and Safety (**DEMIRS**).

Tenement Number	Beneficial Percentage Interest	Status	Title Registered to
P26/3943	100%	Granted	Feysville Gold Pty Ltd
P26/3948-3951	100%	Granted	Feysville Gold Pty Ltd
P26/4351-4353	100%	Granted	Feysville Gold Pty Ltd
P26/4538-4541	100%	Granted	Feysville Gold Pty Ltd
P26/4630-4634	100%	Granted	Feysville Gold Pty Ltd
P26/4390	100%	Granted	Astral Resources NL
M26/846	100%	Granted	Feysville Gold Pty Ltd

Table 3 – Feysville tenement schedule

Feysville is not currently subject to any third-party royalties other than the standard WA Government gold royalty. Astral is currently negotiating with a Native Title claimant group with respect to a Native Title Agreement for both Feysville and Mandilla. The negotiations are advanced and for the purposes of the PFS, Astral has modelled a royalty rate inclusive of the WA Government gold royalty of between 3.0% - 3.5% dependent on quarterly gold production.

#### 2.3. Spargoville

Spargoville is located in the Coolgardie Domain within the Kalgoorlie Terrane, approximately 25 km southwest of Kambalda. Figure 2 demonstrates the significant and largely contiguous tenement package resulting from the consolidation of Astral and Maximus.





Figure 2 – Map of Astral and Maximus consolidated tenure.

Spargoville is comprised of the tenements (excluding miscellaneous licences) outlined in Table 4 below. The tenements are in good standing with the Western Australian Department of Mines, Energy, Industry Regulation and Safety (**DEMIRS**).


Tenement Number	Beneficial Percentage Interest	Status	Title Registered to
M15/100	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/101	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/102	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/1101	100%	Granted	Maximus Resources Ltd
M15/1263	100%	Granted	Maximus Resources Ltd
M15/1264	100%	Granted	Maximus Resources Ltd
M15/1271	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/1323	100%	Granted	Maximus Resources Ltd
M15/1338	100%	Granted	Maximus Resources Ltd
M15/1448	100%	Granted	Maximus Resources Ltd (90%) Bullabulling Pty Ltd (10%)
M15/1449	100%	Granted	Maximus Resources Ltd (75%) Essential Metals Pty Ltd (25%)
M15/1474	100%	Granted	Maximus Resources Ltd
M15/1475	100%	Granted	Maximus Resources Ltd
M15/1769	100%	Granted	Maximus Resources Ltd
M15/1770	100%	Granted	Maximus Resources Ltd
M15/1771	100%	Granted	Maximus Resources Ltd
M15/1772	100%	Granted	Maximus Resources Ltd
M15/1773	100%	Granted	Maximus Resources Ltd
M15/1774	100%	Granted	Maximus Resources Ltd
M15/1775	100%	Granted	Maximus Resources Ltd
M15/1776	100%	Granted	Maximus Resources Ltd
M15/395	100%	Granted	Maximus Resources Ltd
M15/653	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/703	100%	Granted	Maximus Resources Ltd
M15/97	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
M15/99	100% gold rights only	Granted	Mt Edwards Critical Metals Pty Ltd
E15/1837	100%	Granted	Maximus Resources Ltd
E15/1839	100%	Granted	Maximus Resources Ltd

### Table 4 – Spargoville tenement schedule

## 3. Pre-Feasibility Study

The PFS focuses on extraction of Mineral Resources located within the Mandilla tenements which is comprised of two granted mining leases (M15/96 and M15/633) and exploration licence E15/1404, which Astral intends to convert to a mining lease during the next twelve months. Additionally, the PFS assumes ore will be extracted from Feysville tenements comprising P26/4353 (Kamperman), P26/3949, P26/3950 and P26/3943 (Rogan Josh) and P26/3951 (Think Big). Astral has applied for mining lease M26/846 which covers the Rogan Josh and Think Big Deposits, with the grant of the mining lease subject to execution of a Native Title Agreement. The Company intends to extend the mining licence to incorporate the Kamperman deposit. The proposed site infrastructure layout (refer to section 9.2) is planned to utilise mining leases M15/97, M15/1101, M15/1263, M15/1264 and M15/395 from the Spargoville tenure.

The PFS assesses the technical and financial viability of the project and supports the estimation of a JORC compliant maiden ore reserve for Mandilla and Feysville.

The PFS considers Astral's intention to develop, construct and operate a 2.75 million tonne per annum (**Mtpa**) carbon-in-pulp (**CIP**) processing plant and associated infrastructure located at Mandilla.



The Life of Mine (LoM) financial model for the Project was completed on a 100% basis and was built on this option using the key assumptions in Table 5 below.

		•		
Assumptions	UOM	Stage 1	Stage 2	Total LoM
Mining Duration	Years	12.50	0.75	13.25
Processing Duration	Years	12.00	6.50	18.50
Waste Mined	kt	318,814	7,736	326,550
Mineral Resource Mined	kt	47,287	3,518	50,806
Plant Throughput	ktpa	2,750	2,750	2,750
Mine Production Target				
Material Mined	kt	47,287	3,518	50,806
Au Grade	g/t	0.92	0.71	0.91
Au Ounces Contained	koz	1,401	80	1,481
Processing Physicals				
Material Processed	kt	33,022	17,784	50,806
Au Grade	g/t	1.13	0.50	0.91
Ounces Contained	koz	1,196	285	1,481
Ounces Recovered	koz	1,141	273	1,414
Average Annual Production	koz	95	42	76

Table 5 - Key physicals assumptions

The Reserve Case financial model for the Project was completed on a 100% basis and was built on this option using the key assumptions in Table 6 below.

Table 6 - Key physicals assumptions (Reserve Case)

Assumptions	UOM	Reserve Case
Mining Duration	Years	11
Processing Duration	Years	16
Waste Mined	kt	239,450
Mineral Resource Mined	kt	37,956
Plant Throughput	ktpa	2,500
Mine Production Target		
Material Mined	kt	37,956
Au Grade	g/t	0.90
Au Ounces Contained	koz	1,096
Processing Physicals		
Material Processed	kt	37,956
Au Grade	g/t	0.90
Ounces Contained	koz	1,096
Ounces Recovered	koz	1,049
Average Annual Production	koz	66



# 3.1. Study Team

The PFS was prepared by the Company with technical input and review by a range of independent experts, as detailed in Table 7 below.

Table 7 - Study team					
Area	Completed by				
Geology					
Mineral Resource Estimate(s)	Cube Consulting /Widenbar & Associates				
Ore Reserve Estimate(s)	Cube Consulting				
Drillhole Database Management	In-house				
Structural Review	In-house				
Mining Technical					
Geotechnical Engineering	Entech Mining Engineering/In-house				
Open Pit Optimisations	In-house				
Open Pit Designs	In-house				
Open Pit Schedules	In-house				
Metallurgy and Processing					
Metallurgical Testwork	ALS/Como Engineers				
Process Plant Design	Como Engineers				
Cost Modelling					
Power Supply Costing	Resources WA				
Processing Plant – Capital and Operating Costs	Como Engineers				
Tailings Storage Facility – Capital & Sustaining Capital Costs	Soil & Rock Engineering				
Mining – Open Pit	Iron Mine Contracting				
Roads and Civils	Iron Mine Contracting/In-house				
Clearing, Scrubbing & Topsoil	Iron Mine Contracting/In-house				
Mine Closure	Kewan Bond				
Other Site Infrastructure	Como Engineers				
Site Administration	In-house/Como Engineers				
Accommodation & Messing	Shire of Coolgardie				
Flights	CASAIR				
Heritage and Environment					
Permitting and Compliance Status	Austwide Legal/Significant Environmental Services/In-house				
Flora	Native Vegetation Solutions/Significant Environmental Services				
Fauna	Terrestrial Ecosystems/Significant Environmental Services				
Heritage	Austwide Legal				

# 3.2. Project Schedule

Year	2025		2026			2027						
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
End of Quarter	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Award Processing Plant DFS												
DFS Completion												
Environmental Permitting Submissions												
Environmental Approvals												
Native Title Agreement												
Final Investment Decision (FID)												
Construction of Process Plant												
Pre-Mining Site Works												
Plant Commissioning												
Production												



# 4. Geology and Mineral Resource

## 4.1. Mandilla

### 4.1.1. Regional Geology

The Mandilla project is located within the south-west of the Lefroy Map Sheet 3235. It is situated in the Coolgardie Domain, on the western margin of the Kalgoorlie Terrain within the Wiluna-Norseman Greenstone Belt, Archaean Yilgarn Block.

The Project is between the western Kunanalling Shear, and the eastern Zuleika Shear. Project mineralisation is related to north-south trending major D2 thrust faults known as the "Spargoville Trend". The Spargoville Trend contains four linear belts of mafic to ultramafic lithologies (the Coolgardie Group) with intervening felsic rocks (the Black Flag Group) forming a D1 anticline modified and repeated by intense D2 faulting and shearing. Flanking the Spargoville Trend to the east, a D2 Shear (possibly the Karramindie Shear) appears to host the Mandilla Project mineralisation along the western flank of the Emu Rocks Granite, which has intruded the felsic volcanoclastic sedimentary rocks of the Black Flag Group (refer Figure 2 above). This shear can be traced across the region, with a number of deflections present. Where deflections are present, granite stockworks have formed significant heterogeneity in the system and provide structural targets for mineralisation. The Mandilla mineralisation is interpreted to be such a target.



*Figure 3 – Map of Mandilla Gold Project showing gold deposits on local area geology.* 



#### 4.1.2. Deposit Geology

The Mandilla project is located along the southern margin of M15/96 extending into M15/633 and E15/1404 further to the southeast. It comprises an east and west zone, both of which are dominated by supergene mineralisation between 20 and 50 metres depth below surface. Only the east zone shows any significant evidence of primary mineralisation, generally within coarse granular felsic rocks likely to be part of the granite outcropping to the east. Minor primary mineralisation occurs in sediments.

Gold mineralisation appears as a series of narrow, high grade quartz veins with relatively common visible gold and grades over the width of the vein of up to several hundreds of grams per tonne. Surrounding these veins are lower grade alteration haloes. In places, these haloes can coalesce to form quite thick zones of lower grades (tens of metres). The mineralisation manifests itself as large zones of lower grade mineralisation from  $\sim$ 0.5 – 1.5 g/t Au with occasional high grades of +5 g/t Au over one or two metres.

Distal alteration comprises pale orange/red matrix porphyritic syenite. The alteration style is characterised by good textural preservation with the colouration likely to be hematite dusting. Observable minerals are mainly feldspar phenocrysts with 5% dark green secondary amphibole clusters, and possibly actinolite also present. Quartz veining is generally absent in this alteration style; however, quartz veining has been noted.

Another example of distal alteration comprises dark grey-green moderate to strongly texturally destructive alteration, comprising at least one amphibole, epidote-clinozoisite, chlorite and magnetite. The alteration resembles dark-coloured fracture-controlled alteration seen elsewhere at Mandilla. Diopside was also noted. This alteration appears zoned around the gold mineralised segment of the hole, but there is ample evidence that quartz veining and associated gold-related alteration overprints what is probably an earlier high-temperature calc-silicate alteration phase (possibly fault/shear zone). Drill orientation appears to be parallel to the cross-cutting structures, hence a number of faults run at a high angle to the core axis.

The distal alteration is overprinted by grey-coloured, moderate texturally destructive silica and/or chlorite alteration which may form a halo to the gold mineralised zone. The zone can contain quartz veining similar to that seen within the core of gold mineralisation, but this veining generally lacks obvious alteration and is typically low in pyrite content. Early dark alteration fractures are preserved.

The gold related alteration shows a degree of diversity which reflects variation in vein density and proximity to possible structures in the core of mineralised zones. More intense alteration is white to pale grey, locally with a pale brown or pink tinge in vein haloes, and probably is dominated by silica albite. Textural destruction is moderate to strong with replacement mineralisation of black biotite or hornblende that is also disseminated through the altered rock. Dark fractures containing biotite or hornblende sub-parallel to veining are also regularly distributed through the strongly altered zone. An increase in pyrite content is observed mainly close to veins or as blebby inclusions throughout the altered wall rock.

Vein density increases from 1 per metre to 2-3 per metre in the core of the mineralised zones, with individual veins up to 15 cm thick, but typically 1-10 cm in thickness. Visible gold is commonly observed within and on the margin of quartz veins, and rarely observed in wall rock. Individual grains of gold, or small aggregates of grains are observed and can be coarse grained over 1 mm in size.

In some areas, such as in drill hole MDRCD151, the feldspar phenocrysts are albitised, standing out as white in a darker matrix.

Zones of intense, thin (1-10 mm scale) quartz fractures are locally developed within strongly altered zones. Oriented core indicates the fractures dip moderately to the SW, which appears to mimic the gross orientation of the gold mineralisation envelopes at Mandilla prospect. Such fracture zones may represent brittle structures which exert some control on the distribution of the gold mineralisation.

Most mineralised quartz veins are sub-horizontal extension veins (dip up to about 20° from horizontal) and form due to fluid overpressure. Extension vein distribution is probably controlled by multiple small-scale structures within the syenite but could extend ten's of metres away from the structures, particularly into the hanging wall. It is likely small-scale structures (plus extensional veins) form an interlinked fault mesh pattern for allow for vertical fluid flow.

In addition to the granite-hosted mineralisation, a paleochannel situated above the granite/sediment contact contains significant gold mineralisation. The channel is about two kilometres in length, up to 50 metres wide, but only a few metres thick. Gold is contained within quartz sands and gravels, although is not consistently distributed throughout the paleochannel. An 800-metre stretch of the paleochannel was mined by Astral in 2006 and 2007, with gold production totalling 4,005 ounces, at a grade of almost 15 g/t Au (Fyfe, 2007).

The Project contains four discrete deposits (Figure 2) that are separated spatially and with differing geological characteristics:

- Theia is the main deposit and contains 80% of the gold ounces. It extends over a strike length of 1600 mN, is about 150 to 250 mE wide and extends to 350 m below the surface. The overall mineralisation at Theia strikes to the north-west at about 330°, with a sub-vertical dip. However, extensive structural logging from diamond core drilling of the quartz veins within the mineralised zones shows that majority dip gently (20° to 30°) towards SE to SSE (130° to 160°).
- The Iris deposit contains approximately 9% of the gold ounces of the Project and has a similar trend and orientation as Theia. The mineralisation extends over a strike length of 600 mN, is about 200 mE wide and extends to 200 m below the surface.



- Eos, representing approximately 3% of the total gold ounces, is at the southern boundary of the project and comprises paleochannel mineralisation that extends over a strike length of 300 m, is about 75m wide and up to 20 m thick and is 40 to 50 m below surface. Recent deeper drilling has also defined a zone of fresh rock mineralisation at Eos.
- Hestia is on the western edge of the Project and contains approximately 8% of the total gold ounces the mineralisation extends over a strike length of 800 m and up to 200 m below surface. The stacked lodes are between 2 m and 10 m thick, and dip steeply (75°) towards the WSW (250°). The mineralisation style is very different to the other deposits and is associated with a shear zone adjacent to a mafic/sediment contact.

#### 4.1.3. Mineral Resource Estimate

The latest Mineral Resource Estimate (**MRE**) for Mandilla, was prepared by independent consultants Cube Consulting in accordance with the JORC Code (2012 Edition) and was reported on 3 April 2025 (**Mandilla MRE**) in ASX announcement *"Group Mineral Resource Increases to 1.62 Million Ounces"*. The Mandilla MRE, which incorporates the Theia, Iris, Eos and Hestia deposits totals **42 million tonnes at 1.1g/t Au for 1.43 million ounces of contained gold**.

The MRE was estimated using a 0.39g/t Au lower cut-off and is constrained within pit shells derived using a gold price of AUD\$3,500 per ounce.

The MRE is summarised in Table 8 below, a detailed breakdown by deposit is provided in Table 9 and a grade and tonnage sensitivity by cut-off grade is provided in Table 10.

Mineral Resource Estimate for the Mandilla Gold Project (Cut-Off Grade >0.39g/t Au)							
Classification	Tonnes (Mt)	Grade	Au Metal (oz)				
Indicated	30.6	1.1	1,034,000				
Inferred	10.9	1.1	392,000				
Total	41.5	1.1	1,426,000				

#### Table 8 – Mandilla MRE

The preceding statement of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

Table 9 – Mandilla MRE by source

Deposit	Classification	Tonnes (Mt)	Grade (g/t)	Au Metal (oz)			
Theia	Indicated	24.5	1.1	832,000			
	Inferred	8.8	1.2	323,000			
	Total	33.3	1.1	1,154,000			
	Indicated	2.8	0.8	68,000			
Iris	Inferred	1.6	0.8	40,000			
	Total	4.3	0.8	108,000			
	Indicated	1.2	1.6	59,000			
Eos	Inferred	0.4	1.1	13,000			
	Total	1.5	1.5	72,000			
	Indicated	2.2	1.1	76,000			
Hestia	Inferred	0.2	2.1	15,000			
	Total	2.4	1.2	91,000			
Total 41.5 1.1 1,426,000							
All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant							

#### \_\_\_\_\_

Astral Resources NL Mandilla Project | Pre-Feasibility Study | June 2025

Cut-off grade (g/t Au)	Tonnes (Mt)	Grade (g/t)	Au Metal (oz)
0.3	48.6	1.0	1,505,000
0.35	44.9	1.0	1,467,000
0.39	41.5	1.1	1,426,000
0.4	41.1	1.1	1,420,000
0.45	37.4	1.1	1,370,000
0.5	34.1	1.2	1,320,000
	-		

All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

#### 4.1.4. Ore Reserve

The maiden ore reserve for Mandilla is table in below:

Resource	Proved (Mt)	g/t	Ounces (koz)	Probable (Mt)	g/t	Ounces (koz)	Total (Mt)	g/t	Ounces (koz)
Theia	-	-	-	28.0	0.9	829	28.0	0.9	829
Hestia	-	-	-	2.1	0.9	60	2.1	0.9	60
Eos	-	-	-	1.2	1.2	47	1.2	1.2	47
Iris	-	-	-	2.9	0.6	58	2.9	0.6	58
Total	-	-	-	34.3	0.9	1,000	34.3	0.9	1,000
Ore Reserve	Ore Reserves are a subset of Mineral Resources.								
Ore Reserve	Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.								
The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.									
The Ore Res	The Ore Reserves for Mandilla are reported at a cut-off grade of 0.30 g/t Au lower cut-off.								

Table 11 – Mandilla Ore Reserve

This study summaries the material information pursuant to ASX Listing Rule 5.9. Additional information required by ASX Listing Rule 5.9 is summarised in section 4.5. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is provided in section 23.

## 4.2. Feysville

### 4.2.1. Regional Geology

The Feysville project is situated within the Norseman-Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton. The gold deposits within the project area are hosted by felsic to intermediate schists, mafic volcanics, ultramafic intrusives and porphyries within a major structural corridor hosting the Ethereal Shear (Figure 4).

Multiple mineralised structures trend NNW throughout the area. At Think Big, mineralisation extends for approximately 500 metres along strike and typically 10 metres across strike. Several additional sub-parallel zones of mineralisation occur within the fragmental unit sub-parallel and up to 50 metres east of the Ethereal Shear Zone.

Geology at Feysville is complex with regional mapping identifying a double plunging northwest trending antiformal structure known as the Feysville Dome bounded to the west by the Boulder Lefroy Fault and south by the Feysville Fault. The Feysville Fault, located on the southern margin of the tenement is interpreted to represent thrusting of underlying mafic/ultramafic volcanic and intrusive rocks over a younger felsic metasedimentary sequence to the south. The sequence has been extensively intruded by intermediate and felsic porphyries.





Figure 4: Map of Feysville Gold Project (including tenements and deposits/prospects) on local area geology.

## 4.2.2. Deposit Geology

Gold mineralisation within the area is strongly associated with sheared contacts between porphyry units and the mafic country rock with multiple mineralisation styles present over the project. There are a number of historical gold workings on the Project.

Think Big lies within the Ethereal shear corridor, a NW trending structure with a large supergene expression. Geology is a subvertical feldspar porphyry swarm intruding into volcaniclastically derived andesitic conglomerates, trending NW with a hanging wall ultramafic (UM) unit. Contacts between conglomerates and porphyries are intrusive however structures have preferentially sheared the contacts possibly a result of rheological contrast between the units. The sheared contacts dip steeply to the west.

Mineralisation at Think Big is predominantly found within the volcaniclastic derived conglomerate hosts between sheared porphyry bodies. The strongest tenor is on margins of porphyries between closely spaced porphyries - where the conglomerate is moderately to intensely sericitised and albitised. Porphyries appear to be completely barren - no sulphides present or even anomalous mineralisation.

A series of stacked lodes have been interpreted steeply dipping to the south-west at approximately  $70^{\circ}$  toward  $230^{\circ}$  with a total strike length of 500m. The average width of each lode is between 2 - 8 m, with a total width approximately 110m. These are overlain



by a supergene blanket. The wireframes generally envelope 0.4 ppm Au but are allowed to 0.20 ppm Au in many areas to connect the interpreted continuity of the sub-vertical lodes.

At Kamperman, the mineralisation appears to be in proximity to a NE trending fault, first interpreted by aerial magnetics (truncation of a strongly magnetic ultramafic body), and later supported by drillhole log interpretation and multi-element lithogeochemistry. The fault also happens to mark a boundary between different styles of mineralisation. The fault could either be offsetting mineralisation or primarily related to gold mineralization. Literature suggests the fault may be related to D4 deformation and hence synchronous with gold mineralisation.

Drilling at Kamperman has delineated gold mineralisation over 450m of strike length. Gold occurs within several different styles of mineralisation through the prospect including the following:

- Pyrite+-pyrrhotite+-chalcopyrite+-magnetite rich zone hosted in chloritic "mafic" unit (Southern Lode),
- High grade gold occurring along lithological contacts,
- Quartz veining (Northern Lodes),
- Pyrite bearing silicified feldspar porphyry,
- Mineralized minor sheared zones and
- Supergene blanket at saprock-joint oxidised horizon.

The mineralisation at Kamperman has been interpreted into 20 discrete domains.

At Rogan Josh the mineralisation appears to be on the sheared contacts between volcaniclastic conglomerate and an intrusive dacitic unit. Supergene enrichment is observed above the shear.

The mineralisation at Rogan Josh has been interpreted into 12 domains including the main supergene zone.

#### 4.2.3. Mineral Resource Estimate

The latest MRE for Feysville, was prepared by independent consultants Cube Consulting in accordance with the JORC Code (2012 Edition) and was reported on 1 November 2024 (**Feysville MRE**) in ASX announcement "Group MRE Increases to 1.46Moz with Updated Feysville MRE". The Feysville MRE, which incorporates the Think Big, Kamperman and Rogan Josh deposits totals **5 million tonnes at 1.2g/t Au for 196 thousand ounces of contained gold**.

The MRE was estimated using a 0.39g/t Au lower cut-off and is constrained within pit shells derived using a gold price of AUD\$2,500 per ounce.

The MRE is summarised in Table 12 below, a detailed breakdown by deposit is provided in Table 13 and a grade and tonnage sensitivity by cut-off grade is provided in Table 14.

#### Table 12 – Feysville MRE

Mineral Resource Estimate for the Feysville Gold Project (Cut-Off Grade >0.39g/t Au)							
Classification	Tonnes (Mt)	Grade	Ounces (koz)				
Indicated	3.5	1.3	144				
Inferred	1.5	1.1	53				
Total	5.0	1.2	196				

The preceding statement of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.



Deposit	Classification	Tonnes (Mt)	Grade (g/t)	Ounces (koz)
	Indicated	1.9	1.1	68.1
Think Big	Inferred	0.5	1.2	17.1
	Total	2.4	1.1	85.2
	Indicated	1.1	1.5	52.4
Kamperman	Inferred	0.9	1.1	31.4
	Total	2.0	1.3	83.8
	Indicated	0.5	1.3	23.3
Rogan Josh	Inferred	0.1	1.0	4.1
	Total	0.7	1.3	27.4
Total		5.0	1.2	196.4
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### Table 13 – Feysville MRE by source.

All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

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Cut-off grade (g/t Au)	Tonnes (Mt)	Grade (g/t)	Ounces (koz)			
0.3	5.2	1.2	198.6			
0.35	5.1	1.2	197.7			
0.39	5.0	1.2	196.4			
0.4	5.0	1.2	196.1			
0.45	4.8	1.2	194.0			
0.5	4.7	1.3	191.3			
All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.						

Table 14 – Feysville MRE by cut-off grade.

Figure 5 displays the Feysville MRE for the Think Big, Kamperman and Rogan Josh deposits on local area geology.





*Figure 5: Map of Feysville MRE (including tenements and deposits/prospects) on local area geology.* 



### 4.2.4. Ore Reserve

The maiden ore reserve for Feysville is table in below:

Resource	Proved (Mt)	g/t	Ounces (koz)	Probable (Mt)	g/t	Ounces (koz)	Total (Mt)	g/t	Ounces (koz)
Kamperman	-	-	-	1.1	1.2	45	1.1	1.2	45
Rogan Josh	-	-	-	0.4	1.1	12	0.4	1.1	12
Think Big	-	-	-	0.8	1.2	30	0.8	1.2	30
Total	-	-	-	2.3	1.2	88	2.3	1.2	88
Ore Reserves are a	a subset of Mineral F	Resources.							
Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.									
The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.									
The Ore Reserves	The Ore Reserves for Feysville are reported at a cut-off grade of 0.40 g/t Au lower cut-off.								

#### Table 15 – Feysville Ore Reserve

This study summaries the material information pursuant to ASX Listing Rule 5.9. Additional information required by ASX Listing Rule 5.9 is summarised in section 4.5. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is provided in section 23.

## 4.3. Spargoville

#### 4.3.1. Regional Geology

The Spargoville project is located in the Coolgardie Domain within the Kalgoorlie Terrane, approximately 25 kilometres southwest of Kambalda.

The greenstone stratigraphy of the Kalgoorlie Terrane can be divided into three main units:

- 1. predominantly mafic to ultramafic units of the Kambalda Sequence, these units include the Lunnon Basalt, Kambalda Komatiite, Devon Consols Basalt, and Paringa Basalt;
- 2. intermediate to felsic volcaniclastic sequences of the Kalgoorlie Sequence, represented by the Black Flag Group and
- 3. siliciclastic packages of the late basin sequence known as the Merougil Beds.

The Paringa Basalt, or Upper Basalt, is less developed within the Coolgardie Domain, but similar mafic volcanic rocks with comparable chemistry are found in the Spargoville area. Slices of the Kambalda Sequence, referred to as the Burbanks and Hampton Formations, are believed to represent thrust slices within the Kalgoorlie Sequence.

Multiple deformational events have affected the Kalgoorlie Terrane, with at least five major regional deformational events identified. Granitoid intrusions associated with syntectonic domains are found in the Spargoville area, including the Depot Granite and the Widgiemooltha Dome. Domed structures associated with granitoid emplacement are observed in the St Ives camp, with deposition of the Merougil Beds and emplacement of porphyry intrusions occurring during extensional deformation. Gold occurrences associated with the Zuleika and Spargoville shears are representative of deposits that formed during sinistral transpression on northwest to north-northwest trending structures.

The Spargoville project consists of the Wattle Dam, Eagles Nest, Larkinville, Hilditch and 5B projects.

#### 4.3.2. Deposit Geology

#### Wattle Dam

The Wattle Project geology consists of a steep west-dipping sequence of metamorphosed mafic and ultramafic volcanic rocks, interflow metasedimentary rocks and felsic porphyry intrusions. The dominant structural style consists of steep north-plunging isoclinal folds with sheared and attenuated fold limbs.



The Wattle Dam deposit consists of the Redback, Golden Orb, Wattle Dam Stockwork, S5, 8500N, Huntsman and Trapdoor gold deposits. The deposits exhibit a prominent northwards plunge of high-grade shoots and mineralised zones related to regional north-plunging isoclinal folds.

The Wattle Dam Gold Mine main lode exhibits abundant coarse gold mineralisation associated with a strong biotite - amphibole assemblage as well as in carbonate veins. Interflow metasedimentary shales are present in close association with high-grade main lode mineralisation. Additionally, a 40m to 50m wide zone of quartz-carbonate stockwork, termed Wattle Dam Stockwork, occurs within the hanging wall komatiite to the west.

The Redback, Golden Orb and S5 deposits are located 600m to the south-southeast of the Wattle Dam open pit. At Redback, gold mineralisation occurs as veinlet stockwork in greenstone units between two planar, NNW-striking feldspar-hornblende porphyry intrusions. High-grade mineralisation includes veinlet stockwork and disseminated gold controlled by quartz-carbonate-pyrrhotite-scheelite-Au veinlets. At the Golden Orb and S5 deposits, gold mineralisation occurs at structurally deformed contacts between ultramafics and interflow sediments.

#### Larkinville & Hilditch

Gold mineralisation at Hilditch is interpreted to be associated with structurally controlled contacts between mafic/ultramafic and volcaniclastic units. Minor interflow sediments are observed within the mafic and ultramafic sequence, similar to that prevalent at the Company's Wattle Dam Gold Project.

The Larkinville project area encompasses a typical greenstone sequence, which includes basalts, dolerites, high magnesium basaltic and intrusive rocks, komatiite ultramafics, felsic volcanics, and sedimentary rocks. Additionally, pegmatite intrusions with various orientations are common. The Larkinville Gold Deposit is hosted in felsic volcaniclastics. The regolith profile is composed of 1-2 metres of transported colluvium, residual upper saprolite extending to approximately 30 meters in depth, and lower saprolite and saprock reaching around 70 metres in depth.

#### **Eagles Nest**

The Eagles Nest geology is dominated by Archean mafic/ultramafic and sedimentary lithologies. Hydrothermal vein and shear related gold mineralisation has been targeted by the exploration. The geological setting, rock types, alteration and nature of the gold are suggestively of a Wattle Dam style of mineralisation.

The mineralisation is interpreted to be hosted within a steeply east dipping shear zone.

#### <u>5B</u>

The 5B gold mineralisation occurs within a shear zone at the contact of a small dunite body located between a footwall basalt and an ultramafic unit in the hanging wall. It is thought that the primary sulphide minerals have been structurally remobilised into their current position within the shear zone. Gold and nickel mineralisation appear to be intimately associated, with the ore zone also elevated in copper, cobalt, PGE's and arsenic. There is no apparent documentation of the relationship between the primary Ni bearing sulphide minerals and the gold mineralisation although there is some suggestion that the gold mineralisation may be associated with a later crosscutting shear.

The mineralisation trends in a N-S direction over a strike of approximately 80m and dips to the west at approximately 65°.

#### 4.3.3. Mineral Resource Estimate

Following completion the off-market takeover of Maximus Resources Limited during May 2025, Astral released a restated MRE for Spargoville (**Spargoville MRE**). The Spargoville MRE was prepared by independent consultant Widenbar and Associates, in accordance with the JORC Code (2012 Edition), incorporating the Wattle Dam Gold Project, Eagles Nest, Hilditch, Larkinville and 5B deposits and totals **3 million tonnes at 1.4g/t Au for 139koz of contained gold**.

The MRE was estimated using a 0.39g/t Au lower cut-off and is constrained within pit shells derived using a gold price of AUD\$3,500 per ounce.

The Spargoville MRE is summarised in Table 16 below, with a detailed breakdown by deposit provided in Table 17 and a grade and tonnage sensitivity analysis by cut-off grade provided in Table 18.



### Table 16 – Spargoville MRE

Mineral Resource Estimate for the Spargoville Gold Project (Cut-Off Grade >0.39g/t Au)							
Classification	Tonnes (Mt)	Grade	Au Metal (oz)				
Indicated	1.9	1.3	81,000				
Inferred	1.1	1.6	58,000				
Total	3.0	1.4	139,000				

The preceding statement of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

Deposit	Classification	Tonnes (Mt)	Grade (g/t)	Au Metal (oz)			
	Indicated	1.4	1.2	54,000			
Wattle Dam Gold Project	Inferred	0.7	1.5	37,000			
	Total	2.1	1.3	91,000			
	Indicated	0.1	1.9	8,000			
Eagles Nest	Inferred	0.1	1.9	8,000			
	Total	0.3	1.9	16,000			
Larkinville	Indicated	0.2	1.8	11,000			
	Inferred	0.0	1.0	1,000			
	Total	0.2	1.7	12,000			
	Indicated	0.2	1.1	8,000			
Hilditch	Inferred	0.1	1.7	7,000			
	Total	0.4	1.3	15,000			
	Indicated	-	-	-			
5B	Inferred	0.0	4.2	5,000			
	Total	0.0	4.2	5,000			
Total		3.0	1.4	139,000			
All tonnages reported	All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures						

#### Table 17 – Spargoville MRE by source.



Cut-off grade (g/t Au)	Tonnes (Mt)	Grade (g/t)	Au Metal (oz)		
0.3	3.2	1.4	141,000		
0.35	3.1	1.4	140,000		
0.39	3.0	1.4	139,000		
0.4	3.0	1.4	139,000		
0.45	2.9	1.5	137,000		
0.5	2.8	1.5	135,000		
All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to					

#### Table 18 – Spargoville MRE by cut-off grade.

The PFS does not contemplate any contribution of ore from the Spargoville MRE but does utilise the Spargoville tenure for locating infrastructure and the associated operational footprint.

#### 4.3.4. Ore Reserve

No ore reserve has been declared for Spargoville.

## 4.4. Group Ore Reserve

Table 19 shows the declared Ore Reserves. These are based on all the Resources at both the Mandilla and Feysville projects and only take into account the Measured and Indicated Resource classification material.

A mining production, stockpiling and process feed schedule was completed using the detailed final and staged pit designs for the Reserve Case. This schedule treated all material classified as inferred as waste and forms the basis of the reported Ore Reserves for the project. The results of the Reserves Case schedule demonstrate that the project is economically viable considering all relevant factors, test work and design criteria, culminating in a financial analysis with favourable economic metrics.

Resource	Proven (Mt)	g/t	Ounces (koz)	Probable (Mt)	g/t	Ounces (koz)	Total (Mt)	g/t	Ounces (koz)	
	Mandilla									
Theia	-	-	-	28.0	0.9	829	28.0	0.9	829	
Hestia	-	-	-	2.1	0.9	60	2.1	0.9	60	
Eos	-	-	-	1.2	1.2	47	1.2	1.2	47	
Iris	-	-	-	2.9	0.6	58	2.9	0.6	58	
Total - Mandilla	-	-	-	34.3	0.9	1,000	34.3	0.9	1,000	
					<u>Feysville</u>					
Kamperman	-	-	-	1.1	1.2	45	1.1	1.2	45	
Rogan Josh	-	-	-	0.4	1.1	12	0.4	1.1	12	
Think Big	-	-	-	0.8	1.2	30	0.8	1.2	30	
Total - Feysville	-	-	-	2.3	1.2	88	2.3	1.2	88	
Total	-	-	-	36.6	0.9	1,082	36.6	0.9	1,082	
<u> </u>		_								

#### Table 19 – Group Ore Reserves

Ore Reserves are a subset of Mineral Resources.

Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.

The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

The Ore Reserves for Mandilla are reported at a cut-off grade of 0.30g/t Au lower cut-off and Feysville are reported at a cut-off grade of 0.40 g/t Au lower cut-off.



This study summaries the material information pursuant to ASX Listing Rule 5.9. Additional information required by ASX Listing Rule 5.9 is summarised in section 4.5. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is provided in section 23.

## 4.5. Ore Reserves – Other Material Information Summary

The following information is provided to meet the remaining requirements under ASX Listing Rule 5.9.1 not otherwise expressly outlined in this PFS. This information is further provided in detail in the JORC Table 1 as contained in section 23.

#### 4.5.1. Classification – Ore Reserve Estimate

The main basis of classification of Ore Reserves is the underlying Mineral Resource classification. All Probable Ore Reserves derive from Indicated Mineral Resources in accordance with JORC (2012). There are no Measured Mineral Resources within the deposits, therefore no Proved Reserves have been reported. The results of the Ore Reserve estimate reflect the Competent Person's view of the deposit. No Inferred Mineral Resources are included in the Ore Reserves.

#### 4.5.2. Classification Criteria – Mineral Resource Estimate

The Mineral Resource Estimate used for the conversion to an Ore Reserve for the Mandilla deposit is that which was announced in Astral ASX announcement dated 03/04/25. Below is the classification summary from the announcement.

Classification of Mineral Resources uses two main criteria as follows:

- 1. Confidence in the Au estimate
- 2. Reasonable prospects for eventual economic extraction.

Assessment of confidence in the estimate of gold included guidelines as outlined in JORC (2012):

- Drill data quality and quantity
- Geological domaining (for mineralised domain)
- The spatial continuity of Au mineralisation
- Geostatistical measures of Au estimate quality.

In summary, the more quantitative criteria relating to these guidelines include data density and the kriging search pass used, as follows:

- The Indicated Mineral Resource has a nominal drill spacing of 40mN x 20mE or closer (10mEx 10mN in grade control drilled areas in the paleochannel), not more than 20 m laterally beyond drilling, and using search pass 1
- The Inferred Mineral Resource is material within the mineralised domain, but not meeting the criteria for Indicated.

The MRE used for the conversion to an Ore Reserve for the Feysville deposit is that which was announced in Astral ASX announcement dated 01/11/24. Below is the classification summary from the announcement.

For Think Big, Resource categories are based on overall confidence in the estimate which was guided by drill spacing, Ordinary Kriging (OK) quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. Indicated Resources were assigned to the portion of the of the deposit where drill spacing is generally 20m x 15m and OK metrics show high quality. Inferred Resources have been assigned to remaining areas of the mineralisation where drill data becomes sparse and geological uncertainty increases.

For Kamperman, Resource categories are based on overall confidence in the estimate, which was guided by drill spacing, OK quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. The Indicated Mineral Resource is restricted to the main north and south lodes, and the supergene zones where drill spacing is typically 25 mN x 25 mE and the estimates have good Kriging metrics such as slope of regression greater than 50%. The Inferred Mineral Resource is the other material within the mineralised domains, but not meeting the criteria for Indicated (generally greater than 30 mN x 30 mE drilling or containing less than ~50 samples). Domains informed by less than 30 samples or a single drillhole including Domains 5, 7, 11, 16 and 17 have remained unclassified. All mineralised domains north of 6,57,7320mN are also unclassified due to lack of sampling.

For Rogan Josh, Resource are categories based on overall confidence in the estimate, which was guided by drill spacing, OK quality metrics including Kriging Efficiency and Slope of regression, and geological complexity. The Indicated Mineral Resource is restricted to the supergene zones and has a nominal drill spacing of 40 mN x 20 mE and good Kriging metrics such as slope of regression greater than 50%. The Inferred Mineral Resource is the other material within the mineralised domains, but not meeting the criteria for Indicated (generally greater than 40 mN x 40 mE drilling or containing less than ~50 samples). This includes all the sub-vertical domains. There is a portion of the supergene zones that have not been classified due to sparse sampling data and lack of confidence in the grade continuity.



#### 4.5.3. Mining Method & Other Mining Assumptions

The selected mining method used to extract the Ore Reserves is via conventional open pit bench mining, utilising mining-class excavators and rear-dump haul trucks. This is an industry-standard method used widely in Western Australian gold operations. Drilling and blasting of hard material will be necessary to achieve efficient mining productivity and has been accounted for in the Pre-Feasibility Study.

Mining dilution and recovery factors (ore loss) were accounted for via regularisation of the MRE model. Regularisation is a commonly used technique to account for the predicted ore losses and dilution that will occur during mine production. The models for Mandilla were regularised to a block size of 5m(x) by 6.25m(y) by 5m(z), and the models for Feysville were regularised to a block size of 5m(x) by 5m(y) by 5m(z). The block size selected for regularisation is considered appropriate for the orebody geometry, planned method of extraction and fleet size contemplated in the Pre-Feasibility Study. In the view of the Competent Person, mining dilution and ore loss is adequately accounted for via the regularisation process, as such no further dilution or ore loss factors were applied.

The Ore Reserves are supported by a Pre-Feasibility study. The outcomes of the study indicate a technically achievable and economically viable mine plan. All material modifying factors have been considered and applied when converting the Mineral Resource to an Ore Reserve.

A mining production, stockpiling and process feed schedule was completed using the detailed final and staged pit designs for the Reserve Case. This schedule treated all material classified as inferred as waste and forms the basis of the reported Ore Reserves for the project. The results of the Reserves Case schedule demonstrate that the project is economically viable considering all relevant factors, test work and design criteria, culminating in a financial analysis with favourable economic metrics.

All Ore Reserves are planned to be extracted solely via open pit methods, with no extraction via underground methods contemplated in the Pre-Feasibility Study.

#### 4.5.4. Processing

The Mandilla processing plant is a 2.75 million tonne per annum carbon-in-pulp process plant.

The design crushing throughput rate is 413tph, equating to 76% availability (day and nightshift operation).

Design milling rate is 344tph based on availability of 91.3% to process 2.75Mtpa. The following process plant description is based on the Process Design Criteria and flowsheets. The processing circuit includes the following major equipment areas:

- Primary jaw crusher
- Secondary cone crusher
- Tertiary cone crusher
- Crushed ore screening
- Milling
- Cyclone classification
- Gravity separation
- Gravity concentration and intensive leaching of gravity concentrate
- Leaching and adsorption of cyclone overflow
- Elution circuit and carbon regeneration
- Services and reagents

A total of 42 gravity and leach test were performed across Mandilla and Feysville which resulted in the following key observations:

- Gravity recovery across the four Mandilla deposits is very high averaging above 70%.
- The gravity recovery at both Rogan Josh and Kamperman is high averaging above 40%.
- The combined gravity and leach gold extraction results for Mandilla are very high averaging 97.6% at 150µm grind size.
- The combined gravity and leach gold extraction results for Rogan Josh and Kamperman are high averaging 91.1% and 94.4% respectively at 150µm grind size.
- Overall gold recovery for the purposes of the PFS is 96% for Mandilla, 90% for Rogan Josh and 96% for Kamperman. The Think Big overall gold recoveries were set at 89% in oxide and 86% in the transitional. The fresh ore zone at Think Big was not contemplated in the PFS as previous metallurgical testing had indicated poor gold recoveries at coarse grind sizes.

Detailed multi-element assays were completed on all composite samples used for metallurgical testing, with the following key observations:



- Levels of metals that are deleterious to cyanide leaching, such as Ni, Pb, Cu and Te are low in all but two of the 25 bulk samples collected to date for metallurgical testing.
- Elevated Cu was observed in two of the five sections tested at Kamperman, Kamperman represents less than 5% of the gold production contemplated in the PFS and will be blended into the process plant, mitigating any impacts from increased cyanide consumption as a result of the elevated Cu.
- Arsenic and sulphides concentrations are low in the samples, suggesting that potential gold locked in pyrite/arsenopyrite is low, this is confirmed by the very low residual gold in the solid tails.
- Organic carbon concentrations are low or below detection limit. This indicates that preg-robbing is not expected to be prevalent.

### 4.5.5. Cut-off Grade

Economic cut-off grades were calculated and applied to the estimate, based on relevant input assumptions. These cut-offs are 0.3g/t for Mandilla and 0.4g/t for Feysville.

The cut-off grade was calculated using the assumed:

- Gold sell price
- Royalty costs
- Processing costs including G&A and grade control
- Transport costs
- Processing recovery

### 4.5.6. Estimation Methodology

The Mineral Resource Estimate used for the conversion to an Ore Reserve for the Mandilla deposit is that which was announced in Astral ASX announcement dated 3 April 2025. Below is a repeat of the estimation section in the announcement.

Estimation of the fresh rock mineral resource for Theia, Iris and Eos was by the non-linear method Localised Uniform Conditioning (LUC) using Datamine software. The LUC estimation process was as follows:

- Drill hole data was selected within mineralised domains and composited to 2 m downhole intervals in Datamine software the majority of the raw sample lengths were 1 m (91% of samples within the mineralised domains), but the variability of the data was reduced significantly by using 2m composites.
- The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the transported, oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries (with the exception of the surficial transported cover). Note that at Eos, mineralisation is on the oxidised/transitional boundary (i.e. no fresh rock).
- Therefore the fresh, transitional and oxidised zones were combined for variography and estimation, with a hard boundary for the northern paleochannel and the transported cover. As each of the deposits are spatially and statistically separate, then hard domain boundaries were used between them.
- Variography was performed on data transformed to normal scores, and the variogram models were back-transformed to original units. The Gaussian anamorphosis used for the normal scores transform was also subsequently used for the discrete Gaussian change of support model required for Uniform Conditioning. Variography was performed for the separate deposits (the northern paleochannel is considered a separate deposit).
- The variogram models had high nugget effects at Theia, Iris and Hestia (~70 to 80% of total sill), with a ranges of 60 to 100m. At Eos, the nugget effect is moderate (50% of total sill), with ranges of 120 m horizontally and 10 m vertically. For the northern paleochannel, the nugget is moderate to high (70%), with ranges of 20 m horizontally and 4 m vertically.
- Estimation (via Ordinary Kriging a necessary precursor step for UC) was into a non-rotated block model in MGA94 grid, with a panel block size of 20 mE x 25 mN x 5 mRL this is about the average drill spacing in the main well-drilled part of the Project. Localisation of the grades was into Selective Mining Units (SMU) block of 10 mE x 12.5 mN x 2.5 mRL (8 SMUs per panel).
- A minimum of 8 and maximum of 16 (2 m composite) samples per panel estimate was used, with a search ellipse radius of 100 m x 100 m x 40 m (oriented in the same directions as the variogram models) for Theia and Iris, with a shorter radius of 20 m in the minor direction for Eos.



- The use of a maximum number of composites of 16 effectively limits the search ellipse radius to 20 m in the well-drilled (~Indicated) part of the Project.
- The panel estimates used the 'distance limited threshold' technique, where uncapped samples are used for a very local estimate, and capping (threshold) is used beyond this local distance. The thresholds used were 40 ppm for Theia, 9 ppm for Iris and Eos, 6 ppm for Hestia and 40 ppm for the northern paleochannel. These thresholds were based on inflections and discontinuities in the histograms and log-probability plots, and on metal quantities above thresholds.
- The UC process applies a Change of Support correction (discrete Gaussian model) based on the composite sample distribution and variogram model, conditioned to the Panel grade estimate, to predict the likely grade tonnage distribution at the SMU selectivity.
- The Localising step was then run, and the resulting SMU models for each deposit were combined using Datamine.
- Estimates of Au grades were validated against the composited drill hole data by extensive visual checking in cross-section, plan and on screen in 3D, by global (per deposit comparisons of input data and model, and by semi-local statistical methods (swath plots). All methods showed satisfactory results.

For the Hestia deposit ordinary kriging was used. The ordinary kriging process was as follows:

- Cube specified an ellipsoidal search neighbourhood with first-pass composite search ranges set to 90 m of the estimation block centre for the major, 30 m for the semi-major and 15 m for the minor search direction.
- The variography anisotropy axes for the input semi variogram models were specified to be the same as the interpolated search orientation.
- Cube also specified an expanding search distance algorithm whereby blocks not estimated in the primary search were estimated by doubling the search range for the secondary pass.
- Finally, any blocks not estimated in the second pass were estimated by quadrupling the primary search distances for the tertiary grade estimation pass.
- For the primary and secondary estimation passes Cube specified that a minimum of eight and maximum of 20 composites were required for a block to be estimated in each search.
- For the tertiary pass the minimum and maximum requirements were set to three and 20 composites respectively.
- All blocks in the mineralised lode wireframes were estimated in three estimation passes. For the transported cover domains, which are essentially non-mineralised except for a small part of Theia and the Eos paleochannel, ordinary kriging was used to estimate grades into the panels localisation of the grades into the SMU blocks was not undertaken.

