

# **GROUP PRODUCTION TARGET STATEMENT**

Aurelia Metals Limited (ASX:AMI) (**Aurelia** or the **Company** or the **Group**) is pleased to report updated Production Targets for its Peak, Federation and Dargues Mines.

Group Production Target is presented in Table 1. Mine Production Targets are summarised in Table 2 to Table 4.

# Group

- Approximately 87% of Group Production Target tonnage is comprised of high-tenor Peak Cu and Federation Zn-Pb deposits, which are the cornerstones of the future Aurelia production profile.
- Group Production Target NSR increases to A\$270/t (from A\$260/t at 30 June 2022).
- An underlying increase of 5% in the Group Production Target after adjustment for removal of the Hera Mine bringing the Group Production Target tonnage to 9.1Mt.
- Hera Mine was removed from the Production Target (represented 640kt as at 30 June 2022) as the mining operation has ceased and the surface facilities were placed into planned care and maintenance during H1 CY23.

#### Table 1. Group Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Cu (%)	Au (g/t)	Zn (%)	Pb (%)	Ag (g/t)
Measured portion	960	280	0.7	3.6	1.6	1.4	9
Indicated portion	6,000	280	1.0	1.3	4.8	2.9	7
Inferred portion	2,100	240	1.3	0.6	3.8	2.2	6
Production Target	9,100	270	1.1	1.4	4.2	2.6	7

Note: Net Smelter Return (NSR) is an estimate of the net recoverable value per tonne including offsite costs, payables, royalties and metal recoveries. Values are reported to two significant figures which may result in rounding discrepancies in the totals.

# Peak Mine

- Production Target tonnage increased by 15% to 4.7Mt; successful near-mine exploration drilling at Chesney and improved price assumptions more than offset mining depletion through the year.
- Peak transitioning to a copper-dominant mining operation with copper ore now 83% of Production Target tonnage; strong potential for further growth with planned future underground drilling at Great Cobar.

For more information, contact us at:

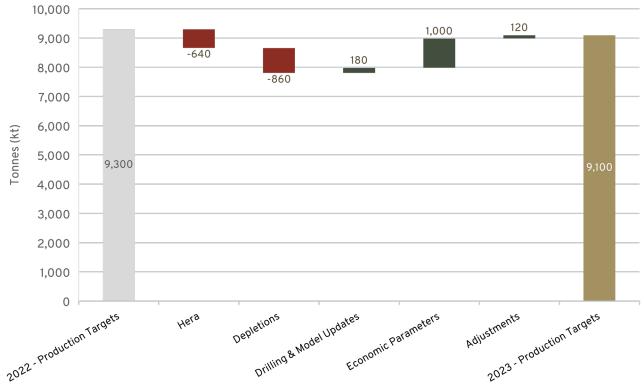
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# **Federation Mine**

- Production Target tonnage unchanged at 4.0Mt; first mine stope production expected Q3 CY24.
- Excellent potential for further growth in Production Target with planned future underground drilling.

### Dargues Mine

- Production Target depletion in-line with mine plan.
- Remaining 370kt (comprised of 98% M&I MRE classification) delivers residual expected mine life of 12-15 months.



**Figure 1**. Change in Aurelia Group Production Target tonnage relative to 30 June 2022. *Note: Values are reported to two significant figures which results in rounding discrepancies in the totals.* 

A Production Target is a projected estimate of potentially mineable mineralised material based on the application of mining modifying factors. The process and assumptions used to establish the Production Targets for Aurelia's mining operations and development projects are those used to prepare the Group's Ore Reserve Estimate reported as at 30 June 2023. Production Targets are derived from Measured, Indicated and Inferred Mineral Resource classifications whereas the Group's Ore Reserve Estimate excludes material from the Inferred Mineral Resource classification. The Company has been guided by ASX Listing Rules Chapter 5 (5.16 to 5.19) for the preparation of Production Targets.

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The Company highlights the following cautionary statement in relation to confidence in the estimation of Production Targets that incorporate Mineral Resources from the Inferred classification:

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 stated Production Targets are based on the