The MRE used for the conversion to an Ore Reserve for the Feysville deposit is that which was announced in Astral ASX announcement dated 1 November 2024. Below is a repeat of the estimation section in the announcement.

Estimation of the mineral resources was by OK implemented in Datamine software (version 2.0.66.0) using the following process:

- Drill hole data was selected within mineralised domains and composited to 1 m downhole intervals in Datamine software the majority of the raw sample lengths were 1 m (98% of samples within the mineralised domains).
- The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries.
- Therefore, the fresh, transitional and oxidised zones were combined for variography and estimation, with hard boundaries used for the mineralised domains.
- Variography was performed on data transformed to normal scores, and the variogram models were back-transformed to original units.
- The variogram models had moderate to low nugget effects, with ranges of 40m to 75m at Think Big, ranges of 70m to 150m at Rogan Josh and ranges of 40m to 60m at Kamperman.
- For Think Big, estimation was into a block model rotated by -40 degrees to align with the strike of the mineralised domains, with a parent cell size set to 10m in the east, 15m in the north orientation and 5m in elevation which approaches the industry rule of thumb of half the drill spacing. Sub blocking was allowed to reflect the volumes at wireframe boundaries however

estimation occurred at the parent block size using hard boundaries. For Rogan Josh, the block model was not rotated and used a parent block size set to 20m in the east and north orientations and 5m in elevation. The Kamperman block model was not rotated and used a parent block size set to 10m in the east and north orientations and 5m in elevation.



- OK parameters included a minimum of eight and a maximum of 20 or 24 samples required for each block estimate, with search ellipse radii set to the effective range of the respective variogram models (oriented in the same directions as the variogram models), a three-pass sample search of incrementally expanding search ranges and block discretisation grid of 5x5x3 nodes.
- Global top caps were applied to Domains with extreme outliers. The effect of using top caps was tested during the estimation process by running two estimates and found that capping was required to prevent the spreading of high gold grades. The conservatively applied top caps generally correspond with the 97.5 percentile of the grade distribution for each domain.
- Estimates of Au grades were validated against the composited drill hole data by extensive visual checking in cross-section, plan and on screen in 3D, by global (per deposit comparisons of input data and model, and by semi-local statistical methods (swath plots). All methods showed satisfactory results.

### 4.5.7. Material Modifying Factors

Mandilla is situated in the northern Widgiemooltha greenstone belt, approximately 70 kilometres south of the significant mining centre of Kalgoorlie and approximately 20 kilometres west of Kambalda in Western Australia. Mandilla's geographical location provides easy and relatively low-cost access to products and materials needed for continuous operations.

Feysville is located within the north-north-west trending Norseman – Wiluna Greenstone Belt, within the Kambalda Domain of the Archean Yilgarn Craton, approximately 14 kilometres south of the KCGM Super Pit in Kalgoorlie.

The Mandilla and Feysville projects have undergone the essential geotechnical studies to meet Pre-Feasibility Study (PFS) requirements, ensuring that the proposed pits are designed with slope stability and safety in mind.

Environmental approvals are underway, with submissions forecast to be submitted in the 4th quarter of 2025.

Infrastructure requirements, including the construction of processing plants and transportation networks, have been planned and integrated into the project design.

These comprehensive measures ensure that the projects are well-prepared to meet regulatory standards and operational demands.

The Company will be reliant on third-party and other regulatory approvals to enable it to proceed with the development of the Project. There is no guarantee that the required approvals will be granted and delays in project permitting may delay the project from commencing production in the proposed timeframe. Early engagement with regulators to raise awareness of the project and the planned scope will commence during the early stages of the DFS workstreams.

## 4.6. Resource Growth & Confidence

The significant resource growth achieved organically at Mandilla and Feysville and via the acquisition of Spargoville by Astral since 2020 is displayed in Chart 1 below.





Chart 1 – Group MRE growth by category & ounces

Importantly the current Group Mineral Resource and Reserves (refer to section 20) demonstrates Astral's ability to continue to grow its Mineral Resources cost effectively, whilst substantially increasing the geological confidence.

## 5. Geotechnical

Geotechnical studies were carried out in 2024/2025 by Entech on both the Mandilla and Feysville projects. As Theia and Iris at Mandilla, were previously drilled to a feasibility level the geotechnical drilling campaigns were focused on Hestia and Eos to meet PFS requirements. All of the deposits at Feysville (Kamperman, Rogan Josh and Think Big) were also drilled and geotechnically assessed to a PFS level.

## 5.1. Mandilla Geotechnical

Entech Pty Ltd (**Entech**) was commissioned by Astral to complete a PFS level geotechnical study for the proposed pits Eos and Hestia, part of the Mandilla project. The geotechnical assessments evaluate the potential for slope instabilities and derives slope design parameter recommendations for the proposed open pits.

## 5.1.1. Geotechnical Review

A dedicated geotechnical drilling program was designed by Entech in collaboration with AAR, which was subsequently logged and sampled by Entech to investigate ground conditions specific to the project. The geotechnical material properties testing program was managed by Entech to capture information pertinent to characterising and understanding the mechanical behaviour of the different materials expected to be encountered, and to form a basis for input into slope stability analysis.

The confidence level of geotechnical data for the oxide, transitional and fresh domains of granite, sedimentary and ultramafic rock units is considered to be commensurate with a Pre- Feasibility Study level due to the sufficient drilled metres, material properties testing coverage and the scale of the proposed pits.

Spatial coverage of geotechnical logging and sampling could be improved for both Eos and Hestia and will be considered as part of DFS planning.

Large scale structural modelling was not observed or reviewed as part of this study for either Eos or Hestia. Understanding and supply of these structures as 3D wireframes in the next study will aid in development of successful design parameters and recommendations.

The current coverage of drilling and structure orientations within both Eos and Hestia is good and has enabled Entech to define several possible structure sets within each pit and further refine these into sets which potentially occur in specific locations or lithologies. Increased spatial coverage and quantity of structures logged for geotechnical properties will aid our understanding of

large and small scale pit performance such as crest loss, rock fall risk or larger scale instability on persistent structures such as bedding planes or faults.

## 5.2. Feysville Geotechnical

Entech was commissioned by Astral to complete a PFS level geotechnical study for the proposed pits Think Big, Kamperman and Rogan Josh, part of the Feysville project. The geotechnical assessments evaluate the potential for slope instabilities and derives slope design parameter recommendations for the proposed open pits.

### 5.2.1. Geotechnical Review

A dedicated geotechnical drilling program was designed by Entech in collaboration with AAR, which was subsequently logged and sampled by Entech to investigate ground conditions specific to the project. The geotechnical material properties testing program was managed by Entech to capture information pertinent to characterising and understanding the mechanical behaviour of the different materials expected to be encountered, and to form a basis for input into slope stability analysis.

Samples were selected from the drill core of the dedicated geotechnical diamond drill holes to perform material properties testing, including Atterberg Limits, particle size distribution, consolidated undrained triaxial, uniaxial compressive strength, uniaxial tensile strength, elastic constant (Young's Modulus and Poisson's Ratio) and direct shear testing of natural

defects.

Entech considers confidence level of geotechnical data for the oxide, transitional and fresh domains of the dominant lithologies porphyry, sedimentary and ultramafic is commensurate with a Pre-Feasibility Study level and therefore reserve declaration requirements due to the sufficient drilled metres, material properties testing coverage and the scale of the proposed

pits.

The current coverage of drilling and structure orientations is good and has enabled Entech to define several possible structure sets within each pit and further refine these into sets which potentially occur in specific locations or lithologies. The distribution of structure orientations within Kamperman appears strongly related to all provided structure wireframes. Structures at Rogan Josh appear related to the "RJ\_GEOL\_Fault" but no evidence at drill core level was recorded with southeast dipping orientations of concordant with "RJ\_XC\_NE\_faults\_JRsth". Lastly at Think Big, recorded structure orientations are generally in line with large scale structure dip directions however this cannot be confirmed for certain.

Several modelled large-scale structures and their predicted intersection points with geotechnical drill core have been confirmed for both Kamperman and Think Big providing additional certainty to the orientations modelled.

# 6. Optimisation, Mine Design and Schedule

## 6.1. Reserve Case – Mandilla & Feysville

## 6.1.1. Pit Optimisation

Prior to any pit optimisations being performed, the Mandilla and Feysville Resource models were first regularised to a 5mE x 6.25mN x 5mZ and 5mE x 5mN x 5mZ selective mining unit (SMU) respectively. This results in a more realistic excavation size and inherently introduces mining dilution and recovery factors into the models which more closely represents real world inclusions.

The regularised models were then coded to include mining costs, geotechnical zones and independent rock types based on a combination of weathering profiles and material JORC classifications. The models were then imported into the optimisation software and had additional parameters applied to them.

As this is the Reserve case, only the Measured and Indicated classifications were taken into consideration for possible economic extraction.

## 6.1.2. Pit Optimisation Parameters

The following are the parameters applied to the Mandilla and Feysville Resource block models in the optimisation process. These parameters were all sourced from either PFS / DFS level studies completed by Astral or cost quotations requested by Astral from suppliers.

### 6.1.2.1. Slope Sets

PFS level geotechnical studies were completed on all the Mandilla and Feysville deposits. The results were utilised for the optimisation and design phases of this study. Please refer to following table for the slope parameters used.



Geotechnical Domain	Material Type	Bench Height (m)	Bench Face Angle (°)	Spill Berm Width (m)	Inter-Ramp Angle (°)
	Transported/Oxide	10	45	5	34
Theia and Iris	Transitional	20	60	9	44
	Fresh	20	75	9	54
	Transported/Oxide	10	50	6.5	34
Hestia and Eos	Transitional	15	65	7.5	46
	Fresh	20	70	9	51
Kamperman, Rogan Josh and Think Big	Transported/Oxide	10	50	6.5	34
	Transitional	20	60	9	46
	Fresh	20	75	9	54

### Table 20 – Pit optimisation slope parameters

#### 6.1.2.2. Exchange Rates

All costs and revenues are in Australian dollars.

#### 6.1.2.3. Processing Throughput

A processing throughput of 2.5Mtpa was used for the optimisation. This is based on the early PFS work which contemplated a 2.5Mtpa processing plant be constructed at the Mandilla project.

#### 6.1.2.4. Processing Recoveries

Table 21 shows the processing recoveries used on the Mandilla and Feysville Resources. It should be noted that the fresh material in the Think Big Resource was not considered due to metallurgical testing showing the potential for poor gold recoveries (< 85%), further gravity and leach testing is warranted prior to its inclusion in further studies.

Resource	Material Type	Processing Recovery
	Oxide	96%
Mandilla (Theia, Iris, Hestia and Eos)	Transitional	96%
	Fresh	96%
	Oxide	96%
Kamperman	Transitional	96%
	Fresh	96%
	Oxide	90%
Rogan Josh	Transitional	90%
	Fresh	90%
Think Big	Oxide	89%
Think Big	Transitional	86%



#### 6.1.2.5. Processing Costs

A processing cost of \$25.55/t and \$35.55/t was applied to the Mandilla and Feysville optimisations respectively. These values were derived from the PFS processing study and includes an allowance for site general and administrative (**G&A**) costs and grade control. A haulage cost of \$10/t was applied to the Feysville processing cost to represent the trucking distance to Mandilla.

#### 6.1.2.6. Economic Cut-Off Grade (COG)

A calculated cut-off grade of 0.28g/t Au for Mandilla and 0.42g/t Au Feysville was utilised. This is based on the following cut-off grade formula, which is automatically calculated in Whittle.



Cut-Off Grade

Mine Dilution x Process Cost

Process Recovery x (Gold Price - Sell Cost)

#### 6.1.2.7. Mining Costs

Astral submitted a Request for Quotation (RFQ) to several mining contractors. The RFQ was based on wet hire and included both load & haul and drill & blast.

The Mandilla project is planned to support 2 x 250t excavators combined with 190t rigid trucking fleets whereas Feysville will utilise 1 x 120t excavator with 90t trucking fleet.

Astral selected the mid-point of the returned RFQ's with the view that these costs would provide a fair representation of the mining costs for the PFS study.

The selected mining costs were coded into the Resource model by bench to use in the optimisations. The average cost output from the optimisation are as follows:

Average Optimised Mining Cost (\$/t)
\$3.66
\$2.80
\$2.37
\$2.94
\$3.41
\$2.46
\$2.70

#### Table 22 – Average Optimised Mining Cost

#### 6.1.2.8. Mining Dilution and Recoveries

The original Mineral Resource models were regularised from variable block sized models to a 5mE x 6.25mN x 5mZ for the Mandilla and 5mE x 5mN x 5mZ model for the Feysville models. This resulted in a more realistic SMU size and inherently introduced mining dilution and recovery factors as a result. As such, no mining dilution or recovery factors were added as part of the optimisation process.

#### 6.1.2.9. Commodity Price

A gold sell price of \$3,000/oz was used for the ore reserve base case optimisation.

#### 6.1.2.10. Royalties

A 2.5% government royalty was used for Mandilla with an additional 0.3% added to Feysville to account for a potential native title royalty that is currently being negotiated.

#### 6.1.2.11. Discount Rate

A discount rate of 10% was used as a base case for the optimisation.

#### 6.1.2.12. Input Summary

The table below shows a summary of the parameters used in the optimisation as per the above section.



ltem	Value	Unit	Comment
Mining			
Average Cost			
Mandilla	\$2.94	t	Average output mining cost. Cost coded in BM by bench. Drill and blast included.
Feysville	\$2.86		
Dilution		%	Dilution introduced in the regularised models
Recovery		%	Recovery factor introduced in the regularised models
Processing			
Cost			
Mandilla	\$25.55	t	Includes processing, G&A and grade control
Feysville	\$35.55	t	Includes processing, G&A, grade control and 70km of ore haulage to Mandilla
Recovery	0.6%		
	96%	%	
Think Big	89%. 86%		Oxide, transitional
Throughput	2.5	Mtpa	Planned plant throughput size
Selling			
Price	3,000.00	oz	
Selling Cost			
Mandilla	2.5%	oz	State Royalty
Feysville	2.8%		State Royalty and third-party royalties
Discount Rate	10	%	

## Table 23 – Optimisation input summary

## 6.1.3. Optimisation Results

The following tables and figures show the results of the optimisations.

Revenue factor refers to the varied base gold price of \$3,000/oz used to generate the different pit shells. The revenue factor 1 shell was selected for each Resource as the basis for their respective designs.



Figure 6 – Theia \$3,000 gold price shell output – Reserve Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
ΡΙτ	Factor			1 ornes		Jo 270
1	0.3	\$145,948,894	\$150,005,098	1,858,608	5,010,599	79,278
2	0.32	\$154,175,442	\$100,358,092	1,994,841	5,293,599	84,429
3	0.34	\$270,381,022	\$308,091,038	4,045,420	13,984,092	104,944
4	0.36	\$277,886,206	\$318,662,989	4,246,978	14,408,190	1/1,229
5	0.38	\$293,750,379	\$342,375,072	4,727,349	15,383,531	185,594
0	0.4	\$466,078,586	\$622,082,067	10,718,872	30,628,487	305,303
/	0.42	\$476,125,536	\$640,936,939	11,083,874	31,875,423	377,220
8	0.44	\$509,187,710	\$708,015,794	12,282,067	37,880,676	420,487
9	0.46	\$520,013,815	\$729,999,630	12,747,611	39,558,223	435,101
10	0.48	\$526,795,714	\$744,251,923	13,065,568	40,721,176	444,898
11	0.5	\$532,339,911	\$757,495,230	13,392,651	41,761,771	454,306
12	0.52	\$537,498,541	\$771,749,393	13,850,785	42,723,049	465,360
13	0.54	\$544,163,024	\$797,298,551	14,632,021	45,416,877	485,643
14	0.56	\$549,821,233	\$813,334,054	15,202,190	46,768,337	499,050
15	0.58	\$553,544,244	\$822,777,021	15,537,864	47,768,299	507,211
16	0.6	\$559,061,247	\$839,716,373	16,099,507	50,149,012	522,213
17	0.62	\$560,461,774	\$849,233,525	16,449,212	51,607,290	531,032
18	0.64	\$560,750,490	\$860,422,182	16,908,551	53,487,082	541,981
19	0.66	\$561,359,194	\$868,378,912	17,252,508	54,839,118	550,138
20	0.68	\$565,370,336	\$887,603,124	18,279,944	58,247,103	572,501
21	0.7	\$567,116,156	\$902,003,000	18,928,634	62,069,857	588,997
22	0.72	\$566,838,009	\$904,783,299	19,093,881	62,699,327	592,446
23	0.74	\$564,711,720	\$923,462,384	20,180,582	67,530,067	616,883
24	0.76	\$564,305,429	\$927,931,233	20,461,903	68,923,162	623,246
25	0.78	\$563,751,397	\$931,438,552	20,729,328	69,981,208	628,776
26	0.8	\$558,142,111	\$1,008,353,063	25,865,532	104,405,228	760,954
27	0.82	\$556,371,503	\$1,013,842,840	26,308,342	106,843,543	771,217
28	0.84	\$553,738,417	\$1,022,978,392	26,991,891	112,315,504	790,047
29	0.86	\$552,846,414	\$1,024,165,976	27,110,461	113,071,780	792,874
30	0.88	\$551,324,048	\$1,026,359,420	27,341,542	114,820,000	798,707
31	0.9	\$549,837,737	\$1,027,302,569	27,482,019	115,593,298	801,589
32	0.92	\$548,480,935	\$1,028,306,408	27,663,569	116,690,345	805,488
33	0.94	\$545,111,737	\$1,030,452,356	28,105,078	119,767,493	815,475
34	0.96	\$530,629,120	\$1,033,805,099	29,352,725	128,812,181	841,698
35	0.98	\$528,203,125	\$1,034,075,814	29,521,160	129,786,823	844,841
36	1	\$514,550,592	\$1,034,547,382	30,372,744	138,753,246	865,103
37	1.02	\$512,080,375	\$1,034,459,634	30,586,008	140,610,816	870,035
38	1.04	\$510,537,239	\$1,034,280,009	30,683,857	141,382,091	871,997
39	1.06	\$509,171,427	\$1,034,087,282	30,763,431	141,841,738	873,318
40	1.08	\$506,167,370	\$1,033,278,426	30,957,562	143,570,017	877,462
41	1.1	\$502,803,804	\$1,032,468,540	31,130,187	144,821,092	880,409
42	1.12	\$501,844,949	\$1,032,102,331	31,190,623	145,273,758	881,588
43	1.14	\$499,386,039	\$1,031,403,176	31,316,971	145,922,428	883,386
44	1.16	\$498,076,414	\$1,030,791,243	31,383,602	146,570,797	884,722
45	1.18	\$497,083,822	\$1,030,360,463	31,430,647	146,917,076	885,495

Table 24 – The	eia Pit by	pit table	output –	Reserve	Case



Chart 2 – Theia Pit by pit graph - Reserve Case



Figure 7 – Hestia \$3,000 gold price shell output – Reserve Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
	0.52	67.000.564	67 422 064	456.005	4 427 626	5.266
1	0.52	\$7,080,561	\$7,122,861	156,235	1,437,626	5,266
2	0.54	\$21,135,500	\$21,560,413	522,106	3,584,700	16,133
3	0.56	\$21,921,319	\$22,378,480	541,394	3,754,306	16,///
4	0.58	\$24,308,651	\$24,881,167	610,608	4,295,974	18,879
5	0.6	\$26,439,004	\$27,129,444	676,195	4,778,037	20,841
6	0.62	\$30,335,739	\$31,270,869	/96,358	5,810,044	24,628
/	0.64	\$32,464,467	\$33,567,897	8/6,/16	6,411,178	26,864
8	0.66	\$36,779,614	\$38,288,101	1,054,332	7,827,813	31,776
9	0.68	\$36,817,859	\$38,329,724	1,055,571	7,843,157	31,820
10	0.7	\$37,845,996	\$39,474,846	1,105,298	8,241,128	33,135
11	0.72	\$46,001,683	\$48,834,092	1,567,269	11,759,564	44,638
12	0.74	\$46,681,845	\$49,626,942	1,604,722	12,117,843	45,691
13	0.76	\$46,945,746	\$49,938,064	1,620,785	12,280,437	46,129
14	0.78	\$47,150,954	\$50,181,630	1,634,001	12,422,459	46,502
15	0.8	\$47,860,667	\$51,055,633	1,695,041	12,982,214	48,035
16	0.82	\$48,066,927	\$51,310,390	1,712,800	13,163,826	48,497
17	0.84	\$48,785,662	\$52,217,131	1,782,972	14,000,891	50,411
18	0.86	\$50,674,167	\$54,666,257	1,989,042	16,713,476	56,046
19	0.88	\$50,989,511	\$55,102,648	2,034,878	17,254,883	57,244
20	0.9	\$51,400,263	\$55,696,790	2,105,736	18,128,973	59,088
21	0.92	\$51,414,515	\$55,720,129	2,109,453	18,167,379	59,177
22	0.94	\$51,499,121	\$55,861,792	2,132,928	18,516,978	59,836
23	0.96	\$51,501,320	\$55,870,335	2,135,819	18,550,447	59,906
24	0.98	\$51,507,057	\$55,910,881	2,151,926	18,755,699	60,316
25	1	\$51,490,437	\$55,916,606	2,163,077	18,895,752	60,585
26	1.02	\$51,470,558	\$55,910,862	2,170,511	18,977,707	60,750
27	1.04	\$51,438,013	\$55,893,988	2,179,184	19,081,880	60,943
28	1.06	\$51,387,720	\$55,859,563	2,188,683	19,245,272	61,204
29	1.08	\$51,271,616	\$55,771,088	2,206,435	19,475,684	61,594
30	1.1	\$51,000,423	\$55,548,394	2,240,597	20,038,904	62,479
31	1.12	\$50,805,181	\$55,381,571	2,262,312	20,359,961	62,978
32	1.14	\$50,803,150	\$55,380,229	2,262,725	20,359,961	62,982
33	1.16	\$50,132,212	\$54,748,748	2,310,633	21,368,037	64,322
34	1.18	\$50,067,873	\$54,692,409	2,317,312	21,431,834	64,426
35	1.2	\$48,378,728	\$53,065,704	2,425,518	23,479,643	67,288
36	1.22	\$45,267,781	\$49,843,330	2,643,169	27,314,049	72,724
37	1.24	\$44,710,282	\$49,255,026	2,681,697	27,942,010	73,570
38	1.26	\$44,561,008	\$49,097,466	2,690,345	28,101,774	73,776
39	1.28	\$44,315,594	\$48,836,478	2,702,322	28,363,446	74,111
40	1.3	\$44,157,336	\$48,668,663	2,711,755	28,498,561	74,305
41	1.32	\$43,733,823	\$48,221,669	2,734,751	28,902,886	74,788
42	1.34	\$43,005,398	\$47,446,362	2,763,248	29,595,888	75,604
43	1.36	\$42,687,000	\$47,107,268	2,773,964	29,897,076	75,933
44	1.38	\$42,552,277	\$46,963,179	2,777,268	30,027,878	76,064
45	1.42	\$41,595,698	\$45,950,057	2,817,416	30,787,404	76,903

Table 25 –	Hestia Pit l	oy pit table	output –	Reserve Case
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Chart 3 – Hestia Pit by pit graph - Reserve Case



Figure 8 – Eos \$3,000 gold price shell output – Reserve Case



et a a l	<b>D</b>	One of Dit Cost floor	Outer Dit Cost floor	land One	10/	la sud
Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	waste	Input
PIL	Factor	DISC.	Undisc.	Tonnes	Tonnes	Ounces
1	0.64	\$10 601 527	\$10 7/2 226	318 211	2 /72 10/	10 252
2	0.66	\$10,001,537	\$10,743,220	25/ 201	3,473,194	10,235
2	0.00	\$10,752,484	\$10,878,433	/2/ 825	4 302 509	12/98
3	0.08	\$12,055,015	\$12,801,045	793 003	4,302,309	22,498
5	0.7	\$21,381,945	\$22,038,240	838 871	8,300,834	22,854
6	0.72	\$22,033,330	\$22,751,457	865.076	8,702,207	23,732
7	0.74	\$22,424,027	\$23,173,507	893 587	9 045 721	24,275
, 8	0.78	\$23,089,446	\$23,000,013	917 117	9 174 404	25 328
9	0.70	\$23,005,440	\$23,311,030	943 706	9 299 210	25,520
10	0.82	\$23,555,172	\$24,497,100	975 919	9 411 052	26 322
11	0.84	\$23,332,737	\$24,407,502	1 004 065	9 567 921	26,817
12	0.86	\$24 498 969	\$25 560 091	1 112 189	10 165 384	28 733
13	0.88	\$24,681,168	\$25,785,837	1.148.483	10.361.728	29.339
14	0.9	\$24,732,441	\$25,850,764	1.160.011	10.435.600	29,541
15	0.92	\$24,758,203	\$25,888,169	1.170.631	10.461.401	29.684
16	0.94	\$24,772,758	\$25,910,585	1.177.917	10.500.716	29,799
17	0.96	\$24,791,175	\$25,951,635	1.199.947	10.556.690	30.085
18	0.98	\$24.802.482	\$25,991,500	1.228.249	10.738.589	30.541
19	1	\$24,793,816	\$25,997,576	1.243.546	10.769.288	30.724
20	1.02	\$24,543,895	\$25,883,465	1.393.901	12.459.521	33.553
21	1.04	\$24,520,085	\$25.870.057	1.405.768	12,495,067	33.697
22	1.06	\$24,482,434	\$25,843,712	1,419,351	12,545,870	33,868
23	1.08	\$24,429,635	\$25,802,493	1,434,111	12,619,243	34,064
24	1.1	\$23,852,265	\$25,280,608	1,525,505	14,287,222	36,261
25	1.12	\$23,570,930	\$25,021,001	1,565,975	14,878,112	37,059
26	1.14	\$23,500,222	\$24,955,298	1,575,810	14,919,838	37,170
27	1.16	\$22,125,859	\$23,637,035	1,732,967	17,149,508	40,193
28	1.18	\$22,065,906	\$23,578,011	1,738,556	17,199,700	40,270
29	1.2	\$21,848,461	\$23,366,321	1,761,753	17,421,658	40,608
30	1.22	\$21,734,706	\$23,251,068	1,768,980	17,535,167	40,737
31	1.24	\$21,649,179	\$23,165,559	1,775,758	17,607,506	40,838
32	1.26	\$21,554,112	\$23,069,829	1,782,575	17,692,735	40,943
33	1.28	\$21,491,696	\$23,006,287	1,786,297	17,751,357	41,007
34	1.3	\$21,370,179	\$22,883,001	1,794,086	17,845,168	41,124
35	1.32	\$21,177,398	\$22,686,871	1,805,996	17,962,509	41,277
36	1.34	\$21,108,420	\$22,615,193	1,808,566	18,002,551	41,312
37	1.36	\$20,855,575	\$22,354,000	1,819,952	18,215,003	41,516
38	1.38	\$20,450,520	\$21,937,614	1,841,210	18,543,663	41,851
39	1.4	\$20,377,449	\$21,861,142	1,843,504	18,576,927	41,878
40	1.42	\$20,250,267	\$21,728,116	1,847,629	18,673,040	41,951
41	1.44	\$20,126,946	\$21,599,353	1,851,950	18,756,764	42,019
42	1.46	\$20,060,195	\$21,529,176	1,853,725	18,789,669	42,040
43	1.48	\$20,005,658	\$21,471,606	1,854,898	18,811,500	42,052
44	1.5	\$19,914,352	\$21,376,154	1,858,021	18,877,348	42,104
45	1.52	\$19,848,038	\$21,305,290	1,858,412	18,904,582	42,109

## Table 26 – Eos Pit by pit table output – Reserve Case









Figure 9 – Iris \$3,000 gold price shell output – Reserve Case



Final	Revenue	Onen Pit Cashflow	Onen Pit Cashflow	Input Ore	Waste	Input
Dit	Factor	Disc	Undisc	Tonnes	Tonnes	Ounces
	Tuctor	Disci	ondisci	Tonnes	Tonnes	Ounces
1	0.76	\$26 392 020	\$28 565 626	2 075 917	11 858 450	43 028
2	0.78	\$26,608,984	\$28,826,737	2 099 839	11 920 115	43 431
3	0.8	\$27.048.208	\$29,366,391	2,156,907	12,069,365	44.369
4	0.82	\$27 472 350	\$29 901 927	2 222 818	12 216 881	45 394
5	0.84	\$27,584,516	\$30.050.618	2,246.052	12,234,824	45.708
6	0.86	\$27.805.447	\$30,340,758	2.288.843	12.379.588	46.401
7	0.88	\$28.455.618	\$31.241.995	2.450.357	12.920.171	49.006
8	0.9	\$28.601.660	\$31.457.487	2.496.382	13.062.151	49.701
9	0.92	\$30.255.248	\$33,486,846	2,899,307	15.927.185	57.793
10	0.94	\$30.392.670	\$33.693.657	2.950.624	16.259.019	58.781
11	0.96	\$30.447.438	\$33.812.848	3.003.505	16.441.726	59.591
12	0.98	\$30,459,280	\$33,997,782	3,130,403	17,180,713	61,822
13	1	\$30,437,966	\$34.004.598	3,155,833	17.239.211	62.167
14	1.02	\$30,414,669	\$34,001,054	3,171,329	17,254,362	62,346
15	1.04	\$30,369,627	\$33,977,791	3,191,737	17,298,043	62,601
16	1.06	\$30.298.956	\$33,930,610	3.214.623	17.388.836	62.926
17	1.08	\$30,108,301	\$33,774,249	3,253,346	17,702,030	63,640
18	1.1	\$30,004,056	\$33,690,075	3,276,397	17,781,400	63,951
19	1.12	\$29,901,681	\$33,605,266	3,293,804	17,891,160	64,212
20	1.14	\$29,833,219	\$33,546,748	3,307,411	17,906,832	64,357
21	1.16	\$29,437,113	\$33,172,553	3,348,276	18,366,441	65,183
22	1.18	\$29,389,066	\$33,124,253	3,351,949	18,388,054	65,230
23	1.2	\$25,344,265	\$29,179,786	3,699,943	22,323,597	72,392
24	1.22	\$25,057,098	\$28,903,026	3,728,352	22,443,546	72,743
25	1.24	\$24,934,552	\$28,782,281	3,739,035	22,503,843	72,886
26	1.26	\$24,772,931	\$28,624,178	3,751,053	22,602,133	73,057
27	1.28	\$24,317,400	\$28,160,482	3,777,072	22,937,533	73,591
28	1.3	\$23,679,610	\$27,504,636	3,813,416	23,349,696	74,282
29	1.32	\$22,986,885	\$26,766,826	3,853,846	23,768,462	75,026
30	1.34	\$22,540,873	\$26,306,613	3,877,734	24,055,454	75,468
31	1.36	\$22,510,255	\$26,272,680	3,878,973	24,065,366	75,484
32	1.38	\$22,446,631	\$26,207,745	3,881,820	24,084,681	75,516
33	1.4	\$21,584,139	\$25,303,442	3,914,425	24,663,695	76,277
34	1.42	\$21,543,274	\$25,260,609	3,916,077	24,683,342	76,301
35	1.44	\$21,203,646	\$24,906,891	3,929,574	24,881,967	76,552
36	1.46	\$21,102,712	\$24,802,472	3,934,117	24,926,157	76,615
37	1.48	\$20,735,299	\$24,418,937	3,946,463	25,149,289	76,875
38	1.5	\$20,634,156	\$24,306,560	3,950,180	25,181,749	76,924
39	1.52	\$20,580,181	\$24,248,756	3,951,006	25,201,345	76,935
40	1.54	\$20,544,852	\$24,208,919	3,951,006	25,211,483	76,935
41	1.56	\$20,470,899	\$24,131,774	3,952,636	25,249,517	76,965
42	1.58	\$19,145,590	\$22,715,638	3,992,675	25,957,221	77,783
43	1.6	\$19,075,635	\$22,638,573	3,994,327	25,988,772	77,813
44	1.62	\$19,021,387	\$22,577,094	3,994,327	26,004,643	77,813
45	1.64	\$19,010,096	\$22,564,666	3,994,327	26,007,892	77,813

## Table 27 – Iris Pit by pit table output – Reserve Case









Figure 10 – Kamperman \$3,000 gold price shell output – Reserve Case



Prind Revenue Open Pit Casmiow Open Pit Casmiow Input Ore Waste Input   Pit Factor Disc. Undisc. Tonnes Ounces   1 0.32 \$3,670,911 \$3,674,870 28,273 186,137 1,918   2 0.34 \$3,946,145 \$3,950,882 31,467 193,871 2,070   3 0.36 \$4,205,917 \$4,211,325 33,707 207,916 2,210   4 0.38 \$4,729,154 \$4,736,204 39,077 241,421 2,507   5 0.4 \$23,076,530 \$23,360,079 320,334 978,900 13,838   6 0.42 \$25,216,393 \$25,564,766 359,898 1,048,003 15,251   7 0.44 \$54,135,365 \$55,748,947 770,402 3,227,244 34,368   8 0.46 \$56,642,828 \$58,413,571 807,439 3,472,990 36,140   9 0.48 \$61,643,567 \$63,856,733 925,220 3,788,	Final	Devenue	Onen Dit Coshflour	On an Dit Cookflow	In sect One	Masha	land
Pit Pattol Dist. Ondes. Innes Innes Ondes.   1 0.32 \$3,670,911 \$3,674,870 28,273 186,137 1,918   2 0.34 \$3,946,145 \$3,950,882 31,467 193,871 2,070   3 0.36 \$4,205,917 \$4,211,325 33,707 207,916 2,210   4 0.38 \$4,729,154 \$4,736,204 39,077 241,421 2,507   5 0.4 \$23,076,530 \$23,360,079 320,334 978,900 13,838   6 0.42 \$25,216,393 \$25,564,766 359,898 1,048,003 15,251   7 0.44 \$56,642,828 \$58,413,571 807,439 3,472,990 36,140   9 0.48 \$61,643,567 \$63,856,733 925,220 3,788,812 40,100   10 0.5 \$62,005,692 \$64,223,067 933,471 3,802,615 40,373   11 0.52 \$64,177,299 \$66,594,318 969,721 <t< th=""><th>Final</th><th>Revenue</th><th>Open Pit Cashflow</th><th>Open Pit Cashflow</th><th>Input Ore</th><th>waste</th><th>Input</th></t<>	Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	waste	Input
1 $0.32$ $\$3,670,911$ $\$3,674,870$ $28,273$ $186,137$ $1,918$ 2 $0.34$ $\$3,946,145$ $\$3,950,882$ $31,467$ $193,871$ $2,070$ 3 $0.36$ $\$4,205,917$ $\$4,211,325$ $33,707$ $207,916$ $2,210$ 4 $0.38$ $\$4,729,154$ $\$4,736,204$ $39,077$ $241,421$ $2,507$ 5 $0.4$ $\$23,076,530$ $\$23,360,079$ $320,334$ $978,900$ $13,838$ 6 $0.42$ $\$25,216,393$ $\$25,564,766$ $359,898$ $1,048,003$ $15,251$ 7 $0.44$ $\$54,135,365$ $\$55,748,947$ $770,402$ $3,227,244$ $34,368$ 8 $0.46$ $\$56,642,828$ $\$58,413,571$ $807,439$ $3,472,990$ $36,140$ 9 $0.48$ $\$61,643,567$ $\$63,856,733$ $925,220$ $3,788,812$ $40,100$ 10 $0.5$ $\$62,005,692$ $\$64,252,067$ $933,471$ $3,802,615$ $40,373$ 11 $0.52$ $\$64,177,299$ $\$66,594,318$ $969,721$ $4,085,934$ $42,078$ 12 $0.54$ $\$65,663,567$ $\$68,212,853$ $999,074$ $4,228,912$ $43,310$ 13 $0.56$ $\$66,875,744$ $\$69,529,227$ $1,020,638$ $4,520,565$ $44,387$ 14 $0.58$ $\$67,137,654$ $\$69,830,510$ $1,031,526$ $4,530,315$ $44,656$ 15 $0.6$ $\$67,606,070$ $\$70,347,421$ $1,042,605$ $4,631,076$ $45,289$ 17 $0.64$ $\$68,448,019$ $\$7$	PIL	Factor	DISC.	Undisc.	Tonnes	Tonnes	Ounces
1 $0.32$ $3,0,0,0,511$ $3,0,0,4,0,0$ $20,273$ $180,107$ $1,513$ 2 $0.34$ $\$3,946,145$ $\$3,950,882$ $31,467$ $193,871$ $2,070$ 3 $0.36$ $\$4,205,917$ $\$4,211,325$ $33,707$ $207,916$ $2,210$ 4 $0.38$ $\$4,729,154$ $\$4,736,204$ $39,077$ $241,421$ $2,507$ 5 $0.4$ $\$23,076,530$ $\$23,360,079$ $320,334$ $978,900$ $13,838$ 6 $0.42$ $\$25,216,393$ $\$25,564,766$ $359,898$ $1,048,003$ $15,251$ 7 $0.44$ $\$54,135,365$ $\$55,748,947$ $770,402$ $3,227,244$ $34,368$ 8 $0.46$ $\$56,642,828$ $\$58,413,571$ $807,439$ $3,472,990$ $36,140$ 9 $0.48$ $\$61,643,567$ $\$63,856,733$ $925,220$ $3,788,812$ $40,100$ 10 $0.5$ $\$62,005,692$ $\$64,252,067$ $933,471$ $3,802,615$ $40,373$ 11 $0.52$ $\$64,177,299$ $\$66,594,318$ $969,721$ $4,085,934$ $42,078$ 12 $0.54$ $\$65,63,567$ $\$68,212,853$ $999,074$ $4,278,912$ $43,310$ 13 $0.56$ $\$66,875,744$ $\$69,830,510$ $1,031,526$ $4,631,076$ $45,289$ 14 $0.58$ $\$67,137,654$ $\$69,830,510$ $1,031,526$ $4,631,076$ $45,289$ 15 $0.6$ $\$67,606,070$ $$77,347,421$ $1,042,605$ $4,611,360$ $45,102$ 16 $0.62$ $\$67,71,414$ $$7$	1	0.32	\$3,670,011	\$3 674 870	28.225	186 127	1 018
2 0.34 3,3,3,4,1,4 1,3,4,0,7 1,3,6,1 2,0,0   3 0.36 \$4,205,917 \$4,211,325 33,707 207,916 2,210   4 0.38 \$4,729,154 \$4,736,204 39,077 241,421 2,507   5 0.4 \$23,076,530 \$23,360,079 320,334 978,900 13,838   6 0.42 \$25,216,393 \$25,564,766 359,898 1,048,003 15,251   7 0.44 \$54,135,365 \$55,748,947 770,402 3,227,244 34,368   8 0.46 \$56,642,828 \$58,413,571 807,439 3,472,990 36,140   9 0.48 \$61,643,567 \$63,856,733 925,220 3,788,812 40,100   10 0.5 \$62,005,692 \$64,252,067 933,471 3,802,615 40,373   11 0.52 \$64,177,299 \$66,594,318 969,721 4,085,934 42,078   12 0.54 \$65,663,567 \$68,212,853 999,074 4,	2	0.32	\$3,070,911	\$3,074,870	20,273	102 971	2 070
3 0.30 34,203,217 34,211,223 33,07 207,310 22,10   4 0.38 \$4,729,154 \$4,736,204 39,077 241,421 2,507   5 0.4 \$23,076,530 \$23,360,079 320,334 978,900 13,838   6 0.42 \$25,216,393 \$25,564,766 359,898 1,048,003 15,251   7 0.44 \$54,135,365 \$55,748,947 770,402 3,227,244 34,368   8 0.46 \$56,642,828 \$58,413,571 807,439 3,472,990 36,140   9 0.48 \$61,643,567 \$63,856,733 925,220 3,788,812 40,100   10 0.5 \$62,005,692 \$64,252,067 933,471 3,802,615 40,373   11 0.52 \$64,177,299 \$66,594,318 969,721 4,085,934 42,078   12 0.54 \$65,663,567 \$68,212,853 999,074 4,278,912 43,310   13 0.56 \$66,877,744 \$69,529,227 <	2	0.34	\$3,340,143	\$3,950,882	33 707	207 916	2,070
40.5334,729,13434,736,20435,077241,4212,30750.4\$23,076,530\$23,360,079320,334978,90013,83860.42\$25,216,393\$25,564,766359,8981,048,00315,25170.44\$54,135,365\$55,748,947770,4023,227,24434,36880.46\$56,642,828\$58,413,571807,4393,472,99036,14090.48\$61,643,567\$63,856,733925,2203,788,81240,100100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,28,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824	3	0.30	\$4,205,517	\$4,211,323	39,077	207,510	2,210
50.4\$25,070,530\$25,564,766359,8981,048,00315,25170.44\$52,216,393\$25,564,766359,8981,048,00315,25170.44\$54,135,365\$55,748,947770,4023,227,24434,36880.46\$56,642,828\$58,413,571807,4393,472,99036,14090.48\$61,643,567\$63,856,733925,2203,788,81240,100100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,224,0151,103,2344,952,17547,045	- <del>4</del>	0.38	\$23,076,530	\$23,260,079	320 33/	978 900	13 838
00.42923,210,333923,334,760333,6381,048,00313,21170.44\$54,135,365\$55,748,947770,4023,227,24434,36880.46\$56,642,828\$58,413,571807,4393,472,99036,14090.48\$61,643,567\$63,856,733925,2203,788,81240,100100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,611,36045,102150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,24,0151,103,2344,952,17547,045	6	0.4	\$25,070,350	\$25,500,075	359 898	1 0/8 003	15,050
70.44334,133,303333,143,347770,4223227,24434,30380.46\$56,642,828\$58,413,571807,4393,472,99036,14090.48\$61,643,567\$63,856,733925,2203,788,81240,100100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	7	0.42	\$57,210,355	\$25,304,700	770 402	3 227 244	34 368
00.409.0,042,0209.55,415,5110.07,4353,472,53030,44090.48\$61,643,567\$63,856,733925,2203,788,81240,100100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,24,0151,103,2344,952,17547,045	, 8	0.44	\$56.642.828	\$58 /13 571	807.439	3 /72 990	36 140
100.5\$62,005,692\$64,252,067933,4713,802,61540,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	9	0.40	\$50,042,828	\$53,415,571	925 220	3 788 812	40 100
100.53302,003,032303,232,007333,4713,802,01340,373110.52\$64,177,299\$66,594,318969,7214,085,93442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	10	0.48	\$62,005,692	\$64,252,067	022 /71	3 802 615	40,100
110.520.64,177,2550.60,554,316505,7214,003,55442,078120.54\$65,663,567\$68,212,853999,0744,278,91243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	10	0.5	\$67,177,299	\$66 59/ 318	969 721	1 085 93/	40,373
120.54\$05,003,507\$06,212,033555,0744,276,51243,310130.56\$66,875,744\$69,529,2271,020,6384,520,56544,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	12	0.52	\$65 663 567	\$68 212 853	999,721	4,085,954	42,078
130.30303,313,344303,323,2271,022,0384,320,30344,387140.58\$67,137,654\$69,830,5101,031,5264,530,31544,656150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	12	0.54	\$66 875 744	\$60,212,055	1 020 638	4,270,512	43,310
140.38\$07,137,034\$05,830,5101,031,5204,330,313444,030150.6\$67,606,070\$70,347,4211,042,6054,611,36045,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	14	0.50	\$67,127,654	\$69,323,227	1,020,038	4,520,505	44,587
150.6\$07,000,070\$70,547,4211,042,0034,011,30043,102160.62\$67,771,414\$70,537,5301,049,3224,631,07645,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	14	0.58	\$67,537,034	\$09,830,310	1,031,520	4,550,515	44,030
100.02\$07,771,414\$70,337,3301,043,3224,031,07043,289170.64\$68,448,019\$71,282,5961,064,3564,815,61645,998180.66\$68,694,840\$71,568,8541,075,0664,851,82246,293190.68\$68,829,894\$71,728,5031,081,9954,874,31746,473200.7\$69,184,948\$72,144,3921,098,6824,948,49646,950210.72\$69,249,286\$72,224,0151,103,2344,952,17547,045	16	0.0	\$67,000,070	\$70,547,421	1,042,005	4,011,300	45,102
17 0.64 \$66,448,015 \$71,282,350 1,004,350 4,613,016 43,558   18 0.66 \$68,694,840 \$71,568,854 1,075,066 4,851,822 46,293   19 0.68 \$68,829,894 \$71,728,503 1,081,995 4,874,317 46,473   20 0.7 \$69,184,948 \$72,144,392 1,098,682 4,948,496 46,950   21 0.72 \$69,249,286 \$72,224,015 1,103,234 4,952,175 47,045	10	0.62	\$68 4/8 010	\$70,337,330	1,049,322	4,031,070	45,289
18 0.68 \$68,829,894 \$71,728,503 1,081,995 4,874,317 46,473   20 0.7 \$69,184,948 \$72,144,392 1,098,682 4,948,496 46,950   21 0.72 \$69,249,286 \$72,224,015 1,103,234 4,952,175 47,045	10	0.04	\$68 604 840	\$71,282,330	1,004,330	4,813,010	45,338
19 0.08 \$08,829,894 \$71,728,303 1,081,993 4,674,317 40,473   20 0.7 \$69,184,948 \$72,144,392 1,098,682 4,948,496 46,950   21 0.72 \$69,249,286 \$72,224,015 1,103,234 4,952,175 47,045	10	0.00	\$08,034,840	\$71,308,834	1,075,000	4,851,822	40,293
20 0.7 309,184,948 372,144,352 1,098,082 4,948,450 40,950   21 0.72 \$69,249,286 \$72,224,015 1,103,234 4,952,175 47,045	20	0.08	\$00,029,094	\$71,720,303	1,001,995	4,074,317	40,473
21 0.72 303,243,280 372,224,013 1,103,234 4,332,173 47,043	20	0.7	\$60,240,286	\$72,144,332	1,098,082	4,948,490	40,950
	21	0.72	\$09,249,280	\$72,224,013	1,105,234	4,932,173	47,045
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	0.74	\$09,270,440	\$72,235,440	1,105,810	4,935,299	47,093
25 0.70 \$05,056,005 \$72,055,362 1,120,054 5,055,052 47,715   24 0.79 \$60,671,741 \$72,722,529 1,129,101 5,109,125 47,715	23	0.70	\$05,056,005	\$72,055,562	1,120,094	5,095,092	47,719
24 0.78 \$05,071,741 \$72,755,556 1,126,101 5,106,125 47,778   25 0.8 \$60,757,020 \$72,841,210 1,124,510 5,149,610 47,060	24	0.78	\$05,071,741	\$72,755,556	1,128,101	5,108,125	47,778
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25	0.8	\$09,737,930	\$72,841,510	1,134,310	5,140,010	47,900
20 0.02 309,032,334 372,930,715 1,140,797 5,194,341 40,136   27 0.94 \$70,009,696 \$72,366,090 1,160,207 5,431,672 48,913	20	0.82	\$09,652,554	\$72,950,715	1,140,797	5,194,541	40,150
27 0.04 \$70,098,080 \$73,200,080 1,159,207 5,421,075 46,615   28 0.96 \$70,102,404 \$72,202,415 1,169,070 5,505,982 40,105	27	0.84	\$70,090,000	\$75,200,060	1,159,207	5,421,075	40,015
28 0.00 \$70,135,404 \$75,552,415 1,106,575 5,505,882 45,105   20 0.99 \$70,225,967 \$72,456,164 1,175,900 5,555,015 40,294	20	0.80	\$70,195,404	\$73,352,413	1,108,979	5,505,882	49,103
29 0.08 \$70,255,807 \$75,450,104 1,175,690 5,555,915 49,264   20 0.0 \$70,251,607 \$72,502,500 1,182,227 5,500,500 40,428	29	0.88	\$70,255,607	\$75,450,104	1,175,690	5,555,915	49,204
50 0.9 \$70,201,502 \$75,505,559 1,165,257 5,369,009 49,456   21 0.02 \$70,217,606 \$72,504,045 1,104,959 5,712,055 40,707	21	0.9	\$70,201,502	\$73,505,559	1,105,257	5,569,009	49,430
31 0.32 \$70,517,050 \$73,594,345 1,154,858 5,713,055 45,757   32 0.04 \$70,217,860 \$73,508,686 1,106,130 5,713,605 49,757	22	0.92	\$70,317,090	\$73,594,945	1,194,838	5 712 642	49,797
32 0.54 \$70,517,800 \$73,598,060 1,190,130 5,713,042 49,810   22 0.06 \$70,220,704 \$72,665,667 1,211,775 5,954,514 50,247	22	0.94	\$70,317,800	\$73,538,080	1,130,130	5,715,042	49,810 50.247
33 0.50 \$70,333,754 \$73,003,507 1,211,775 5,634,514 50,247   34 0.08 \$70,225,056 \$73,671,002 1,215,500 5,868,015 50,247	34	0.90	\$70,339,794	\$73,003,307	1,211,775	5 868 015	50,247
34 0.38 \$70,535,050 \$73,071,052 1,215,505 5,608,515 50,517   35 1 \$70,257,864 \$73,677,650 1,246,647 6,240,413 51,345	25	0.98	\$70,353,050	\$73,071,032	1,215,503	6 3/0 /13	51 2/15
35 1 370,257,804 373,077,030 1,240,047 0,343,413 31,343   36 1.02 \$70,251,264 \$73,676,205 1.248,627 6.252,855 51,345	35	1 02	\$70,257,804	\$73,077,050	1,240,047	6 352 855	51,345
30 1.02 370,231,304 373,070,335 1,240,027 0,332,835 51,375   37 1.04 \$70,246,142 \$73,674,708 1.240,026 6.255,783 51,375	30	1.02	\$70,251,304	\$73,070,395	1,248,027	6 355 783	51,375
37 1.04 370,240,142 373,074,708 1,243,370 0,333,783 31,337   38 1.06 \$70,222,870 \$73,668,226 1.252,660 6.262,607 51,443	20	1.04	\$70,240,142	\$73,674,708	1,249,970	6 363 607	51,397
30 1.00 370,232,070 373,000,320 1,232,000 0,303,007 31,445   30 1.08 \$70,201,200 \$73,644,440 1.255,000 6,424,577 51,545	20	1 02	\$70,232,670	\$73,000,320	1 255 022	6 / 2/ 577	51,445
3.5 1.00 370,201,200 373,044,445 1,233,300 0,424,377 31,335   40 1.1 \$70,106,007 \$73,640,022 1,256,320 6,421,102 51,555	<u> </u>	1 1	\$70,201,200	\$73,044,443	1 256 220	6/21 107	51,555
+0 1.1 \$70,130,037 \$73,040,062 1,230,533 0,431,132 31,307   /1 1.12 \$70,184,055 \$72,621,104 1.257,641 6.442,429 51,507	40 //1	1 1 2	\$70,190,097	\$73,040,002	1 257 6/1	6 112 120	51,507
+1 1.12 \$70,104,000 \$70,001,104 1,207,041 0,442,430 51,000   42 1.14 \$70,060,024 \$72,500,050 1.264,605 6,501,700 51,000	41 // 2	1 1 1	\$70,104,000	\$73,031,104	1 26/ 605	6 501 700	51 957
+2 1.1+ 370,003,03+ 373,323,333 1,204,003 0,331,760 31,037   //3 1.16 \$70,006,821 \$73,512,758 1.266,787 6.602,505 51,037	42 //2	1 16	\$70,005,054	\$73,525,555	1 266 797	6 602 505	51 802
+3 1.10 \$70,040,021 \$73,512,730 1,200,707 0,002,305 51,095   44 1.18 \$70,040,021 \$73,512,730 1.200,707 0,002,305 51,095	45 ///	1 1 2	\$70,040,021	\$73,512,750	1 267 107	6 604 002	51,055
45 1 2 \$69,888,185 \$73,360,630 1 275,107 6,004,032 51,657	-++ 45	1.10	\$69 828 185	\$73,367,014	1 275 1/2	6 736 /62	57 125

## Table 28 – Kamperman Pit by pit table output – Reserve Case



Chart 6 – Kamperman Pit by pit graph - Reserve Case



Figure 11 – Rogan Josh \$3,000 gold price shell output – Reserve Case



Final	Povonuo	Onen Dit Cashflour	Onen Dit Cashflow	Input Oro	Wasta	Innut
Final Dit	Factor	Disc		Toppos	Toppos	Input
PIL	Factor	DISC.	Unuisc.	Tonnes	Tonnes	Ounces
1	0.38	\$2 128 805	\$2 130 524	21 177	161 156	1 281
2	0.30	\$2,351,531	\$2,150,524	24 075	170 926	1 416
3	0.4	\$2,399,206	\$2,353,651	24,075	173 262	1 446
4	0.42	\$8 202 978	\$8 232 164	93 160	828 367	5 319
5	0.46	\$9,004,337	\$9,040,988	106 549	882 470	5 879
6	0.48	\$9,212,342	\$9 251 445	111 103	893 537	6.037
7	0.5	\$9,212,342	\$9,251,445	115 278	913 406	6 199
8	0.52	\$9,664,632	\$9,709,253	120 824	930 786	6 388
9	0.52	\$9,755,254	\$9 801 273	123,024	932 380	6 463
10	0.56	\$10 018 748	\$10,068,462	129,835	970 793	6 694
11	0.58	\$10,018,748	\$10,215,443	134 388	984 593	6 828
12	0.6	\$10,245,459	\$10,299,106	136 987	990.095	6 903
13	0.62	\$13 742 622	\$13 852 431	208 756	2 184 880	10 355
14	0.64	\$14 025 166	\$14 142 762	219 014	2 229 855	10,656
15	0.66	\$14,171,011	\$14,292,813	224,489	2,256,103	10.816
16	0.68	\$14 818 632	\$14 960 295	249 565	2 418 549	11 581
17	0.7	\$14.977.705	\$15,125,362	257.322	2.439.817	11.779
18	0.72	\$15.079.303	\$15.230.939	262.449	2.463.777	11.917
19	0.74	\$15.221.936	\$15.379.127	269.480	2.506.742	12.119
20	0.76	\$15.577.481	\$15.751.077	290.692	2.626.754	12.699
21	0.78	\$16.334.971	\$16,545,353	335.667	3.070.395	14.050
22	0.8	\$16.465.908	\$16.684.629	346.128	3.113.966	14.297
23	0.82	\$16,539,353	\$16,763,716	353.431	3.140.869	14.460
24	0.84	\$16.736.195	\$16.976.159	373.417	3.256.164	14.942
25	0.86	\$16.770.584	\$17.014.136	378.189	3.264.449	15.034
26	0.88	\$16.799.936	\$17.046.966	382,885	3.278.878	15.128
27	0.9	\$16.853.248	\$17.107.399	392,603	3.319.942	15.332
28	0.92	\$16.870.935	\$17.128.468	397.375	3.327.022	15.418
29	0.94	\$16,898,005	\$17,161,254	405,481	3,368,103	15,585
30	0.96	\$16,913,715	\$17,182,997	414,319	3,392,949	15,747
31	0.98	\$16,915,574	\$17,187,542	418,373	3,400,919	15,816
32	1	\$16,918,380	\$17,224,357	470,146	3,861,274	17,021
33	1.02	\$16,908,501	\$17,219,950	478,756	3,887,574	17,172
34	1.04	\$16,889,943	\$17,207,234	488,183	3,917,570	17,335
35	1.06	\$16,857,224	\$17,181,038	499,082	3,965,168	17,529
36	1.08	\$16,839,669	\$17,165,685	502,962	3,993,676	17,607
37	1.1	\$16,772,177	\$17,105,261	515,809	4,079,840	17,849
38	1.12	\$16,738,448	\$17,074,024	520,666	4,094,960	17,923
39	1.14	\$16,706,061	\$17,043,702	524,843	4,113,656	17,992
40	1.16	\$16,648,600	\$16,988,824	530,625	4,157,377	18,097
41	1.18	\$16,586,997	\$16,929,981	536,853	4,189,807	18,197
42	1.2	\$16,379,899	\$16,730,877	556,107	4,356,712	18,550
43	1.22	\$16,355,412	\$16,706,685	557,394	4,366,319	18,570
44	1.24	\$15,907,804	\$16,270,780	591,781	4,668,534	19,192
45	1.26	\$15,843,146	\$16,207,426	596,278	4,707,216	19,270

Table 29 – Rogan Josh Pit by pit table output – Reserve Case








Figure 12 – Think Big \$3,000 gold price shell output – Reserve Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
1	0.2	¢22,227,401	¢22.4E8.810	142 101	880.604	11.025
2	0.3	\$22,557,401	\$22,436,610	142,101	016 444	11,925
2	0.32	\$23,070,555	\$25,821,099	157,455	910,444	12,720
5	0.34	\$24,650,500	\$25,000,094	172,410	952,027	13,435
4 5	0.30	\$25,747,000	\$25,927,754	200 129	947,630	15,990
5	0.38	\$20,004,074	\$27,030,331	200,138	1 106 244	14,737
7	0.4	\$29,555,267	\$25,824,075	255,771	1,100,244	10,556
/ 0	0.42	\$20,807,190	\$51,110,176	201,700	1,145,259	17,445
0	0.44	\$31,900,003	\$32,511,610	200,003	1,103,092	18,324
10	0.40	\$32,043,823	\$33,024,300	216 / 27	1,174,074	10,220
10	0.48	\$35,230,842	\$33,034,403	310,437	1,180,391	20 196
12	0.5	\$34,234,203	\$354,741,885	350 666	1,255,024	20,190
12	0.52	\$35,002,400	\$35,145,102	361 307	1,204,303	20,325
1/	0.54	\$36,059,518	\$35,545,705	301,337	1,277,370	20,800
15	0.50	\$36,372,426	\$36,004,510	/03 917	1,300,230	21,054
16	0.58	\$36,772,420	\$30,330,636	405,517	1,370,037	22,107
17	0.0	\$37,088,118	\$37,337,230	/31 759	1 / 31 333	22,502
18	0.62	\$37,310,250	\$37,705,055	431,735	1 443 927	22,557
10	0.66	\$37,510,250	\$37,545,005	442,511	1,445,527	23,230
20	0.00	\$37,507,100	\$38,139,182	452,001	1,450,945	23,477
20	0.00	\$37,031,713	\$30,233,400	560 847	2,006,426	25,042
21	0.7	\$39,779,013	\$40,039,330	580,347	2,000,420	20,701
22	0.72	\$40,273,737	\$41,105,407	621 / 3/	2,100,227	27,402
23	0.74	\$40,889,238	\$41,055,512	639 120	2,145,505	28,173
24	0.70	\$41,057,223	\$42,097,770	653 760	2,100,575	28,555
25	0.78	\$41,037,223	\$42,055,552	661 647	2,223,312	28,550
20	0.82	\$41,201,134	\$42,100,005	670 192	2,240,552	29,114
27	0.82	\$41,201,134	\$42,207,405	677 338	2,245,874	29,285
20	0.86	\$41 340 582	\$42,328,757	691 766	2,235,205	29,432
30	0.88	\$41 386 177	\$42,508,662	701 943	2,234,300	29,730
31	0.00	\$41,300,177	\$42,553,002	710 784	2,307,300	30,096
32	0.92	\$41 479 473	\$42,655,075	733.069	2 391 385	30 564
33	0.94	\$41 505 529	\$42,701,667	745 233	2 448 954	30,832
34	0.96	\$41,508,110	\$42,711,282	749.507	2,452,234	30,906
35	0.98	\$41,507,726	\$42,719,437	754,758	2,467.089	31.006
36	1	\$41,500,104	\$42,721,237	760.680	2.472.950	31,104
37	1.02	\$41.485.467	\$42.717.361	767.553	2.483.893	31.221
38	1.04	\$41,407.998	\$42,682.088	794.912	2.577.026	31.713
39	1.06	\$41.356.355	\$42,647.021	806.087	2.647.048	31.951
40	1.08	\$41,318.327	\$42,621.635	814.599	2,659.888	32,087
41	1.1	\$41,297,812	\$42,606,354	818,220	2,664,154	32,143
42	1.12	\$41,283,572	\$42,593,251	819,198	2,669.051	32,159
43	1.14	\$41,256,805	\$42,570,432	822,154	2,679,653	32,208
44	1.16	\$41,234,930	\$42,551,596	824,457	2,688,054	32,246
45	1.18	\$41,227,922	\$42,544,364	824,457	2,690,346	32,246

# Table 30 – Think Big Pit by pit table output – Reserve Case





Chart 8 – Think Big Pit by pit graph - Reserve Case

## 6.1.4. Sensitivity Analysis

Sensitivity analyses were performed on the Mandilla and Feysville Resources. The sensitivities were carried out on the base case optimisation parameters.

The following sensitivity analyses were completed:

- Sell price variations at -20%, -10%, +10% and +20%
- Processing cost variations at -20%, -10%, +10% and +20%
- Mining cost variations at -20%, -10%, +10% and +20%

As the following sensitivity graphs illustrate, the cashflow and material movements of the project vary proportionally to the independent variable. This would suggest that, should operating costs or metal sell price change, a linear outcome from materials mined to cashflow can be expected.



#### 6.1.4.1. Theia Sensitivities



Chart 9 – Theia Undiscounted cashflow sensitivity analysis – Reserve Case



Chart 10 - Theia Plant feed tonnes sensitivity analysis - Reserve Case





Chart 11 – Theia Mined contained gold sensitivity analysis – Reserve Case

#### 6.1.4.2. Hestia Sensitivities



Chart 12 – Hestia Undiscounted cashflow sensitivity analysis – Reserve Case





Chart 13 – Hestia Plant feed tonnes sensitivity analysis - Reserve Case



Chart 14 – Hestia Mined contained gold sensitivity analysis – Reserve Case

### 6.1.4.3. Eos Sensitivities



Chart 15 – Eos Undiscounted cashflow sensitivity analysis – Reserve Case



Chart 16 – Eos Plant feed tonnes sensitivity analysis - Reserve Case





Chart 17 – Eos Mined contained gold sensitivity analysis – Reserve Case

## 6.1.4.4. Eos Sensitivities



Chart 18 – Iris Undiscounted cashflow sensitivity analysis – Reserve Case





Chart 19 – Iris Plant feed tonnes sensitivity analysis - Reserve Case



Chart 20 – Iris Mined contained gold sensitivity analysis – Reserve Case



### 6.1.4.5. Kamperman Sensitivities



Chart 21 – Kamperman Undiscounted cashflow sensitivity analysis – Reserve Case



Chart 22 – Kamperman Plant feed tonnes sensitivity analysis - Reserve Case





Chart 23 - Kamperman Mined contained gold sensitivity analysis - Reserve Case

### 6.1.4.6. Rogan Josh Sensitivities



Chart 24 - Rogan Josh Undiscounted cashflow sensitivity analysis - Reserve Case





Chart 25 – Rogan Josh Plant feed tonnes sensitivity analysis - Reserve Case



Chart 26 – Rogan Josh Mined contained gold sensitivity analysis – Reserve Case



### 6.1.4.7. Think Big Sensitivities



Chart 27 – Think Big Undiscounted cashflow sensitivity analysis – Reserve Case



Chart 28 – Think Big Plant feed tonnes sensitivity analysis - Reserve Case





Chart 29 – Think Big Mined contained gold sensitivity analysis – Reserve Case

## 6.1.5. Pit Designs

The following pit designs are based on the parameters outlined previously. The pit shapes were created based on the revenue 1 factor output shell.

The Mandilla designs utilise ramp widths of 30 metres for dual lanes and 20 metres for single lanes. These widths were chosen to accommodate a 190-tonne truck mining fleet. The Feysville designs have ramp widths of 25 and 15 meters for dual and single lanes respectively. These widths were used to support a 90-tonne trucking fleet.



#### 6.1.5.1. Theia Stage 1 Pit Design



Figure 13 – Theia stage 1 pit design – Plan view – Reserve Case

#### 6.1.5.2. Theia Stage 2 Pit Design



Figure 14 – Theia stage 2 pit design – Plan view - Reserve Case

#### 6.1.5.3. Theia All Pit Designs

The following figure illustrates stage 1 and 2 of Theia overlaid together. For perspective, note that the final Theia design has a total vertical depth of 375 metres.



Figure 15 – Theia Stage 1 and 2 pit design - Plan view - Reserve Case



## 6.1.5.4. Hestia Pit Design

Figure 16 – Hestia pit design - Plan view - Reserve Case



#### 6.1.5.5. Eos Pit Design



Figure 17 – Eos Pit design - Plan view - Reserve Case



### 6.1.5.6. Iris Pit Design

Figure 18 – Iris pit design – Plan view - Reserve Case



#### 6.1.5.7. Kamperman Pit Design



Figure 19 – Kamperman pit design – Plan view - Reserve Case

### 6.1.5.8. Rogan Josh Pit Design



Figure 20 – Rogan Josh pit design – Plan view - Reserve Case



#### 6.1.5.9. Think Bit Pit Design



Figure 21 – Think Big pit design – Plan view - Reserve Case

## 6.1.6. Group Ore Reserves (Mandilla and Feysville)

Table 31 shows the Ore Reserves. These are based on the Resources at both the Mandilla and Feysville projects and only take into account the Measured and Indicated Resource classification material.

A mining production, stockpiling and process feed schedule was completed using the detailed final and staged pit designs for the Reserve Case. This schedule treated all material classified as inferred as waste and forms the basis of the reported Ore Reserves for the project. The results of the Reserves Case schedule demonstrate that the project is economically viable considering all relevant factors, test work and design criteria, culminating in a financial analysis with favourable economic metrics.

Resource	Proven (Mt)	g/t	Ounces (koz)	Probable (Mt)	g/t	Ounces (koz)	Total (Mt)	g/t	Ounces (koz)		
		Mandilla									
Theia	-	-	-	28.0	0.9	829	28.0	0.9	829		
Hestia	-	-	-	2.1	0.9	60	2.1	0.9	60		
Eos	-	-	-	1.2	1.2	47	1.2	1.2	47		
Iris	-	-	-	2.9	0.6	58	2.9	0.6	58		
Total - Mandilla	-	-	-	34.3	0.9	1,000	34.3	0.9	1,000		
					<u>Feysville</u>						
Kamperman	-	-	-	1.1	1.2	45	1.1	1.2	45		
Rogan Josh	-	-	-	0.4	1.1	12	0.4	1.1	12		
Think Big	-	-	-	0.8	1.2	30	0.8	1.2	30		
Total - Feysville	-	-	-	2.3	1.2	88	2.3	1.2	88		
Total	-	-	-	36.6	0.9	1,082	36.6	0.9	1,082		
Ore Reserves are a	subset of Mineral H	Resources									

#### Table 31 – Ore Reserves

Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.

The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

The Ore Reserves for Mandilla are reported at a cut-off grade of 0.30 g/t Au lower cut-off and Feysville are reported at a cut-off grade of 0.40 g/t Au lower cut-off.



This study summaries the material information pursuant to ASX Listing Rule 5.9. Additional information required by ASX Listing Rule 5.9 is summarised in section 4.5. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is provided in section 23.

# 6.2. Production Case – Mandilla & Feysville

## 6.2.1. Pit Optimisation

Prior to any pit optimisations being performed for the production case, the Mandilla and Feysville Resource models were first regularised to a 5mE x 6.25mN x 5mZ and 5mE x 5mN x 5mZ selective mining unit (**SMU**) respectively. This results in a more realistic excavation size and inherently introduces mining dilution and recovery factors into the models which more closely represents real world inclusions.

The regularised model was then coded to include mining costs, geotechnical zones and independent rock types based on a combination of weathering profiles and material JORC classifications. The models were then imported into the optimisation software and had additional parameters applied to them.

As this is the Production case, the Measured, Indicated and Inferred classifications were taken into consideration for possible economic material.

## 6.2.2. Pit Optimisation Parameters

The following are the parameters applied to the Mandilla and Feysville Resource block models in the optimisation process. These parameters were all sourced from either PFS / DFS level studies completed by Astral or cost quotations requested by Astral from suppliers.

#### 6.2.2.1. Slope Sets

PFS level geotechnical studies were completed on all the Mandilla and Feysville deposits. The results were utilised for the optimisation and design phases of this study. Please refer to following table for the slope parameters used.

Geotechnical Domain	Material Type	Bench Height (m)	Bench Face Angle (°)	Spill Berm Width (m)	Inter-Ramp Angle (°)
	Transported/Oxide	10	45	5	34
Theia and Iris	Transitional	20	60	9	44
	Fresh	20	75	9	54
	Transported/Oxide	10	50	6.5	34
Hestia and Eos	Transitional	15	65	7.5	46
	Fresh	20	70	9	51
	Transported/Oxide	10	50	6.5	34
Kamperman, Rogan Josh and Think Big	Transitional	20	60	9	46
	Fresh	20	75	9	54

Table 32 – Pit optimisation slope parameters

#### 6.2.2.2. Exchange Rates

All costs and revenues are in Australian dollars.

#### 6.2.2.3. Processing Throughput

A processing throughput of 2.5Mtpa was used for the optimisation. This is based on the early PFS work which contemplated a 2.5Mtpa processing plant be constructed at the Mandilla project.

#### 6.2.2.4. Processing Recoveries

The following table shows the processing recoveries used on the Mandilla and Feysville Resources. It should be noted that the fresh material in the Think Big Resource was not considered due to metallurgical testing showing the potential for poor gold recoveries (< 85%), further gravity and leach testing is warranted prior to its inclusion in further studies.

## Table 33 – Processing Recoveries

Resource	Material Type	Processing Recovery
	Oxide	96%
Mandilla (Theia, Iris, Hestia and Eos)	Transitional	96%
	Fresh	96%
	Oxide	96%
Kamperman	Transitional	96%
	Fresh	96%
	Oxide	90%
Rogan Josh	Transitional	90%
	Fresh	90%
Think Dia	Oxide	89%
типк ыз	Transitional	86%

#### 6.2.2.5. Processing Costs

A processing cost of \$25.55/t and \$35.55/t was applied to the Mandilla and Feysville optimisations respectively. These values were derived from the PFS processing study as well as also include an allowance for site general and administrative (**G&A**) costs and grade control.

A haulage cost of \$10/t was applied to the Feysville processing cost to represent the trucking distance to Mandilla.

#### 6.2.2.6. Economic Cut-Off Grade (COG)

A calculated cut-off grade of 0.28g/t Au for Mandilla and 0.42g/t Au Feysville was utilised. This is based on the following cut-off grade formula, which is automatically calculated in Whittle.

Cut-Off Grade = Mine Dilution x Process Cost Process Recovery x (Gold Price - Sell Cost)

#### 6.2.2.7. Mining Costs

Astral submitted a Request for Quotation (RFQ) to several mining contractors. The RFQ was based on wet hire and included both load & haul and drill & blast.

The Mandilla project is planned to support 2 x 190t trucking fleets whereas Feysville will utilise 1 x 90t trucking fleet.

Astral selected the mid-point of the returned RFQ's with the view that these costs would provide a fair representation of the mining costs for the PFS study.

The selected mining costs were coded into the Resource model by bench to use in the optimisations. The average cost output from the optimisation are as follows:



Resource	Average Optimised Mining Cost (\$/t)
Theia	\$3.74
Hestia	\$2.74
Eos	\$2.44
Iris	\$3.12
Kamperman	\$3.45
Rogan Josh	\$2.48
Think Big	\$2.69

#### Table 34 – Average Optimised Mining Cost

#### 6.2.2.8. Mining Dilution and Recoveries

The original Mineral Resource models were regularised from variable block sized models to a 5mE x 6.25mN x 5mZ for the Mandilla and 5mE x 5mN x 5mZ model for the Feysville models. This resulted in a more realistic SMU size and inherently introduced mining dilution and recovery factors as a result. As such, no mining dilution or recovery factors were added as part of the optimisation process.

## 6.2.2.9. Commodity Price

A gold sell price of \$3,000/oz was used for the base case optimisation.

#### 6.2.2.10. Royalties

A 2.5% government royalty was used for Mandilla with an additional 0.3% added to Feysville to account for a potential native title royalty that is currently being negotiated.

#### 6.2.2.11. Discount Rate

A discount rate of 10% was used as a base case for the optimisation.

#### 6.2.2.12. Input Summary

The table below shows a summary of the parameters used in the optimisations as per the above section.



Item	Value	Unit	Comment
Mining			
Average Cost			
Mandilla	\$3.01	t	Average output mining cost. Cost coded in BM by bench. Drill and blast included.
Feysville	\$2.87		
Dilution		%	Dilution introduced in the regularised models
Recovery		%	Recovery factor introduced in the regularised models
Processing			
Cost			
Mandilla	\$25.55	t	Includes processing, G&A and grade control
Feysville \$35.55		t	Includes processing, G&A, grade control and 70km of ore haulage to Mandilla
Recovery Mandilla & Kamporman	0.6%		
	96%	%	
Think Big	89%. 86%		Oxide, transitional
Throughput	2.5	Mtpa	Planned plant throughput size
Selling			
Price	3,000.00	oz	
Selling Cost			
Mandilla	2.5%	oz	State Royalty
Feysville	2.8%		State Royalty and third-party royalties
Discount Rate	10	%	

## Table 35 – Optimisation input summary

## 6.2.3. Optimisation Results

The following tables and figures show the results of the optimisations.

Revenue factor refers to the varied base gold price of \$3,000/oz used to generate the different pit shells. For the revenue factor 1 shell was selected for each Resource as the basis for their respective designs.



Figure 22 – Theia \$3,000 gold price shell output – Production Case



Final	Revenue	Onen Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Dit	Factor	Disc	Undisc	Tonnes	Tonnes	Ounces
	ractor	Disci	ondisci	Tonnes	Tonnes	Ounces
1	03	\$146 107 750	\$156 915 727	1 871 902	4 997 305	79 488
2	0.32	\$154 328 923	\$166 608 121	2 008 135	5 280 305	84 639
3	0.34	\$270 468 213	\$308 341 667	4 058 720	13 970 798	165 154
4	0.36	\$277 968 190	\$318 913 017	4,050,720	14 394 896	171 439
5	0.38	\$293 811 572	\$342 625 700	4 740 643	15 370 237	185 804
6	0.4	\$484 121 267	\$655 406 633	11 206 233	31 723 209	383 682
7	0.42	\$493.335.523	\$673,903,468	11.582.328	32.876.414	395.384
8	0.44	\$533,233,463	\$756,402,285	13.082.518	40.010.671	448.632
9	0.46	\$542.232.106	\$777.217.511	13.517.781	41.589.749	462.462
10	0.48	\$552.725.113	\$803.966.851	14.097.324	44.041.521	480.901
11	0.5	\$557,706,784	\$817.534.574	14,487,808	44.887.780	490.910
12	0.52	\$565,587,753	\$844,815,258	15,332,323	47,392,397	512,322
13	0.54	\$570,914,677	\$859,763,612	15,804,799	48,685,615	524,198
14	0.56	\$573,450,021	\$867,702,841	16,070,214	49,449,731	530,766
15	0.58	\$599,638,572	\$965,192,098	19,325,800	61,614,554	616,360
16	0.6	\$602,568,225	\$979,805,175	19,819,244	63,614,598	629,351
17	0.62	\$609,159,143	\$1,006,998,473	20,691,568	68,201,282	654,629
18	0.64	\$609,590,841	\$1,014,285,618	20,953,264	69,459,370	661,600
19	0.66	\$609,644,052	\$1,029,660,054	21,591,585	72,700,175	677,479
20	0.68	\$623,497,786	\$1,213,686,331	28,879,062	113,949,524	878,681
21	0.7	\$622,278,753	\$1,223,195,506	29,331,293	115,977,264	889,812
22	0.72	\$620,328,432	\$1,229,784,164	29,657,160	117,710,799	897,979
23	0.74	\$618,735,471	\$1,233,721,502	29,883,806	118,840,958	903,242
24	0.76	\$614,173,831	\$1,249,209,874	30,773,163	123,898,276	925,266
25	0.78	\$612,161,582	\$1,260,683,907	31,449,106	128,137,499	942,895
26	0.8	\$604,762,854	\$1,287,123,830	33,193,874	138,728,449	986,560
27	0.82	\$602,869,947	\$1,289,897,709	33,413,277	140,072,746	991,618
28	0.84	\$575,359,371	\$1,321,473,942	36,064,682	160,270,647	1,057,068
29	0.86	\$572,899,102	\$1,325,612,617	36,487,474	162,630,537	1,066,722
30	0.88	\$566,146,043	\$1,333,046,893	37,298,377	168,513,741	1,086,654
31	0.9	\$560,211,002	\$1,337,845,889	37,916,774	173,199,916	1,101,822
32	0.92	\$555,736,391	\$1,339,888,749	38,311,559	175,683,992	1,110,348
33	0.94	\$554,397,699	\$1,340,305,105	38,414,662	176,276,366	1,112,413
34	0.96	\$552,301,226	\$1,340,783,314	38,593,800	177,399,073	1,116,108
35	0.98	\$546,831,788	\$1,341,498,835	38,961,036	180,372,669	1,124,393
36	1	\$544,185,520	\$1,341,594,128	39,228,034	182,407,322	1,130,495
37	1.02	\$543,082,577	\$1,341,536,396	39,317,860	182,931,069	1,132,202
38	1.04	\$539,240,394	\$1,340,942,422	39,594,460	185,904,818	1,139,464
39	1.06	\$536,704,989	\$1,340,288,379	39,788,047	187,504,215	1,143,744
40	1.08	\$533,754,487	\$1,339,386,403	39,986,161	189,197,592	1,148,060
41	1.1	\$529,156,552	\$1,338,193,579	40,215,530	191,263,633	1,152,520
42	1.12	\$528,029,258	\$1,337,610,712	40,298,769	191,965,242	1,154,325
43	1.14	\$525,408,763	\$1,336,426,256	40,439,319	193,334,505	1,157,349
44	1.16	\$522,839,193	\$1,334,813,215	40,603,897	194,910,680	1,160,911
45	1.18	\$521,189,200	\$1,333,616,902	40,717,863	195,920,386	1,163,261

# Table 36 – Theia Pit by pit table output – Production Case



Chart 30 – Theia pit by pit graph - Production Case



Figure 23 – Hestia \$3,000 gold price shell output – Production Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
1	0.52	\$7.080.561	\$7.122.861	156.235	1.437.626	5.266
2	0.54	\$21.135.500	\$21,560,413	522.106	3.584.700	16.133
3	0.56	\$21,921,319	\$22,378,480	541.394	3.754.306	16.777
4	0.58	\$24,998,257	\$25.603.685	627.693	4.522.083	19.462
5	0.6	\$27,527,522	\$28,279,621	707.037	5.120.832	21.798
6	0.62	\$31,533,286	\$32,547,904	830,690	6,203,266	25,702
7	0.64	\$33.674.843	\$34,866,056	911.830	6.809.932	27.958
8	0.66	\$37.975.757	\$39,586,260	1.089.446	8.226.567	32.869
9	0.68	\$38,050,746	\$39,669,136	1,092,558	8,259,556	32,959
10	0.7	\$39.153.299	\$40,902,137	1.146.195	8.696.447	34.376
11	0.72	\$53,463,689	\$57,147,958	1,748,002	17,206,266	54,369
12	0.74	\$54,309,772	\$58,148,618	1,791,465	17,692,351	55,689
13	0.76	\$54,836,662	\$58,788,196	1,825,149	18,066,597	56,590
14	0.78	\$55,461,564	\$59,562,327	1,871,076	18,528,759	57,798
15	0.8	\$55,953,014	\$60,183,171	1,911,665	18,934,304	58,873
16	0.82	\$56,178,125	\$60,476,192	1,933,747	19,133,730	59,407
17	0.84	\$56,888,130	\$61,410,097	2,006,280	19,996,281	61,375
18	0.86	\$58,939,912	\$64,217,368	2,249,372	23,090,780	67,863
19	0.88	\$59,614,122	\$65,126,190	2,319,644	24,465,319	70,260
20	0.9	\$60,006,855	\$65,739,105	2,393,111	25,360,523	72,163
21	0.92	\$60,019,653	\$65,762,444	2,396,828	25,398,929	72,252
22	0.94	\$60,099,025	\$65,915,450	2,423,121	25,777,709	72,969
23	0.96	\$60,134,693	\$66,003,305	2,442,496	26,270,649	73,681
24	0.98	\$60,134,431	\$66,044,601	2,459,016	26,480,368	74,101
25	1	\$60,065,677	\$66,052,031	2,491,974	26,854,223	74,831
26	1.02	\$60,040,856	\$66,044,944	2,501,038	26,955,519	75,029
27	1.04	\$60,026,632	\$66,029,467	2,508,472	27,036,527	75,190
28	1.06	\$59,859,743	\$65,848,204	2,535,317	27,880,745	76,293
29	1.08	\$59,818,744	\$65,804,571	2,544,602	28,000,821	76,491
30	1.1	\$59,574,752	\$65,546,475	2,585,186	28,659,515	77,514
31	1.12	\$59,392,757	\$65,357,494	2,610,567	29,019,502	78,077
32	1.14	\$59,384,327	\$65,348,802	2,611,806	29,031,768	78,098
33	1.16	\$58,782,331	\$64,716,637	2,659,616	30,048,048	79,439
34	1.18	\$58,656,877	\$64,588,374	2,672,832	30,191,177	79,685
35	1.2	\$57,099,001	\$62,970,468	2,782,277	32,278,070	82,610
36	1.22	\$53,782,254	\$59,617,727	3,005,710	36,300,958	88,254
37	1.24	\$53,243,390	\$59,090,746	3,041,760	36,853,125	89,007
38	1.26	\$53,056,104	\$58,903,588	3,052,886	37,031,440	89,248
39	1.28	\$52,807,909	\$58,649,102	3,064,450	37,287,219	89,575
40	1.3	\$52,609,171	\$58,446,910	3,075,948	37,450,538	89,809
41	1.32	\$52,206,689	\$58,045,909	3,097,908	37,816,322	90,242
42	1.34	\$51,456,000	\$57,270,602	3,126,405	38,509,324	91,057
43	1.36	\$51,006,610	\$56,811,495	3,143,316	38,909,811	91,503
44	1.38	\$50,755,608	\$56,552,179	3,149,924	39,146,709	91,741
45	1.4	\$49,745,998	\$55,539,058	3,190,072	39,906,235	92,580

# Table 37 – Hestia Pit by pit table output – Production Case





Chart 31 – Hestia pit by pit graph - Production Case



Figure 24 – Eos \$3,000 gold price shell output – Production Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
1	0.4	\$4,508,141	\$4,515,978	45,555	616,211	2,575
2	0.44	\$4,776,514	\$4,785,673	50,247	640,822	2,739
3	0.46	\$4,994,916	\$5,005,312	54,532	669,164	2,884
4	0.48	\$5,352,429	\$5,364,928	61,179	717,217	3,120
5	0.5	\$5,538,321	\$5,552,164	65,480	743,731	3,252
6	0.52	\$5,549,709	\$5,563,664	65,871	743,731	3,260
7	0.62	\$5,561,535	\$5,575,602	66,262	744,419	3,269
8	0.64	\$16,247,968	\$16,510,460	420,371	4,284,713	13,705
9	0.66	\$16,383,144	\$16,651,913	426,819	4,319,113	13,848
10	0.68	\$18,285,113	\$18,635,120	497,343	5,114,028	15,956
11	0.7	\$26,908,990	\$27,811,723	865,521	9,318,373	26,312
12	0.72	\$31,699,316	\$33,057,803	1,100,684	11,886,874	32,800
13	0.74	\$32,527,631	\$33,996,249	1,158,331	12,246,963	34,007
14	0.76	\$32,666,238	\$34,157,963	1,171,272	12,297,531	34,236
15	0.78	\$32,994,110	\$34,540,569	1,201,485	12,466,634	34,818
16	0.8	\$33,272,331	\$34,873,560	1,232,890	12,612,607	35,373
17	0.82	\$33,615,688	\$35,295,149	1,278,789	12,798,430	36,141
18	0.84	\$34,293,781	\$36,149,825	1,382,541	13,399,276	38,017
19	0.86	\$34,493,196	\$36,411,090	1,419,348	13,568,625	38,622
20	0.88	\$34,634,952	\$36,605,512	1,451,458	13,729,709	39,145
21	0.9	\$34,672,197	\$36,659,019	1,461,579	13,784,317	39,312
22	0.92	\$34,701,260	\$36,709,246	1,475,515	13,824,781	39,505
23	0.94	\$34,752,356	\$36,796,590	1,499,258	14,026,289	39,947
24	0.96	\$35,070,865	\$37,457,828	1,727,123	16,757,192	45,143
25	0.98	\$35,067,326	\$37,476,116	1,742,574	16,803,922	45,344
26	1	\$35,049,448	\$37,482,436	1,760,373	16,841,210	45,558
27	1.02	\$34,739,085	\$37,374,510	1,918,040	18,575,207	48,506
28	1.04	\$34,708,276	\$37,359,887	1,931,048	18,614,459	48,665
29	1.06	\$34,634,045	\$37,311,179	1,952,988	18,744,933	48,984
30	1.08	\$34,520,809	\$37,228,476	1,980,682	18,919,465	49,402
31	1.1	\$34,405,580	\$37,138,722	2,005,069	19,052,543	49,740
32	1.12	\$34,143,045	\$36,906,747	2,041,636	19,586,103	50,459
33	1.14	\$32,784,592	\$35,654,450	2,201,111	21,778,190	53,497
34	1.16	\$32,634,146	\$35,513,770	2,218,056	21,932,595	53,765
35	1.18	\$32,541,288	\$35,425,501	2,227,523	22,007,684	53,895
36	1.2	\$32,323,475	\$35,219,034	2,250,361	22,223,943	54,226
37	1.22	\$31,808,798	\$34,684,367	2,270,118	23,227,751	55,055
38	1.24	\$31,641,464	\$34,519,518	2,283,505	23,384,162	55,274
39	1.26	\$31,347,252	\$34,225,632	2,304,272	23,682,226	55,640
40	1.28	\$31,281,701	\$34,158,813	2,307,921	23,736,388	55,700
41	1.3	\$30,617,058	\$33,485,162	2,348,781	24,353,497	56,405
42	1.32	\$30,456,894	\$33,322,062	2,358,282	24,442,350	56,524
43	1.34	\$30,154,827	\$33,012,819	2,375,164	24,662,804	56,802
44	1.36	\$29,922,900	\$32,773,694	2,386,999	24,797,915	56,967
45	1.38	\$20,831,647	\$23,068,079	2,883,587	31,661,197	65,316

# Table 38 – Eos Pit by pit table output – Production Case



Chart 32 – Eos pit by pit graph - Production Case



Figure 25 – Iris \$3,000 gold price shell output – Production Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
1	0.74	\$39.093.182	\$43.144.707	2.772.748	14.718.211	58.999
2	0.76	\$40,794,941	\$45.175.111	2.937.934	15.320.088	62.056
3	0.78	\$41,244,768	\$45,722,405	2,982,005	15,483,346	62,893
4	0.8	\$41.541.327	\$46.111.526	3.024.922	15.588.956	63,585
5	0.82	\$50,296,250	\$58,988,246	4.287.955	22.202.487	88.999
6	0.84	\$50,870,611	\$60,129,816	4,425,437	22,746,415	91,509
7	0.86	\$51,044,199	\$60,498,191	4,481,275	22,883,041	92,403
8	0.88	\$51,312,292	\$61,070,838	4,559,232	23,305,693	93,872
9	0.9	\$51,761,541	\$62,312,324	4,770,808	24,517,431	97,818
10	0.92	\$51,825,087	\$62,652,990	4,849,428	24,850,130	99,179
11	0.94	\$51,881,206	\$63,281,027	5,014,806	25,792,860	102,342
12	0.96	\$51,928,300	\$63,380,216	5,060,066	25,968,023	103,053
13	0.98	\$51,938,432	\$63,431,185	5,102,454	26,087,426	103,662
14	1	\$51,849,478	\$63,455,679	5,187,136	26,570,697	105,148
15	1.02	\$51,044,020	\$63,331,383	5,476,782	28,822,630	110,683
16	1.04	\$50,674,846	\$63,153,134	5,575,061	29,550,717	112,515
17	1.06	\$50,391,016	\$63,001,896	5,642,344	29,873,544	113,480
18	1.08	\$50,098,489	\$62,807,659	5,700,853	30,202,798	114,423
19	1.1	\$49,891,986	\$62,672,750	5,734,086	30,385,980	114,931
20	1.12	\$49,658,532	\$62,499,109	5,763,321	30,641,423	115,501
21	1.14	\$49,155,126	\$62,131,053	5,828,104	31,029,401	116,436
22	1.16	\$48,692,725	\$61,695,225	5,890,324	31,334,474	117,381
23	1.18	\$47,206,425	\$60,444,019	6,030,511	32,741,453	119,735
24	1.2	\$46,820,242	\$60,102,235	6,063,317	32,983,726	120,243
25	1.22	\$45,675,020	\$59,073,013	6,150,263	33,842,878	121,864
26	1.24	\$45,272,874	\$58,699,701	6,182,477	34,038,913	122,308
27	1.26	\$43,264,468	\$56,788,171	6,306,708	35,529,573	124,795
28	1.28	\$42,666,596	\$56,201,140	6,342,419	35,932,091	125,470
29	1.3	\$42,251,235	\$55,814,232	6,372,051	36,166,684	125,870
30	1.32	\$42,130,930	\$55,689,235	6,377,811	36,212,878	125,944
31	1.34	\$41,874,884	\$55,424,254	6,388,505	36,336,666	126,121
32	1.36	\$40,895,446	\$54,453,807	6,430,956	36,968,795	127,003
33	1.38	\$40,285,241	\$53,827,930	6,456,149	37,332,183	127,519
34	1.4	\$39,053,064	\$52,578,691	6,500,665	38,144,069	128,585
35	1.42	\$39,006,124	\$52,525,116	6,501,056	38,160,827	128,590
36	1.44	\$38,724,352	\$52,234,116	6,513,314	38,296,401	128,773
37	1.46	\$37,869,508	\$51,354,429	6,541,789	38,792,399	129,393
38	1.48	\$37,422,845	\$50,846,558	6,557,896	38,973,268	129,648
39	1.5	\$37,265,608	\$50,675,481	6,563,678	39,029,012	129,721
40	1.52	\$36,972,406	\$50,368,541	6,574,356	39,146,727	129,869
41	1.54	\$36,932,191	\$50,322,392	6,575,182	39,159,752	129,879
42	1.56	\$36,677,990	\$50,058,175	6,582,919	39,262,539	129,974
43	1.58	\$36,445,441	\$49,818,632	6,590,244	39,355,702	130,075
44	1.6	\$36,273,063	\$49,639,923	6,596,237	39,414,419	130,138
45	1.62	\$36,196,763	\$49,554,385	6,597,889	39,441,479	130,162

# Table 39 – Iris Pit by pit table output – Production Case



Chart 33 – Iris pit by pit graph - Production Case



Figure 26 – Kamperman \$3,000 gold price shell output – Production Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
Pit	Factor	Disc.	Undisc.	Tonnes	Tonnes	Ounces
	0.00	40.470.545	40.470.004		404.057	1.010
1	0.32	\$3,473,545	\$3,476,994	26,033	181,957	1,813
2	0.34	\$3,939,859	\$3,944,588	31,467	193,871	2,070
3	0.36	\$4,199,184	\$4,204,584	33,/0/	207,916	2,210
4	0.38	\$17,560,314	\$17,701,491	210,036	860,487	10,169
5	0.4	\$34,200,351	\$34,821,401	472,045	1,448,964	20,565
6	0.42	\$61,494,952	\$63,551,270	862,759	3,184,659	38,432
/	0.44	\$64,725,242	\$67,005,383	908,132	3,439,789	40,634
8	0.46	\$72,037,524	\$74,861,751	1,008,705	4,216,830	45,829
9	0.48	\$77,060,464	\$80,436,450	1,124,672	4,597,072	49,905
10	0.5	\$79,188,433	\$82,792,508	1,167,434	4,836,520	51,638
11	0.52	\$80,692,898	\$84,505,373	1,210,903	4,948,989	52,996
12	0.54	\$81,196,439	\$85,085,948	1,227,322	4,980,797	53,471
13	0.56	\$81,842,234	\$85,815,800	1,243,564	5,073,581	54,070
14	0.58	\$82,364,733	\$86,434,097	1,264,946	5,107,558	54,629
15	0.6	\$83,025,106	\$87,182,888	1,281,737	5,207,355	55,266
16	0.62	\$84,641,039	\$89,068,346	1,337,338	5,492,046	57,052
17	0.64	\$88,025,775	\$93,110,947	1,473,140	6,062,421	61,099
18	0.66	\$88,199,707	\$93,321,259	1,480,542	6,100,902	61,325
19	0.68	\$88,608,306	\$93,843,055	1,505,562	6,158,196	61,927
20	0.7	\$88,946,634	\$94,261,451	1,522,286	6,238,502	62,420
21	0.72	\$89,378,791	\$94,806,533	1,546,396	6,359,621	63,114
22	0.74	\$90,781,909	\$96,620,427	1,634,929	6,794,544	65,540
23	0.76	\$90,893,508	\$96,767,584	1,642,623	6,833,543	65,757
24	0.78	\$92,265,393	\$98,640,002	1,752,377	7,460,328	68,763
25	0.8	\$92,851,747	\$99,474,100	1,807,079	7,791,751	70,252
26	0.82	\$92,935,063	\$99,599,823	1,816,684	7,841,146	70,494
27	0.84	\$92,944,942	\$99,616,757	1,818,355	7,845,825	70,528
28	0.86	\$93,127,093	\$99,903,111	1,842,292	8,023,882	71,203
29	0.88	\$93,208,928	\$100,045,526	1,856,618	8,134,058	71,596
30	0.9	\$93,268,468	\$100,184,088	1,876,171	8,237,666	72,052
31	0.92	\$93,312,583	\$100,282,296	1,889,468	8,365,927	72,445
32	0.94	\$93,320,610	\$100,335,183	1,901,041	8,416,033	72,700
33	0.96	\$93,316,367	\$100,346,194	1,905,112	8,426,736	72,773
34	0.98	\$93,308,768	\$100,352,329	1,908,852	8,443,240	72,850
35	1	\$93,234,954	\$100,361,187	1,931,925	8,721,656	73,554
36	1.02	\$93,070,300	\$100,322,719	1,968,233	9,001,090	74,419
37	1.04	\$93,028,403	\$100,306,731	1,975,863	9,050,267	74,581
38	1.06	\$92,982,588	\$100,286,094	1,983,387	9,087,688	74,729
39	1.08	\$92,878,886	\$100,220,608	1,995,524	9,216,990	75,049
40	1.1	\$92,846,551	\$100,200,466	1,999,385	9,234,896	75,122
41	1.12	\$92,762,806	\$100,141,560	2,007,630	9,293,262	75,291
42	1.14	\$92,723,831	\$100,111,542	2,010,789	9,329,857	75,371
43	1.16	\$92,567,530	\$99,989,550	2,023,059	9,455,329	75,662
44	1.18	\$92,468,787	\$99,909,625	2,030,079	9,506,934	75,802
45	1.2	\$92,315,993	\$99,781,516	2,039,802	9,613,518	76,028

# Table 40 – Kamperman Pit by pit table output –Production Case





Chart 34 – Kamperman pit by pit graph - Production Case



Figure 27 – Rogan Josh \$3,000 gold price shell output – Production Case



Final	Povonuo	Open Bit Cashflow	Open Bit Cashflow	Input Oro	Wasto	Innut
Di+	Eactor	Disc		Toppes	Toppes	Ounces
FIL	Factor	Disc.	ondisc.	Tonnes	Tonnes	Ounces
1	0.38	\$2 128 805	\$2 130 524	21 177	161 156	1 281
2	0.30	\$2,351,531	\$2,150,524	24 075	170 926	1 416
3	0.42	\$2,399,206	\$2,000,000	24,075	173 262	1 446
4	0.42	\$8 202 978	\$8 232 164	93 160	828 367	5 319
5	0.46	\$9,004,337	\$9 040 988	106 549	882 470	5 879
6	0.48	\$9,212,342	\$9 251 445	111 103	893 537	6.037
7	0.5	\$9,212,342	\$9,468,316	115 278	913 406	6 199
, 8	0.52	\$9,664,632	\$9,709,253	120 824	930 786	6 388
9	0.52	\$9,755,254	\$9 801 273	123,624	932 380	6 463
10	0.54	\$10,018,748	\$10,068,462	129,447	970 793	6 694
11	0.50	\$10,010,740	\$10,000,402	134 716	984 593	6 837
12	0.50	\$10,255,558	\$10,225,725	137 315	990.095	6 912
13	0.0	\$13,752,649	\$13,862,712	209.084	2 184 880	10 363
14	0.62	\$14,071,315	\$14,190,370	2203,004	2,104,000	10,305
15	0.66	\$14,071,313	\$14 333 162	226,550	2,251,100	10,705
16	0.68	\$14,857,662	\$15,000,644	251 219	2,237,400	11 622
17	0.00	\$15,016,713	\$15,000,044	258,976	2,413,834	11 820
18	0.7	\$15,010,713	\$15,447,837	230,570	2 508 735	12 192
10	0.72	\$15,200,107	\$15,447,057	275 397	2,500,755	12,152
20	0.74	\$15,352,550	\$15,454,102	273,337	2,511,751	12,230
20	0.70	\$15,750,050	\$15,510,041	3/13 21/	3 081 881	14 228
21	0.78	\$16,471,240	\$16,827,596	35/ 018	3 122 021	14,220
22	0.8	\$16,602,000	\$16,827,550	361 988	3 147 903	14,477
23	0.84	\$16,865,877	\$17,112,440	380 683	3 260 079	15 106
24	0.84	\$16,903,877	\$17,112,440	388 101	3 270 5/9	15,100
25	0.80	\$16,913,000	\$17,105,105	393 125	3 286 052	15 3/17
20	0.88	\$16,944,752	\$17,200,004	402 515	3 3 2 5 3 9 8	15,547
27	0.5	\$17,019,280	\$17,236,780	402,515	3 335 835	15,544
20	0.92	\$17,013,280	\$17,200,400	400,010	3 377 572	15,035
30	0.94	\$17,047,400	\$17,320,514	417,382	3 398 171	15,834
31	0.50	\$17,000,525	\$17,333,354	424,510	3,006,171	16,035
32	1	\$17,002,796	\$17 394 021	484 634	3 886 819	17 329
32	1 02	\$17,073,350	\$17,354,021	494 616	3 919 136	17,525
34	1.02	\$16 971 597	\$17,307,043	532 927	4 132 146	18 255
35	1.04	\$16 941 673	\$17 295 951	542 859	4 172 020	18 430
36	1.00	\$16,910,118	\$17 268 481	550.067	4 233 414	18 587
37	1 1	\$16,435,985	\$16 835 078	629 303	4 859 196	20 201
38	1.1	\$16,378,711	\$16,781,509	637 268	4 898 128	20,201
39	1 14	\$16 311 730	\$16 718 313	645 792	4 947 188	20,545
40	1 16	\$16 265 919	\$16 674 464	650 675	4 980 366	20,430
40 41	1 18	\$16 235 094	\$16 644 378	652 981	4 993 200	20,504
42	1.10	\$16 002 /01	\$16.419.152	674 222	5 177 040	21,010
42	1.2	\$15 965 791	\$16 382 937	676 527	5 193 006	21,010
44	1 74	\$15 907 943	\$16 326 010	680 435	5 224 505	21,045
45	1.26	\$15.856.580	\$16.275.145	683.414	5,257.215	21.173

	Table 41 –	Rogan Josh	Pit by pit	table output -	Production	Case
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Chart 35 – Rogan Josh Pit by pit graph - Production Case



Figure 28 – Think Big \$3,000 gold price shell output – Production Case



Final	Revenue	Open Pit Cashflow	Open Pit Cashflow	Input Ore	Waste	Input
ΡΙτ	Factor	DISC.	Undisc.	Tonnes	Tonnes	Ounces
1	0.2	¢22,228,020	¢22.4E0.707	142 401	000 204	11.020
2	0.3	\$22,556,029	\$22,459,707	142,491	016 124	11,950
2	0.32	\$23,079,145	\$25,621,990	172 294	910,154	12,725
5	0.34	\$24,091,102	\$25,050,201	175,504	952,012	13,472
4 5	0.30	\$25,627,560	\$20,010,177	201 760	947,041	14,042
5	0.38	\$20,969,066	\$27,196,090	201,700	1 107 204	14,805
7	0.4	\$29,701,100	\$25,570,515	242,049	1,107,304	10,034
/ 0	0.42	\$22,066,120	\$51,224,059	203,300	1,145,224	17,515
0	0.44	\$32,000,120	\$32,420,497	200,291	1,103,077	18,391
9 10	0.40	\$32,707,103	\$33,149,499	210 270	1,174,039	10,939
10	0.48	\$33,372,003	\$33,779,004	2/2//2	1,180,370	20 326
12	0.5	\$34,475,651	\$34,934,200	252 019	1,200,085	20,320
12	0.52	\$34,807,924	\$35,341,579	264 077	1,208,704	20,033
13	0.54	\$35,255,365	\$35,749,572	205 /21	1,201,029	21,000
14	0.50	\$30,237,439	\$30,808,177	407 925	1,304,709	21,374
15	0.58	\$36,377,413	\$37,130,303	407,823	1,380,340	22,510
10	0.0	\$30,941,040	\$37,337,063 ¢27,012,027	420,233	1,410,070	22,098
10	0.02	\$37,200,310	\$37,912,027	455,007	1,433,130	23,102
10	0.64	\$30,110,030	\$30,730,071	401,909	1,024,479	24,032
19	0.00	\$20,579,915	\$39,077,057	472,099	1,002,094	24,500
20	0.08	\$36,551,640	\$39,200,000	401,499 502.055	1,064,155	24,599
21	0.7	\$40,820,012	\$41,755,900	624 120	2,214,050	27,040
22	0.72	\$41,504,125	\$42,500,177	660 422	2,550,009	20,002
25	0.74	\$41,645,995	\$42,912,900	680,455	2,406,741	29,545
24	0.76	\$42,104,964	\$43,211,405	607,220	2,402,119	30,024
25	0.78	\$42,295,749	\$45,455,276 \$42,602,205	700 919	2,496,409	20,415
20	0.82	\$42,459,075	\$45,005,205	709,010	2,550,252	30,734
27	0.82	\$42,503,593	\$43,083,722	718,303	2,505,134	30,909
28	0.84	\$42,589,000	\$43,790,003	729,445	2,597,832	31,154
29	0.80	\$42,079,495	\$45,907,167	745,675	2,045,900	31,400
30	0.88	\$42,750,801	\$44,015,278	760,898	2,081,441	31,811
22	0.9	\$42,794,540	\$44,070,093	770,755	2,705,309	32,011
32	0.92	\$42,839,898	\$44,147,730	788,784	2,755,755	32,370
33	0.94	\$42,809,127	\$44,202,720	810.007	2,824,077	32,098
34 25	0.96	\$42,873,177	\$44,217,939	810,097	2,839,482	32,820
35	0.98	\$42,672,490	\$44,224,452	014,500	2,650,520	32,901
30	1 02	\$42,803,509	\$44,220,818	021,279	2,859,077	33,018
37 20	1.02	\$42,775,000	\$44,190,771	030,477	3,022,945	33,735
56 20	1.04	342,122,310 \$12,676,727	\$44,1/1,8U/ \$44,1/2,4C9	0/5,1/0	2 110 F40	24,045
39	1.00	342,070,727	244,143,408 \$11 100 510	000,049 007 157	3,113,343 2,111,331	24,240
40 //1	1.00	\$42,020,300 \$12,500,202	244,103,348 \$11 090 220	001,107	3,144,224 2,151,602	24,420 21 100
41	1.1	242,298,383	244,000,330	901,702 002 740	3,131,002	24,490
42	1.12	242,284,135	\$44,U/5,ZZ/	902,740 007.009	3,130,499	34,514
45	1.14 1 1 <i>C</i>	\$42,000,000 \$40 E11 EE2	ې++,U34,6UZ ¢11 013 003	010 201	3,1/0,009	24,001 24,620
44	1 10	\$42,311,033 \$42,460,100	\$44,012,033 \$42,064,560	012 252	2 210 627	24,039
45	1.10	242,400,190	JHJ,JUH,JUU	913,233	120,212,027	54,704

Table 42 –	• Think Big	Pit by pit	table output -	Production Case
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Chart 36 – Think Big Pit by pit graph - Production Case

## 6.2.4. Sensitivity Analysis

A sensitivity analysis was performed on Mandilla and Feysville. The sensitivities were carried out on the base case optimisation parameters.

The following sensitivity analyses were assessed:

- Sell price variations at -20%, -10%, +10% and +20%
- Processing cost variations at -20%, -10%, +10% and +20%
- Mining cost variations at -20%, -10%, +10% and +20%

As the following sensitivity graphs illustrate, the cashflow and material movements of the project vary proportionally to the independent variable. This would suggest that, should operating costs or metal sell price change, a linear outcome from materials mined to cashflow can be expected.



### 6.2.4.1. Theia Sensitivities







Chart 38 - Theia Plant feed tonnes sensitivity analysis - Production Case





Chart 39 – Theia Mined contained gold sensitivity analysis – Production Case

## 6.2.4.2. Hestia Sensitivities



Chart 40 – Hestia Undiscounted cashflow sensitivity analysis – Production Case





Chart 41 – Hestia Plant feed tonnes sensitivity analysis - Production Case



Chart 42 – Hestia Mined contained gold sensitivity analysis – Production Case



## 6.2.4.3. Eos Sensitivities



Chart 43 – Eos Undiscounted cashflow sensitivity analysis – Production Case



Chart 44 - Eos Plant feed tonnes sensitivity analysis - Production Case





Chart 45 – Eos Mined contained gold sensitivity analysis – Production Case

6.2.4.4. Iris Sensitivities



Chart 46 – Iris Undiscounted cashflow sensitivity analysis – Production Case





Chart 47 – Iris Plant feed tonnes sensitivity analysis - Production Case



Chart 48 – Iris Mined contained gold sensitivity analysis – Production Case

## 6.2.4.5. Kamperman Sensitivities



Chart 49 – Kamperman Undiscounted cashflow sensitivity analysis – Production Case



Chart 50 - Kamperman Plant feed tonnes sensitivity analysis - Production Case





Chart 51 – Kamperman Mined contained gold sensitivity analysis – Production Case





Chart 52 – Rogan Josh Undiscounted cashflow sensitivity analysis – Production Case





Chart 53 – Rogan Josh Plant feed tonnes sensitivity analysis - Reserve Case



Chart 54 - Rogan Josh Mined contained gold sensitivity analysis - Reserve Case



## 6.2.4.7. Think Big Sensitivities



Chart 55 – Think Big Undiscounted cashflow sensitivity analysis – Production Case



Chart 56 – Think Big Plant feed tonnes sensitivity analysis - Production Case





Chart 57 – Think Big Mined contained gold sensitivity analysis – Production Case

# 6.2.5. Production Pit Designs

The following pit designs are based on the parameters outlined previously. The pit shapes were created based on the revenue 1 factor output shell.

The Mandilla designs utilise ramp widths of 30 metres for dual lanes and 20 metres for single lanes. These widths were chosen to accommodate a 190-tonne truck mining fleet. The Feysville designs have ramp widths of 25 and 15 meters for dual and single lanes respectively. These widths were used to support a 90-tonne trucking fleet.



## 6.2.5.1. Theia Stage 1 Pit Design



Figure 29 – Theia stage 1 pit design – Plan view – Production Case



## 6.2.5.2. Theia Stage 2 Pit Design

Figure 30 – Theia stage 2 pit design – Plan view - Production Case



#### 6.2.5.3. Theia Stage 3 Pit Design



Figure 31 – Theia stage 3 pit design – Plan view - Production Case

## 6.2.5.4. Theia Stage 4 Pit Design







#### 6.2.5.5. Theia Stage 5 Pit Design



Figure 33 – Theia stage 5 pit design – Plan view - Production Case

## 6.2.5.6. Theia All Pit Designs

The following figure illustrates stage 1 through 5 of Theia overlaid together. For perspective, note that the final Theia design has a total vertical depth of 380 metres.



Figure 34 – Theia All Pit Stages – Plan view – Production Case



## 6.2.5.7. Hestia Pit Design



Figure 35 – Hestia pit design - Plan view - Production Case



Figure 36 – Eos Pit design - Plan view - Production Case



### 6.2.5.9. Iris Pit Design



Figure 37 – Iris pit design – Plan view - Production Case





Figure 38 – Kamperman pit design – Plan view - Production Case



#### 6.2.5.11. Rogan Josh Pit Design



Figure 39 – Rogan Josh pit design – Plan view - Production Case

### 6.2.5.12. Think Bit Pit Design



Figure 40 – Think Big pit design – Plan view - Production Case

# 6.3. Life of Mine (LoM) Schedule – Production Case

The mining and processing production schedule considered the practicalities of the mining sequence as well as other considerations such as multiple fleet interactions and ore delivery. Feysville, a 5 plus year project, is planned to commence mining in year two with the ore being hauled to the Mandilla plant using road trains. The ore feed from Feysville will displace some of the lower grade material from Mandilla being processed within those years of operation.

Main points of the LoM:

- Two 190-tonne trucking fleets, using 250t excavators, mining throughout the life of the Mandilla project with one 90-tonne fleet, using a 120t excavator, being introduced at Feysville at the end of year two.
- Each fleet in Mandilla is scheduled to mine 14,000bcm to 15,000bcm per day with the Feysville fleet being scheduled to mine 7,000bcm per day.
- Mining is expected to be completed within fourteen years with processing continuing until all low-grade stockpiles have been depleted (19 years).
- Processing throughput is set to a rate of 2.75Mtpa.
- Processing starts 5 months after initial mining begins. This ensures that enough material is available to satisfy the mill throughput on startup and for the following periods.
- Total Indicated to Inferred material split is 80% to 20% respectively.
- The Eos and Hestia pits will be used as in-pit TSF once they have been mined in year 10 and year 12 respectively.
- Mineral Resource material is split into the following grade bins with the highest available grade material prioritised for milling:

Ore	Grade Bin				
HG	>1.2g/t				
MG	0.8-1.2g/t				
LG	0.6-0.8g/t				
MW	0.35-0.6g/t				

As shown in the following tables and chart, except for year one when ore is only delivered to the plant after 5 months of initial mining, the throughput limit of 2.75Mtpa is achieved throughout the LoM. Most of the mineralised waste material will be stockpiled and held over for processing once mining is completed.

Tuble 43 – LOIVI Milleu Mulena	Table	43 -	LOM	mined	materia
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			Year												
ltem	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Plant Feed (Mt)	50.8	2.7	6.2	4.3	1.7	4.0	3.1	3.6	5.7	5.7	5.7	0.3	1.3	5.3	1.2
Waste (Mt)	326.6	22.0	21.9	27.2	30.9	31.0	32.2	31.2	27.0	20.3	17.4	22.5	24.6	16.7	1.7
Grade (g/t)	0.91	0.87	0.90	0.99	0.71	0.88	1.00	0.76	1.06	0.99	1.02	0.85	0.70	0.70	0.75
Contained Au (koz)	1480.8	76.2	179.1	136.2	39.5	113.4	100.6	88.0	192.9	180.5	187.5	8.2	29.5	119.1	30.1
Strip Ratio (w:o)	6.4	8.1	3.5	6.4	17.9	7.7	10.3	8.7	4.8	3.6	3.0	74.6	18.8	3.2	1.3

#### Table 44 – Total processed material

Total Ore Processed	Total									Proc	essing Y	ears								
Total Ole Processeu	TUtal	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Plant Feed (Mt)	50.8	1.39	2.75	2.75	2.75	2.76	2.75	2.75	2.75	2.76	2.75	2.75	2.75	2.76	2.75	2.75	2.75	2.76	2.75	2.64
Grade (g/t)	0.91	1.22	1.22	1.22	1.02	1.07	1.02	0.94	1.16	1.22	1.22	1.22	1.08	0.98	0.66	0.42	0.42	0.42	0.42	0.42
Contained Au (koz)	1480.8	54.4	107.7	107.9	90.2	95.0	90.4	82.7	102.9	108.2	107.9	107.9	95.3	86.6	58.6	37.4	37.4	37.5	37.4	35.3





Chart 58 – Annual processing throughput

# 7. Metallurgy and Processing

Como Engineering was commissioned by Astral to conduct a PFS to estimate capital and operating costs for a 3-stage crush, singlestage grinding, gravity and CIP Gold plant designed to treat 2.75 Mtpa of gold material from Mandilla and Feysville.

Phase 1 and Phase 2 testwork to support the Scoping Study<sup>4</sup> was undertaken in May 2021 and July 2022, results of which were detailed in the announcement dated 21 September 2023. A further phase of testwork (Phase 3) was completed in late 2024 and early 2025.

Phase 3 testwork, as was the case with Phase 1 and Phase 2, was supervised by Como Engineering and conducted by ALS in Perth.

# 7.1. Metallurgy

The three phases of testwork completed to date can be summarised as follows:

- Phase 1: ALS Metallurgical Testwork. Report number A21668, May 2021
  - Testwork conducted includes head assay analysis, gravity and gravity tails direct cyanidation, SMC test, Optical Mineralogy on Knelson concentrates, and Sequential CIP. All tests were conducted on oxide and fresh samples.
- Phase 2: ALS Metallurgical Testwork. Report number A23176, July 2022
  - Testwork conducted includes head assay analysis, gravity and gravity tails direct cyanidation, coarse crush bottle roll, Bond Ball Mill Work Index, Bond Rod Mill Work Index, Bond Abrasion Index, lime demand test on Mandilla site water and St. Ives site water, and variability testwork (gravity and gravity tails cyanidation) on fresh samples. All tests were conducted on oxide and fresh samples.
- Phase 3: ALS Metallurgical Testwork. Report numbers A25894, September 2024, and A26362 April 2025 (samples RJ, RJ2, KM1, KM2, KM3, KM4, KM5)



<sup>&</sup>lt;sup>4</sup> - ASX Announcement 21 September 2023 "Mandilla Gold Project – Kalgoorlie, WA. Positive Scoping Study"

- Testwork conducted on samples from the Eos, Iris, Hestia, Theia and Kamperman orebodies include head assay analysis, gravity and gravity tails direct cyanidation. The Eos orebody is oxide/transitional material whilst the Iris and Hestia orebodies are mainly fresh rock (granite) with oxide constituting approximately 5-10% of the resource.
- The Eos, Iris, Hestia and Kamperman testwork then progressed with leach variability tests on samples from the main Theia orebody. Samples of fresh ore from seven sections were supplied as pre-determined blends to undergo gravity and gravity tails cyanidation.
- Newly sourced supply of water from Mandilla site was also provided and subject to full ICP assay, TDS, oxygen uptake and lime demand testwork.

## 7.1.1. Head Assay

- Head assays ranged from 0.23g/t to 10.1g/t Au. Phase 1 and phase 2 assayed head grade at Theia averaged 0.81 and 0.78 g/t Au respectively. For Phase 3, the assayed head grade for Theia was 0.81g/t Au (excluding the 10.1g/t Au outlier), Eos was 1.86g/t Au, Iris was 0.66g/t Au and Hestia was 0.64g/t Au. At Feysville, the Kamperman assayed head grade averaged 2.23g/t Au and at Rogan Josh it was 0.69g/t Au.
- There was significant variation in the duplicate gold assays across the four Mandilla deposits, indicating coarse gold in the sample. This is verified by the high gravity recovery achieved during the testing.
- Levels of metals that are deleterious to cyanide leaching, such as Ni, Pb, Cu and Te are low in all but two of the 25 bulk samples collected to date for metallurgical testing.
- Elevated Cu was observed in two of the five sections tested at Kamperman, Kamperman represents less than 5% of the gold production contemplated in the PFS and will be blended into the process plant, mitigating any impacts from increased cyanide consumption as a result of the elevated Cu.
- Arsenic and sulphides concentrations are low in the samples, suggesting that potential gold locked in pyrite/arsenopyrite is low, this is confirmed by the very low residual gold in the solid tails.
- Organic carbon concentrations are low or below detection limit. This indicates that preg-robbing is not expected to be prevalent.

## 7.1.2. Water Assay

Three site water samples from Mandilla and one from the Widgiemooltha Borefield (located approximately 20km south of Mandilla) were collected and submitted for elemental analysis and lime demand testwork across the three phases of testwork completed.

	Phase 1	Phase	Phase 3		
ANALTTE	Mandilla	Mandilla	Widgie	Mandilla	
Al(mg/l)	<0.02	0	83	<2.0	
Ca(mg/I)	354	674	443	1145	
Fe(mg/l)	67	<0.10	7	<1.0	
K(mg/l)	1,338	747	235	120	
Mg(mg/l)	15,130	8,074	1,198	1690	
Pb(mg/l)	0	1	0	0	
Cl	166,100	96,100	20,400	21,400	
SO <sub>4</sub>	23,400	12,900	2,700	4,100	
TDS	305,400	187,400	38,800	45,700	
**Cond	208	171	54	57.3	
рН	1.29	6.37	3.29	7.39	
SG	-	1.12	1.03	-	

#### Table 45 – Phase 1, 2, and 3 selected element water analysis

Key observations from the water analysis and lime demand testing were:

- The water collected at Mandilla in Phase 1 and Phase 2 was hypersaline with 305,400 ppm and 187,400 ppm TDS respectively. The samples also contained significant amounts of magnesium, which determines the buffer point in lime demand testwork.
- The Widgiemooltha Borefield water is better quality with a TDS equivalent to sea water ~35,000ppm TDS.



- Lime addition testwork in phase 2 indicated that the Mandilla water had pH buffering around pH 9.0 and required 15 kg/t of lime to reach a pH above this. The Widgiemooltha Borefield water used much less lime to achieve a pH level of 10, requiring approximately 3.5 kg/t of lime.
- Widgiemooltha water was used for the phase 2 leach testwork.
- The Phase 3 Mandilla bore water sample returned a TDS level of 45,700ppm and is similar in quality to the Widgiemooltha Borefield sample
- Phase 3 testwork was completed using Mandilla site water at a pH of 8.9. Lime demand testwork completed on the Phase 3 Mandilla site water resulted in 1.5kg/t of lime to achieve a pH of 9.0.

## 7.1.3. Comminution Testwork

No additional comminution testwork was undertaken post completion of the Scoping Study. Comminution testwork previously completed is summarised below.

Crushing Work Index (**CWi**) tests were obtained from composite oxide and fresh samples tested in Phase 2. The oxide CWi result was 8.3 kWh/t and the average from the fresh composites (3 tests) was 8.22kWhr/t with a maximum of 9.79kWhr/t and a minimum of 6.11kWhr/t.

Bond Work Index tests were completed on both Phase 1 and Phase 2 samples. For Phase 1, Ball Bond Work Index (**BBWi**) tests were completed and for Phase 2 both BBWi and Rod Bond Work Index (**RBWi**) were completed. Test results are tabulated below:

		10510			estresults			
Test work	ID	Lithology	F <sub>80</sub> μm	Ρ <sub>80</sub> μm	Aperture µm	BBWi kWh/t	RBWi kWh/t	Rod/ Ball
	Oxide		2,529	115	150	13.9	-	-
Phase 1	Fresh	2,467	108	150	12.2	-	-	
	Composite #1	Oxide	2,540	80	106	11.9	17.3	1.46
	Composite #2	Fresh	2,580	83	106	14.4	21.1	1.47
	Composite #3 Fresh		2,594	83	106	12.2	18.0	1.48
Phase 2	Composite #4	Fresh	2,585	81	106	10.9	20.6	1.88
	Composite #2	nposite #2 Fresh		113	150	14.8	21.1	1.43
	Composite #3	Fresh	2,596	114	150	12.0	18.0	1.50
	Composite #4	Fresh	2,581	114	150	14.1	20.6	1.46

Table 46 – BBWi and RBWi test results

The average RWi for both apertures are similar at 19.2kWhr/t for 106µm and 19.9 kWh/t 150µm. Higher RBWi compared to BBWi at 150 µm aperture indicates that there will be higher proportion of critical size materials.

The 80th percentile BWi at 150  $\mu$ m aperture of 14.8 kWh/t is used as a design value to account for more competent ore in the deposit.

Bond Abrasion tests were completed on both oxide and fresh composites from Phase 2 samples.

Sample ID	Lithology	Bond Ai	Material Ranking
Composite #1	Oxide	0.4174	Highly Abrasive
Composite #2	Fresh	0.4618	Highly Abrasive
Composite #3	Fresh	0.5176	Highly Abrasive
Composite #4	Fresh	0.5129	Highly Abrasive

Both oxide and fresh ore are highly abrasive. The average abrasion index for the composite sample is 0.477 and is used as the design value.



## 7.1.4. Gravity and Leaching

A total of 42 gravity and leach tests have been completed across the Mandilla and Feysville deposits. Gold extraction versus grind size was examined during Phase 1 and Phase 2 and a 150µm grind size was determined as appropriate, yielding both an exceptionally high gold recovery and lower power costs due to the coarse grind size selected. The results of the three phases of gravity and leach testwork are summarised below:

		Grind	Calc. Head	Gravity	Total Extr	action (%)	Final Tails	NaCN	Lime
	Sample Description	Size (µm)	Grade (g/t)	Recovery (%)	24-hr	48-hr	Grade (g/t)	(kg/t)	(kg/t)
	Oxide	75	0.92	68.9	96.8	98.4	0.02	0.32	0.3
	Oxide	106	0.96	71.1	97.0	98.4	0.02	0.31	0.2
	HG Variability	150	0.61	63.3	94.7	94.7	0.04	0.86	0.2
	HG Variability	212	0.66	66.1	95.1	95.1	0.03	0.90	0.3
1	LG Fresh	75	0.60	80.7	95.8	95.8	0.03	0.25	0.1
hase	LG Fresh	106	0.75	66.3	95.5	97.3	0.02	0.26	0.2
4	Fresh	75	1.24	92.6	99.2	99.2	0.01	0.29	0.2
	Fresh	106	0.49	71.4	95.9	95.9	0.02	0.29	0.2
	HG Variability	106	0.95	81.6	97.4	97.4	0.03	0.22	0.3
	10kg Bulk Oxide	106	1.35	73.7	98.2	98.2	0.03	0.25	0.2
	10 kg Bulk Fresh	106	0.92	79.2	96.2	97.8	0.02	0.25	0.2
		180	0.52	47.7	98.5	98.5	0.01	0.35	4.3
	Oxide	212	0.75	60.8	98.7	98.0	0.02	0.35	4.2
		300	1.23	61.8	98.7	98.3	0.02	0.35	4.1
s 2		125	8.53	93.2	99.2	99.2	0.06	0.21	2.7
hase	Fresh	150	1.04	86.3	97.6	97.6	0.03	0.30	2.7
Ч		212	0.70	72.5	94.9	95.0	0.04	0.31	2.7
	Fresh Variability 1	212	0.13	27.6	88.7	88.7	0.02	0.17	4.6
	Fresh Variability 2	212	1.05	77.8	95.5	96.2	0.04	0.21	4.6
	Fresh Variability 3	212	0.95	72.7	94.5	95.3	0.05	0.17	4.5
		125	1.63	89.6	98.5	98.5	0.02	0.11	1.7
	Hestia	150	0.72	78.0	98.2	98.2	0.01	0.19	1.4
		212	4.95	96.5	99.5	99.5	0.02	0.18	1.5
		125	1.63	50.2	99.4	99.4	0.01	0.20	3.2
	Eos	150	1.35	43.0	96.9	96.9	0.01	0.27	3.4
		212	1.35	17.9	98.8	98.8	0.01	0.18	3.0
		125	0.52	55.7	97.2	97.2	0.01	0.24	1.9
	Iris	150	0.73	67.0	96.7	96.7	0.02	0.22	1.8
		212	0.73	66.8	96.5	96.5	0.02	0.29	2.0
	Theia Section 1	150	1.11	87.2	97.8	97.8	0.02	0.25	2.1
e 3	Theia Section 2	150	1.04	77.5	98.5	98.5	0.02	0.21	2.0
Phas	Theia Section 4	150	1.77	90.0	99.5	99.5	0.01	0.17	2.3
	Theia Section 5	150	0.84	81.7	94.7	95.5	0.04	0.30	1.7
	Theia Section 6	150	19.90	96.4	99.6	99.7	0.06	0.94	1.6
	Theia Section 7	150	4.60	92.9	99.1	99.2	0.04	0.24	1.7
		150	0.87	38.2	92.8	93.6	0.05	0.37	1.2
	Rogan Josh	150	0.53	36.9	89.4	89.4	0.06	0.40	1.4
	Kamperman 1 (Rpt)	150	2.22	58.2	90.6	93.0	0.16	1.21	1.1
	Kamperman 2 (Rpt)	150	2.00	40.8	88.4	90.1	0.20	1.34	2.1
	Kamperman 3	150	2.21	43.7	97.5	98.1	0.04	0.49	2.2
	Kamperman 4	150	1.35	41.7	97.9	98.4	0.02	0.32	1.1
	Kamperman 5	150	3 37	47.7	97.5	97.9	0.02	0.49	0.9
	Kampernan 5	100	5.57	47.7	57.5	51.5	0.07	0.45	0.5

Table 48 – Gravity & Leach Testwork



The key observations from the gravity and leach testwork programs are:

- Gravity recovery across the four Mandilla deposits is very high averaging above 70%.
- The gravity recovery at both Rogan Josh and Kamperman is high averaging above 40%.
- The combined gravity and leach gold extraction results for Mandilla are very high averaging 97.6% at 150µm grind size.
- The combined gravity and leach gold extraction results for Rogan Josh and Kamperman are high averaging 91.1% and 94.4% respectively at 150µm grind size.
- Overall gold recovery for the purposes of the PFS is 96% for Mandilla, 90% for Rogan Josh and 96% for Kamperman. The Think Big overall gold recoveries were set at 89% in oxide and 86% in the transitional. The fresh ore zone at Think Big was not contemplated in the PFS as previous metallurgical testing had indicated poor gold recoveries at coarse grind sizes.

## 7.1.5. Reagents

Design values for cyanide consumption:

- Oxide is 0.32 kg/t, taken as an average from phase 1 and 2. The average cyanide consumption for the Eos orebody (0.22kg/t) was disregarded in determining the overall average as Eos constitutes less than 5% of the project tonnes.
- Fresh is 0.24 kg/t, also taken as an average from phase 1 and 2, Hestia and Iris testwork. Two outliers showing 0.89 and 0.90 kg/t from phase 1 testwork were excluded from determining the overall average. Subsequent master composites and variability testwork did not indicate any high cyanide consumptions.
- Phase 3 testwork at Kamperman indicated that 2 sections had elevated levels of copper which will increase the cyanide consumption (1.28kg/t). The other 3 sections delivered moderate levels of cyanide consumption (0.43kg/t). Kamperman constitutes less than 5% of the project tonnes.

Design values for lime consumption are based on phase 2 testwork and phase 3 testwork.

- Oxide is 4.21 kg/t, taken as an average from Phase 2. The average lime consumption of the Eos orebody was 3.19kg/t and was disregarded in determining the average.
- Fresh is 2.34 kg/t, taken as an average from Phase 2, Hestia and Iris testwork.

Oxygen Uptake

- Oxygen uptake tests were conducted on Phase 1 samples.
- Oxygen consumption for both oxide and fresh composites are low.
- Oxygen sparging is not required however a Pressure Swing Adsorption (PSA) plant has been added into the process design to reduce the volatilisation of cyanide in the CIP circuit if/when running at a low pH (~ pH8.9 – pH9.0) to limit lime consumption in the event of significant buffering due to hypersaline water.

## 7.1.6. Metallurgical Testwork Gaps

The following further testwork covering all lithology domains and ore depths throughout the entire mine pit shell is recommended for progress to a definitive feasibility level of study:

- Pulp viscosity testing for agitator sizing.
- Tailings solution cyanide speciation and potential cyanide detoxification.
- Variability testing for comminution.

## 7.2. Processing Design Criteria

Design criteria have been prepared to provide the key design parameters for equipment selection and engineering for a three-stage crush single-stage grinding gravity and CIP process plant. The design criteria incorporate the main details for the ore and the processing plant. A summary of the key design criteria is shown in Table 49 below.



DESCRIPTION	Units	VALUE
Operating Schedule		
Annual Throughput	tpa	2,750,000
Plant capacity	t/h	344
Average Feed Grade – Gold	g/t	1.04
Design Feed Grade - Gold	g/t	2.2
Gravity Recovery Circuit	Туре	Dual concentrators
Design Gold Recovery (gravity + CIL)	%	96.4
Design CIP Recovery	%	89.0
Nominal Gold Production	kozpa	80.4
Physical Ore Characteristics		
Ore Source		Multiple Open Pits
Bond Ball Work Index - design	kWh/t	14.8
Crushing		
Circuit Type		Three-Stage Crushing
Primary Crusher		Jaw
Secondary & Tertiary Crushers		Cone
Feed Size F100	mm	600
Product Size P80	mm	12
Grinding		
Circuit Type		Ball Mill
Feed Size F80	mm	12
Product Size P80	μm	150
Grinding Mill Power Installed	kW	5,000
Leach Circuit		
No of Tanks	#	2
Leach Circuit volume total	m <sup>3</sup>	3,610
Leach Circuit residence Time	hr	7
Adsorption Circuit		
No of Tanks	#	6
Adsorption Circuit volume total	m <sup>3</sup>	10,831
Adsorption Circuit residence Time	h	20
Elution and Electrowinning		
Carbon Elution Process		Pressure Zadra
Design Capacity (Carbon)	t	5.0
Carbon Regeneration		
Reactivation Kiln Type		Horizontal Diesel Fired
Capacity	kg/h	250

## Table 49 – Process design criteria



# 7.3. Process Description

The Mandilla processing plant has been designed based on processing 2.75 million tonnes per annum of gold ore.

The design crushing throughput rate is 413tph, equating to 76% availability (day and nightshift operation).

Design milling rate is 344tph based on availability of 91.3% to process 2.75Mtpa. The following process plant description is based on the Process Design Criteria and flowsheets. The processing circuit includes the following major equipment areas:

- Primary jaw crusher
- Secondary cone crusher
- Tertiary cone crusher
- Crushed ore screening
- Milling
- Cyclone classification
- Gravity separation
- Gravity concentration and intensive leaching of gravity concentrate
- Leaching and adsorption of cyclone overflow
- Elution circuit and carbon regeneration
- Services and reagents

An overall process flow diagram is presented in Figure 41 below.





Figure 41 – Mandilla Gold Project Process Flow Diagram



## 7.3.1. Crushing

The three-stage crushing circuit will produce a crushed product of nominally 80% passing (**P80**) 12mm as feed for the ball milling circuit.

The nominal crushing rate is 413tph with double shift operation and 76% crusher runtime. The fine crushed ore is stored in the feed bin with a live capacity of 4,000t with an allowance for an emergency stockpile.

All conveyors in the crushing circuit are fixed speed and equipped with:

- belt scrapers
- belt ploughs
- belt underspeed detection
- belt drift detection
- local emergency stop button
- local isolation
- conveyor pull wires.

In addition, the primary sacrificial conveyor and screen feed conveyor are also fitted with belt rip detection.

Walkway access is provided on one side of the conveyor to the head pulleys on the secondary and tertiary crusher feed conveyors. The fine ore emergency stacker is also provided with walkway access.

All conveyor transfer chutes are fitted with blocked chute detectors which are interlocked to stop the respective conveyor drive if a chute has a high level. To suppress dust, high pressure atomizing water sprays are fitted at fugitive dust emission points.

The three-stage crushing plant will be monitored and controlled from a dedicated control room located above the working level of the primary crusher.

#### 7.3.1.1. Primary Crushing

Ore is fed by front-end loader to the 80 m3 capacity ROM bin. To prevent oversize material entering the bin and causing blockage, a static grizzly bar with 600 mm spacings is fitted on top of the bin. Oversize material caught on the grizzly bars is periodically broken up by rock breaker. The width of the ROM bin is sized to allow a front loader with a bucket width of three metres to dump directly to the bin.

To regulate ore feed into the ROM bin, adjacent green and red dump/no dump lights are fitted alert the loader operator. The ROM bin dump point also incorporates a concrete pad with integrated tyre bump stop.

Ore is withdrawn from the base of the ROM bin at a controlled rate by a variable speed apron feeder which feeds onto a vibrating grizzly. The vibrating grizzly separates material by size: -80mm material passes through an undersize chute to the heavy-duty sacrificial conveyor whilst oversize material is directed into the primary jaw crusher. The primary crusher is a 39" x 51" (or equivalent) jaw crusher which operates with a closed side setting of 120 mm. Due to abrasiveness, a double toggle jaw crusher has been selected.

Crushed primary ore discharges onto the sacrificial conveyor where it rejoins the vibrating grizzly undersize material. An overhead magnet removes any tramp metal prior to the ore proceeding to primary screening. The sacrificial conveyor transfers to the primary screen feed conveyor which also receives secondary crushed product.

The primary screen is a double deck screen which sizes the coarse ore into three size fractions for feeding into either the mill, the secondary crusher or tertiary crusher. The feed chute on the screen is designed to ensure even distribution of material.

The aperture of the top deck is 50 mm: this oversize material is directed through an oversize chute to the secondary crusher via feed conveyor.

The aperture of the bottom deck is 18mm: this middling material is directed through a chute to a transfer conveyor which proceeds to the tertiary crusher.

The screen undersize (nominally 80% -13 mm) passes through the screen undersize chute onto undersize conveyor. This material then proceeds to the fine ore bin from where it is fed to the milling circuit.

A gantry crane installed at the primary crusher will allow for maintenance lifting works.

#### 7.3.1.2. Secondary Crushing

Primary screen oversize material (+50 mm) is fed to the secondary crusher feed bin via feed conveyor. This conveyor is fitted with a weightometer which provides instantaneous and totalised tonnage rates.



Ore is withdrawn from the feed bin by a vibrating feeder which is fitted with a variable speed drive (**VSD**) to allow the feed rate to the crusher to be controlled. The feed bin is fitted with a level element to detect high level caused by blockage in the discharge and out of balance mass flows.

Feed to the secondary cone crusher can be automatically controlled by the level indicator installed above the crusher feed bowl. Level control allows choke feeding of the crusher to ensure efficient operation and minimise power and wear.

Secondary crushed ore circulates back to the primary screen feed conveyor via discharge conveyor. This conveyor is fitted with a magnet to remove any tramp metal which may have come from the feed bin or transfer chutes or screen.

The secondary crusher has adjustable closed side setting (nominally 30 mm), which can be changed using the vendor supplied hydraulic adjustment pack.

A gantry crane installed at the secondary crusher will allow for maintenance lifting works.

## 7.3.1.3. Tertiary Crushing

Primary screen middling material (+18 mm) is fed to the tertiary crusher feed bin via feed conveyor. This conveyor is fitted with a weightometer which provides instantaneous and totalised tonnage rates.

Ore is withdrawn from the feed bin by a vibrating feeder which is fitted with a VSD to allow the feed rate to the crusher to be controlled. The feed bin is fitted with a level element to detect high level caused by blockage in the discharge and out of balance mass flows.

Feed to the tertiary cone crusher can be automatically controlled by the level indicator installed above the crusher feed bowl. Level control allows choke feeding of the crusher to ensure efficient operation and minimise power and wear.

Tertiary crushed ore proceeds to the tertiary screen via feed conveyor. This conveyor is fitted with a magnet to remove any tramp metal which may have come from the feed bin, transfer chutes or screen.

The tertiary screen is a double deck screen which sizes the crushed ore into either mill feed or tertiary crusher feed. The feed chute on the screen is designed to ensure even distribution of material.

The aperture of the top deck is 30 mm: oversize material is directed through an oversize chute to the transfer conveyor where it combines with primary screen middling material (+18mm).

The aperture of the bottom deck is 15mm: this middling material is directed through a chute to the transfer conveyor where, combined with the primary screen middlings and tertiary screen oversize material, proceeds to the tertiary crusher.

Tertiary screen undersize material transfers via discharge conveyor to the crushed ore conveyor where it combines with primary screen undersize material and then proceeds to the fine ore bin ahead of feeding into the milling circuit.

The tertiary crusher has adjustable closed side setting (nominally 14 mm), which can be changed using the vendor supplied hydraulic adjustment pack.

A gantry crane installed at the tertiary crusher will allow for maintenance lifting works.

### 7.3.1.4. Fine Ore Bin

Prior to feeding the fine ore bin, the crushed and screened ore is transferred by conveyor to the first of two emergency feed bins. Under normal operation, a belt feeder beneath this bin transfers the ore onto the fine ore bin feed conveyor which proceeds up to the top of the fine ore bin.

The emergency feed bin is fitted with an overflow chute which – when the belt feeder is offline - allows ore to be transferred onto radial stacker and build an emergency stockpile. Ore is reclaimed off this stockpile by loader operator and fed back into the process via the emergency feed bin.

The fine ore bin has a live volume of 4,000 t which equates to 12.8 hours of production. Ore is withdrawn from the base of bin via vibrating pan feeders – operating in duty/standby mode - onto mill feed conveyor. This conveyor is fitted with weightometer which provides the instantaneous and totalized mill feed rates. The speed of the belt feeders is controlled by a process loop to the weightometer. The mill feed rate is automatically controlled to the selected mill feed rate.

Upstream of the mill feed bin is the second emergency feed bin which feeds onto the mill feed conveyor via a belt feeder. This allows loader operators the option to feed stockpiled ore into either the fine ore bin or onto the mill feed conveyor.

A lime silo and feeder are located above the mill feed conveyor. Bulk lime is delivered to site and pneumatically transferred to the lime silo. The lime is fed by a variable speed screw feeder onto the mill feed conveyor at a rate controlled by a pH meter in the first leach tank.



Adjacent to the lime silo is a ball mill kibble where grinding media is added to replenish depleted media. Media drums are hoisted up and tilted into a 600L open hopper which then transfers through a chute onto the mill feed conveyor via an automated feeder. The transfer of the media is controlled by a local start/stop button.

## 7.3.2. Milling, Classification and Gravity Separation

## 7.3.2.1. Milling and Classification

The milling circuit comprises a single stage 5,000 kW ball mill fitted with composite rubber/metal liners, discharge trommel in closed circuit with cyclone classifiers.

Charged with 78 mm steel balls, the mill grinds the ore to a P80 of  $150 \mu$ m. The addition of process water to maintain a discharge solid density of 73% is regulated through a flowmeter and flow control valve. The ore slurry discharges the mill through a 12 mm aperture trommel screen which segregates oversize scat material to a bunker for reclaiming back into the process via front end loader. The milled slurry discharges into a hopper which is fitted with a level indicator. The level is maintained by a control loop to the VSD's on the discharge pumps feeding the classification cyclones.

The classification cyclone cluster consists of 15 operating units (3 standby) which separates the slurry into fine overflow (product which is the targeted size for the leach circuit, solids density 45%) and coarse underflow (oversize material, solids density 78%). Operation of the cyclones is monitored by a flowmeter and gamma density gauge. The cyclone feed density (64%) is regulated by process water addition to the mill discharge hopper using a signal from the gamma density gauge.

## 7.3.2.2. Gravity Circuit

The coarse cyclone underflow flows into a splitter box from where it is either returned to the mill or diverted to the gravity circuit. The splitter box directs approximately 30-50% of the cyclone underflow to two gravity feed preparation screens and the respective batch Knelson concentrators, whilst the remaining fraction returns to the mill via the feed chute. Oversize material (nominally +2 mm) from the gravity preparation screens recirculates back to the mill, whilst the undersize flows to the concentrators.

The gravity concentrators are high speed centrifuges which recover high density free gold through centrifugal force. Fluidising raw water which is added at a controlled rate by flowmeters and flow control valves.

Operating semi-continuously by local PLCs, gold-bearing concentrate is periodically discharged to a secure hopper feeding the Gekko ILR1000BA intensive leach unit, whilst the tailings circulate back to the mill via the feed chute. The intensive leach reactor dissolves the gold by using a high concentration caustic/cyanide solution. After leaching the gold, solids are allowed to settle (with the assistance of flocculant), and the clarified solution is then pumped to a loaded solution tank located in the gold room for recovery by electrowinning.

The milling area is equipped with a manually operated sump pump.

## 7.3.3. Leaching and Adsorption

The cyclone fine overflow gravitates to a vibrating horizontal trash screen which has a 0.8 mm aperture polyurethane deck. The oversize trash cascades into a bunker where it is periodically removed by loader for disposal, whilst undersize slurry flows into the leach tank.

The leach circuit comprises  $2 \times 1,800 \text{ m}3$  agitated leach tanks, followed by  $6 \times 1,800 \text{ m}3$  agitated adsorption tanks. A pH probe installed in the first leach tank controls the lime addition to the mill circuit. Due to buffering of the site water, the pH will be maintained at a setpoint of 9.0.

To dissolve the gold into solution, cyanide is added to the leach tank at a level that is automatically controlled by an online analyser as well as manual monitoring by standard titration with silver nitrate. The addition of cyanide solution to the leach tank is adjusted to maintain the targeted free cyanide concentration and is measured by a flowmeter. The cyanide flowrate can be adjusted to maintain proportional control with the milling rate.

To reduce cyanide consumption, oxygen will be used instead of air. Oxygen from the PSA plant is also introduced through sparges at the base of the tanks and is manually controlled using a flowmeter and flow control valve. The oxygen addition rate is adjusted to target the required dissolved oxygen levels as measured by the dissolved oxygen probes installed on the tanks.

The leach slurry then enters the adsorption circuit through an overflow launder where it is contacted with granular activated carbon which adsorbs the gold from solution. The slurry progresses down the adsorption train whilst the carbon is pumped counter current to the slurry flow direction using recessed impellor pumps. The (barren) carbon is reintroduced to the circuit at the back end through adsorption tank 6.



Carbon concentration in the adsorption tanks is typically 10 - 15 g/L and is retained within each tank by two mechanically agitated cylindrical wedge wire Kemix<sup>®</sup> screens. This allows the slurry to pass through the screen and into an overflow launder to the next adsorption tank.

The gold-loaded carbon is recovered from the first adsorption tank by a pump where it passes over horizontal vibrating loaded carbon screen where it is washed before proceeding to the acid wash circuit. Underflow from the screen returns to the adsorption tank.

The gold-depleted slurry (tailings) discharges the last adsorption tank and passes over a horizontal vibrating screen. Operating with an aperture of 0.6 mm, this screen recovers any carbon (as oversize) which may have passed through a leaking intertank screen on the last adsorption tank. The undersize from the carbon safety screen flows to the tailings hopper.

All tanks in the leach and adsorption circuit can be manually bypassed for maintenance. Allowance has been included for cyanide and trash screen undersize to feed into the second leach tank, as well as feed to the carbon safety screen from adsorption tank number 5.

A gantry crane above the leach and adsorption tanks will allow for maintenance lifting works such as removal of inter-tank screens for cleaning and agitator motor replacement.

## 7.3.4. Elution and Goldroom

The elution circuit design allows for a 5-tonne pressure Zadra circuit. The carbon elution column has been sized to accommodate future expansion and allow for periods when gravity gold recovery is reduced. The elution circuit has been sized based on completing only 5 cycles per a week. Loaded carbon grade will typically be <1,000 g/t and the elution circuit is designed to handle loadings of 3,000 g/t should the gravity circuit be offline.

The circuit includes separate acid and elution columns, electrowinning cell, thermal heater and a carbon regeneration kiln. The elution process is automated by a PLC system.

### 7.3.4.1. Acid Wash

After the gold-loaded carbon is washed on the screen, it gravitates into the acid wash column. Operating in a batch-wise manner, acid washing removes carbonate deposits prior to undergoing elution.

Once the column is full, a mixture of raw water and hydrochloric acid (diluted to a concentration of 3% HCl) is pumped up through the column. These acid washings discharge out of the column to the tailings hopper.

After a single bed volume of dilute acid has been pumped through the column and allowed to soak, the carbon bed is then flushed with four bed volumes of potable water to remove residual acid and increase pH. The rinse solution discharges out of the column to the tailings hopper.

After completing the acid washing and rinsing, the column is pressurised and the carbon is hydraulically transferred to the adjacent elution column to strip the gold from the carbon.

The acid wash bund is equipped with a manually operated sump pump which discharges to the tails hopper.

### 7.3.4.2. Elution

Once full of carbon, the elution column is drained of excess water before being pressurised and placed in a closed loop with the eluate storage tank, elution heater, heat exchanger and electrowinning cells.

To recover the gold from the loaded carbon, it is contacted with a hot caustic/cyanide solution that causes the gold to release from the carbon back into solution as a cyanide complex.

The caustic/cyanide solution is initially prepared in the eluate storage tank by mixing with potable water. The dilute concentrations of the caustic and cyanide in the eluate makeup is 2.0% and 0.2% respectively. The eluate is then pumped through the recovery heat exchanger where it is heated to 90°C. The solution is then further heated to 135°C in the direct fired elution heater. To prevent boiling, the pressure of the system is maintained above the vapour pressure of water at 135°C.

The hot, pressurised solution is then pumped through the elution column via tube screens at the base. The gold-bearing solution then discharges the column at the top via tube screens, flows through the cold side of the reclaim heat exchanger (thus heating the incoming caustic/cyanide solution) and then into a flash pot to lower the pressure back to atmospheric levels.

The gold-bearing solution then flows to the single electrowinning cells where the precious metals are plated onto the stainless steel mesh cathodes. The barren solution discharging the electrowinning cells gravitates back to the eluate tank, thus completing the circuit.



After carbon stripping (elution) and electrowinning is completed, the elution column is rinsed with water to cool the carbon and remove excess caustic. These washings are circulated back to the leach tanks to minimize gold losses. The elution column is then repressurised with raw water and the now barren carbon is transferred to the regeneration kiln feed hopper.

The elution area is equipped with a manually operated sump pump which also discharges to the leach tanks.

#### 7.3.4.3. Carbon Regeneration

The barren carbon from the elution column is hydraulically transferred to the regeneration kiln feed hopper (2500-HP-004) after passing over a dewatering screen.

Once the regeneration kiln feed hopper is full, carbon is added at a controlled rate using the VSD on the kiln screw feeder. Water entering the kiln with the wet carbon creates a reducing atmosphere and prevents burning of the carbon.

The carbon is heated to 750°C in the horizontal regeneration kiln with the temperature regulated by a burner control loop. The high temperature removes volatiles (diesel, oils, grease etc.) and regenerates the carbon surface to near its new adsorption capability.

The regenerated carbon discharges from the kiln into a quench tank and is then pressure transferred to the barren carbon screen above the last adsorption tank in the leach area. The barren carbon screen is a linear motion vibrating screen which is used to dewater the carbon before it enters the adsorption circuit. The underflow from the dewatering screen is sent to the carbon safety screen, whilst the regenerated (barren) carbon cascades off the screen into the adsorption tank to repeat the gold loading process.

The regeneration area is equipped with a manually operated sump pump that is directed to the carbon safety screen.

#### 7.3.4.4. Gold Room

The gold room contains electrowinning cells to separately recover the gold from the gravity and leach/elution solutions, as well as drying oven and smelting furnace.

The rich solution recovered in the gravity concentrators and intensive reactor is pumped from the loaded gravity solution tank to a dedicated electrowinning cell.

The gold rich eluate recovered from the elution column is passed through single electrowinning cells operating in parallel.

A high current of 1000 amps is passed through the electrowinning cells which causes the cyanide complex to reduce: thus depositing a gold-rich sludge onto the stainless-steel cathodes. The sludge is pumped out of the electrowinning cells to a settling tank whilst the loaded cathodes are periodically removed and washed. The combined gold sludge is then pumped to a filter press. The gold-rich filter cake is recovered and dried in an oven, which is positioned beneath an extraction hood which vents to the atmosphere.

After drying, the gold sludge is mixed with fluxes and smelted in the diesel fired tilting barring furnace at ~1,100°C. The furnace is positioned beneath an extraction hood which vents to the atmosphere. Once the contents of the barring furnace are fully molten, it will have separated into two phases: reduced metal and slag. The molten contents are then poured into moulds. The heavier, denser metal remains in the base of these moulds whilst the lighter slag overflows the top and cascades down. These gold bars are allowed to cool, stamped and stored in a safe to then be transported off site to market.

### 7.3.4.5. Gold Room Security

Due to the high value product, the gold room will be a secure area with access limited to those personnel with the authorised level of security clearance. Entry will use an electronic swipe card on the external to the magnetic locked door. Upon entry and exit, all personnel will be required to pass the security screening which will use both metal detectors and removal of all personal items for inspection by the security guards.

Two persons will be required to swipe their access card to gain entry. The building will have 24hour security surveillance via monitored cameras located around the perimeter and internally. Cameras will be positioned internally to ensure that every area of the gold room can be observed, with dedicated cameras for the smelting furnace and vault. The external door, vault and safe with be fitted with mercury switches to detect any forced access. The monitored security system will include infrared motion sensors. The alarm system will have an uninterrupted power supply system with monitoring via a dedicated mobile broad band device to both the site security team and an off-site location.

## 7.3.5. Tailings

The tailings hopper, positioned beneath the carbon safety screen, is level controlled by a control loop to the VSD's on the tailings pumps which pumps the tails out to the tailings storage facility (**TSF**). Return water is recovered from the TSF central decant using return pump and is pumped to the process water pond.

The tailings area in the process plant is equipped with a manually operated sump pump.



## 7.3.6. Reagents

### 7.3.6.1. Quicklime

Quicklime will be delivered to site in bulk and transferred to the silo located over the mill feed conveyor. Lime is dosed from the silo by the rotary valve into the discharge screw feeder and drops onto the mill feed conveyor. The lime feed rate is controlled via a variable speed drive in a control loop to the leach tank pH.

## 7.3.6.2. Cyanide

Liquid cyanide will be delivered by road train and transferred to storage tanks from where it will be pumped to the leach circuit. The cyanide unloading and storage areas are equipped with a manually operated area sump pumps.

### 7.3.6.3. Activated Carbon

Activated carbon will be delivered to site in 500kg bulka bags. When a top-up batch is required, a bag is hoisted into the carbon conditioning tank and repulped with transfer water. It is then introduced into the adsorption circuit through the barren carbon sizing screen via a transfer eductor.

#### 7.3.6.4. Diesel

Diesel fuel for the elution circuit, barring furnace and kiln will be pumped from a day tank which will be filled from the site diesel fuel supply system.

#### 7.3.6.5. Elution reagents

Hydrochloric acid will be delivered in bulk by truck at a concentration of 33% and transferred to a storage tank. It will be pumped to the acid wash column. The hydrochloric acid unloading and storage area is equipped with a manually operated sump pump and safety shower.

Sodium hydroxide will be delivered in bulk by truck in liquid form at a concentration of 50% and transferred to a storage tank and will be pumped for use in the elution and intensive leach. The caustic unloading and storage area is equipped with a manually operated sump pump and safety shower.

Flux reagents for gold smelting will be delivered in powder form in 25 kg bags, including silica sand, sodium nitrate, soda ash and borax.

### 7.3.6.6. Flocculant

Liquid flocculant for use in the gravity circuit will be delivered in a 1,000L IBC and dosed via a dedicated dosing pump.

### 7.3.6.7. Oxygen

Oxygen required for the leach circuit will be provided by a vendor package vacuum pressure swing adsorption (VPSA) plant.

### 7.3.7. Services

#### 7.3.7.1. Compressed Air

Two rotary screw compressors with 30 kW electric drives will service the general plant including the workshop. A separate air compressor will be installed for the mill lubrication system.

#### 7.3.7.2. Raw Water

Raw water will be distributed throughout the plant by a duty and standby pump from the raw water pond.

A separate gland water pump will supply water for pump seals.

The fire water pump skid will be equipped with a backup diesel pump and supplied with water from the raw water pond.

### 7.3.7.3. Process Water Services

Process water will be distributed throughout the plant by a duty and standby pump from the process water priming tank. The process water is distributed to the milling area and for general hosing.

Process water will be sourced from a combination of raw water and tailings dam return water.



### 7.3.7.4. Potable and Safety Shower Water System

Potable water will be supplied from a reverse osmosis system and transferred to the potable water tank fitted with a level indicator. A single duty and standby pump will service the elution requirements and safety shower ring main. Pressure for the safety showers is maintained by a pressure sustaining valve on the return ring into the potable water tank.

## 7.3.8. Process Control System

The process control system will monitor and run the plant from a central control room located next to griding and classification circuit. Programmable Logic Control (**PLC**) units will be located in each Motor Control Centre (**MCC**) and the control room. The PLC's will report to the plant SCADA system that will allow the operator to monitor, control and adjust parameters on the plant. Both the PLC and SCADA systems will have an uninterrupted power supply.

The control system will provide three modes of control:

- Automatic;
- Semi-automatic; and
- Maintenance.

In automatic mode, the plant is fully controlled by the PLC with all interlocks in place. The crushing circuit will have a sequence start/stop control that the operator can execute from the Crusher Control Room to start the complete crusher circuit.

Semi-automatic mode allows the operator to start/stop equipment via the Human Machine Interface (**HMI**) screen. In this mode all critical interlocks are in place.

In maintenance mode, each drive is controlled by the local control station located by each motor.

In all modes of operation, the emergency stop pushbuttons in the field are active, as well as critical hard-wired interlocks. The mode of operation is selectable from the SCADA system.

# 8. Power Generation

Site power generation is based on an average hourly load of ~8MW with a peak load of ~10.8MW. Annual energy consumption is ~70GWh. The main user of electrical power is the 2.75Mtpa processing plant and associated site infrastructure.

An options study was conducted, including investigating a range of on-site gas generation options, a hybrid gas + solar PV option and connection to the grid network. Findings determined that the grid connection and piped gas options represent the lowest cost options. Sensitivity analysis indicates that a sustained increase in gas prices is likely to present the most significant risk in relative cost terms. It was therefore determined that the grid connection option represents the best financial option on a risk-adjusted basis, based on current trends and forecasts. Furthermore, the grid connection is expected to have a materially lower carbon emissions impact than piped gas, saving ~120,000t of CO<sub>2</sub> in comparison.

The grid connection requires the development of a new overhead line (**OHL**), whereas piped gas requires a pipeline connection and generation infrastructure for the piped gas option. On balance, the OHL is likely to result in lower delivery and operational risks, noting that approvals for new gas connections have an indicative timeline of approximately 1.5 - 2 years.

On the basis of the above, it was determined that pricing for a grid connection option is the most appropriate basis for estimating energy costs for the Pre-Feasibility Study. However, the piped gas option should not be ruled out of contention, at this stage.

The main user of electrical power is the 2.75Mtpa processing plant and associated site infrastructure, as discussed in section 15.1. A localised cost of electricity (**LCOE**) of \$0.22/kWh for the grid connection option has been modelled.

# 9. Other Infrastructure

## 9.1. Tailings Storage Facility and Waste Landforms

Soil & Rock Engineering Pty Ltd (SRE) was engaged to conduct a Pre-Feasibility Study for the proposed Theia Tailings Storage Facility (**TTSF**) and In-Pit Tailings Storage Facilities at Hestia (**HIPTSF**) and Eos (**EIPTSF**) for the Mandilla Project.

Tailings will be contained within the TTSF, an integrated waste landform (**IWL**) style of TSF to the northwest of the Theia Pit, from the commencement of processing in Year 1 through to the end of Year 10. The Stage 1 Crest of the TTSF is RL 347 metres, a maximum height of 17 metres. As illustrated in Figure 42, the TTSF is planned to be incorporated into the Theia waste rock dumps (**WRD's**). This minimises the costs associated with cartage of waste material for the construction of the TSF embankments.

The proposed Stage 2 downstream raise of the TTSF, will occur as tailings deposition continues into the Stage 1 TTSF. The Stage 2 Crest of the TTSF is RL 352 metres and a maximum height of 22 metres. This raise is being executed by downstream construction.



Following completion of mining in the Eos Pit at the end of year 10, tailings deposition will then be switched to this facility, the EIPTSF, which is located to the south-east of the Theia Pit. The EIPTSF would operate until the end of year 13 at which stage tailings deposition will be switched to the HIPTSF for the remainder of the LoM.

The proposed TSF design concept is based on downstream construction techniques, with upstream slopes of 2.0:1 (H:V) and downstream slopes of 3.0:1 (H:V). The internal perimeter embankments are to comprise an engineered, compacted, 'clayey' soil embankment with a cut-off trench on the upstream face, with a minimum crest width of 4 metres. The downstream section of the embankment will have a minimum crest width of 15 metres and comprises traffic-compacted mine waste.

# 9.2. Site Roads and Access

Figure 42 below shows the conceptual layout of the Mandilla mine site including roads and proposed processing area.

The successful acquisition of Maximus has enabled the Company to design a far more optimal design for the IWL and WRD's as compared to the Scoping Study. Furthermore, waste haulage distances have materially improved as compared to the Scoping Study.



Figure 42 – Mandilla Site Layout including IWL-TSF





Figure 43 – Feysville Site Layout

# 9.3. Water Supply and Storage Distribution

Water requirements for the process plant peaks at approximately 132L/s, reducing to between 32L/s to 63L/s at steady state. The PFS capital estimates includes raw water and process water storage ponds suitable for a 2.75Mtpa process plant.

Como Engineering received pricing for 50km of borefield piping, 10 bore pumps and associated infrastructure for pumping of raw water to the process plant. This capital allocation equates to \$8.1m.

Potential saline (as opposed to hyper saline) water supply search areas have been identified via airborne electromagnetic surveys that identified palaeochannel valleys to the north-west, north-east and south of Mandilla. Field drilling programs are planned to commence within these water supply target areas later in calendar year 2025, and the modelling and reporting completed by mid-2026.

Dewatering requirements for the Theia Pit are expected to range between 10 - 20L/s from the end of Year-1 up to end of Year-3. The dewatering requirements are expected to trend up to 20 - 30L/s from Year-4 to the end of Year-6 with peak dewatering rates up to 30-40L/s until the end of the Theia mine life. Hestia, Eos and Iris are each expected to require approximately 5L/s of dewatering. The TTSF and the HIPTSF and EIPTSF have been designed for 75% and 80% tailings slurry water volume recovery respectively once

steady-state operation has been achieved.

Astral expects that between the mine dewatering requirements, the identified palaeochannel water search areas and the high rates of water return expected from the TTSF and the HIPTSF that sufficient quantities of water for processing and dust suppression will be available.

# 9.4. Accommodation and Flights

## 9.4.1. Accommodation

The Kambalda township is located approximately 24 kilometres by road from Mandilla. The Shire of Coolgardie operates a 355person camp within the township of Kambalda. Accommodation costs have been modelled based on pricing provided by the Shire of Coolgardie.

## 9.4.2. Flights

The Kambalda airstrip is used by several commercial airlines to fly mining personnel to mine sites in the Kambalda region. The airstrip is currently unsealed and, as a result, can only be utilised by propellor driven aircraft. There is potential for the airstrip to be sealed in the future, which will allow larger jet aircraft to land at the Kambalda airstrip.
The Shire of Coolgardie provides all necessary Aerodrome Reporting Officers (**ARO**s), check-in services and associated facilities that will allow 100-seat aircraft to land in Kambalda.

Costs for provision of flights have been modelled based on pricing received by commercial airline operators currently providing services into Kambalda airstrip.

## 9.5. Non-Process Infrastructure

Como Engineering was commissioned to provide capital cost estimates for non-process related infrastructure items. These included:

- Unsealed non-process road (3.5km access from Coolgardie-Esperance to the processing plant);
- General administration office (including geology and exploration);
- General ablution block;
- First aid and ERT training building;
- Mining administration office (12m x 15m);
- Exploration office (12m x 6m);
- Mining production and maintenance office (12m x 15m);
- Mining contractor workshop (24m x 17m x 15m);
- Mining cribroom (12m x 12m);
- HV and LV fuel and washdown facilities;
- Diesel storage fuel tanks (3 x 110KL);
- Turkey's nest and standpipe for mining;
- Borefield with 10 bore pumps and telemetry control stations;
- Two transfer booster pump stations; and
- 50km of HDPE borefield piping.

Explosives supplies are anticipated to be sourced from local explosives manufacturers and distributors.

General arrangement drawings for the process plant and non-process infrastructure are provided below in Figure 44 and Figure 45.





Figure 44 – General arrangement drawing for Mandilla Gold Project process plant and non-process infrastructure

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Figure 45 – Zoomed in view of general arrangement drawing for non-process infrastructure



# **10. Stakeholder Engagement**

Astral is committed to creating a positive legacy for the communities in which it operates, recognising that early and ongoing engagement with all relevant stakeholders demonstrates a commitment to building robust, open and transparent relationships. The key stakeholders to be consulted for the proposed project development are summarised in Table 50.

Stakeholder Sector	Organisation	Interest			
State Government	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	<ul> <li>Regulates all exploration and mining activities in Western Australia;</li> <li>Administers the <i>Mining Act 1978</i> (Mining Act) and associated regulations;</li> <li>Assessment and approval of the Mining Development and Closure Proposal (MDCP) document application(s);</li> <li>Assessment of Native Vegetation Clearing Permit applications associated with mining projects; and</li> <li>Regulates safety in the resource sector.</li> </ul>			
	Department of Water and Environmental Regulation (DWER)	<ul> <li>Regulates environmental and water resources in Western Australia;</li> <li>Administers the <i>Environmental Protection Act 1986</i> (EP Act) and the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act); and</li> <li>Assessment and approval of environmental works approval and operating licence applications for prescribed premises, and groundwater licence application(s).</li> </ul>			
	Main Roads	<ul> <li>Approval for Mandilla site access junction with the Coolgardie– Esperance Highway.</li> <li>Approval for Feysville site access junction with the Goldfields Highway.</li> </ul>			
	Department of Health (DoH)	<ul> <li>Approval to construct and install septic apparatus.</li> </ul>			
Local Government	Shire of Coolgardie City of Kalgoorlie-Boulder	<ul> <li>Use of public roads and infrastructure; and</li> <li>Local employment.</li> </ul>			
Native Title Claim Group	Marlinyu Ghoorlie Claimant Group	<ul> <li>Astral is in the process of executing a Mining Agreement with the Marlinyu Ghoorlie claimants for the land underlying the proposed project development areas; and</li> <li>Local Marlinyu Ghoorlie People employment opportunities.</li> </ul>			
Other Relevant Stakeholders	Mandilla Homestead	<ul> <li>Located approximately 1.5km to the east of the Mandilla project site, on the other side of the Coolgardie–Esperance Highway.</li> </ul>			
	Woolibar Pastoral Station	Encompasses the Feysville Project site.			
	Neighbouring mining companies	<ul> <li>Astral has submitted miscellaneous licence applications to explore for water within certain tenements.</li> </ul>			

# **11. Environmental Legislative Framework**

Environmental protection in Western Australia is governed by both State and Commonwealth legislation. A summary of the relevant environmental approvals and statutory requirements is provided in Table 51.

Relevant Legislation	Environmental Factor Regulated	Relevant Approval / Requirement				
Aboriginal Cultural Heritage Act 2021 (ACH) (WA)	Aboriginal Heritage	Aboriginal heritage surveys of the Mandilla project site were conducted in 2006, prior to small-scale palaeochannel mining operations in 2007; the surveys identified one site of ethnographic significance situated on the eastern boundary of M15/633 known as Emu Rock; this site has been protected via a 100m buffer exclusion zone to date. Additional Aboriginal heritage surveys will potentially be required for both sites prior to mining operations commencing.				
Dangerous Goods Safety Act 2004 (DGS Act)	Land Degradation Health/ Safety	Dangerous goods licence(s) will be obtained for fuel, explosives and chemical storage on both project sites.				
Environmental Protection Act 1986 (EP Act) – Part IV (Environmental impact assessment) (WA)	Biodiversity/ Flora/ Fauna/ Ecosystems	The proposed project development does not warrant referral to the EPA for formal assessment, as no DEMIRS-EPA MoU referral criteria are triggered. Therefore, the submission of Mining Development and Closure Proposal (MDCP) application(s) to DEMIRS is the appropriate avenue of assessment under the EP Act (Part IV).				
EP Act – Part V (Environmental regulation) (WA)	Biodiversity/ Flora/ Fauna/ Ecosystems	Native Vegetation Clearing Permit (NVCP) application(s) for the proposed project development will be submitted to DEMIRS around the same time as the MDCP application(s).				
	Biodiversity/ Flora/ Fauna/ Ecosystems Land Degradation Water Resources Air Quality	Works Approval and Licence applications will be submitted to DWER (Enviro division) for the following prescribed premises categories: 5 – Processing or beneficiation of ore 89 – Putrescible landfill site.				
Health Act 1911 (WA)	Health/ Safety	Approval to construct and install a septic apparatus from the Department of Health.				
Main Roads Act 1930 (WA)	Health/ Safety	Main Roads WA and the Shire of Coolgardie will be consulted regarding the Mandilla site access junction with the Coolgardie–Esperance Highway and the workforce travelling to/from Kambalda. Main Roads WA and the Shire of Kalgoorlie Boulder will be consulted regarding the Feysville site access junction with the Goldfields Highway and the workforce travelling to/from Kalgoorlie Boulder and/or Kambalda.				
Mines Safety and Inspection Act 1994 (WA)	Health/ Safety	Project Management Plan (PMP) application(s) will be submitted to DEMIRS for approval.				
Mining Act 1978 (Mining Act) (WA) Mining Amendment Act 2022 (Amendment Act) (WA)	Biodiversity/ Flora/ Fauna/ Ecosystems Mine Closure/ Landforms	Mining Development and Closure Proposal (MDCP) application(s) submitted to DEMIRS for mining and associated activities on Mining Act tenure. Reporting requirements will be imposed as tenement conditions (e.g. AER and MCP).				
Mining Rehabilitation Fund Act 2012 (MRF Act)	Mine Closure/ Landforms	Compulsory disturbance footprint data reporting will commence on annual basis for MRF levy payments				

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Relevant Legislation Environmental Factor Regulated		Relevant Approval / Requirement			
(WA)		when mine development commences.			
National Greenhouse and Energy Reporting Act 2007 (NGER Act) (Cth)	Air Quality	Reporting of emissions will be undertaken during operations in accordance with this NGER Act.			
Rights in Water and Irrigation Act 1914 (RIWI Act) (WA)	Water Resources	Groundwater Well Licence (GWL) applications will be submitted to DWER (Water division) for mine dewatering and water supply abstraction requirements.			

# 12. Environmental and Social Setting

## 12.1. Climate

The Project area is characterised as semi-arid. Temperatures are highest in December–February and most rain comes in winter, with additional rain from summer thunderstorms. Winter rain is the result of low-pressure cells that move in an easterly direction from the southwest of the state, whereas summer rain is often from thunderstorms that move in from either the west or the north-west. The mean annual rainfall for Coolgardie is 265mm, while the mean annual evaporation rate is around 2,300mm.

## 12.2. Biogeography

The Project area is located within the Coolgardie (COO3 – Eastern Goldfields) Interim Biogeographic Regionalisation of Australia (IBRA) sub-region. This Eastern Goldfields sub-region is a gently undulating plain on the Yilgarn Craton with calcareous soil being dominant. The sub-region supports a diverse eucalypt woodland around the salt lakes, on the low ranges and in the broad valleys. The vegetation is of Mallees, Acacia thickets and shrub heaths on sandplains. There are three broad fauna habitats: Mixed eucalypt woodland over mixed shrubs, chenopod shrubland and grasses; Chenopod shrubland with scattered grasses; and Mixed Acacia shrubland with scattered trees and grasses. The density of trees and shrubs vary across the Project area.

## 12.3. Geomorphology and Land Systems

The Project area is located within the Kambalda soil-landscape zone of the Kalgoorlie Province. The Kambalda zone predominantly consists of greenstone hills and ranges, granitic hills and rises and the intervening broad, level to undulating plains between the upland areas. Soils vary according to the diverse geology and are often highly calcareous. The broad, sheetwash plains are dominated by calcareous loamy earth soils often with gravel, and calcareous clay loam soils become more prevalent on the lower slopes of sheetwash plains.

The topography within the project development areas is relatively flat. There are no major water bodies such as rivers or lakes, with relatively minor creek/ drainage lines occurring in parts. The creeks and drainages are ephemeral in nature, only carrying runoff following heavy rainfall events, including the eastern portion of the Feysville project site existing within an ephemeral wetland/ salt lake.

## **12.4. Social Environment**

As per section 10 (Stakeholder Engagement), Astral is in the process of consulting with the relevant stakeholders about the proposed project development. As part of this stakeholder engagement process, Astral is planning to execute a native title agreement with the Marlinyu Ghoorlie claimants and enter in land access agreements with other relevant stakeholders for access roads, ground water and power infrastructure as required.

#### 12.4.1. Human and Environmental Receptors

The closest population centre to the Mandilla project site is the Mandilla Station Homestead, located directly across the other side of the Coolgardie–Esperance Highway, approximately 1.5km to the east. There are no other active human settlements in close proximity to the Project site, with the Widgiemooltha Roadhouse Tavern being the next closest (approximately 18km to the south).

There are no notable environmental receptors (e.g. nature, water, timber, etc. reserves) in close proximity to the Project sites. The dominant land uses in this bioregion are pastoralism and mining. Mining is evident in many areas around



Kambalda, Higginsville, Widgiemooltha and Norseman, with numerous small abandoned and operational mines scattered throughout the landscape. Some of the Project areas have been disturbed due to historical development activity (i.e. tracks, exploration, etc). There is also evidence of disturbance by cattle and the presence of rabbits and feral cats. The majority of the recent ground disturbance has been from ongoing exploration activities for the proposed project development.

There are no human settlements or notable environmental receptors within close proximity to the Feysville project site.

#### **12.4.2.** Aboriginal Heritage

Aboriginal heritage surveys have been conducted over the Project development tenure in the past, with no sites identified and registered by the Department of Planning, Lands and Heritage (**DPLH**) Aboriginal Cultural Heritage Inquiry System (**ACHIS**) to date.

Aboriginal heritage surveys of the Mandilla project site were conducted in 2006, prior to small-scale palaeochannel mining operations in 2007; the surveys identified one site of ethnographic significance situated on the eastern boundary of M15/633 known as Emu Rock; this site has been protected via a 100m buffer exclusion zone to date.

As part of the process of executing a Mining Agreement with the Marlinyu Ghoorlie claimants for the land underlying the proposed project development areas, more current Aboriginal heritage surveys will be undertaken prior to mining operations commencing.

#### 12.4.3. Post-Mining Land Use

Based on the Project sites being located on either vacant crown land in the case of Mandilla and leased pastoral land in the case of Feysville, the most appropriate post-mining land use for the Project area is considered to be pastoralism.

Reinstating the pre-mining land use (pastoral livestock grazing activities) following the closure of mine landforms will include ensuring the pit mine voids, waste rock landforms (**WRL's**) and other associated rehabilitated areas are physically and geochemically safe to humans and animals (i.e. safe, stable and non-polluting), surface water drainage patterns are reinstated, and rehabilitated land is consistent with agreed reference vegetation communities and/or with the post-mining land use. The open pit voids will be rendered safe, minimising risk to the public and fauna from accidental entry, by the installation of abandonment bunds in accordance with the "Safety Bund Walls Around Abandoned Open Pit Mines Guideline".

## 13. Environmental Studies and Outcomes

Significant Environmental Services (SES) were engaged to complete a PFS level environmental assessment for the Mandilla Project and to report on those findings. In addition to SES, a number of specialist sub-consultants were engaged to complete PFS level assessments in their particular area of expertise.

This section provides the baseline environmental data for the Project, including materials characterisation (for waste rock, tailings and soil), water (surface and groundwater) and ecological (flora and fauna). The majority of the environmental studies have been completed for the Mandilla project site, as initial environmental approvals are scheduled to be obtained for the standalone Mandilla project development in 2026. The environmental studies for the Feysville Project site are also well progressed, with secondary approvals scheduled to be obtained for the combined Mandilla-Feysville project development in 2027.

## 13.1. Waste Rock Characterisation

Mine Waste Management (**MWM**) were engaged to complete the waste rock characterisation assessments to understand the environmental geochemistry hazards for the Project sites by geochemically characterising the primary lithologies that will be encountered during mining. This has been completed for the Mandilla project site (4x proposed pits – Theia, Hestia, Iris and Eos) and has commenced for the Feysville project site. The results are summarised below for Mandilla, with the summary outcomes being that the risk of acid and metalliferous drainage (**AMD**) is low due to the minimal quantity of potentially acid forming (**PAF**) waste rock material to manage via encapsulation within inner sections of the WRD's.

#### 13.1.1. Methodology

Materials from recent drilling programs within the Mandilla proposed pit areas were selected for the assessment of geochemical properties, as they provide fresh, representative waste rock and ore samples for analysis. MWM reviewed all information provided by Astral, including previous work, geological data, and information on the proposed pits and developed a sampling and analysis plan (SAP) to understand the preliminary geochemical hazards associated with the Project materials. As a part of the SAP, a total of 140 drill core material were collected (100 fresh waste rock samples, 29

weathered waste rock samples, and 11 ore samples) from the x4 proposed pit areas. All samples were analysed for environmental geochemistry testwork at NATA accredited ALS Environmental laboratory.

#### 13.1.2. Acid-Base Accounting (ABA) Results

The saturated paste pH values available for 45 samples (32 fresh waste rock samples, 10 weathered waste rock samples, and 3 ore samples) ranged from pH 3.9 to 9.5. Only 4 (being weathered waste rocks) out of 45 samples analysed had paste pH value lower than pH 5, with all other samples having paste pH value higher than pH 7, indicating that majority of samples may not contain acidic stored oxidation products (with exception of few weathered samples), or if present, are minor.

The total sulfur (S) values ranged from <0.01 to 1.34 wt% S for all 140 samples (100 fresh waste rock samples, 29 weathered waste rock samples, and 11 ore samples) with a median value of 0.03 wt% S. Of the 140 samples analysed, 138 samples had total S values lower than 1 wt% S, indicating lower potential for acid and metalliferous drainage (AMD) from waste rock. Consequently, the calculated maximum potential acidity (MPA) values ranged from <1 to 41 kg H<sub>2</sub>SO<sub>4</sub>/t with a median value 0.9 kg H<sub>2</sub>SO<sub>4</sub>/t suggesting low AMD risk from the materials. Furthermore, the acid neutralising capacity (ANC) values (all positive) ranged from <1 to 82.5 kg H<sub>2</sub>SO<sub>4</sub>/t with a median of 35.8 kg H<sub>2</sub>SO<sub>4</sub>/t. As a result, the calculated net acid producing potential (NAPP) value for 11 (out of 140) samples had positive NAPP values and remaining 129 samples had negative NAPP values. Using the Price (2009) classification scheme and the information above, 129 samples were classified as non-acid forming (NAF), 7 as potentially acid forming (PAF), and 4 samples as uncertain (UC).

The results from acid buffering capacity curve (**ABCC**) test (n = 9 samples) showed that the proportion of ANC likely available under field conditions ranged from 13% to 97% of the ANC, with a median of approximately 87% of the ANC. For the majority of waste rock samples (7 out of 9), dolomite and calcite were the predominant carbonate minerals, as indicated by the ABCC curves. This, along with supporting quantitative X-Ray Diffraction (**QXRD**) data, suggests that dolomite and calcite are the primary carbonate minerals in the waste rock material.

#### 13.1.3. Metal Leaching Potential Results

Deionised water extract (DI leach 1:5) data for major ions and a broad suite of metals/metalloids were undertaken for 17 samples (8 fresh waste rock samples, 7 weathered waste rock samples, and 2 ore samples). The solubility data indicated that 10 out of 17 samples (6 fresh waste rock samples, 2 weathered waste rock samples, and 2 ore samples) exhibited low metal concentrations and a circumneutral to alkaline pH (7.0 to 9.0). Two fresh waste rock samples and one weathered waste rock sample had moderate metal concentrations with a circumneutral to alkaline pH. Additionally, 4 weathered waste rock samples had moderately to weakly acidic pH (4.0 to 6.0), with 1 sample showing low metal concentrations and the remaining 3 samples exhibiting moderate metal levels.

The NAG liquor, before back titration, was analysed for 10 samples (1 fresh waste rock sample, 7 weathered waste rock samples, and 2 ore samples). The results indicated moderate soluble metal concentrations in 5 samples (1 fresh waste rock, 2 weathered waste rock, and 2 ore samples), while the remaining 5 weathered waste rock samples exhibited low soluble metal concentrations.

#### 13.1.4. Management Considerations

The risk of AMD is low due to the minimal quantity of PAF waste rock material to manage via encapsulation within inner sections of the WRD's.

### 13.2. Tailings Characterisation

MWM completed the tailings characterisation assessment to understand the environmental geochemistry hazards for the Project by geochemically characterising samples representing tailings material (i.e. metallurgical process residues) that will be disposed into the tailings storage facility (**TSF**) from ore processing operations at the Mandilla project site. The results are summarised below, with the summary outcomes being that the risk of AMD is low due to the tailings material being assessed to be non-acid forming (**NAF**).

#### 13.2.1. Methodology

The testwork of four (4) representative tailings samples included analysis of paste EC and pH, total sulfur (S), chromium reducible sulfur (CRS), sulfate, total carbon (C), acid neutralising capacity (ANC), net acid generation (NAG) test, total elemental digest (4-acid digest for 48 elements), deionised (DI) water leach, and analysis of leachate.

#### 13.2.2. Acid-Base Accounting (ABA) Results

All four tailings samples had alkaline paste pH values, ranging from pH 8.4 to 8.6. Paste EC values were low to slightly saline, ranging from 225 to 482  $\mu$ S/cm, with a median value of 312  $\mu$ S/cm. Total sulfur concentrations across the four

tailings samples ranged from 0.02 to 0.14 wt% S, with a median value of 0.13 wt% S. Consequently, the calculated maximum potential acidity (**MPA**) values were low, ranging from 0.6 to 4.3 kg  $H_2SO_4/t$ , with a median value of 3.8 kg  $H_2SO_4/t$ . The ANC values exceeded MPA across all samples, ranging from 6.7 to 39.8 kg  $H_2SO_4/t$ , with a median value of 30 kg  $H_2SO_4/t$ . As a result, all tailings samples reported negative net acid producing potential (**NAPP**) values, ranging from -6.1 to -35.5 kg  $H_2SO_4/t$ . CRS data indicated that the majority of sulfur within the tailings samples is present in sulfidic form. NAG test results showed all tailings samples had NAG pH values greater than 4.5. The DI leach data showed all tailings samples exhibited low metal concentrations and a circumneutral to alkaline pH (7 to 9).

Based on the above data, all four tailings samples are classified as non-acid forming (NAF) according to the Price (2009) and AMIRA (2002) classification schemes.

#### 13.2.3. Management Considerations

The results indicate that the risk of AMD from the tailings is low, as the material has been assessed as NAF. Generally, within tailings storage facilities there is low oxygen flux into the tailings, further reducing the potential for AMD generation.

#### 13.3. Soil Characterisation

SES completed the soil characterisation assessments for the main proposed disturbance footprints of the Project development areas (open pits, waste rock landforms and supporting infrastructure areas). The purpose of this study was to characterise the surficial soil materials within the proposed disturbance footprint areas and subsequently determine where the optimum volumes can be sourced as topsoil material for rehabilitation. A summary of the results and conclusions are provided below for Mandilla.

#### 13.3.1. Methodology

Soil materials were investigated by shallow diggings within the proposed disturbance footprint areas, involving soil profiling, sampling and laboratory analysis of the physical and chemical properties.

#### 13.3.2. Results

The soil characterisation results indicate that the required volume of topsoil material for rehabilitation of the waste rock landforms and laydown infrastructure areas can be harvested during ground clearing earthworks, and this topsoil growth medium material can be stabilised and achieve revegetation if the waste rock landforms (WRL's; including WRD's and the IWL-TSF) are appropriately designed and constructed as per the approved designs.

#### 13.3.3. Management Considerations

Surficial soil (0-20cm topsoil layer) materials will be salvaged from the disturbance footprint areas during initial ground clearing earthworks and stockpiled within designated storage areas. The topsoil material will be stored in stockpiles of no more than 2m vertical height to maintain the seed viability and biotic activity of this growth medium resource for later use in rehabilitation of the WRL's and laydown infrastructure areas at closure.

To minimise the erosion potential of the surficial soil materials, the WRL's have been designed with battered 17° wall slopes, top surface flat with crest bunding, back-sloped berms constructed at 10-15m vertical height intervals, sediment bunds around the toe of landform, and topsoil growth media applied 20cm depth on the outer surface of the final landform, followed by slopes contour ripped to minimise surface water runoff, erosion and sedimentation.

#### 13.4. Surface Water

Groundwater Resource Management (**GRM**) was engaged to complete the surface water assessments to identify and ameliorate potential flood risks and develop preliminary engineering designs for the required surface water management measures. A summary of the findings and conclusions are provided below for Mandilla.

#### 13.4.1. Methodology

GRM collated and analysed the available hydro-meteorological information and completed hydrological modelling that was then used in the preliminary design of surface water management structures (e.g. diversion channel/drains and sediment control measures) based on the proposed site layout plan and mine landform designs.

#### 13.4.2. Results

There are no significant river systems or named watercourses in the vicinity of the Mandilla project area, the most significant local hydrological feature being the internally draining Lake Lefroy, located some 7km to the east. The surface

elevation of the lake is approximately 290mAHD, some 30 to 40m lower than typical ground elevations at the Project. Natural ground surface gradients are low, typically sloping eastwards towards Lake Lefroy at about 0.5%.

Although there are no major river systems in the vicinity of the project site, there are several ephemeral drainages which drain via a combination of surficial sheet-flow and channelized flow and report downstream of the project site, crossing the Coolgardie-Esperance Highway before ultimately discharging along the south-western shore of Lake Lefroy. These drainages are reported by GRM as the Northern, Central and Southern catchments and drain areas of approximately 8.3, 123.6 and 9.4km2 respectively.

GRM determined that the development of the Mandilla landforms (pits, WRD's and IWL-TSF) will result in the loss of about 40% of the Northern Catchment and 10% of the Southern Catchment, with runoff from the remaining Northern and Southern catchments unimpacted by the project and continuing to report unimpeded from the site via existing natural drainages and watercourses. As such, runoff from the Northern and Southern catchments is not considered to pose a significant flood risk and no distinct surface water management measures are considered necessary.

However, the bulk of the larger Central Catchment (123.6km2), which is located north-west (i.e. upstream) of the project site, will require diversion works as runoff will be impeded by the development of the Main (western) waste rock landform (WRL). The preliminary design of the Central Catchment Diversion comprises an approximately 7km long diversion channel and parallel flood bund. The channel will have a nominal 6m base-width, 2H:1V side-slopes and will be 3.5m deep, while a 2m high flood bund with a 3m crest width and 1.5H:1V side-slopes will be required. Preliminary earthworks modelling indicates that in the order of 366,000m3 of cut will be required for the diversion channel and some 85,000m3 of fill will be required for the parallel flood bund. Material excavated from the channel may be re-used in the flood bund subject to its geotechnical suitability. The final site layout plan will likely include the addition of a 2km long starter bund along the western toe-line of the West WRD in lieu of the planned flood bund.

#### 13.4.3. Management Considerations

The above surface water management considerations will be implemented by Astral to ensure surface water flows are managed effectively and appropriately throughout operations and at closure.

### 13.5. Groundwater

GRM was engaged to complete the mine dewatering and water supply assessments for the Project. A summary of the outcomes are provided below.

#### 13.5.1. Mine Dewatering Assessments

The mine dewatering assessment for the Mandilla Project site has been completed, with a summary of the hydrogeology and pit dewatering requirements provided below. The field drilling programs for the Feysville Project site have been completed, with the modelling and reporting to be completed mid-2025.

#### 13.5.1.1. Methodology

The preliminary groundwater investigation drilling and testing programme at Mandilla was undertaken in two phases between late October 2024 to early February 2025 and involved the drilling and testing of 11 groundwater investigation bores to depths of between 82.5 and 150m.

A numerical groundwater flow model was developed for the Mandilla area using the MODFLOW code. The model was calibrated to the available data and run in predictive mode to assess the dewatering requirements for each of the proposed x4 open pits over the life of mine.

#### 13.5.1.2. Results

The hydrogeology of the Mandilla Project area is characterised by low relief and east to north-easterly draining palaeodrainage systems, underlain by Archean sequences, with groundwater typically occurring in fractured bedrock aquifers and Tertiary age palaeochannel sands.

The Mandilla groundwater investigation drilling and testing programme found that:

- The groundwater level is 19 to 35mbgl.
- A thick clay sequence covered the Iris and Eos pit deposits to depths around 40-50m.
- The northern Theia pit area has relatively low permeability, with the highest airlift yield measured at 2.3L/s.
- A zone of higher permeability in the southern part of the Theia pit was identified in x3 bores, with airlift yields ranging up to 4.9L/s.
- The groundwater quality is saline to hypersaline (ranging up to around 125,000mg/LTDS), slightly acidic to slightly alkaline and of the sodium chloride type.

The results of the modelling found that no significant groundwater inflows are predicted for around the first three months of development until the regional water table is intersected. Once the regional groundwater table is intersected, it is predicted that:

- The Theia pit will contribute the bulk of the mine dewatering discharge from Mandilla such that:
  - Dewatering will be required from the Theia pit for 6½ years of the 10½ year project mine life.
  - Inflow rates will build gradually, up to around 10 to 20L/s from the end of the first year up until the latter part of Year-3 mining.
  - From around the end of Year-3 the inflows potentially stabilise in a range of 20 to 30L/s.
  - Peak inflows are predicted occur in the latter part of Year-6 with dewatering rates of around 30-40L/s required to maintain dry conditions.
- The Eos pit may require dewatering rates of up to around 10L/s due to its high mining rate, although the pit will only be operational for around 6 months or so.
- Groundwater inflows to the Hestia and Iris pits are predicted to be low, circum 5L/s each.

It should be noted that the dewatering rates predicted assume that no ex-pit bores are installed and operated to assist with the mine dewatering (GRM, 2025b).

The drawdown impact in the local aquifer from dewatering at Mandilla at the end of project mining is predicted to extend out radially from the Theia pit to a maximum distance of around 3km (GRM, 2025b).

Further groundwater investigation for the Theia pit area will be undertaken mid-2025 to advance the hydrogeological understanding of the Project to a Feasibility Study level of confidence and likely involve:

- Drilling of an additional 4-5 groundwater investigation bores around the Theia pit; and
- Drilling, installation and testing of 2 to 3 groundwater production bores.

#### 13.5.1.3. Management Considerations

In summary, the groundwater level is 19 to 35mbgl, groundwater quality saline to hypersaline (ranging up to around 125,000mg/LTDS), and the drawdown impact in the local aquifer from dewatering at the end of project mining is predicted to extend out radially from the Theia pit to a maximum distance of around 3km. Therefore, the poor water quality has low ecological or economical values to other groundwater users, with no human or environmental receptors within close proximity to the project area; hence, there are negligible aquifer impacts from the mine dewatering drawdown, with the dewater volumes able to be fully utilised for dust suppression during mining operations.

#### 13.5.2. Water Supply Assessments

Potential saline (as opposed to hyper saline) water supply search areas have been identified via airborne electromagnetic surveys that identified palaeochannel valleys to the north-west and north-east of Mandilla. Field drilling programs are planned to commence within these water supply target areas later in calendar year 2025, and the modelling and reporting completed by mid-2026.

## **13.6.** Flora and Vegetation

Native Vegetation Solutions (**NVS**) has completed the flora and vegetation assessments for both the Mandilla and Feysville project sites to date, including desktop reviews, field surveys and reporting. Due to the recent (May 2025) acquisition of the Maximus Resources tenements enabling the site layout plan to be expanded to the west, this extension area requires surveying by NVS in the upcoming Spring season (Q3-2025) for the Mandilla flora and vegetation assessment to be considered complete. A summary of the results and conclusions to date (i.e. excluding the western extension area outcomes) are provided below.

#### 13.6.1. Methodology

NVS completed the required level and timing of flora surveys over the Project development tenure at Mandilla (initially 1,260 hectares; excludes the proposed western extension area) and Feysville (1,100 hectares) to date, conducted in accordance with the "Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)".

#### 13.6.2. Results

The field assessments established that the condition of the vegetation in the Project development areas ranged from "Completely Degraded" to "Very Good", with most of the areas falling into the "Good" category. Areas affected by historic

exploration were deemed in "Degraded" or "Completely Degraded" condition. No areas of vegetation were assessed to be in "Pristine" condition.

Several weed species were recorded, with none considered Declared Pests under the Biosecurity and Agriculture Management Act 2007 (BAM Act).

No Threatened or Priority Ecological Communities (**TEC** or **PEC**) and no Threatened Flora were recorded in either of the Project development/ survey areas, with only two Priority Flora recorded in the Mandilla survey area, Beyeria sulcata var. truncata (P3) and Ptilotus procumbens (P1). The Mandilla site layout plan avoids the majority of the Priority Flora populations.

In summary, no unique or restricted vegetation communities were identified within the Project development areas, with all vegetation types/communities common, widespread and well represented in the Eastern Goldfields subregion. Given the relatively small sizes of the Project development areas and the extent of vegetation associations elsewhere, the impact of proposed disturbance/clearing is not considered to affect the conservation values of flora and vegetation or create fragmentation or patches of remnant vegetation.

#### 13.6.3. Management Considerations

In summary, NVS concluded that there are no PEC/TEC's and no Threatened Flora species within the Project development areas, and all vegetation types/communities are common, widespread and well represented in the Eastern Goldfields subregion. These outcomes are expected to enable streamlined approval of the Native Vegetation Clearing Permit (**NVCP**) application. The internal Clearing Management Procedure will be implemented by Astral to ensure ground disturbance and clearing is restricted to the approved area (ha) and disturbance footprint boundary limits under the Clearing Permit.

## 14. Operating Cost Estimate

Operating costs are derived from a number of sources including quotations and budget pricing supplied by suppliers, estimates based on similar WA mining operations, and pricing derived from processing plant suppliers scaled by accepted methods.

The PFS is aimed at identifying operating costs to an accuracy of +/-20%.



#### Table 52 - Operating costs summary

Operating Costs <sup>1</sup>	\$ million	\$/t Milled	\$/oz
Mining <sup>2</sup>	\$1,553	\$30.81	\$1,098
Processing (incl. Maintenance, Transport, Insurance & Refining)	\$963	\$18.95	\$681
General & Administrative (Site)	\$166	\$3.28	\$118
C1 Cash Cost <sup>3</sup>	\$2,682	\$52.80	\$1,897
Royalties	\$187	\$3.69	\$132
Sustaining Capital	\$80	\$1.57	\$56
All-in Sustaining Cost (AISC) <sup>4</sup>	\$2,949	\$58.05	\$2,085

Notes:

<sup>1</sup> – Operating costs presented in the table above were calculated based on recovered gold.

<sup>2</sup> – Excludes pre-production mining costs.

 $^{3}$  – C1 cash cost includes mining, processing (including transport, insurance and refining costs) and site G&A costs.

<sup>4</sup> – All-in Sustaining Cost (**AISC**) per ounce payable includes C1 cash cost, royalties and sustaining capital costs. It does not include corporate costs, exploration costs and non-sustaining capital costs.

### 14.1. Mining Costs

Mining costs are derived from estimated cost per bulk cubic metre (bcm) rates for load and haul, drill and blast, and technical services as determined by the RFQ process.

In addition to contractor mining costs, the Company has modelled the salary and related costs for the mining owners team, however the cost associated with accommodation, messing and flights for mining personnel and owners team mining personnel is included within general and administrative costs.

The Company has applied an assumed cost of \$1.25 per tonne of ore processed for grade control drilling and related costs. The total LoM allowance modelled for grade control drilling is approximately \$63.51 million.

The Company also obtained quotes for clearing and grubbing, based on the proposed disturbance footprint. The total LoM allowance modelled for clearing and grubbing is approximately \$19.05 million.

The average mining cost per total material mined over the LoM is \$4.25/t or \$12.48/bcm.

Note: the above assumptions may vary from the optimisation assumptions.

#### **14.2.** Power Generation Costs

Site power generation is based on an average hourly load of ~8MW with a peak load of ~10.8MW. Annual energy consumption is ~70GWh. The main user of electrical power is the 2.75Mtpa processing plant and associated site infrastructure.

A LCOE cost of \$0.22/kwh for the grid connection option has been modelled.

Refer to section 8 for further information.

#### 14.3. Processing Costs

The estimates for the processing plant operating costs were completed by Como Engineers to an accuracy of +/-25% for a 2.75Mtpa CIP process plant using a three-stage crushing and single stage grinding circuit. Costs were inclusive of crushing, grinding and gravity, leaching and absorption, elution and goldroom, services and general maintenance.

A power load list was provided and costs have been modelled based on the LCOE outlined in section 14.2.

Specific site administration costs were also provided by Como and have been incorporated in General & Administrative costs.

The cost for accommodation, messing and flights for processing personnel is allocated to General & Administrative costs. The average processing cost per total plant feed over the LoM is \$18.95/t.

*Note*: the above assumptions may vary from the optimisation assumptions.

### 14.4. General and Administrative Costs

General & Administrative costs include a fixed annual cost of \$0.77 million provided by Como Engineers.

Power costs for non-process infrastructure have been modelled based on the load list provided by Como Engineers at the LCOE rate detailed in section 8.

Personnel costs for an Owners Team (consisting of a General Manager, HSE Manager and Safety, Environmental and Security Personnel). Costs have been built up on a first principles approach in-house, utilising available market rate data.

Flight costs have been modelled based on recent flight cost information for CASAIR Aviation.

Accommodation and Messing costs for all personnel (including processing and mining personnel) have been modelled based on pricing provided by the Shire of Coolgardie who operate suitable camp accommodation in Kambalda.

The average G&A cost per plant feed tonne processed is \$3.28/t.

### 14.5. Royalties

Mandilla is covered by existing Mining Leases which are not currently subject to any third-party royalties other than the standard WA Government gold royalty of 2.5% of gold revenue. Astral is currently negotiating with a Native Title claimant group with respect to a Native Title Agreement for both Feysville and Mandilla. The negotiations are advanced and for the purposes of the PFS, Astral has modelled a royalty rate inclusive of the WA Government gold royalty of between 3.0% - 3.5% dependent on quarterly gold production.

## 15. Capital Cost Estimate

Capital costs are derived from a number of sources including quotes and budget pricing from suppliers and estimates based on recent actual pricing from similar Western Australian mines, as detailed in Table 53 below.

They include all pre-production site, process plant, tailings dam, and mining development costs as well as sustaining capital post-production start-up.

The PFS is aimed at identifying the capital costs to an accuracy of +/- 25% and operating costs to an accuracy of +/-20%.



Pre-Production Capital	Source	\$m	
Processing Plant	Como Engineers	121.38	
Non-Process Infrastructure	Como Engineers	17.12	
Owner's Costs	Como Engineers	8.82	
Tailings Storage Facility	Soil & Rock Engineering	15.02	
Earthworks and Roads	RFQ/In-house	2.90	
Other (Light Vehicles, Communications etc.)	In-house/other studies	0.65	
Contingency	Como Engineers	14.52	
Pre-Production Mining & G&A	In-house/RFQ	46.70	
Total Pre-Production		227.11	
Sustaining Capital		\$m	
Sustaining Capital (incl Process & NPI)	In-house/other studies	22.50	
Tailings Storage Facility	Soil & Rock Engineering	2.49	
Water Diversion Bund	RFQ/In-house	6.00	
Earthworks and Roads	RFQ/In-house	7.20	
Mine Closure & Site Rehabilitation	Kewan Bond	41.60	
Total Sustaining		79.79	
Total LOM Capital		306.90	

#### Table 53 - Capital cost estimate

## 15.1. Processing Plant and Non-Processing Infrastructure Cost Breakdown

The estimate for the processing plant and non-processing infrastructure cost construction was completed by Como Engineers to an accuracy of +/-25%.

The capex for a 2.75Mtpa CIP process plant using a three-stage crushing and single stage grinding circuit is shown below. An allowance of \$18.62 million is included for non-process infrastructure. Further details on the inclusions for non-process infrastructure is detailed in section 9.5.



Processing Plant Costs		Equipment/ Material Costs	Installation	Total
EPCM	\$m	-	12.64	12.64
General	\$m	3.82	3.05	6.87
Electrical	\$m	13.49	8.64	22.12
Site Infrastructure	\$m	4.56	0.44	5.00
Crushing	\$m	21.36	2.57	23.93
Milling & Classification	\$m	16.24	2.75	19.00
Leaching & Absorption	\$m	16.33	1.60	17.93
Elution & Regeneration	\$m	7.10	0.37	7.47
Goldroom	\$m	0.61	0.15	0.77
Services - Air & Water	\$m	1.79	0.53	2.32
Reagents	\$m	1.39	0.32	1.72
Tailings	\$m	0.64	0.31	0.96
Oxygen Plant	\$m	0.56	0.10	0.66
Subtotal	\$m	87.91	33.47	121.38
Contingency 10%	\$m	8.79	3.35	12.14
Total	\$m	96.70	36.82	133.52
Non-Process Infrastructure		Equipment/ Material Costs	Labour	Total
Non-Process Infrastructure	\$m	14.21	2.92	17.12
Contingency 9%	\$m	1.24	0.26	1.50
Total	\$m	15.45	3.17	18.62
Owners' Costs		Equipment/ Material Costs	Labour	Total
First Fills	\$m	2.43	-	2.43
Commissioning Spares	\$m	1.99	-	1.99
Warehouse and Critical Spares	\$m	4.40	-	4.40
Subtotal	\$m	8.82	-	8.82
Contingency 10%	\$m	0.88	-	0.88
Total	\$m	9.70	-	9.70
Processing Plant + Non-Process Infrastructure + Owners' Costs		Equipment/ Material	Labour	Total
		Costs		
Plant Costs	\$m	<b>Costs</b> 96.70	36.82	133.52
Plant Costs Non-Process Infrastructure	\$m \$m	96.70 15.45	36.82	133.52
Plant Costs Non-Process Infrastructure Owner's Costs	\$m \$m \$m	Costs           96.70           15.45           9.70	36.82 3.17 -	133.52 18.62 9.70

## 15.2. Pre-Production Mining and G&A Costs

Pre-production Mining capital costs include all mining costs up until the commencement of processing (refer to section 14.1 for mining costs).

Pre-production General & Administrative costs include all General & Administrative costs up until the commencement of processing (refer to section 14.4 for General & Administrative costs).

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## **15.3. Sustaining Capital**

Como Engineers provided forecast sustaining capital for the process plant. An allowance of \$1.8 million per annum has been made during year 4 to year 15 of processing operations. This allowance covers processing plant sustaining capital and other sustaining capital (e.g. light vehicles, equipment etc.). This allowance excludes sustaining capital relating to the TSF, earthworks and roads and mine closure and rehabilitation costs.

## **15.4. Tailings Storage Facility**

The estimate for the Tailings Storage Facility construction was provided by Soil & Rock Engineering Pty Ltd (SRE).

Tailings will be contained within the Theia Tailings Storage Facility (**TTSF**), an integrated waste landform style of TSF to the northwest of the Theia Pit, from the commencement of processing in Year 1 through to the end of Year 10.

The Stage 1 Crest of the TTSF is RL 347 metres and a maximum height of 17 metres.

The proposed Stage 2 downstream raise of the TTSF, will occur as tailings deposition continues into the Stage 1 TTSF. The Stage 2 Crest of the TTSF is RL 352 metres and a maximum height of 22 metres. This raise is being executed by downstream construction.

A cost of approximately \$2.5 million has been modelled for the Stage 2 TSF lift in year 6.

Following completion of mining in the Eos Pit at the end of year 10, tailings deposition will then be switched to this facility, the EIPTSF, which is located to the south-east of the Theia Pit. The EIPTSF would operate to the end of year 13 prior to tailings deposition being switched to HIPTSF for the remainder of the LoM.

An initial capital cost of \$15.0 million has been modelled for Stage 1, inclusive of earthworks, underdrainage and return water storage.

### 15.5. Earthworks and Roads

The estimate for the capital costs associated with Earthworks (ROM pad etc) and Roads was based on rates supplied by Iron Mine Contracting, adjusted for the quantities determined in-house.

### **15.6. Mine Closure & Rehabilitation Costs**

The estimate for the sustaining capital costs associated with Mine Closure & Rehabilitation was supplied by Kewan Bond for Mandilla. The Company applied the costs for Mandilla to Feysville on the basis of the comparable disturbance footprint, having regard for the Feysville containing limited infrastructure.

## 16. Project Economics – Financial Analysis and Outcomes

### 16.1. Financial Result

At a gold price of A\$4,250/oz, which is lower than the gold spot price over the past six months, the Project is forecast to generate an unleveraged and pre-tax IRR of 101%, an undiscounted and pre-tax Free Cash Flow of A\$2,835 million and an unleveraged and pre-tax NPV<sub>8%</sub> of approximately A\$1.4 million (refer to the range of possible economic values determined by sensitivity in Section 16.3). The financial forecast summary is presented in Table 55.



Key Financial Assumptions		
Gold Price Assumed	A\$/oz	4,250
Discount Rate	%	8
Foreign Exchange	AUD:USD	0.65
Key Project Metrics		
Payable Metal	Koz	1,414
Gold Revenue	A\$M	6,011
Mining Costs – Total	A\$M	1,594
Mining Costs – Pre-Production (capitalised)	A\$M	-40
Mining Costs	A\$M	1,553
Processing (including Maintenance, Transport, Insurance & Refining)	A\$M	963
General and Administrative Costs	A\$M	166
Royalties	A\$M	187
Project EBITDA	A\$M	3,142
Depreciation and Amortisation	A\$M	307
Net Profit Before Tax	A\$M	2,835
Capital		
Pre-Production Capital Expenditure (incl. contingency)	A\$M	180
Pre-Production Costs - Mining/General & Administrative	A\$M	47
Sustaining Capital	A\$M	80
LOM Capital	A\$M	307
Project Returns		
FCFF (Pre-tax)	A\$M	2,835
FCFF (Post-tax)	A\$M	2,012
Pre Tax NPV @ FID (8.0%)	AUD M	1,400
Pre Tax IRR (at FID)	%	101%
Pre Tax payback - From first Au production	Years	0.92
Post Tax NPV @ FID (8.0%)	AUD M	1,001
Post Tax IRR (at FID)	%	86%
Post Tax payback - From first Au production	Years	1.00
Equity NPV @ FID (8.0%)	AUD M	1,001
Post Tax IRR (at FID)	%	86%
Capital Intensity (Steady State)	AUD/oz p.a.	2,381
Pre-Tax NPV/Pre-Production Capital	x	6.16
Post-Tax NPV/Pre-Production Capital	x	4.41

Table 55 – LOM	financial	forecast	summary
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Notes:

 $^{1}-\ensuremath{\mathsf{Payback}}$  period is calculated from the start of gold production.

<sup>2</sup> – Capital intensity is calculated by dividing pre-production capital by average annual payable metal over the Stage 1 period.

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Approximate project cashflows on a pre-tax basis for Stage 1 are modelled in Chart 59 below.



Chart 59 – Stage 1 Project cashflows (pre-tax)

## 16.2. Production Target

The total payable (recovered) gold metal over the life of the Project is forecast to be approximately 1,414koz. A breakdown of the schedule of payable gold by Resource category (Indicated and Inferred) across the life of the Project is included at Chart 60, noting that the Indicated Mineral Resource category is inclusive of declared Ore Reserves.

Approximately 80% of the materials scheduled for extraction across LoM are classified as Indicated, with the balance classified as Inferred. This provides confidence in the Project being able to pay back the pre-development capital from the higher confidence Indicated category.



Chart 60 – Payable metals % by Resource category

There is a low level of geological confidence associated with Inferred Mineral Resources, and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production target itself will be realised. The underlying Mineral Resources have been prepared by the Competent Persons in accordance with the JORC Code.



## 16.3. Sensitivity Analysis

The Project is financially robust with a short payback period and strong free cashflows. The Project's unleveraged and pretax NPV is most sensitive to changes in gold price and operating costs, while it is more resilient to changes in the discount rate, metal recovery and capital costs as shown in Chart 61 below.



Chart 61 – NPV sensitivity analysis (unleveraged, pre-tax)

Changes to the Australian dollar gold price, either by US dollar gold price variation or AUD:USD exchange rate fluctuations would have a direct impact on revenue and derived cashflow. The forecast impact on key metrics across a range of Australian dollar gold prices is provided in Table 56 below.

Gold Price	AUD/oz	3000	3250	3500	3750	4000	4250	4500	4750	5000
NPV Pre-Finance, Pre-tax	AUD M	475	660	845	1,030	1,215	1,400	1,584	1,769	1,954
Pretax IRR	%	40%	52%	65%	77%	89%	101%	113%	124%	136%
Payback	Years	2.08	1.58	1.33	1.17	1.00	0.92	0.83	0.75	0.75
Annual EBITDA	AUD M	77.2	95.7	114.3	132.8	151.3	169.8	188.3	206.8	225.4
LOM EBITDA	AUD M	1,429	1,771	2,114	2,456	2,799	3,142	3,484	3,827	4,169
Free Cashflow	AUD M	1,122	1,464	1,807	2,149	2,492	2,835	3,177	3,520	3,862
LOM Revenue	AUD M	4,243	4,597	4,950	5,304	5,658	6,011	6,365	6,718	7,072

Gold Price	AUD/oz	5250	5500	5750	6000	6250	6500	6750	7000
NPV Pre-Finance, Pre-tax	AUD M	2,139	2,324	2,509	2,694	2,878	3,063	3,248	3,433
Pretax IRR	%	147%	158%	169%	180%	191%	202%	213%	224%
Payback	Years	0.67	0.67	0.58	0.58	0.58	0.50	0.50	0.50
Annual EBITDA	AUD M	243.9	262.4	280.9	299.4	318.0	336.5	355.0	373.5
LOM EBITDA	AUD M	4,512	4,854	5,197	5,540	5,882	6,225	6,567	6,910
Free Cashflow	AUD M	4,205	4,547	4,890	5,233	5,575	5,918	6,260	6,603
LOM Revenue	AUD M	7,426	7,779	8,133	8,486	8,840	9,194	9,547	9,901

### **16.4. Growth Potential**

The following factors have not been captured in the PFS and could offer medium and long-term upside to the financial outcomes of the PFS:

• Mineral Resource growth – Astral has demonstrated the ongoing growth potential of Mandilla with the recent April 2025 MRE adding a further 161,000oz from an in-fill focussed drilling campaign. Furthermore, as demonstrated by

the October 2024 MRE update at Feysville, Astral has demonstrated the ability to generate new circa 100koz deposits at sub \$20/oz in discovery costs (Kamperman deposit).

- Active greenfields exploration is ongoing at Feysville and extensional and in-fill drilling at the known deposits at both Mandilla and Feysville have the potential to deliver additional Mineral Resources.
- With the recent acquisition of Spargoville, Astral has added ~ 144km<sup>2</sup> of highly prospective tenure contiguous to Mandilla. The new tenement acquisition is currently the subject of a 10,000 metre RC exploration program and has the potential to lead to further discoveries which will add significant value to Mandilla given its proximity to the 2.75mtpa process plant contemplated in the PFS.
- Selective ore mining The regularisation process adopted for both Hestia and Eos (5mE x 6.25mN x 5mZ) is appropriate for the 250t class excavators contemplated in the PFS. However, Hestia has a steeply dipping structural control to the gold mineralisation which could potentially be more selectively mined using a 120t class excavator. Similarly, the flat-lying palaeochannel mineralisation at Eos could potentially be mined more selectively with a 120t class excavator. Throughout the Mandilla LoM, the Project is mill constrained, more selective mining, albeit less productive from a mining perspective has the potential to improve the grade through the process plant and further improve the overall Project NPV.
- Given the Project is mill constrained, analysis will be conducted during the DFS in order to determine whether there is economic benefit in further increasing the capacity of the process plant.

## 17. Risks

The risks described in this section are not an exhaustive list of the risks faced by the Company or by investors in the Company. It should be considered in conjunction with other information in this Study.

## 17.1. Gold price volatility and exchange rate

The Company is exposed to the risks of commodity price volatility and exchange rate fluctuations increasing the Company's costs.

The analysis has been conducted using a gold price of A\$4,250/oz, which Astral considers to be a conservative gold price forecast, given the spot price of gold has not been below that level in the previous 6 months, however the Project is sensitive to fluctuations in the gold price or AUD: USD exchange rate. Each movement in the AUD gold price of \$250/oz results in a change to the pre-tax free cash flow of approximately \$343 million.

Financial analysis shows the Project has very strong economics, as a change in gold price of -20% (from \$4,250 to \$3,400) still delivers a positive pre-tax free NPV of \$771 million (down from \$1.4 billion).

#### 17.2. Future capital requirements

The Company's capital requirements depend on numerous factors. Following completion of the Study, the Company may require further financing to fund the Project.

Additional funding will be required and may be raised by the Company through the issue of equity, debt or a combination of debt and equity or asset sales. Any additional equity financing will dilute shareholdings and debt financing, if available, may involve restrictions on financing and operating activities.

If the Company is unable to obtain additional financing as needed, it may be required to reduce the scope of its proposed operations and scale back its exploration, studies and development programmes as the case may be. There is no guarantee that the Company will be able to secure any additional funding or be able to secure funding on terms favourable to the Company.

If the Company is unable to obtain additional financing as needed, it may be required to reduce, delay or suspend its operations and this could have a material adverse effect on the Company's activities and could affect the Company's ability to continue as a going concern or remain solvent.

## 17.3. Capital and operating costs

The capital and operating costs have been conducted at what the Company considers to be a relatively stable point in the pricing cycle. As the Project progresses towards Feasibility studies, value engineering works will be conducted on all major capital and operating cost areas. The economic analysis of the Project shows the following:

- A +20% increase in operating costs for the Project still generates a NPV<sub>8</sub> of \$1.1 billion; and
- A +20% increase in capital costs for the Project still generates a NPV<sub>8</sub> of \$1.3 billion.

## **17.4. Mineral Resource and Ore Reserve Estimates**

Ore Reserve and Mineral Resource estimates are expressions of judgment based on drilling results, past experience with mining properties, knowledge, experience, industry practice and many other factors.

Estimates which are valid when made may change substantially when new information becomes available. Mineral Resource and Ore Reserve estimation is an interpretive process based on available data and interpretations and thus estimations may prove to be inaccurate.

The actual quality and characteristics of mineral deposits cannot be known until mining takes place and will almost always differ from the assumptions used to develop resources. Further, Ore Reserves are valued based on future costs and future prices and, consequently, the actual Ore Reserves and Mineral Resources may differ from those estimated, which may result in either a positive or negative effect on operations.

Should the Company encounter mineralisation or formations different from those predicted by past drilling, sampling and similar examinations, resource estimates may have to be adjusted and mining plans may have to be altered in a way which could adversely affect the Company's operations.

### 17.5. Operational risks

The operations of the Company may be affected by various factors which are beyond the control of the Company, such as failure to locate or identify mineral deposits, failure to achieve predicted grades in exploration or mining, operational and technical difficulties encountered in exploration and mining, difficulties in commissioning and operating plant and equipment, mechanical failure or plant breakdown, unanticipated metallurgical problems which may affect extraction costs, adverse weather conditions, industrial and environmental accidents, industrial disputes and unexpected shortages, delays in procuring, or increases in the costs of consumables, spare parts, plant and equipment, fire, explosions and other incidents beyond the control of the Company. The operations of the Company may also be affected by various other factors, including failures in internal controls and financial fraud.

These risks and hazards could also result in damage to, or destruction of, production facilities, personal injury, environmental damage, business interruption, monetary losses and possible legal liability. While the Company currently intends to maintain insurance within ranges of coverage consistent with industry practice, no assurance can be given that the Company will be able to obtain such insurance coverage at reasonable rates (or at all), or that any coverage it obtains will be adequate and available to cover any such claims.

### 17.6. Mine development

Possible future development of mining operations at the Company's projects or other tenements applied for or acquired by the Company may not occur and is dependent on a number of factors including, but not limited to, the acquisition and/or delineation of economically recoverable mineralisation, favourable geological conditions, the grant of tenure, availability of funding on reasonable terms for such development and favourable mining, processing, metallurgical, infrastructure, economic, heritage, environmental, engineering, social, government, native title and other legal matters and receiving the necessary approvals from all relevant authorities and parties.

If the Company commences production on any existing or future projects, its operations may be disrupted by a variety of risks and hazards which are beyond the control of the Company, such as weather patterns, unanticipated technical and operational difficulties encountered in exploration, development, extraction and production activities, mechanical failure of operating plant and equipment, shortages or increases in the price of consumables, spare parts and plant and equipment, cost overruns, access to the required level of funding and contracting risk from third parties providing essential services.

Vertical advancement has been modelled in accordance with bcm rates provided by a reputable mining contractor. At various stages of the proposed mine plan, vertical advancement has been modelled at the upper threshold of industry norms. Should the Company encounter challenges with achieving targeted progress, including meeting forecast volume and grade, the Company has a number of options, including modification to mining fleet specification and quantities and the option to re-sequence additional work fronts in the mining schedule (e.g. Eos and Hestia deposits).

No assurance can be given that the Company will achieve commercial viability through the development of existing or future projects.

## 17.7. Metallurgical risks

The economic viability of the proposed development depends on the metallurgical recoveries as outlined in the PFS. Further test work is required to estimate the effect changes in mineralogy may have in the economic recovery of specific areas of the resource.

## 17.8. Tenure, access and grant of applications

Interests in tenements in Australia are governed by state legislation and are evidenced by the granting of licences or leases. Each licence or lease is for a specific term and has annual expenditure and reporting commitments, together with other conditions requiring compliance. The Company could lose its title to or its interest in one or more of the tenements in which it has an interest, or the size of any tenement holding could be reduced if licence conditions are not met or if insufficient funds are available to meet the minimum expenditure commitments. The Company's tenements, and other tenements in which the Company may acquire an interest, will be subject to renewal, which is usually at the discretion of the relevant authority. If a tenement is not renewed the Company may lose the opportunity to discover mineralisation and develop that tenement. The Company cannot guarantee that tenements in which it presently has an interest will be renewed beyond their current expiry date.

### 17.9. Native title, cultural heritage and sacred sites

Mining tenements in Australia are subject to native title laws and may be subject to future native title applications. Native title may preclude or delay granting of exploration and mining tenements or the ability of the Company to explore, develop and/or commercialise the mining tenements. Considerable expenses may be incurred negotiating and resolving issues, including any compensation agreements reached in settling native title claims lodged over any of the mining tenements held or acquired by the Company.

The presence of Aboriginal sacred sites and cultural heritage artefacts on mining tenements is protected by Western Australian and Commonwealth laws. Any destruction or harming of such sites and artefacts may result in the Company incurring significant fines and court injunctions. The existence of such sites may limit or preclude exploration or mining activities on those sites, which may cause delays and additional expenses for the Company in obtaining clearances.

## 17.10. Approval risks

The Company will be reliant on third-party, environmental and other regulatory approvals to enable it to proceed with the development of the Project. There is no guarantee that the required approvals will be granted and delays in project permitting may delay the project from commencing production in the proposed timeframe. Early engagement with regulators to raise awareness of the project and the planned scope will commence during the early stages of the DFS workstreams.

## 18. Funding

The PFS estimates a funding requirement of approximately A\$227 million to cover the capital and operating costs from the commencement of plant construction to the end of plant commissioning and the commencement of gold production. It is expected that the funding requirement will be met with a mixture of debt and equity, which will need to be raised prior to project construction commencing.

The Company considers there is a reasonable basis to conclude that the project funding will be available when required, on grounds including the following:

- The Project has strong technical and economic fundamentals which are forecast based on the PFS to provide an attractive return on capital investment and generates significant free cashflows at conservative gold prices (well below current spot gold price). This provides a strong platform to source debt and equity funding.
- The Company has a strong track record of raising equity funds as and when required to further the exploration and evaluation of Mandilla.

There is, however, no certainty that the Company will be able to source funding as and when required (nor any certainty as to the form such capital raising may take, such as equity, debt, hybrid and/or other capital raising). Typical project

development financing would involve a combination of debt and equity. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

## 19. Conclusions and Forward Work Plan

The Board of Astral has approved this Pre-Feasibility Study.

The PFS provides justification that Mandilla is a commercially viable stand-alone gold mining operation and, accordingly, the Board of Astral is supportive of progressing the Project to a Definitive Feasibility Study. A Final Investment Decision (**FID**) is targeted for the September 2026 Quarter.

The forward work plan will include:

- Exploration and evaluation activities are continuing at the Mandilla, Feysville and Spargoville Gold Projects. Exploration activities will include:
  - In-fill drilling to convert addition inferred mineral resources to the higher confidence indicated category
  - Extensional drilling targeting further resource growth
  - Greenfields exploration drilling at Feysville and Spargoville.
- A sample grade control drill program will be conducted over a portion of the proposed Stage 1 and Stage 2 pits at the Theia deposit, to further de-risk the earlier stages of the Project.
- Continue metallurgical testwork programs.
- Commence permitting and seek all necessary approvals.
- Investigate alternative water supply options.
- Execute Native Title Agreements with the claimant group.
- Progress discussions for project financing.
- Delivery of a DFS by June 2026.



# 20. Group Resources and Reserves

## 20.1. Mineral Resources

		Indicated			Inferred		Tota	Mineral Res	ource
Project	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)
Mandilla <sup>1</sup>	31	1.1	1,034,000	11	1.1	392,000	42	1.1	1,426,000
Feysville <sup>2</sup>	4	1.3	144,000	1	1.1	53,000	5	1.2	196,000
Spargoville <sup>3</sup>	2	1.3	81,000	1	1.6	58,000	3	1.4	139,000
Total	36	1.1	1,259,000	14	1.2	502,000	50	1.1	1,761,000

Table 57 – Group Mineral Resources

The preceding statement of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

The Mineral Resources for Mandilla, Feysville and Spargoville are reported at a cut-off grade of 0.39 g/t Au lower cut-off and is constrained within pit shells derived using a gold price of AUD \$3,500 per ounce for Mandilla and Spargoville and AUD\$2,500 per ounce for Feysville.

## 20.2. Ore Reserves

#### Table 58 – Group Ore Reserves

		Probable				
Project	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	(Mt)	(Au g/t)	(oz Au)	(Mt)	(Au g/t)	(oz Au)
Mandilla	34.3	0.9	1,000,000	34.3	0.9	1,000,000
Feysville	2.3	1.2	88,000	2.3	1.2	88,000
Total	36.6	0.9	1,082,000	36.6	0.9	1,082,000

Ore Reserves are a subset of Mineral Resources.

Ore Reserves are estimated using a gold price of AUD \$3,000 per ounce.

The preceding statement of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition. All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate significant figures.

The Ore Reserves for Mandilla are reported at a cut-off grade of 0.30 g/t Au lower cut-off and Feysville are reported at a cut-off grade of 0.40 g/t Au lower cut-off.



## 21. Forward Looking Statements

This report may contain certain "forward-looking statements" which may not have been based solely on historical facts but rather may be based on the Company's current expectations about future events and results. Such statements include, but are not limited to, statements with regard to capacity, future production and grades, estimated costs, revenues and reserves, the construction costs of new projects and projected capital expenditures, the outlook for minerals and metals prices and the outlook for economic conditions and may be (but are not necessarily) identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage". Where the Company expresses or implies an expectation of belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. The detailed reasons for that conclusion are outlined throughout this report and all material assumptions are disclosed.

However, forward-looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements.

Such risks include, but are not limited to resource risk, metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as government regulation and judicial outcomes.

For a more detailed discussion of such risks and other factors, see the risks section of this report, the Company's Annual Reports, as well as the Company's other announcements. Readers should not place undue reliance on forward-looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of this report, or to reflect the occurrence of unanticipated events, except as required under applicable securities laws.

The Pre-Feasibility Study referred to in this report is based on technical and economic assessments to support the estimation of Mineral Resources and Ore Reserves. Those estimates have been prepared by a competent person in accordance with JORC Code 2012 and all production targets are based on those Mineral Resources and Ore Reserves and all material assumptions relation to those production targets and related forecast financial information are set out in this report.

Whilst Astral Resources believes it has reasonable grounds to support the results of the Pre-Feasibility Study, however there is no assurance that the intended development referred to will proceed as described. The production targets, related forecast financial information and other forward-looking statements referred to are based on information available to the Company at the time of release and should not be solely relied upon by investors when making investment decisions. Material assumptions and other important information are contained in this report. Astral Resources cautions that mining and exploration are high risk and subject to change based on new information or interpretation, commodity prices or foreign exchange rates. Actual rates may differ materially from the results or production targets contained in this report. Further evaluation is required prior to a decision to conduct mining being made.

## 22. Competent Persons Statements

## 22.1. Mandilla

The information in this report that relates to the maiden Ore Reserves for the Mandilla Gold Project is based on information compiled by Mr Mitchell Rohr, who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Rohr is an independent consultant employed by Cube Consulting. Mr Rohr has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rohr consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

The information in this report that relates to the Mineral Resources for the Mandilla Gold Project reported in this announcement were announced in the Company's ASX announcement dated 3 April 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 3 April 2025 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at <u>www.astralresources.com.au</u>.

The information in this announcement that relates to metallurgical test work for the Mandilla Gold Project reported in this announcement were announced in the Company's ASX announcements dated 28 January 2021, 6 June 2022, 17 September 2024 and 5 March 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcements dated 28 January 2021, 6 June 2022, 17 September 2024 and 5 March 2025 and all material assumptions and technical parameters in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at <u>www.astralresources.com.au</u>.

The information in this announcement relating to the Company's Scoping Study are extracted from the Company's announcement on 21 September 2023 titled "Mandilla Gold Project – Kalgoorlie, WA. Positive Scoping Study". All material assumptions and technical parameters underpinning the Company's Scoping Study results referred to in this announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

### 22.2. Feysville

The information in this report that relates to the maiden Ore Reserves for the Feysville Gold Project is based on information compiled by Mr Mitchell Rohr, who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Rohr is an independent consultant employed by Cube Consulting. Mr Rohr has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rohr consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

The information in this report that relates to the Mineral Resources for the Feysville Gold Project reported in this announcement were announced in the Company's ASX announcement dated 1 November 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 1 November 2024 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at www.astralresources.com.au.

The information in this announcement that relates to metallurgical test work for the Feysville Gold Project reported in this announcement were announced in the Company's ASX announcement dated 22 May 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 22 May 2025 and all material assumptions and technical parameters in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at <u>www.astralresources.com.au</u>.

## 22.3. Spargoville

The information in this report that relates to the Mineral Resources for the Spargoville Project reported in this announcement were announced in the Company's ASX announcement dated 7 May 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcement dated 7 May 2025 and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which Competent Persons' findings are presented have not materially changed from previous market announcements. The reports are available to view on the ASX website and on the Company's website at <u>www.astralresources.com.au</u>.

# 23. JORC Code 2012 - Table 1

## Section 1 – Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Sampling techniques• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard industry standard drilling diamond drilling (DD), and investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should• The project has been sampled using industry standard drilling (DD), and core (AC) drilling.• The project has been sampled using industry standard drilling techniques industry standard drilling (DD), and (AC) drilling.• All drilling and sampling was undertaken an industry-standard manner by previo operators (Ramelius Resources Ltd) and currently daximus Resources Limited.	Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
<ul> <li>not be taken as limiting the broad meaning of sampling</li> <li>include reference to measures taken to ensure sampling described in this release has been carried out on the 2019, 2020, 2023 and 2024 DD, RC and AC drilling.</li> <li>Aspects of the determination of mineralisation that are brability standard' work has been done this would be relatively is simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to a maximum sample is coarse gold that has inherent sampling problems.</li> <li>Unusual commodities or mineralisation types (e.g. submarine nadules) may warrant disclosure of detailed in formation.</li> <li>The sampling described in this release has been carried out on the 2019, 2020, 2023 and 2024 DD, RC and AC drilling.</li> <li>All DD holes were drilled and sampled. The DD for sos or intertatel, logged geologically and marked up for assay at a minimum 0.3m interval and a maximum sample interval of 1.2 metres constrained by geological or alteration boundaries.</li> <li>Drill core is cut in half by a diamond saw and half HQ or NQ2 core. Samples are appropriate for use in factors and half HQ or NQ2 core. Samples are appropriate for use in the core was atriked up by AAR geologists.</li> <li>The core was atraked up by AAR geologists.</li> <li>The core was atraked up by AAR geologists.</li> <li>The core was cut on site with AAR's CoreWise saw.</li> <li>All R Choles were drilled and sampled. The samples are collected at 1 m intervals</li> <li>All R Choles were drilled and sampled. The samples are collected at 1 m intervals</li> </ul>	Criteria Sampling techniques	<ul> <li><b>JORC Code explanation</b></li> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Commentary (Mandilla)</li> <li>The project has been sampled using industry standard drilling techniques including diamond drilling (DD), and reverse circulation (RC) drilling and aircore (AC) drilling.</li> <li>The sampling described in this release has been carried out on the 2019, 2020, 2021, 2022, 2023 and 2024 DD, RC and AC drilling.</li> <li>All DD holes were drilled and sampled. The DD core is orientated, logged geologically and marked up for assay at a minimum 0.3m interval and a maximum sample interval of 1.2 metres constrained by geological or alteration boundaries.</li> <li>Drill core is cut in half by a diamond saw and half HQ or NQ2 core. Samples submitted for assay analysis.</li> <li>DD core was marked up by AAR geologists.</li> <li>The core was cut on site with AAR's CoreWise saw.</li> <li>All samples were assayed by MinAnalytical/ALS/Intertek with company standards blanks and duplicates inserted at 25 metre intervals.</li> <li>All RC holes were drilled and sampled. The samples are collected at 1m interval via a cyclone and splitter system and logged geologically. A four-and-a-half-inch RC hammer bit was used ensuring plus 20kg of sample collected per metre.</li> <li>All RC samples were collected in bulka bags in the AAP compound and trucked weakly</li> </ul>	<ul> <li>Commentary (Feysville)</li> <li>The project has been sampled using industry standard drilling techniques including diamond drilling (DD), and reverse circulation (RC) drilling and air-core (AC) drilling.</li> <li>The sampling described in this release has been carried out on the 2022-2024 AC, DD and RC drilling.</li> <li>All DD holes were drilled and sampled. The DD core is orientated, logged geologically and marked up for assay at a minimum 0.3m interval and a maximum sample interval of 1.2 metres constrained by geological or alteration boundaries.</li> <li>Drill core is cut in half by a diamond saw and half HQ or NQ2 core. Samples are submitted for assay analysis.</li> <li>DD core was marked up by AAR geologists.</li> <li>The core was cut on site with AAR's CoreWise saw.</li> <li>All samples were assayed by MinAnalytical/ALS/Intertek with company standards blanks and duplicates inserted at 25 metre intervals.</li> <li>The RC holes were drilled and sampled. The samples are collected at 1m intervals via a cyclone and splitter system and logged geologically. A four-and-a-half-inch RC hammer bit was used ensuring plus 20kg of sample collected per metre.</li> <li>All RC samples were collected in bulka bags in the AAP compound and trucked wasking the compound and trucked wasking the AAP compound and trucked wasking t</li></ul>	<ul> <li>Commentary (Spargoville)</li> <li>All drilling and sampling was undertaken in an industry-standard manner by previous operators (Ramelius Resources Ltd and Tychean Resources Ltd) and currently by Maximus Resources Limited.</li> <li>RC samples were collected directly into calico sample bags on a 1.0m basis from a cone splitter mounted on the drill rig cyclone. 1.0m sample mass typically averages 3.0kg splits.</li> <li>Duplicate samples were also collected directly into calico sample bags from the drill rig cyclone, at a rate of 1 in every 25.</li> <li>Sampling protocols and QAQC are as per industry best practice procedures.</li> <li>RC samples are appropriate for use in a Resource Estimate.</li> <li>Diamond core was dominantly NQ2 size, sampled on geological intervals, with a minimum of 0.2 m up to a maximum of 1.2 m.</li> <li>Diamond holes were cut in half, with one half sent to the lab and one half retained.</li> <li>Diamond core samples are appropriate for use in a resource estimate.</li> <li>All samples were submitted to ALS Geochemistry in Kalgoorlie for either fire assay (50 g sample) and multi-element analysis (ICP-MS); or photon assay.</li> <li>Historical: Eagles Nest and 5B deposits were based on historical drilling with diamond drilling also using BQ and LTK46</li> </ul>
			<ul> <li>cyclone and splitter system and logged geologically. A four-and-a-half-inch RC hammer bit was used ensuring plus 20kg of sample collected per metre.</li> <li>All RC samples were collected in bulka bags in the AAR compound and trucked weekly to Machael the Value discussion.</li> </ul>	<ul> <li>via a cyclone and splitter system and logged geologically. A four-and-a-half-inch RC hammer bit was used ensuring plus 20kg of sample collected per metre.</li> <li>All RC samples were collected in bulka bags in the AAR compound and trucked weekly the Michael trial/ALC in Kalanalia and trucked weekly</li> </ul>	assay (50 g sample) and multi-elemen analysis (ICP-MS); or photon assay. • Historical: Eagles Nest and 5B deposit were based on historical drilling with diamond drilling also using BQ and LTK40 core diameters. Samples were analysed





Criteria JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Criteria JORC Code explanation	Commentary (Mandilla)Hannans Transport. All samples transported were submitted for analysis. Transported material of varying thickness throughout project was generally selectively sampled only where a paleochannel was evident.• All samples were assayed by MinAnalytical/ALS with company standards blanks and duplicates inserted at 25 metre intervals.• AC- 1m samples were collected from individual 1m sample piles. Sample weights were between 2 and 3 kg• Historical - The historic data has been gathered by a number of owners since the 1980s. There is a lack of detailed information available pertaining to the equipment used, sample techniques, sample sizes, sample preparation and assaying methods used to generate these data sets. Down hole surveying of the drilling where documented has been undertaken using Eastman single shot cameras (in some of the historic drilling) and magnetic multi-shot tools and gyroscopic instrumentation. All Reverse Circulation (RC) drill samples were laid out in 1 metre increments and a representative 500 - 700 gram spear sample was collected from each pile and composited	Commentary (Feysville) Hannans Transport. All samples transported were submitted for analysis. Transported material of varying thickness throughout project was generally selectively sampled only where a paleochannel was evident. • All samples were assayed by MinAnalytical/ALS with company standards blanks and duplicates inserted at 25 metre intervals. • Historical - The historic data has been gathered by a number of owners since the 1980s. There is a lack of detailed information available pertaining to the equipment used, sample techniques, sample sizes, sample preparation and assaying methods used to generate these data sets. Down hole surveying of the drilling where documented has been undertaken using Eastman single shot cameras (in some of the historic drilling) and magnetic multi-shot tools and gyroscopic instrumentation. All Reverse Circulation (RC) drill samples were laid out in 1 metre increments and a representative 500 – 700 gram spear sample was collected from each pile and composited into a single sample every 4 metres. Average weight 2.5 – 3 kg sample. All Aircore samples were laid out in 1 metre	Commentary (Spargoville) and Aqua Regia assay methods.
	Circulation (RC) drill samples were laid out in 1 metre increments and a representative 500 – 700 gram spear sample was collected from each pile and composited into a single sample every 4 metres. Average weight 2.5 – 3 kg sample. All	collected from each pile and composited into a single sample every 4 metres. Average weight 2.5 – 3 kg sample. All Aircore samples were laid out in 1 metre increments and a representative 500 – 700 gram spear sample was collected from	
	Aircore samples were laid out in 1 metre increments and a representative 500 – 700 gram spear sample was collected from each pile and composited into a single sample every 4 metres. Average weight 2.5 – 3 kg sample. Im samples were then	each pile and composited into a single sample every 4 metres. Average weight 2.5 – 3 kg sample. 1m samples were then collected from those composites assaying above 0.2g/t Au.	



(Mandilla) Commentary (Feysville)	Commentary (Spargoville)
Au.	
<ul> <li>Iling was cored using HQ and d bits</li> <li>S were drilled using face ammer reverse circulation th a four-and-a-half inch bit vere drilled to blade refusal.</li> <li>All RC holes were drilled using face sampling hammer reverse circulation technique with a four-and-a-half inch bit All AC holes were drilled to blade refusal</li> </ul>	<ul> <li>The deposits were drilled and sampled using RC, diamond drilling (DD), rotary air blast (RAB) and aircore (AC) techniques. The Mineral Resource estimate was supported solely by diamond and RC drill holes. The face-sampling RC bit has a diameter of 4.75 inches (12.1 cm).</li> <li>Diamond drilling, consistently using HQ core for depths of 60 - 100 m and NQ2 thereafter. Most of the diamond drilling utilised triple-tube retrieval gear to ensure frequent orientation measurements and overall core quality. Additionally, some diamond holes were drilled to wedge up-dip from previously drilled diamond holes.</li> <li>The Wattle Dam Project database comprises 413 Diamond holes for 80,070m and 670 RC holes for 74,955 m. Only Diamond and RC drill holes were used to support the Mineral Resource Estimate.</li> <li>The Larkinville Deposit has 95 drillholes for a total of 7,906m. There are 58 Reverse Circulation (RC) holes, one diamond drillhole (DD) and 36 RAB holes (Rotary Air Blast). All holes are used to define mineralisation envelopes; only RC and DD are used in grade estimation.</li> <li>The Eagles Nest deposit was drilled and sampled using RC drilling techniques. The MRE was supported by a total of 69 RC drill holes.</li> </ul>
	y (Mandilla)       Commentary (Feysville)         It Au. <ul> <li>Diamond drilling was cored using HQ and na bits</li> <li>Swere drilled using face hammer reverse circulation ith a four-and-a-half inch bit were drilled to blade refusal.</li> <li>All RC holes were drilled using face sampling hammer reverse circulation technique with a four-and-a-half inch bit All AC holes were drilled to blade refusal.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				<ul> <li>The MRE was supported by 22 RC drill holes and 8 diamond drill holes from surface and an additional 25 underground diamond drill holes.</li> <li>Historical: Eagles Nest and 5B Deposits also utilised diamond core of BQ and LTK46 core diameters.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>DD: Diamond drilling collects uncontaminated fresh core samples which are cleaned at the drill site to remove drilling fluids and cuttings to present clean core for logging and sampling.</li> <li>RC: Definitive studies on RC recovery at Mandilla have not been undertaken systematically, however the combined weight of the sample reject and the sample collected indicated recoveries in the high nineties percentage range. Poor recoveries are recorded in the relevant sample sheet.</li> <li>No assessment has been made of the relationship between recovery and grade. Except for the top of the hole, while collaring there is no evidence of excessive loss of material and at this stage no information is available regarding possible bias due to sample loss.</li> <li>RC: RC face-sample bits and dust suppression were used to minimise sample loss. Drilling airlifted the water column above the bottom of the hole to ensure dry sampling. RC samples are collected through a cyclone and cone splitter, the rejects deposited on the ground, and the samples for the lab collected to a total mass optimised for photon assay (2.5 to 4 kg).</li> <li>AC: Poor recoveries are recorded in the relevant sample sheet.</li> </ul>	<ul> <li>DD: Diamond drilling collects uncontaminated fresh core samples which are cleaned at the drill site to remove drilling fluids and cuttings to present clean core for logging and sampling.</li> <li>Definitive studies on RC recovery at Feysville have not been undertaken systematically, however the combined weight of the sample reject and the sample collected indicated recoveries in the high nineties percentage range. Poor recoveries are recorded in the relevant sample sheet.</li> <li>No assessment has been made of the relationship between recovery and grade. Except for the top of the hole, while collaring there is no evidence of excessive loss of material and at this stage no information is available regarding possible bias due to sample loss.</li> <li>RC: RC face-sample bits and dust suppression were used to minimise sample loss. Drilling airlifted the water column above the bottom of the hole to ensure dry sampling. RC samples are collected through a cyclone and cone splitter, the rejects deposited on the ground, and the samples for the lab collected to a total mass optimised for photon assay (2.5 to 4 kg).</li> <li>Poor recoveries are recorded in the relevant sample sheet.</li> </ul>	<ul> <li>The RC drill recoveries exhibited a high rate, surpassing 90%.</li> <li>Samples underwent a visual inspection to assess recovery and moisture and were monitored for contamination at the time of drilling.</li> <li>There is no observable relationship between recovery and grade, and therefore no sample bias.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		cyclone, the rejects deposited on the ground, and the samples for the lab collected.		
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All chips and drill core were geologically logged by company geologists, using their current company logging scheme. The majority of holes (80%+) within the mineralised intervals have lithology information which has provided sufficient detail to enable reliable interpretation of wireframe.</li> <li>The logging is qualitative in nature, describing oxidation state, grain size, an assignment of lithology code and stratigraphy code by geological interval.</li> <li>DDH: Logging of diamond drill core records lithology, mineralogy, mineralisation, weathering, colour and other features of the samples, and structural information from oriented drill core. All recent core was photographed in the core trays, with individual photographs taken of each tray both dry, and wet, and photos uploaded to the AAR Server.</li> <li>RC: Logging of RC chips records lithology, mineralogy, mineralisation, weathering, colour and stored in a chip tray.</li> <li>AC samples were logged for colour, weathering, grain size, lithology, alteration veining and mineralisation where possible</li> </ul>	<ul> <li>All chips and drill core were geologically logged by company geologists, using their current company logging scheme. The majority of holes (80%+) within the mineralised intervals have lithology information which has provided sufficient detail to enable reliable interpretation of wireframe.</li> <li>DDH: Logging of diamond drill core records lithology, mineralogy, mineralisation, weathering, colour and other features of the samples, and structural information from oriented drill core. All recent core was photographed in the core trays, with individual photographs taken of each tray both dry, and wet, and photos uploaded to the AAR Server.</li> <li>The logging of RC chips records lithology, mineralisation, weathering, colou state, grain size, an assignment of lithology code and stratigraphy code by geological interval.</li> <li>RC: Logging of RC chips records lithology, mineralogy, mineralisation, weathering, colour and other features of the samples. All samples are wet-sieved and stored in a chip tray.</li> <li>AC samples were logged for colour, weathering, grain size, lithology, alteration veining and mineralisation where possible</li> </ul>	<ul> <li>Core and chip samples have been geologically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Logging information stored in the legacy database, and collected in current drill programs includes lithology, alteration, oxidation state, mineralisation, alteration, structural fabrics, and veining.</li> <li>Core orientated structural logging, core recovery, and Rock Quality Designation (RQDs) are all recorded from drill core.</li> <li>The logged data comprises both qualitative information (descriptions of various geological features and units) and quantitative data (such as structural orientations, vein and sulphide percentages, magnetic susceptibility)</li> <li>Photographs of the DD core in both dry and wet forms, as well as RC sample chip trays, are taken to complement the logging data.</li> <li>Historical – Limited information is available for Ramelius and Tychean logging practices.</li> </ul>
Sub-sampling techniques	• If core, whether cut or sawn and whether quarter, half	• HQ and NQ2 diamond core was halved and	• HQ and NQ2 diamond core was halved and	• Diamond core was halved and sampled.
and sample preparation	or all core taken.	the right side sampled.	the right side sampled.	• RC samples were collected on a 1.0m basis
	• If non-core, whether riffled, tube sampled, rotary split,	MinAnalytical/ALS and Intertek assay     standards blanks and shocks were incerted	MinAnalytical/ALS and Intertek assay     standards blanks and shocks were incerted	from a cone splitter mounted on the drill rig
	Eccuriu wrietner samplea wet or ary.	stunuaras, planks and checks were inserted	stunuaras, planks and checks were inserted	cyclone. The 1.0m sample mass is typically split to 3 0kg on average. The cyclone was
and sample preparation	or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, auality and	the right side sampled. • MinAnalytical/ALS and Intertek assay standards, blanks and checks were inserted at regular intervals. Standards, company	the right side sampled. • MinAnalytical/ALS and Intertek assay standards, blanks and checks were inserted at regular intervals. Standards, company	<ul> <li>RC samples were collected on a 1.0m basis from a cone splitter mounted on the drill rig cyclone. The 1.0m sample mass is typically split to 3.0ka on average. The cyclone was</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
	appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling	blanks were inserted at 25 metre intervals and also selective duplicates.	blanks were inserted at 25 metre intervals and also selective duplicates.	blown out and cleaned after each 6 m drill rod to reduce contamination.
	stages to maximise representivity of samples.	• RC holes were drilled and sampled. The	• RC holes were drilled and sampled. The	• Historical – Limited information is available
	• Measures taken to ensure that the sampling is	samples are collected at 1m intervals via a	samples are collected at 1m intervals via a	for sub-sampling techniques for the Eagles
	representative of the in situ material collected, including	cyclone and splitter system and logged	cyclone and splitter system and logged	Nest and 5B deposits.
	for instance results for field duplicate/second-half sampling.	geologically. A four-and-a-half inch RC hammer bit was used ensuring plus 20kg of	geologically. A four-and-a-half inch RC hammer bit was used ensuring plus 20kg of	<ul> <li>Industry standard quality assurance and quality control (QAQC) measures are</li> </ul>
	• Whether sample sizes are appropriate to the grain size	sample collected per metre.	sample collected per metre.	employed involving certified reference
	of the material being sampled.	• Wet samples are noted on logs and sample sheets.	• Wet samples are noted on logs and sample sheets.	material (CRM) standard, blank and field duplicate samples.
		• Historical - The RC drill samples were laid	• Historical - The RC drill samples were laid	• Duplicate samples were taken via a second
		out in one metre intervals. Spear samples	out in one metre intervals. Spear samples	chute on the cone-splitter. The duplicate
		were taken and composited for analysis as	were taken and composited for analysis as	samples were observed to be of
		described above. Representative samples	described above. Representative samples	comparable size to the primary samples.
		retained as described above No	retained as described above No	sample stream by Ramelius Tychean and
		documentation of the sampling of RC chips	documentation of the sampling of RC chips	Maximus at a rate of 1:25.
		is available for the Historical Exploration	is available for the Historical Exploration	<ul> <li>Diamond samples are generally half core.</li> </ul>
		drilling	drilling.	with core sawn in half using a core-saw
		• Recent RC drilling collects 1 metre RC drill	• Recent RC drilling collects 1 metre RC drill	with all cutting occurring on-site at the
		samples that are channelled through a	samples that are channelled through a	company's Wattle Dam coreshed facility.
		rotary cone-splitter, installed directly	rotary cone-splitter, installed directly	• After receipt of the samples by the
		below a rig mounted cyclone, and an	below a rig mounted cyclone, and an	independent laboratory (ALS Kalgoorlie)
		average 2-3 kg sample is collected in pre-	average 2-3 kg sample is collected in pre-	sample preparation followed industry best
		numbered calico bags, and positioned on	numbered calico bags, and positioned on	practice. Samples were dried, coarse
		top of the rejects cone. Wet samples are	top of the rejects cone. Wet samples are	crushing to ~10mm, followed by
		noted on logs and sample sneets.	noted on logs and sample sneets.	pulverisation of the entire sample in an
		• Standard Western Australian sampling	• Standard Western Australian sampling	LIVIS or equivalent pulverising mill to a arind size of 85% passing 75 micron
		statistical work carried out at this stage	statistical work carried out at this stage	The sample sizes are considered adequate
		MinAnalytical/ALS assay standards blanks	MinAnalytical/ALS assay standards blanks	• The sample sizes are considered daequate for the material being sampled
		and checks were inserted at regular	and checks were inserted at regular	Bulk density determinations dominantly
		intervals. Standards, company blanks and	intervals. Standards, company blanks and	adopted the Archimedes water
		duplicates were inserted at 25 metre	duplicates were inserted at 25 metre	displacement method. A total of 291
		intervals.	intervals.	measurements were taken from drill core.
		• RC: 1 metre RC samples are split on the rig	• RC: 1 metre RC samples are split on the rig	
		using a cone-splitter, mounted directly	using a cone-splitter, mounted directly	
		under the cyclone. Samples are collected	under the cyclone. Samples are collected	
		to 2.5 to 4kg which is optimised for photon	to 2.5 to 4kg which is optimised for photon	



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		<ul> <li>assay.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> <li>Unable to comment on the appropriateness of sample sizes to grain size on historical data as no petrographic studies have been undertaken. Sample sizes are considered appropriate to give an indication of mineralisation given the particle size and the preference to keep the sample weight below a targeted 4kg mass which is the optimal weight to ensure representivity for photon assay. There has been no statistical work carried out at this stage.</li> </ul>	<ul> <li>assay.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> <li>Unable to comment on the appropriateness of sample sizes to grain size on historical data as no petrographic studies have been undertaken. Sample sizes are considered appropriate to give an indication of mineralisation given the particle size and the preference to keep the sample weight below a targeted 4kg mass which is the optimal weight to ensure representivity for photon assay. There has been no statistical work carried out at this stage.</li> </ul>	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Photon Assay technique at MinAnalytical Laboratory Services/ALS, Kalgoorlie and Intertek, Maddington.</li> <li>Samples submitted for analysis via Photon assay technique were dried, crushed to nominal 85% passing 2mm, linear split and a nominal 500g sub sample taken (method code PAP3512R)</li> <li>The 500g sample is assayed for gold by PhotonAssay (method code PAAU2) along with quality control samples including certified reference materials, blanks and sample duplicates.</li> <li>The MinAnalytical/ALS PhotonAssay Analysis Technique: - Developed by CSIRO and the Chrysos Corporation, This Photon Assay technique is a fast and chemical free alternative to the traditional fire assay process and utilizes high energy x-rays. The process is non-destructive on and utilises a significantly larger sample than the conventional 50g fire assay. MinAnalytical/ALS has thoroughly tested and validated the PhotonAssay process</li> </ul>	<ul> <li>Photon Assay technique at ALS, Kalgoorlie.</li> <li>Samples submitted for analysis via Photon assay technique were dried, crushed to nominal 90% passing 3.15mm, rotary split and a nominal ~500g sub sample taken (AC/RC Chips method code CRU-32a &amp; SPL-32a, DD core method codes CRU-42a &amp; SPL-32a)</li> <li>The ~500g sample is assayed for gold by PhotonAssay (method code Au-PA01) along with quality control samples including certified reference materials, blanks and sample duplicates.</li> <li>The ALS PhotonAssay Analysis Technique: - Developed by CSIRO and the Chrysos Corporation, This Photon Assay technique is a fast and chemical free alternative to the traditional fire assay process and utilizes high energy x-rays. The process is non-destructive on and utilises a significantly larger sample than the conventional 50g fire assay. ALS has thoroughly tested and validated the PhotonAssay process with results</li> </ul>	<ul> <li>Samples were submitted to ALS in Kalgoorlie for sample preparation i.e. drying, crushing when necessary, and pulverising.</li> <li>Pulverised samples were then transported to ALS in Perth for analysis.</li> <li>The majority of assays were undertaken utilising a 50 g fire assay and ICP-MS multielement suite. Where gold grades exceed 2 ppm, a further 3 x fire assay analyses are undertaken so as to manage the effect of coarse gold affecting assay variability.</li> <li>Samples sourced since late July 2022 were submitted for Photon assaying at ALS, using a 500 g sample. Prior to the use of this analytical technique, Maximus reviewed its assay database to ensure the project had no, or only very low levels of uranium, thorium and barium which would interfere with gold detection.</li> <li>For RC drilling, certified reference material (CRM; or standards) and blanks were inserted into the sample stream every 25</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		<ul> <li>with results benchmarked against conventional fire assay.</li> <li>The National Association of Testing Authorities (NATA), Australia's national accreditation body for laboratories, has issued Min Analytical with accreditation for the technique in compliance with TSO/TEC 17025:2018-Testing.</li> <li>Certified Reference Material from Geostats Pty Ltd submitted at 75 metre intervals approximately. Blanks and duplicates also submitted at 75m intervals giving a 1:25 sample ratio.</li> <li>Referee sampling was carried out.</li> </ul>	<ul> <li>benchmarked against conventional fire assay.</li> <li>The National Association of Testing Authorities (NATA), Australia's national accreditation body for laboratories, has issued Min Analytical with accreditation for the technique in compliance with TSO/TEC 17025:2018-Testing.</li> <li>Certified Reference Material from Geostats Pty Ltd submitted at 75 metre intervals approximately. Blanks and duplicates also submitted at 75m intervals giving a 1:25 sample ratio.</li> <li>Referee sampling has not yet been carried out.</li> </ul>	<ul> <li>m, and a duplicate sample was taken every 25 m.</li> <li>With respect to diamond-core sampling, a standard and blank are inserted into the sample string every 25 samples.</li> <li>Internal laboratory control procedures involve duplicate assaying of randomly selected assay pulps as well as internal laboratory standards. All of this data is reported to the Company and analysed for consistency and any discrepancies.</li> <li>Upon receival field and laboratory QAQC data is reviewed to assess the accuracy and precision. Only after ensuring that the data meets the acceptable criteria, it is approved and authorized for uploading into the database.</li> <li>Historical – cannot comment on QAQC procedures used for Ramelius and Tychean drilling. Data checks determined this was limited to in the field duplicates – no areas of concern where identified.</li> </ul>



	initial y (opulgovine)
Verification of sampling • The verification of significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant intersections by either • Geology Manager or Senior Geologist • Geology Manager or Senior Geologist • Significant • Geologist • Geologist • Geologi	gnificant intersections have been verified
and assaying independent or alternative company personnel. verified hole position on site. verified hole position on site. by	alternative Maximus company
• The use of twinned holes. • Standard data entry used on site, backed • Standard data entry used on site, backed person	ersonnel.
Documentation of primary data, data entry procedures, up in South Perth WA.     up in South Perth WA.     • Three	ree RC drill holes (RBRC037, RBRC038
data verification, data storage (physical and electronic) • No adjustments have been carried out. • No adjustments have been carried out. and R	d RBRC039) were recently drilled as twin
protocols. However, work is ongoing as samples can However, work is ongoing as samples can holes	oles to existing RC holes RBRC012,
• Discuss any adjustment to assay data. be assayed to extinction via the be assayed to extinction via the RBRCC	BRC016 and RBRC 019 respectively.
PhotonAssay Analysis Technique PhotonAssay Analysis Technique Assay.	says and geological logs of these holes
suppo	pport the results of older holes, with the
down	hological bost units in the old bolog
confir	nfirmed by the recent twin drill holes
	other twinning of drill holes was
comp	mpleted to verify historical intersections.
• Temp	mplates have been set up to facilitate
qeolo	pological logging. Prior to the import into
the c	e central database managed by CSA
Globa	obal, logging data is validated for
confo	nformity and overall systematic
compl	mpliance by the geologist.
• Geolo	eological descriptions were entered
direct	rectly onto standard logging sheets,
using	ing standardised geological codes.
• Assay	say results from the laboratory are sent
direct	rectiy to CSA Global in digital format.
Unce i	nce data is vallaatea it is transferred to a
	nubuse.
• NO L analy	palutical data


Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Pre October 2023, DD and RC drill holes were picked up by Minecomp using a Leica RTK GPS. Since October 2023 Southern Cross Surveys were contracted to pick up all latest drilling collars using GSNS with manufacturers specifications +/- 10mm N,E and +/-15mm RL from Survey Control established from Landgate SSMs in RTK.</li> <li>AC Hole collar locations were recorded with a handheld GPS in MGA Zone 51S. RL was initially estimated then holes, once drilled were translated onto the surveyed topography wire frame using mining software. These updated RL's were then loaded into the database.</li> <li>Grid: GDA94 Datum UTM Zone 51</li> </ul>	<ul> <li>Drill holes have been picked up by Topcon HiPer Ga Model RTK GPS. Southern Cross Surveys were contracted to pick up all latest RC/DD drilling collars.</li> <li>Historical hole collar locations and current AC drill holes were recorded with a handheld GPS in MGA Zone 51S. RL was initially estimated then holes, once drilled were translated onto the surveyed topography wire frame using mining software. These updated RL's were then loaded into the database.</li> <li>Grid: GDA94 Datum MGA Zone 51</li> </ul>	<ul> <li>Maximus Resources utilizes handheld GPS to initially locate drill-collars. Subsequently, a qualified surveyor is employed to precisely determine the positions of drill-hole collars. This is achieved through the use of a differential global positioning system (DGPS) or real- time kinetics (RTK) GPS.</li> <li>For legacy drill-holes, DGPS is the primary method employed for collar survey and pick-up.</li> <li>Azimuth and dip directions down the hole are collected using a north-seeking gyro.</li> <li>All the data collected is stored in a grid system known as GDA/MGA94 zone 51.</li> <li>The topography of the project area and mined open pit is accurately defined by DGPS collar pick-ups.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Diamond drilling at Theia is at 40-40m to 40-80m spacing. Iris and Hestia have a number of selective diamond holes within each deposit.</li> <li>RC Drill hole spacing at Theia is a maximum of 40 x 40m. And approaching 20 x 20m within the central areas. Iris and Hestia are generally 40x40 spacing with selected areas at 40x20m at Iris. Eos bedrock drilling is currently 80 x 40m spacing.</li> <li>AC Drill hole spacing is 10 to 50m on section, with 40m sectional spacing (approximate).</li> <li>The spacing is appropriate for the stage of exploration</li> </ul>	<ul> <li>RC Drill hole spacing varies from 40x20m to 40x80m spacings. AC spacing is generally at 200m with some areas down to 100m.</li> <li>Diamond drilling has been used to test depth extensions and stratigraphy and is not on any specific grid pattern.</li> <li>NO Sample compositing was undertaken for RC samples.</li> </ul>	<ul> <li>Drill spacing varies over the deposits.</li> <li>The Wattle Dam Project has drill spacing varying from 10m x 10 in places to mostly 20m x 20m spacing.</li> <li>Larkinville drill spacing is 20m x 20m with the northern and southern extents at 40m x 20m. Hildtich drill spacing from 10m x 10m to 20 x 15m. Eagles Nest is at a 15m x 15m average drill spacing with 5B at 20m x 20m with the southern extents at 40m x 20mspacings.</li> <li>There is a decrease in drill data density outside the current resource area.</li> <li>The mineralised domains have sufficient geological and grade continuity to support the classifications applied to the Mineral Resources given the drill spacing.</li> <li>Mineral Resource estimation procedures are also considered appropriate given the</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				<ul> <li>quantity of data available and style of mineralisation under consideration.</li> <li>Compositing was not applied at the sampling stage.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	• All drill holes have been drilled normal to the interpreted strike. Most of the current holes at Theia are drilled on a 040 azimuth with minor variations applied where drill- hole spacing is limited. Other holes not drilled at 040 azimuth have been completed. Some holes have been drilled at other azimuths to test cross cutting structures and to hit western targets, avoiding surface infrastructure.	<ul> <li>Diamond and RC drill holes have been drilled normal to the interpreted geological strike or interpreted mineralised structure. The drill orientation will be contingent on the prospect mineralistion location and style.</li> <li>AC drilling was oriented 60 degrees toward MGA east (090) and is based on local geology and alignment of the drilling targets.</li> </ul>	<ul> <li>The mineralisation of the Wattle Dam Project deposits is subvertical and strike 340°. Drillholes are drilled grid east-west, near orthogonal to the strike of regional stratigraphy and structure. Drill hole inclinations are normally between 50° and 65° and considered an appropriate angle of intersection.</li> <li>The mineralisation of the Hilditch Project deposits dip 70° to the east and strike of 340°. Larkinville dips 55° to the west with a strike of 325°. Drill hole inclinations are normally between 50° and considered an appropriate angle of intersection.</li> <li>The orientation of the drill lines at Eagles Nest is 270° azimuth, which is approximately perpendicular to the strike of the regional geology and mineralisation. The orientation of the drill lines at 5B is 270° azimuth, which is approximately -60° angled to the west.</li> <li>The orientation of the drill lines at 5B is 270° azimuth, which is approximately -60° angled to the regional geology and mineralisation. The majority of the holes were drilled approximately -60° angled to the approximately -60° angled to the drill lines at 5B is 270° azimuth, which is approximately -60° angled to the drill lines at 5B is 270° azimuth, which is approximately -60° angled to the east.</li> <li>An effort has been made to orient drillholes at a high angle to the mineralisation. The majority of the holes are drilled at a high angle to the mineralisation.</li> <li>The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to approximately of the holes are drilled at a high angle to the mineralisation.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				have introduced a sampling bias.
Sample security	• The measures taken to ensure sample security.	• All samples taken daily to AAR yard in Kambalda West, then transported to the Laboratory in batches of up to 10 submissions	• All samples taken daily to AAR yard in Kambalda West, then transported to the Laboratory in batches of up to 10 submissions	<ul> <li>Maximus Resources drillhole samples were collected in calicos then bagged into polyweave bags and cable-tied before transport to the laboratory in Kalgoorlie by Maximus employees.</li> <li>Ramelius Resources and Tychean Resources maintained adequate sample security during their ownership of the property.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data	• No audits have been carried out at this stage	• No audits have been carried out at this	• No audits have been carried out at this stage
		stuge.	stuge.	stuge.



## Section 2 – Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary	(Mandilla	)		Commentary (	Feysville)			Commentary (Spargoville)
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material</li> </ul>	Tenement	Status	Location	Interest Held (%)	Tenement	Status	Location	Interest Held (%)	• The Spargoville Project is located on granted Mining Leases.
	issues with third parties such as joint ventures,	E 15/1404	Granted	WA	100	P26/3943	Granted	WA	100	• Spargoville Project tenements consist of the
	partnersnips, overriaing royaities, native title interests, historical sites, wilderness or national	M 15/96	Granted	WA	Gold Rights	P26/3948-3951	Granted	WA	100	following mining leases: • M15/1475, M15/1869, M15/1448, M15/1101,
	<ul> <li>The security of the tenure held at the time of reporting along with any known impediments</li> </ul>	M 15/633	Granted	WA	Gold Rights	P26/4351-4353	Granted	WA	100	M15/1263, M15/1264, M15/1323, M15/1338, M15/1474, M15/1774, M15/1775, M15/1776, P15/6241 for which MXR has 100% of all
	to obtaining a licence to operate in the area.	E 15/1958	Granted	WA	100	P26/4538-4541	Granted	WA	100	minerals.
		P 15/6759	Granted	WA	100	P26/4630-4634	Granted	WA	100	• M15/1101, M15/1263, M15/1264, M15/1323,
		P 15/6760	Granted	WA	100	M26/846	Pending	WA	-	M15/1732, M15/1773 for which MXR has
		<ul> <li>The tenemer Western Au Industry Regu</li> <li>Currently, the WA governm</li> <li>The Company Title Agreen claimant gro royalty regim</li> </ul>	its are in g stralian L ulation and ere are no ent 2.5% g y is curren hent (NTA up. The N he.	good standi Department d Safety. royalties oti gold royalty. tly negotiat. ) with the ITA will like	ng with the of Mines, her than the ing a Native native title ly include a	<ul> <li>The tenement Western Aus Industry Regu</li> <li>Currently, the WA governme</li> <li>The Company Title Agreeme claimant grou royalty regime</li> </ul>	is are in go tralian De lation and re are no ro ent 2.5% go is currently ent (NTA) up. The NT. e.	bod standing partment Safety. Syalties othe old royalty. Y negotiatin with the n A will likely	g with the of Mines, er than the g a Native ative title include a	<ul> <li>M13, 1772, M13, 1773 for which MXR flds 100% mineral rights excluding 20% nickel rights.</li> <li>L15/128, L15/255, M15/395, M15/703 for which MXR has 100% all minerals, except Ni rights.</li> <li>M15/97, M15/99, M15/100, M15/101, M15/102, M15/653, M15/1271 for which MXR has 100% gold rights.</li> <li>M15/1449 (Larkinville) for which MXR has 75% of all minerals.</li> <li>Maximus' Spargoville Project tenements are covered by the Marlinyu Ghoorlie Native Title Claimant Group - native title determination application WAD 647/2017. A Heritage Protection Agreement is currently in negotiation with the Marlinyu Ghoorlie group.</li> </ul>
other parties	• Acknowledgment and appraisal of exploration by other parties.	• several prog and air core area betwee Corporation ( soil anomaly late 1988 e percussion t Gold minera	rams of R drilling v n 1988-19 (WMC). In was deline early 1989 raverses lisation w	c percussio were compl 099 by West early 1988 eated, which 9 with a s and diamo vas intersec	n, alamond leted in the tern Mining a significant n was tested series of 4 and drilling. tted in thin	<ul> <li>Previous expli- targeted gold the ultramafi- best results oj Exploration ha soil survey, 2 holes and 5 defined an ar</li> </ul>	oration by and nicke c unit for f 2m @ 1% as consiste 64 RAB / / diamond h ea of exter	vivic Reso I with initia nickel sulph Ni and 1m d of a comp Aircore hole poles. The s nsive gold a	ources Ltd I focus on ides, with @ 2.2%Ni. orehensive rs, 444 RC oil survey nomalism	<ul> <li>The database usea for resource estimation is comprised of drilling carried out when the Project was under ownership of several companies including (listed in chronological order):</li> <li>Ramelius (2005 to 2011)</li> <li>Tychean Resources (2013 – 2015)</li> <li>Maximus Resources Limited (2015 – present).</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		quartz veins within a shallowly dipping shear	clustered in the SE corner of the tenement	
		zone. 1989-90- limited exploration	package. Follow- up drilling confirmed the gold	
		undertaken with geological mapping and 3	potential of the area with intersections such as	
		diamond holes completed.	7m @ 2.47g/t Au at Empire Rose, 10m @	
		• 1990-91- 20 RC holes and 26 AC were drilled to	9.1g/t Au at Ethereal, 8m @ 2.08g/t at	
		follow up a ground magnetic survey and soil	Kamperman and 8m @ 3.26g/t Au at Rogan	
		anomaly. 1991-94 - no gold exploration	Josh.	
		undertaken		
		• 1994-95 – extensive AC programme to		
		investigate gold dispersion. A WNW trending		
		CS defined lineament appears to offset the		
		Manailla granite contact and surrounding		
		sealments, Shallow patchy supergene (20-		
		25m) mineralisation was identified, which		
		During 1005 06 Three AC traverses 400m		
		• During 1995- 96 - Three AC traverses 400m		
		south of the Mandilla soil anomaly targeting		
		the sheared granite felsic sodiment contact		
		• 1996-97 - A 69 hole AC program to the east of		
		the anomaly was completed but proved to be		
		ineffective due to thin regolith cover in the		
		area. WID3215 returned 5m @7a/t from 69m		
		to EOH.		
		●1997-1998- 17 RC infill holes to test		
		mineralisation intersected in previous drilling		
		was completed. A number of bedrock		
		intersections were returned including		
		WID3278 with 4m @ 6.9g/t Au from 46m.		
Geology	• Deposit type, geological setting and style of	• The Mandilla Gold Project (Mandilla) is located	• The Feysville Project is located 16km SSE of	• The Spargoville Gold Project is located in the
	mineralisation.	approximately 70km south of Kalgoorlie, and	Kalgoorlie. The project is situated in the	Coolgardie Domain within the Kalgoorlie
		about 25km south-west of Kambalda in	geological / structural corridor, bounded by	Terrane of the Archaean Yilgarn Craton.
		Western Australia. The deposit is located on	the Boulder Lefroy Fault, that hosts the world	• The greenstone stratigraphy of the Kalgoorlie
		granted Mining Leases M15/633 (AAR gold	class plus million-ounce deposits of Mt	Terrane can be divided into three main units:
		rights), M15/96 (AAR gold rights) and	Charlotte, Fimiston, New Celebration, Victory-	(1) predominantly mafic to ultramafic units of
		Exploration Lease E15/1404 (wholly-owned by	Defiance, Junction, Argo and Revenge /	the Kambalda Sequence, these units include
		AAKJ.	Belleisle. and St Ives.	the Lunnon Basalt, Kambalda Komatiite,
		Regional Geology		Devon Consols Basalt, and Paringa Basalt; (2)
		<ul> <li>Mandilla is located within the south-west of</li> </ul>	Regional Geology	intermediate to felsic volcaniclastic sequences



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		the Lefroy Map Sheet 3235. It is situated in the Coolgardie Domain, on the western margin of the Kalgoorlie Terrain within the Wiluna- Norseman Greenstone Belt, Archaean Yilgarn Block. • Mandilla is located between the western Kunanalling Shear, and the eastern Zuleika Shear. Project mineralisation is related to north-south trending major D25 thrust faults known as the "Spargoville Trend". The Spargoville Trend contains four linear belts of mafic to ultramafic lithologies (the Coolgardie Group) with intervening felsic rocks (the Black Flag Group) forming a D16 anticline modified and repeated by intense D2 faulting and shearing. Flanking the Spargoville Trend to the east, a D2 Shear (possibly the Karramindie Shear) appears to host the Mandilla mineralisation along the western flank of the Emu Rocks Granite, which has intruded the felsic volcanoclastic sedimentary rocks of the Black Flag Group. This shear can be traced across the region, with a number of deflections present. At these locations, granite stockworks have formed significant heterogeneity in the system and provide structural targets for mineralisation. The Mandilla mineralisation is interpreted to be such a target. Local Geology and Mineralisation • Mandilla is located along the SE margin of M15/96 extending into the western edge of	<ul> <li>Geology at Feysville is complex with regional mapping identifying a double plunging northwest trending antiformal structure known as the Feysville Dome bounded to the west by the Boulder Lefroy Fault and south by the Feysville Fault. The Feysville fault, located on the southern margin of the tenement is interpreted to represent thrusting of underlying mafic/ultramafic volcanic and intrusive rocks over a younger felsic metasedimentary sequence to the south. The sequence has been extensively intruded by intermediate and felsic porphyries.</li> <li>Local Geology and Mineralisation</li> <li>There a number of historical gold workings on the project and drilling has identified strong alteration associated with primary gold mineralisation. Gold mineralisation is typically located at the sheared contacts of intrusive porphyry units, within pyrite sericite altered porphyries and also associated with chalcopyrite magnetite/epidote altered breccia zones within ultramafic units.</li> </ul>	<ul> <li>of the Kalgoorlie Sequence, represented by the Black Flag Group and (3) siliciclastic packages of the late basin sequence known as the Merougil Beds.</li> <li>The Paringa Basalt, or Upper Basalt, is less developed within the Coolgardie Domain, but similar mafic volcanic rocks with comparable chemistry are found in the Wattle Dam area. Slices of the Kambalda Sequence, referred to as the Burbanks and Hampton Formations, are believed to represent thrust slices within the Kalgoorlie Sequence.</li> <li>Multiple deformational events have affected the Kalgoorlie Terrane, with at least five major regional deformational events identified. Granitoid intrusions associated with syntectonic domains are found in the Wattle Dam area, including the Depot Granite and the Widgiemooltha Dome. Domed structures associated with granitoid emplacement are observed in the St Ives camp, with deposition of the Merougil Beds and emplacement of porphyry intrusions occurring during extensional deformation.</li> <li>Gold occurrences associated with the Zuleika and Spargoville shears are representative of deposits that formed during sinistral transpression on northwest to north northwest trending structures.</li> </ul>



 $<sup>^5</sup>$  D2 – Propagation of major crustal NNW thrust faults.  $^6$  D1 – Crustal shortening.

Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		M15/633. It comprises an east and west zone,		
		both of which are dominated by supergene		
		mineralisation between 20 and 50 m depth		
		below surface. Only the east zone shows any		
		significant evidence of primary mineralisation,		
		generally within coarse granular felsic rocks		
		likely to be part of the granite outcropping to		
		the east. Minor primary mineralisation occurs		
		in sediments.		
		• The nature of gold mineralisation at Mandilla		
		is complex, occurring along the western		
		margin of a porphyritic granitoid that has		
		intruded volcanoclastic sedimentary rocks.		
		Gold mineralisation appears as a series of		
		narrow, high grade quartz veins with relatively		
		common visible gold, with grades over the		
		width of the vein of up to several hundreds of		
		grams per tonne. Surrounding these veins are		
		lower grade alteration haloes. These haloes		
		can, in places, coalesce to form quite thick		
		zones of lower grade mineralisation. The		
		mineralisation manifests itself as large zones		
		of lower grade from ~0.5 – 1.5g/t Au with		
		occasional higher grades of +5g/t Au over 1 or		
		2 metres.		
		• Further to the west of Theia close to the		
		mafic/sediment contact a D2 shear sub		
		parallels the Mandilla shear. Quartz veining		
		and sulphides have been identified within the		
		sediments close to the contact with high mag		
		basalt within sheared siltstones and shales.		
		• In addition to the granite-hosted		
		mineralisation, a paleochannel is situated		
		above the granite/sediment contact that		
		contains significant gold mineralisation. An		
		800 m section of the paleochannel was mined		
		by AAR in 2006 and 2007, with production		
		totalling 20,573 ounces.		
		•		



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Drill hole	• A summary of all information material to the	• No new drill hole information is reported in this	• No new drill hole information is reported in this	• No new drill hole information is reported in this
Information	understanding of the exploration results	announcement.	announcement.	announcement.
	including a tabulation of the following			
	information for all Material drill holes:			
	• easting and northing of the drill hole collar			
	• elevation of RL (Reduced Level – elevation			
	• sea level in metres) of the drill hole collar			
	<ul> <li>din and azimuth of the hole</li> </ul>			
	• down hole length and interception depth			
	<ul> <li>hole length.</li> </ul>			
	<ul> <li>If the exclusion of this information is justified on</li> </ul>			
	the basis that the information is not Material			
	and this exclusion does not detract from the			
	understanding of the report, the Competent			
	Person should clearly explain why this is the			
	case.			
Data aggregation	In reporting Exploration Results, weighting	No data aggregation methods have been used.	No data aggregation methods have been used.	No new drill hole information is reported in this
methods	averaging techniques, maximum ana/or	• A 100ppb Au lower cut off has been used to	• A 100ppb Au lower cut off has been used to	announcement.
	high grades) and cut-off grades are usually	• A 0 2g/t Au lower cut off has been used to	A 0 2g/t Au lower sut off has been used to	
	Material and should be stated.	• A 0.59/1 Au lower cut off has been used to calculate arades for BC drilling with maximum	• A 0.59/1 Au lower cut off has been used to calculate arades for BC drilling with maximum	
	• Where agaregate intercepts incorporate short	internal dilution of 5m.	internal dilution of 2m.	
	lengths of high grade results and longer lengths	• A cutoff grade of >0.5g*m has been applied for	• A cutoff grade of >0.5g*m has been applied for	
	of low grade results, the procedure used for	reporting purposes in the tables of results.	reporting purposes in the tables of results.	
	such aggregation should be stated and some	• This has not been applied.	• This has not been applied.	
	typical examples of such aggregations should			
	be shown in detail.			
	• The assumptions used for any reporting of			
	stated			
Relationship between	• These relationships are particularly important	• The overall mineralisation trend strikes to the	• The overall mineralisation trends have been	• No new drill hole information is reported in this
mineralisation widths	in the reporting of Exploration Results.	north-west at about 325°, with a sub-vertical	intersected at an appropriate anale to form	announcement.
and intercent lengths	• If the geometry of the mineralisation with	dip. However, extensive structural logging	the closest intercept length to true width. The	
and intercept lengths	respect to the drill hole angle is known, its	from diamond core drilling of the quartz veins	results are reported as downhole depths.	
	nature should be reported.	within the mineralised zones shows that the		
	• If it is not known and only the down hole lengths	majority dip gently (10° to 30°) towards SSE to		
	are reported, there should be a clear statement	S (160° to 180°). The majority of drilling is		
	to this effect (e.g. 'down hole length, true width	conducted at an 040 azimuth and 60° dip to		



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
	not known').	intersect the mineralisation at an optimum		
		oriented drilled at -60 to150°		
		<ul> <li>The Hestia mineralisation is associated with a</li> </ul>		
		shear zone striking around 350°. The drill		
		orientation at 090 azimuth and 60° dip is		
		optimal for intersecting the mineralisation.		
Diagrams	• Appropriate maps and sections (with scales)	• Please refer to the maps and cross sections as	• Please refer to the maps and cross sections as	• Please refer to the maps and sections as
-	and tabulations of intercepts should be	previously released.	previously released.	previously released:
	included for any significant discovery being			•5B – JORC 2012 Mineral Resource Estimate:
	reported. These should include, but not be			75kt at 3.1g/t Au for 7.7koz Inferred Mineral
	limited to a plan view of drill hole collar			Resources. See MXR ASX Announcement 22
	locations and appropriate sectional views.			November 2016
				• Eagles Nest – JORC 2012 Mineral Resource
				Estimate: 150kt at 1.8g/t Au for 8.9koz
				Indicated Mineral Resources and 530kt at
				2.0g/t Au for 33.7koz inferrea Mineral
				Resources. See MIXR ASX Announcement 21
				• Wattle Dam - IOPC 2012 Mineral Pesource
				Estimate: 3 AMt at 1 Aa/t Au for 153 2koz
				Indicated Mineral Resources and 2Mt at 1.5a/t
				Au for 98.2koz Inferred Mineral Resources. See
				MXR ASX Announcement 1 August 2023.
				• Larkinville – JORC 2012 Mineral Resource
				Estimate: 222kt at 1.8g/t Au for 12.8koz
				Indicated Mineral Resources and 26kt at 1.4g/t
				Au for 1.2koz Inferred Mineral Resources. See
				MXR ASX Announcement 19 December 2023.
				• Hilditch – JORC 2012 Mineral Resource
				Estimate: 274kt at 1.1g/t Au for 9.7koz
				Indicated Mineral Resources and 208kt at
				1.5g/t Au for 10koz Inferred Mineral
				Resources. See MXR ASX Announcement 19 December 2023.
Balanced reporting	• Where comprehensive reportina of all	• Balanced reporting has been applied.	• Balanced reporting has been applied.	No new drill hole information is reported in this
	Exploration Results is not practicable,			announcement.
	representative reporting of both low and high			
	grades and/or widths should be practiced to			



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
	avoid misleading reporting of Exploration			
	nesurs.			
Other substantive	• Other exploration data, if meaningful and	<ul> <li>No other substantive exploration data.</li> </ul>	<ul> <li>No other substantive exploration data.</li> </ul>	• Bulk density data was obtained from selected
exploration data	material, should be reported including (but not			billets of diamond core, using an Archimedes
	limited to): geological observations;			water immersion method.
	geophysical survey results; geochemical survey			
	results; bulk samples – size and method of			
	treatment; metallurgical test results; bulk			
	density, groundwater, geotechnical and rock			
	characteristics; potential deleterious or			
	contaminating substances.			
Further work	• The nature and scale of planned further work	• Additional metallurgical testing may be	<ul> <li>Follow up, Reverse Circulation &amp; Diamond</li> </ul>	• Further work will be focused on testing for dip
	(e.g. tests for lateral extensions or depth	required as the Mandilla Gold Project is	Drilling is planned.	extensions and strike extensions and to
	extensions or large-scale step-out drilling).	progressed from preliminary feasibility to	<ul> <li>No reporting of commercially sensitive</li> </ul>	confirm grade and geological continuity
	• Diagrams clearly highlighting the areas of	definitive feasibility for Hestia, Iris and Eos.	information at this stage.	implied by the current block models.
	possible extensions, including the main			Additional metallurgical testwork will also be
	geological interpretations and future drilling			undertaken.
	areas, provided this information is not			
	commercially sensitive.			



## Section 3 – Estimation and Reporting of Mineral Resources

(criteria listed in Section 1, and where relevant in Section 2, also apply to this section)

Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Database integrity	• Measures taken to ensure that data has not been	• Data was geologically logged electronically;	• Data was geologically logged electronically;	• Templates have been set up to facilitate
	corrupted by, for example, transcription or	collar and downhole surveys were also	collar and downhole surveys were also	geological logging. All geological data is
	keying errors, between its initial collection and its	received electronically as were the laboratory	received electronically as were the laboratory	collected in digital format using codes
	use for Mineral Resource estimation purposes.	analysis results. These electronic files were	analysis results. These electronic files were	specifically designed for the project.
	<ul> <li>Data validation procedures used.</li> </ul>	loaded into a Datashed database by	loaded into a Datashed database by	• Prior to the import into the central database
		independent consultant database	independent consultant database	managed by CSA Global, logging data is
		administrators.	administrators.	validated for conformity and overall
		• Additionally, validation checks are routinely	• Additionally, validation checks are routinely	systematic compliance by the geologist. This
		run in the Datashed database including the	run in the Datashed database including the	data is downloaded to a central GeoBank
		following:	following:	database where data validation processes are
		• Sample data exceeding the recorded depth of	• Sample data exceeding the recorded depth of	implemented.
		hole.	hole.	• Laboratory analysis results were received
		<ul> <li>Checking for sample overlaps.</li> </ul>	<ul> <li>Checking for sample overlaps.</li> </ul>	electronically directly from the laboratory and
		<ul> <li>Reporting missing assay intervals.</li> </ul>	<ul> <li>Reporting missing assay intervals.</li> </ul>	loaded straight into the database.
		• Visual validation of co-ordinates of collar drill	• Visual validation of co-ordinates of collar drill	• Data extracted from the database was
		holes.	holes.	validated spatially using Micromine.
		• Visual validation of downhole survey data.	• Visual validation of downhole survey data.	• The master database uses a back-end
		<ul> <li>Missing collar information</li> </ul>	<ul> <li>Missing collar information</li> </ul>	Microsoft SQL Server database, which is
		• Missing logging, sampling, downhole survey data and hole diameter	• Missing logging, sampling, downhole survey data and hole diameter	integrity categories exist:
		• Checks for character data in numeric fields	<ul> <li>Checks for character data in numeric fields</li> </ul>	
		• Data extracted from the database were validated visually in Datamine and Seequent	• Data extracted from the database were validated visually in Datamine and Seequent	Entity Integrity: No duplicate rows in a table, eliminated redundancy and chance of error.
		Leapfrog software. Also, when loading the	Leapfrog software. Also, when loading the	
		data, any errors such as missing values and	data, any errors such as missing values and	Domain Integrity: Enforces valid entries for a
		sample/logging overlaps are highlighted.	sample/logging overlaps are highlighted.	given column by restricting the type, the format
		• In summary the database is good, with no	• In summary the database is good, with no	or a range of values.
		significant errors due to data corruption or	significant errors due to data corruption or	
		transcription.	transcription.	Referential Integrity: Rows cannot be
				aeleted which are used by other
				records User-Defined Integrity:
				Logging rules and validation codes set
				up by the company, preventing
				then and of hole ato
				than ena of nole etc



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
<b>Criteria</b> <i>Site visits</i>	<ul> <li>JORC Code explanation</li> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Commentary (Mandilla)</li> <li>Julie Reid, the Competent Person for Sections 1 and 2 of Table 1 is Astral Resources (AAR) Geology Manager and conducts regular site visits.</li> <li>Michael Job, the Competent Person for Section 3 of Table 1 has not visited site.</li> </ul>	Commentary (Feysville) • A site visit to the Feysville Project was not undertaken by Cube as drilling activities had concluded prior to the estimation work commencement. The competent person who takes responsibility for the data capture and quality is a full-time employee of AAR and closely monitored drilling activities on site and sample preparation and assay processes during laboratory inspections of the ALS facilities in Perth.	<ul> <li>Commentary (Spargoville)</li> <li>No site visits were undertaken for the MRE update, site visits by the Competent Persons were completed as tabled in the previous MRE announcements:</li> <li>5B – JORC 2012 Mineral Resource Estimate: 75kt at 3.1g/t Au for 7.7koz Inferred Mineral Resources. See MXR ASX Announcement 22 November 2016</li> <li>Eagles Nest – JORC 2012 Mineral Resource Estimate: 150kt at 1.8g/t Au for 8.9koz Indicated Mineral Resources and 530kt at 2.0g/t Au for 33.7koz Inferred Mineral Resources. See MXR ASX Announcement 21 February 2017</li> <li>Wattle Dam – JORC 2012 Mineral Resource Estimate: 3.4Mt at 1.4g/t Au for 153.2koz Indicated Mineral Resources and 2Mt at 1.5g/t Au for 98.2koz Inferred Mineral Resources. See MXR ASX Announcement 1 August 2023.</li> <li>Larkinville – JORC 2012 Mineral Resource Estimate: 222kt at 1.8g/t Au for 12.8koz Indicated Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 26kt at 1.4g/t Au for 1.2koz Inferred Mineral Resources and 208kt at 1.5g/t Au for 1.5koz Indicated Mineral Resources and 208kt at 1.5g/t Au for 10koz Inferred Mineral</li> </ul>
				at 1.5g/t Au for 10koz Inferred Mineral Resources. See MXR ASX Announcement 19 December 2023.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations</li> </ul>	<ul> <li>All AAR and the previous operator (WMC) air core, RC and diamond drill hole data was used to guide the interpretation of the mineralisation.</li> <li>The gold mineralisation at Mandilla is complex and is on the western margin of a porphyritic</li> </ul>	<ul> <li>The mineralisation shows a good degree of continuity over several hundreds of meters. The geological interpretations are consistent with drilling results and geological logging.</li> <li>The geology and assay results of high quality drill core, RC and AC samples were used to</li> </ul>	<ul> <li>The interpretation is based on the resource drilling dataset, and a selection of intervals based on geology and assay data.</li> <li>No material assumptions have been made which affect the Mineral Resource Estimate.</li> <li>Oxidation and mineralisation interpretations</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
	on Mineral Resource estimation.	granite that has intruded volcanoclastic	interpret the geology. The mineralisation is	were completed by Maximus. Peer review of
	• The use of geology in guiding and controlling	sedimentary rocks. In the main part of the	contained within a series of north-west	the interpretations was completed by
	Mineral Resource estimation.	Project (termed the 'Theia' and 'Iris' deposits),	striking shear zone dipping sub-vertically.	Widenbar and Associates for the Wattle Dam
	• The factors affecting continuity both of grade	gold mineralisation appears as a series of	Grade based wireframes have been	Project, the Larkinville deposit and the Hilditch
	and geology.	narrow, high grade quartz veins with	interpreted using a lower gold grade threshold	deposit and by Dr Graeme McDonald for
		relatively common visible gold and grades	of 0.20 g/t.	Eagles Nest and 5B deposits.
		over the whith of the veh of up to several	• A total of 11 alfferent loae aomains have been	Geological Interpretations for Au were
		these vains are lower grade alteration balance	interpreted at Think Big in addition to one supergene minoralised zone. At Beggen Josh	Completed for Reaback, Wattle Dam,
		These haloes can in places coalesce to form	nine different lode domains have been	
		auite thick zones of lower arades The	interpreted in addition to three supergene	Twanty five mineralised lodes have been
		mineralisation manifests itself as large zones	mineralised zones At Kamperman 17	modelled at Wattle Dam alona ~2km of strike
		of lower grades from $\sim 0.5 - 1.5$ ppm Au with	different lode domains have been interpreted	length, comprising the Redback/Wattle Dam
		occasional high grades of +5 ppm Au over 1 or	in addition to three supergene mineralised	lodes and associated footwall and
		2 metres.	zones.	hangingwall lodes along the mineralised
		• In addition to the granite-hosted	<ul> <li>Mineralisation at Think Big is predominantly</li> </ul>	corridor.
		mineralisation, there is a paleochannel	found within the volcaniclastic derived	• Three mineralised lodes have been interpreted
		situated above the granite/sediment contact	conglomerate hosts between sheared	at Hilditch.
		in the northern part of the Project that	porphyry bodies. The strongest tenor is on	• Larkinville has a mineralised enveloped
		contains significant gold mineralisation. The	margins of porphyries between closely spaced	generated by Categorical Indicator Modelling.
		channel is about 2 km in length, up to 50 m	porphyries. The mineralisation at Rogan Josh	• At Eagles Nest the main mineralised zone has
		wide, about 20 m below the topographic	appears to be on the sheared contacts	two sub-parallel lodes often separated by up
		surface but only a jew metres tinck. Gold is	intrucius dasitis unit At Kamparman	to 3m but also coming together to form a
		although is not consistently distributed	mineralisation is in provimity to a significant	single larger lode particularly at shallower
		throughout the paleochannel. An 800 m	north-east trending fault with gold occurring	levels.
		stretch of the paleochannel was mined by AAR	in several host environments including a	• At SB the mineralised lode is interpreted as a single lode with good continuity glong strike
		in 2006 and 2007, with production totalling	pyrite±pyrrhotite±chalcopyrite±magnetite	and down din
		4,005 ounces Au, at a grade of almost 15 ppm	rich zone hosted in a chloritic mafic unit, along	• The aeological analysis used to determine the
		Au.	lithological margins, within quartz veins,	estimated Mineral Resources was primarily
		• There is also paleochannel mineralisation to	shear hosted, within a pyrite bearing silicified	based on the geological characteristics of the
		the south of the main part of the Project	feldspar porphyry and the supergene blanket.	area. The lode intervals were interpreted
		(termed the 'Eos' deposit). This differs from	• There is likely to be areas of mineralisation	based on several characteristics, such as
		the northern paleochannel in that it is more	that are affected by the uncertain nature of	grade, shearing, veining and alteration. Some
		extensive laterally (E-W) and about 50 m	the pinching and swelling of the barren	internal dilution was allowed when
		below the topographic surface, and with an	porphyries which may reduce interpreted	interpreting the mineralisation domains, but it
		average grade of almost 2 ppm Au.	volumes.	was generally limited to 3m in most instances.
		• Inere is also snear-nosted Au mineralisation		• The lode domain wireframes were created
		on the western contact of the granite (termed		using a combination of drillhole interval



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		the 'Hestia' deposit). The mineralisation here		selection and implicit vein modelling in
		is in a series of stacked lodes from 2 m to 10 m		Micromine software. The interval selection
		thick that dip steeply to the west at 75°.		process involves manually identifying and
		• Deterministic grade-based wireframes and		categorising drillhole assay and lithological
		running an estimate using linear methods		intervals with the appropriate three-digit lode
		(such as ordinary kriging (OK) or inverse		identifier.
		distance (ID)) is difficult and not		• Oxidation DTMs were created based on
		representative of the mineralisation, other		drillhole logging records.
		than the shear hosted Hestia area. In		
		particular, trying to tie together mineralised		
		trends in such a structurally complex deposit is		
		challenging.		
		• The overall mineralisation at Theia and Iris		
		trend strikes to the north-west at about 330°,		
		with a sub-vertical dip. However, extensive		
		structural logging from diamond core drilling		
		of the quartz veins within the mineralised		
		zones shows that majority dip gently (20° to		
		30°) towards SE to SSE (130° to 160°).		
		• The economic compositing function in		
		Leapfrog software was used for the		
		interpretation of the mineralised zone - at a		
		cut-off of 0.05 ppm Au, the minimum		
		mineralised composite length was set to 4 m,		
		with maximum included and consecutive		
		internal waste parameters set to 2.5 m.		
		• An intrusive geological model was constructed		
		in Leapfrog. In the transitional and fresh rock		
		zone, a global trend of 20° towards the SE		
		(130°) was set, which is concordant with the		
		overall trend of the structurally logged quartz		
		veins for Theia and Iris.		
		• For Eos, a horizontal trend was set for the		
		geological model, and for		
		• For Hestia, AAR interpreted mineralised		
		wireframes using the vein modelling tool in		
		Leapfrog software. Interval selection was		
		guided by the presence of shear-hosted		
		mineralisation which generally coincided with		



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Sparg	oville)	
		<ul> <li>a lower cut-off grade of 0.2 ppm gold.</li> <li>In the northern paleochannel zone (at and just below the base of the existing pits), the economic compositing function in in Leapfrog software was used for the interpretation of the mineralised zone - at a cut-off of 0.1 ppm Au, the minimum mineralised composite length was set to 3 m, with maximum included and consecutive internal waste parameters set to 2 m. A horizontal global trend towards 330° was set and used for interpolation of an intrusive geological model.</li> <li>These mineralised domain models were designed to essentially exclude waste material and were to be used to constrain a non-linear estimation method.</li> </ul>				
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The main deposit of the Mandilla Project (Theia) extends over a strike length of 1600 mN, is about 150 to 250 mE wide and extends to 350 m below the surface. At Mandilla South (Iris), the mineralisation extends over a strike length of 600 mN, is about 200 mE wide and extends to 200 m below the surface.</li> <li>At the very south of the Project (Eos), paleochannel mineralisation extends over a strike length of 300 m, is about 75m wide and up to 20 m thick and is 40 – 50 m below surface.</li> <li>On the western edge of the Project (Hestia) the mineralisation extends over a strike length of 800 m and up to 200 m below surface.</li> <li>The northern paleochannel extends over a strike length and up to 200 m below surface.</li> </ul>	<ul> <li>The Think Big deposit extends over a strike length of 500 mN, is about 50 to 110 mE wide and extends to 200 m below the surface.</li> <li>At Rogan Josh, the mineralisation extends over a strike length of 1200 mN, is about 70 mE wide and extends to 150 m below the surface.</li> <li>The Kamperman deposit extends over a strike length of 450 mN, is approximately 150 mE wide and extends to approximately 170 m below the surface.</li> </ul>	The individual dep Resource have the extents.     Deposit     Wattle Dam Stockwork     Golden Orb     Redback     Huntsman     8500N     Trapdoor     S5     Deposit     Hilditch     Deposit     Larkinville     Eagles Nest diment     south direction for     width varying bett     mineralisation exte	Length Strike Down 500 524 260 264 460 534 550 299 1,530 255 480 277 280 234 Length Strike Down 550 310 Length Strike Down 385 111 sions extend up to 300n ween 3m a nds from su	the Mineral approximate



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				<ul> <li>The Mineralisation at 5B extends in a north-south direction for up to 80m and dips to the west at approximately 65°. The mineralisation extends from 35m (base of current pit) down to a modelled depth of 150m vertically below the surface.</li> <li>The reported Mineral Resources are within a pit shell which was generated by Astral Resources to demonstrate reasonable prospects for eventual economic extraction.</li> </ul>
Estimation and	• The nature and appropriateness of the	• Estimation of the fresh rock mineral resource	• Estimation of the mineral resources was by	Wattle Dam. Larkinville and Hilditch
modelling techniques	<ul> <li>estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimates takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul> <li>for Theia, Iris and Eos was by the non-linear method Localised Uniform Conditioning (LUC) using Datamine software. The LUC estimation process was as follows:</li> <li>Drill hole data was selected within mineralised domains and composited to 2 m downhole intervals in Datamine software – the majority of the raw sample lengths were 1 m (91% of samples within the mineralised domains), but the variability of the data was reduced significantly by using 2 m composites.</li> <li>The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the transported, oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries (with the exception of the surficial transported cover). Note that at Eos, mineralisation is on the oxidised/transitional boundary (i.e. no fresh rock).</li> <li>Therefore the fresh, transitional and oxidised zones were combined for variography and estimation, with a hard boundary for the porther angleochangel and the transported</li> </ul>	<ul> <li>Ordinary Kriging (OK) implemented in Datamine software (version 2.0.66.0) using the following process:</li> <li>Drill hole data was selected within mineralised domains and composited to 1 m downhole intervals in Datamine software – the majority of the raw sample lengths were 1 m (98% of samples within the mineralised domains).</li> <li>The composited data was imported into Supervisor software for statistical and geostatistical analysis. The statistical and domain contact analysis showed slightly different grade population statistics for the oxidised, transitional and fresh rock parts of the main mineralised domain, but the contact analysis showed the grade changes were gradational at the oxidation state boundaries.</li> <li>Therefore the fresh, transitional and oxidised zones were combined for variography and estimation, with a hard boundaries used for the mineralised domains.</li> <li>Variography was performed on data transformed to normal scores, and the variogram models were back-transformed to low nugget effects, with a ranges of 40m to 75m of 150m at Rogan.</li> </ul>	<ul> <li>Wattle Dam, Larkinville and Hilditch</li> <li>The Mineral Resource model was constructed using Micromine 2023.5 software, and statistical analyses used Micromine 2023.5 and GeoAccess 2022 software (Widenbar and Associates)</li> <li>The MRE has been completed using a total of mineralisation domains, as follows:</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargov	ville)	
	• The process of validation, the checking process	cover. As each of the deposits are spatially and	Josh and ranges of 40m to 60m at	Denosit	Lode	Location
	used, the comparison of model data to drill hole	statistically separate, then hard domain	Kamperman.	Wattle Dam Stockwork	SW100	Main
	data, and the use of reconciliation data if	boundaries were used between them.	• For Think Big, estimation was into a block	Wattle Dam Stockwork	SW110	Footwall
	available.	• Variography was performed on data	model rotated by -40 degrees to align with the	Golden Orb	GO111	Footwall
		transformed to normal scores, and the	strike of the mineralised domains, with a	Golden Orb	GO110	Footwall
		variogram models were back-transformed to	parent cell size set to 10m in the east, 15m in	Golden Orb	GO100	Main
		original units. The Gaussian anamorphosis	the north orientation and 5m in elevation	Golden Orb	GO120	Hangingwall
		used for the normal scores transform was also	which approaches the industry rule of thumb	Golden Orb	GOSG	Supergene
		subsequently used for the discrete Gaussian	of half the drill spacing. Sub blocking was	Redback	RB100	Main
		change of support model required for Uniform	allowed to reflect the volumes at wireframe	Redback	RB110	Footwall
		Conditioning. Variography was performed for	boundaries however estimation occurred at	Redback	RB120	Hangingwall
		the separate deposits (the northern	the parent block size using hard boundaries.	Redback	RB121	Hangingwall
		naleochannel is considered a separate	For Rogan Josh, the block model was not	Redback	RB122	Hangingwall
		deposit).	rotated and used a parent block size set to	Redback	RB123	Hangingwall
		• The varioaram models had high nugget effects	20m in the east and north orientations and 5m	Redback	RB124	Hangingwall
		at Theia Iris and Hestia (~70 to 80% of total	in elevation. The Kamperman block model was	Huntsman	HM100	Main
		sill) with a ranges of 60 to 100m. At East the	not rotated and used a parent block size set to	8500N	8500N100	Main
		silly, with a ranges of 00 to 100m. At Los, the	10m in the east and north orientations and 5m	8500N	8500N120	Hangingwall
		with ranges of 120 m horizontally and 10 m	in elevation	Trapdoor	TD100	Main
		with funges of 120 m nonzontally and 10 m	• OK parameters included a minimum of eight	Trapdoor	TD120	Hangingwall
		verticulty. For the northern puleochullier, the	• OK parameters included a minimum of eight	S5	S5121	Hangingwall
		of 20 m barizantally and 4 m vartically	for each block estimate with search ellipse	S5	S5120	Hangingwall
		oj 20 m nonzontany ana 4 m vertically.	for each block estimate, with search empse	S5	S5100	Main
		• Estimation (Via Orainary Kriging – a necessary	radii set to the effective range of the	S5	S5110	Footwall
		precursor step for UC) was into a non-rotated	respective variogram models (oriented in the			
		block model in MGA94 grid, with a panel block	same airections as the variogram models), a	Hilditch	HD100	Main
		size of 20 mE x 25 mN x 5 mRL – this is about	three-pass sample search of incrementally	Hilditch	HD120	Hangingwall
		the average drill spacing in the main well-	expanding search ranges and block		HUIZI	Hangingwall
		drilled part of the Project. Localisation of the	discretisation grid of 5x5x3 nodes.	• Separate weathering	profiles we	re modelled
		grades was into Selective Mining Units (SMU)	<ul> <li>Global top caps were applied to Domains with</li> </ul>	as DIMs for the 'top o	of fresh roci	(TOFR) and
		block of 10 mE x 12.5 mN x 2.5 mRL (8 SMUs	extreme outliers.	the 'base of complete	oxidation	(BOCO).
		per panel).	• Estimates of Au grades were validated against	<ul> <li>Weathering profiles w</li> </ul>	ere assigne	ed a field
		• A minimum of 8 and maximum of 16 (2 m	the composited drill hole data by extensive	"WEATH" with codes	assigned as	OX for
		composite) samples per panel estimate was	visual checking in cross-section, plan and on	Oxidised, TR for Trans	ition and Fl	R for Fresh.
		used, with a search ellipse radius of 100 m x	screen in 3D, by global (per deposit	• Drill hole composite so	amples (Au	grade and SG
		100 m x 40 m (oriented in the same directions	comparisons of input data and model, and by	data) were flagge	d accordi	ing to the
		as the variogram models) for Theia and Iris,	semi-local statistical methods (swath plots).	mineralisation and w	eathering a	lomains they
		with a shorter radius of 20 m in the minor	All methods showed satisfactory results.	are located within. So	mples were	e composited
		direction for Eos.		to 1 m lengths, being	the predom	inant sample
		• The use of a maximum number of composites		length.		-



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
		of 16 effectively limits the search ellipse radius		• Variograms were modelled for composites
		to 20 m in the well-drilled (~Indicated) part of		within the main Wattle Dam, Golden Orb and
		the Project,		Redback deposits
		• The panel estimates used the 'distance limited		• A block model was constructed using parent
		threshold' technique, where uncapped		cell sizes of 4 m (east) x 10 m (north) x 10 m
		samples are used for a very local estimate, and		(elevation) in waste and 2m x 5m x 5m in
		capping (threshold) is used beyond this local		mineralisation. Sub-celling to 1m x 1m x 1m
		distance. The thresholds used were 40 ppm for		was used to ensure the block model were filled
		Theia, 9 ppm for Iris and Eos, 6 ppm for Hestia		the wireframe solids. The blocks were coded in
		and 40 ppm for the northern paleochannel.		the same manner as the drill samples, using
		These thresholds were based on inflections		the Lode and Weathering fields. All blocks
		and discontinuities in the histograms and log-		located above the topographic DTM were
		probability plots, and on metal quantities		deleted from the block model.
		above thresholds.		• Blocks were also flagged as being within the
		• The UC process applies a Change of Support		existing Wattle Dam open pit and
		correction (discrete Gaussian model) based on		underground workings and coded as zero
		the composite sample distribution and		density and grade.
		variogram model, conditioned to the Panel		• As some of the lodes contained significant
		grade estimate, to predict the likely grade		internal low grade and waste material, a
		tonnage distribution at the SMU selectivity.		categorical indicator estimation method was
		• The Localising step was then run, and the		used to define high and low grade sub-
		resulting SMU models for each deposit were		domains within each domain.
		combined using Datamine.		• Ordinary kriging was then used (in Micromine
		• Estimates of Au grades were validated against		2023.5) to interpolate grades into cells.
		the composited drill hole data by extensive		Variable search ellipse orientations, using an
		visual checking in cross-section, plan and on		unfolding methodology, were used to honour
		screen in 3D, by global (per deposit		the variable dip and strike of each lode.
		comparisons of input data and model, and by		• The weathering interfaces (TOFR and BOCO)
		semi-local statistical methods (swath plots).		were treated as soft boundaries for grade
		All methods showed satisfactory results.		interpolation. Au grades were interpolated
		• For the Hestia deposit ordinary kriging was		using the individual lode wireframes as hard
		used. The ordinary kriging process was as		boundaries for grade interpolation.
		follows:		• A three-pass search ellipse strategy was
		• Cube specified an ellipsoidal search		adopted whereby search ellipses were
		neighbourhood with first-pass composite		progressively increased if search criteria could
		search ranges set to 90 m of the estimation		not be met. Search parameters are
		block centre for the major, 30 m for the semi-		summarised in the table below.
		major and 15 m for the minor search direction.		
		• The variography anisotropy axes for the input		



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)		
		<ul> <li>semi variogram models were specified to be the same as the interpolated search orientation.</li> <li>Cube also specified an expanding search distance algorithm whereby blocks not estimated in the primary search were estimated by doubling the search range for the secondary pass.</li> <li>Finally, any blocks not estimated in the second pass were estimated by quadrupling the primary search distances for the tertiary grade estimation pass.</li> <li>For the primary and secondary estimation passes Cube specified that a minimum of eight and maximum of 20 composites were required for a block to be estimated in each search.</li> <li>For the tertiary pass the minimum and maximum requirements were set to three and 20 composites respectively.</li> <li>All blocks in the mineralised lode wireframes were estimated in three estimation passes.</li> <li>For the transported cover domains, which are essentially non-mineralised except for a small part of Theia and the Eos paleochannel, ordinary kriging was used to estimate grades into the SMU blocks was not undertaken.</li> </ul>		Search       Search Radii       Composite         Pass       East       North       RL       Min       Mai         1       5       40       40       4       16         2       10       80       80       4       16         3       15       120       120       1       16         •       Check estimated have been of categorical indicator kriging similar results.       •       A top cut was selected by following statistical anal reviewing log-probability histograms. The point at which samples supporting the diminishes was the primary n are as follows:         Deposit       Redback       Huntsman         Trapdoor       Golden Orb       S5         Wattle Dam Stockwork       8500N         Hilditch       Larkinville         • Drillhole grades were in compared with block model drillhole and block model compared. Swathe plots were compare drillhole grades with grades for easting, northing slices throughout the deposit. reflected the tenor of the drillhole samples both globall         Eagles Nest       • A block model was created in mineralised envelope, block	es       Holes       Per Hole         x       Min       Min       Min         i       2       2       4         i       1       1       4         i       1       1       4         i       1       1       4         carried       out using and product         deposit       doma         yiss,       primar         plots       an         hthe number       high-grade         hethod.       Top cut         25       10         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12         15       50         10       12	ly in interest of the set of the
				north-south and flagged by o	xidation state.	



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	<ul> <li>Commentary (Spargoville)</li> <li>The gold grade was estimated into a block model with a cell size of 5mE x 10mN x 5mRLwith sub-celling to a minimum of 1mE x 2mN x 1mRL.</li> <li>Grade was estimated to the parent block. Due to the relatively narrow nature of the mineralised envelope, small sub-cells were required to be able to best represent the wireframe model boundaries.</li> <li>An Inverse Distance (power=2) estimation was used with an anisotropic search ellipse created to reflect the orientation and proportions of the mineralised lode.</li> <li>The Mineral Resource Estimate is constrained be hard boundaries as defined by the wireframes representing the extent of the mineralisation.</li> <li>A top cut of 6g/t au was used to reduce the affect and spread of a small number of high grade assays.</li> <li>The block model has been validated along sections and provides a good correlation with existing drill hole data and with the wireframe</li> </ul>
				existing drill hole data and with the wireframe reference model. • Various geological interpretations were considered with negligible effect on the global estimate. • The Mineral Resource estimate was undertaken using Micromine
				<ul> <li>undertaken using Micromine.</li> <li>5B</li> <li>A block model was created to represent the mineralised envelope, blocks were aligned north-south and flagged by oxidation state.</li> <li>The gold grade was estimated into a block model with a cell size of 2mE x 2mN x 2mRLwith sub-celling to a minimum of 0.5mE x 0.5mN x 1mRL.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	<ul> <li>Commentary (Spargoville)</li> <li>to the relatively narrow nature of the mineralised envelope, small sub-cells were required to be able to best represent the wireframe model boundaries.</li> <li>An Inverse Distance (power=2) estimation was used with an anisotropic search ellipse created to reflect the orientation and proportions of the mineralised lode.</li> <li>The Mineral Resource Estimate is constrained be hard boundaries as defined by the wireframes representing the extent of the mineralisation.</li> <li>No top cut was applied as the range in assays is not great and very few samples would be affected.</li> <li>The block model has been validated along sections and provides a good correlation with existing drill hole data and with the wireframe reference model.</li> </ul>
				<ul> <li>Various geological interpretations were considered with negligible effect on the global estimate.</li> <li>The Mineral Resource estimate was undertaken using Micromine</li> </ul>
				<ul> <li>Wattle Dam, Larkinville, Hilditch, Eagles Nest and 5B</li> <li>No assumptions with regards to deleterious elements have been made, nor have any assumptions been made regarding the recovery of by-products</li> <li>The block models were subjected to a process of regularisation to a block size of 4mE x 5mN x 5mRL to better represent the likely selective mining unit to be used during open pit mining.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry basis.	• Tonnages are estimated on a dry basis.	• Tonnages are estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The cut-off grade of 0.39 ppm Au was established from pit optimisation work of the current mineral resource estimate model. See Mining factors and assumptions below.	• The cut-off grade of 0.39 ppm Au was established from pit optimisation work of the current mineral resource estimate model. See Mining factors and assumptions below.	• The cut-off grade of 0.39 ppm Au was established from pit optimisation work of the current mineral resource estimate model. See Mining factors and assumptions below.
Mining factors or	• Assumptions made regarding possible mining	• The Mandilla Project would be mined by open	• The Feysville deposits would be mined by open	• The Spargoville Gold Project would be mined
assumptions	methods, minimum mining dimensions and	pit extraction. Recent pit optimisation work	pit extraction.	by open pit extraction. Recent pit optimisation
	dilution. It is always necessary as part of the	mining costs averaging \$3.50/t.	of AUD \$2,500/oz., with mining costs varying	mining costs averaging \$3.30/t.
	process of determining reasonable prospects for	• Pit slope angles are appropriate for the	with depth, but averaging \$8.13/BCM ore and	• Overall pit slope angles were set to 45 degrees
	eventual economic extraction to consider	transported, transitional and fresh rock. Inter-	\$4.72/BCM for waste.	for all Resources.
	made regarding mining methods and	or 58° in fresh, depending upon oxidation	• An overall processing recovery was assumed to	• Processing recovery was assumed to be 96%. A base processing plus G&A cost of \$25.55 per
	parameters when estimating Mineral Resources	state and area.	be 92.5%, with a processing plus G&A and	tonne was used as well as a haulage cost
	may not always be rigorous. Where this is the	• Overall processing recovery was assumed to	haulage cost of \$27.75 per tonne.	component of \$0.14/t/km. This was added to
	case, this should be reported with an explanation of the basis of the mining assumptions made	be 96%, with a processing plus G&A cost of		represent the ore hauling distance from each
	of the basis of the mining assumptions made.	\$25.55 per tonne.		Resource to the Manailia processing plant.



Criteria J	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				This additional item resulted in the following total processing costs: Wattle Dam (\$26.70/t); Larkinville (\$27.47/t); Hilditch (\$27.65); Eagles Nest (\$26.65); 5b (\$25.97).
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Metallurgical testing has been completed on diamond drill core. Results of test work indicate recoveries in excess of 95% are likely. Grind sensitivity work has shown recovery of 95% is achievable at a grind size of 212µm.</li> <li>The Scoping Study published in September 2023 indicates the project is of sufficient scale to support the capital costs required to build a 2.5mtpa process plant.</li> </ul>	<ul> <li>Metallurgical testing was completed at Think Big in 2019 using diamond core from the 2018 drill programs. This testing was conducted at a grind size of 75µm and average gold recoveries of 99.5%, 95.2% and 80.4% were realised in supergene, transitional and primary ore respectively.</li> <li>Preliminary metallurgical testing has been completed at Kamperman and Rogan Josh. Both deposits are free milling with gold recoveries ranging from 90.1% - 98.4% (average 94.4%) at Kamperman and 89.4% - 93.6% (average 91.1%) at Rogan Josh.</li> <li>Further metallurgical testing at Kamperman is currently underway.</li> </ul>	<ul> <li>Wattle Dam, Larkinville, and Hilditch</li> <li>Metallurgical testwork was performed on four bulk composite samples extracted from the open-pit resource areas at Wattle Dam Stockwork and Redback deposits. These Reverse Circulation samples encompassed oxide, transitional, and fresh materials, accurately representing potential mineable open-pit parcels.</li> <li>Tests confirm favourable metallurgy with low reagent consumption and low oxygen demand. Gold recoveries ranged from 91.5% to 97.3% using standard 24-hour carbon-in- leach gold processing. The process yielded high gravity recoverable gold of up to 71.2% even before cyanide leaching. Oxygen sparging was used for the first 15 minutes of the leach tests and importantly due to the rapid leach times, sodium cyanide consumption rates were low for all samples tested. Lime consumption rates were elevated to buffer the water used during the testwork, which would be optimised in full-scale operations.</li> <li>A comprehensive multi-element analysis and semi-quantitative (XRD) mineralogical analysis indicated the absence of elements that could adversely affect gold recovery. The composite samples exhibited low levels of arsenic (As) and tellurium (Te), reducing the likelihood of refractory gold-bearing minerals being present. Additionally, the composite samples displayed low levels of organic carbon, minimizing the potential for gold</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				all composite samples showed low concentrations of base metals, reducing the possibility of cyanicides (elements that consume cyanide) and thereby reducing the chance of any detrimental effect on gold cyanidation.
				<ul> <li>Eagles Nest and 5B</li> <li>Metallurgical testwork is required for both Eagles Nest and 5B deposits.</li> </ul>
Environmental factors	<ul> <li>Assumptions made regarding possible waste and</li> </ul>	• The northern paleochannel has previously	<ul> <li>Modern day mining has not been undertaken</li> </ul>	• A flora and fauna survey was completed in
or assumptions	process residue disposal options. It is always	been mined by small-scale open pit methods	on the Feysville tenements; however, there is	spring (October) 2020 and was followed by a
	necessary as part of the process or determining	by AAR in 2006/2007, and there are existing	evidence of extensive small scale mining	second season flora survey and basic/detailed
	reasonable prospects for eventual economic	waste dumps and open cut pits.	dating back to the early 1900's over the	fauna survey in autumn (May) 2021. No
	extraction to consider the potential	• In addition to the flora, fauna, cultural	tenement footprint.	Inreatened flora were recorded during the
	environmental impacts of the mining and	neritage and waste material characterisation	Fiord and faund surveys have recently been     completed during the early enring of 2024	Jield survey.
	determination of potential environmental	studies completed in 2006/7, Astrui Resources	Completed during the early spring of 2024.	• The basic/detailed jauna survey conducted in May 2021 included assessment of habitat
	impacts particularly for a areenfields project	studies during 2020/2021 and more recently	• Waste characterisation test work is also yet to	values for vertebrate fauna and specifically
	may not always be well advanced, the status of	in 2024	<ul> <li>Discussion with the native title claimant aroun</li> </ul>	for significant species identified in the deskton
	early consideration of these potential	• Considering the extensive existing studies.	is also well advanced in support of a pending	review including Malleefowl Leipog ocellata
	environmental impacts should be reported.	substantial overlap in both the Project	mining tenement application.	(VU), Chuditch Dasyurus geoffroii (VU), Night
	Where these aspects have not been considered	footprint and scope as well as the additional	5 11	Parrot Pezoporus occidentalis (CR/EN), and an
	this should be reported with an explanation of	information collected in environmental		invertebrate, Arid Bronze Azure Butterfly
	the assumptions made.	studies to support the Scoping Study, it is		Ogyris subterrestris petrina (CR). Searches
		considered that there are no environmental		were conducted in suitable habitat for the ant
		factors that would preclude the economic		species Camponotus sp. nr terebrans which is
		extraction or indeed add significant additional		the only known host of the Arid Bronze Azure
		cost to the extraction of the material included		Butterfly; no evidence of its nests was
		in the resource.		observed, so it is unlikely the butterfly occurs
				In the Project area.
				Reubuck occurs 600 m south of the previously     mined Wattle Dam gold Mine. It is therefore
				assumed that waste could be disposed in
				accordance with a site-specific mine and
				rehabilitation plan.



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones with the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Bulk density data was gathered from some recent diamond core using the water immersion technique. A total of 374 density determinations (an additional 26 density determinations in the newly acquired data) have been made from both the granitoid and sediments, in transitional and fresh rock zones. The results are very similar for the granitoid and sediments.</li> <li>Average bulk density values were assigned per modelled weathering domain (2.2 t/m3 for transported, 2.3 t/m3 for oxidised, 2.5 t/m3 for transitional and 2.64 t/m3 for fresh rock).</li> </ul>	<ul> <li>Bulk density data was gathered from some recent diamond core using the water immersion technique. A total of 57 density determinations have been made from various rock types across the Feysville project area.</li> <li>Average bulk density values were assigned per modelled weathering zone with values ranging between 1.80 t/m3 for oxidised and 2.81 t/m3 for fresh rock.</li> </ul>	<ul> <li>Wattle Dam, Larkinville, and Hilditch</li> <li>Bulk density determinations dominantly adopted the Archimedes water displacement method. A total of 291 measurements were taken, with 42 within the mineralisation domains, taken from drill core.</li> <li>210 samples were sourced from fresh rock domain, and 76 samples sourced from the oxide and transitional domains. Three samples were removed from the SG database due to them having unreasonably high values.</li> <li>The following values were applied for the Wattle Dam and Hilditch deposits:</li> </ul>
				Density (Ore)Supergene1.86t/m³Density (Ore)Oxide1.86t/m³Density (Ore)Transition2.51t/m³Density (Ore)Fresh2.95t/m³Density (Waste)Transported1.70t/m³Density (Waste)Laterite1.80t/m³Density (Waste)Oxide1.86t/m³Density (Waste)Transition2.51t/m³Density (Waste)Fresh2.85t/m³Density (Waste)Fresh2.85t/m³• The following values were applied for the Larkinville deposit:Density
				Material       t/m³         Oxide       2.0         Transition       2.5         Fresh       2.8         Eagles Nest         • No direct SG determinations have been undertaken. The values used are taken from the nearby Wattle Dam deposit. The Wattle dam deposit has a very similar geology to the described at Eagles nest.         • Bulk density estimates used are 2.2t/m3 for oxide, 2.4t/m3 for transitional and 2.75t/m3



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				<ul> <li>for fresh.</li> <li>5B</li> <li>No bulk density determinations were undertaken by Maximus. Previous explorers have undertaken work to determine appropriate SG values to be used.</li> <li>Bulk density estimates used are 2.8t/m3 for oxide, 3.0t/m3 for transitional and 3.2t/m3 for fresh.</li> </ul>
Classification	<ul> <li>The basis for the classification of Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The classified mineral resource estimate is within a constraining optimised pit shell as discussed in the Mining factors and assumptions section above.</li> <li>The Indicated Mineral Resource has an approximate drill spacing of 30 mN x 20 mE or closer (10 mE x 10 mN in grade control drilled areas) and is not more than 20m laterally beyond drilling.</li> <li>The Inferred Mineral Resource is material within the mineralised domains and constraining pit shell, but not meeting the criteria for Indicated i.e. broader drill spacing up to 60 mN x 40 mE at depth.</li> <li>This classification considers the confidence of the resource estimate and the quality of the data and reflects the view of the Competent Person.</li> </ul>	<ul> <li>Cube assigned resource categories based on overall confidence in the estimates which was guided by drill spacing, OK quality metrics including Kriging Efficiency and Slope of regression, and geological complexity.</li> <li>Indicated resources were assigned to parts of the supergene domains and the well drilled, upper portions of the central fresh rock domains.</li> <li>Inferred resources have been assigned to the remaining mineralised domains where drilling intercepts become more oblique and geological uncertainty is increased.</li> <li>This classification considers the confidence of the Resource Estimate and the quality of the data and reflects the view of the Competent Person.</li> </ul>	<ul> <li>Wattle Dam, Larkinville, and Hilditch</li> <li>The Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been considered in determining this classification including: <ul> <li>Geological continuity;</li> <li>Data quality;</li> <li>Drill hole spacing;</li> <li>Modelling technique;</li> </ul> </li> <li>Estimation properties including search strategy, number of informing data and average distance of data from blocks.</li> <li>The resource classification methodology incorporated a number of parameters derived from the kriging algorithms in combination with drill hole spacing and the continuity is assumed, and the deposit classified as Indicated are where geological and grade continuity is assumed, and the deposit has been drilled on a 20 m E x 20 m RL pattern (or denser). The drill pattern adopted for Indicated effectively encompasses the area where the average distance to samples is less than 20m and blocks are populated in the first search pass.</li> <li>Areas of the deposits classified as Inferred are</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
				located outside the Indicated volumes where drill spacing is up to 40 m (E) x 40 m (RL) and geological evidence is sufficient to imply but not verify geological and grade continuity.
				Eagles Nest • The Eagles Nest Mineral Resource is classified as Indicated and Inferred. Factors taken into account include drill spacing, mineralisation continuity and estimation quality. • The Mineral Resource classification reflects the views of the Competent Person.
				<ul> <li>5B</li> <li>The 5B Mineral Resource is classified as Inferred. Factors taken into account include drill spacing and data age and quality, mineralisation continuity and estimation quality. Drill density is very good across much of the mineralisation; however, the age of the data reduces the confidence in the quality.</li> <li>The Mineral Resource classification reflects the views of the Competent Person.</li> </ul>
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• No external audits of the mineral resource have conducted, although the independent consultants used for the resource estimate (Cube Consulting) conduct internal peer review.	• No external audits of the mineral resource have conducted, although the independent consultants used for the resource estimate (Cube Consulting) conduct internal peer review.	• The current model has not been audited by an independent third party but has been subject to review by Maximus Resources staff.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within state confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	<ul> <li>This is addressed in the relevant paragraph on Classification above.</li> <li>The Mineral Resource relates to global tonnage and grade estimates.</li> <li>Mining has only taken place in the northern paleochannel area, which only represents a very small fraction of the mineralisation at Mandilla. Therefore, there is no reconciliation data for the majority granite-hosted mineralisation.</li> </ul>	<ul> <li>This is addressed in the relevant paragraph on Classification above.</li> <li>The Mineral Resource relates to global tonnage and grade estimates.</li> <li>No mining has taken place, there is no reconciliation data.</li> </ul>	<ul> <li>This is addressed in the relevant paragraph on Classification above.</li> <li>The Mineral Resource relates to global tonnage and grade estimates.</li> <li>Mining has taken place both in an open pit and underground at Wattle Dam, but the mineralisation at this particular deposit is characterised by a thin zone of very nuggety gold and is atypical compared to the other deposits and produced far more gold than any of the contemporary Mineral Resource Estimates produced. Consequently the mined</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla)	Commentary (Feysville)	Commentary (Spargoville)
	• The statement should specify whether it relates			part of Wattle Dam does not provide a
	to global or local estimates, and, if local, state			meaningful comparison with the current
	the relevant tonnages, which should be relevant			resource estimates.
	to technical and economic evaluation.			<ul> <li>Mining at 5B has also previously occurred with</li> </ul>
	Documentation should include assumptions			very limited production records.
	made and the procedures used.			• No mining has occurred at any of the other
	• These statements of relative accuracy and			deposits and therefore mine production
	confidence of the estimate should be compared			records do not exist
	with production data, where available.			



## Section 4 – Estimation and Reporting of Ore Reserves

(criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section)

Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Mineral Resource estimate for conversion	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	• The Mineral Resource Estimate (MRE) used for the conversion to an Ore Reserve for the Mandilla deposit is that which was announced in Astral ASX announcement dated 03/04/25.
to Ore Reserves	• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The MRE used for the conversion to an Ore Reserve for the Feysville deposit is that which was announced in Astral ASX announcement dated 01/11/24.
		• The Mineral Resources are reported inclusive of the Ore Reserve.
Site Visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Julie Reid, the Competent Person for Sections 1 and 2 of Table 1 is Astral Resources' Geology Manager and conducts regular site visits.
	• If no site visits have been undertaken indicate why this is the case.	• The Competent Person for Section 4 of Table 1 has not visited site. The status of the project is pre-development, as such reliance is placed on site visits performed by the Competent Persons to date.
Study status	<ul> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre- Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	• The Ore Reserves are supported by a Pre-Feasibility study. The outcomes of the study indicate a technically achievable and economically viable mine plan. All material modifying factors have been considered and applied when converting the Mineral Resource to an Ore Reserve.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• Economic cut-off grades were calculated and applied to the estimate, based on relevant input assumptions as summarised in the Pre-Feasibility Study. These cut-offs are 0.3g/t for Mandilla and 0.4g/t for Feysville.
Mining factors or assumptions	<ul> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>Any minimum mining widths used.</li> </ul>	<ul> <li>Mineral Resources were converted to Ore Reserves using industry-standard open pit optimisation methodologies using Whittle software, followed by detailed pit designs and production schedules that demonstrate safe and practical extraction of the Ore Reserves in a timely and economic manner.</li> <li>The selected mining method used to extract the Ore Reserves is via conventional open pit bench mining, utilising mining-class excavators and rear-dump haul trucks. This is an industry-standard method used widely in Western Australian gold operations. Drilling and blasting of hard material will be necessary to achieve efficient mining productivity and has been accounted for in the Pre-Feasibility Study.</li> <li>All Ore Reserves are planned to be extracted solely via open pit methods, with no extraction via underground methods contemplated in the Pre-Feasibility Study.</li> <li>Geotechnical assumptions are based on detailed test work from diamond drill samples taken from the Mandilla and Feysville deposits. These samples underwent testing by Entech Consulting Pty Ltd. to determine their material properties. The results of this test work provided the basis for the geotechnical assumptions used to produce the open pit optimisations and detailed designs.</li> <li>Mining dilution and recovery factors (ore loss) were accounted for via regularisation of the MRE model.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Criteria         Metallurgical factors or assumptions	<ul> <li>ORC Code explanation</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the selected mining methods.</li> <li>The infrastructure requirements of the selected mining methods.</li> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	Commentary (Wahadila & Feysville)         Regularisation is a commonly used technique to account for the predicted ore losses and dilution that will occur during mine production.         • The models for Mandilla were regularised to a block size of $5m(x)$ by $6.25m(y)$ by $5m(z)$ , and the models for Feysville were regularised to a block size of $5m(x)$ by $5m(y)$ by $5m(z)$ .         • The block size selected for regularisation is considered appropriate for the orebody geometry, planned method of extraction and fleet size contemplated in the Pre-Feasibility Study. In the view of the Competent Person, mining dilution and ore loss is adequately accounted for via the regularisation process, as such no further dilution or ore loss factors were applied.         • A target minimum mining width of 20 metres at the pit bottoms was considered when producing the detailed pit designs.         • Inferred material was treated as waste for the purposes of the Pre-Feasibility Study Case used to determine the Ore Reserves.         • A detailed site layout for both Mandilla and Feysville was developed as part of the Pre-Feasibility Study, addressing access, material storage and processing facility location aspects of the Project.         • The mineral processing method selected for the Pre-Feasibility Study and the Ore Reserves is as follows:         • 2.5 million tonne per annum throughput (Reserves Case)         • Three-stage crushing circuit         • Milling and classification circuit         • Gravity concentration and intensive cyanidation of the gravity concentrate         • Cyanide leaching of the gravity tail via carbon-in-pulp (CIP)         • Electrowinnin
		<ul> <li>economically viable mine plan.</li> <li>No deleterious elements are expected based on the results of the metallurgical test work to date.</li> </ul>
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	<ul> <li>The Project site is located on vacant crown land which has historically been used for cattle grazing, as remains evident through local damage.</li> <li>Detailed Fauna surveys and assessments have been carried out on both the Mandilla and Feysville deposits, by Terrestrial Ecosystems, a qualified third-party consultancy.</li> <li>Detailed Flora surveys and assessments have been carried out on both the Mandilla and Feysville deposits, by Native Vegetation Solutions, a qualified third-party consultancy.</li> <li>The outcomes of the risk assessments carried out during the flora and fauna studies indicate that the level of environmental risk associated with development of the project is low.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.	<ul> <li>Sufficient land space is available at the project, with mining and exploration tenure held by Astral at the Mandilla and Feysville deposits.</li> <li>The project site lies adjacent to the sealed Coolgardie-Esperance highway and is approximately 25km from the town of Kambalda.</li> <li>Availability of a suitably experienced and qualified labour force is expected, utilising a predominately Fly-In, Fly-Out workforce.</li> <li>Power and water studies have been completed to a suitable level of detail and demonstrate that availability of these utilities is not expected to present an issue.</li> </ul>
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul> <li>Capital costs for major items including the processing facility, access road construction, administration and mining offices, heavy vehicle workshops, utilities and other ancillary items have been estimated to a Pre-Feasibility Study level of accuracy and include a 10% contingency of cost.</li> <li>Owners costs including items such as first fills and commissioning spares have been estimated to a Pre-Feasibility Study level of accuracy and include a 10% contingency of cost.</li> <li>Operating costs for mining have been estimated through a tender process completed by several mining contractor companies. The contractors invited to participate in the tender process are experienced with the style of mining method and jurisdiction of the Project. The cost estimates received from the tender process and used in the Pre-Feasibility Study are considered reasonable and are aligned with costs at comparable projects.</li> <li>Operating costs for processing (including general and administrative charges, labour, consumables and power) have been estimated to a Pre-Feasibility Study level of accuracy and form part of the processing facility study completed by Como Engineers Pty Ltd.</li> </ul>
Revenue factors	<ul> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul> <li>The head grade of gold delivered to the process facility is based on detailed production scheduling completed as part of the Pre-Feasibility Study.</li> <li>Transportation, treatment and refining charges associated with the sale of gold has been included in the mine planning and financial modelling for the Project.</li> <li>Assumptions were made by Astral for metal pricing for gold and exchange rate, at AUD\$3000/oz and 0.65 USD:AUD respectively. These assumptions are based on current and recent market behaviour of those inputs. These revenue factor assumptions are comparable to those used by industry peers.</li> <li>A royalty rate of 2.8% inclusive of a third party royalty has been included in the calculation of net revenue.</li> </ul>
Market assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul> <li>There is a transparent and well-established market for the sale of gold.</li> <li>In the opinion of the Competent Person, price assumptions used for gold in the study are reasonable.</li> </ul>



Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Economic	<ul> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul> <li>Inputs from the open pit mining, processing, sustaining capital and contingencies have been scheduled and costed to generate the cost estimate.</li> <li>Capital expenditure to develop the project has been included in the economic analysis.</li> <li>A discount rate of 8% was used in the economic analysis.</li> <li>Cost inputs have been estimated from quotations and/or by competent specialists.</li> <li>The Ore Reserve returns a positive NPV based on the assumed commodity price of A\$3,000/oz and the Competent Person is satisfied that the project economics that underpin Ore Reserve retain an acceptable profit margin under reasonable future commodity price movements.</li> <li>Sensitivity analysis has indicated that the project is sensitive to movements in gold price, operating costs and metallurgical recoveries. Project NPV remains favourable for sensitivity tests within reasonable ranges.</li> </ul>
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>While mining tenements M15/96 and M15/633 both fall within the Marlinyu Ghoorlie Claim area, both tenements predate native title legislation and therefore are not subject to Native title Legislation.</li> <li>It is noted that Astral is currently working with the Marlinyu Ghoorlie claimants in respect of heritage approvals as well as Native Title approvals in respect of the Company's Feysville Gold Project.</li> <li>Archaeological surveys of the area were conducted in 2006 as part of preparation for previous operations. The surveys identified one site of significance situated on the eastern boundary of M15/633 known as Emu Rock. The survey proposes an interim management method of the application of a 100-metre buffer from the site.</li> <li>Astral expects to work with the Marlinyu Ghoorlie to make appropriate arrangements with respect to the Project.</li> <li>The proposed development focuses on extraction of Mineral Resources located within the Mandilla tenements which is comprised of two granted mining lease (M15/96 and M15/633) and exploration licence E15/1404, which Astral intends to convert to a mining lease during the next twelve months. Additionally, the PFS assumes ore will be extracted from Feysville tenements comprising P26/4353 (Kamperman), P26/3949, P26/3950 and P26/3943 (Rogan Josh) and P26/3951 (Think Big). Astral has applied for mining lease M26/846 which covers the Rogan Josh and Think Big Deposits, with the grant of the mining lease subject to execution of a Native Title Agreement. The Company intends to extend the mining licence to incorporate the Kamperman deposit. The proposed site infrastructure layout is planned to utilise mining leases M15/97, M15/1101, M15/1263, M15/1264 and M15/395 from the Spargoville tenure.</li> <li>Approvals required to achieve the outcomes of the Pre-Feasibility Study include:         <ul> <li>Mining Proposal</li> <li>Mine Closure Plan</li> <li>Native Vegetation Clearing Permit</li> <li></li></ul></li></ul>



Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre- Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul> <li>No material naturally occurring risks have been identified to prevent the classification of the Ore Reserves.</li> <li>The project lies within a prolific gold mining region which is supported by a stable regulatory and governmental framework.</li> <li>It is anticipated that all outstanding regulatory approvals will be given within the required project development timeframe.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul> <li>The main basis of classification of Ore Reserves is the underlying Mineral Resource classification. All Probable Ore Reserves derive from Indicated Mineral Resources. There are no Measured Mineral Resources within the deposits, therefore no Proved Reserves have been reported.</li> <li>The results of the Ore Reserve estimate reflect the Competent Person's view of the deposit.</li> <li>No Inferred Mineral Resources are included in the Ore Reserves.</li> </ul>
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• The Ore Reserve was prepared by Astral's internal technical personnel and was subsequently reviewed and verified by an independent third-party.



Criteria	JORC Code explanation	Commentary (Mandilla & Feysville)
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The Ore Reserves have been estimated based on a Pre-Feasibility Study completed in June 2025.</li> <li>It is reasonable to assume that with the passage of time, assumptions made in the Study would become less appropriate or accurate. The Competent Person is satisfied that the study is current at the time of reporting the Ore Reserve and represents reasonable outcomes to a satisfactory level of accuracy.</li> <li>Gold price and exchange rate assumptions were selected by Astral and in the view of the Competent Person are reason</li> <li>able. These assumptions are subject to market forces and present a potential area of uncertainty.</li> </ul>





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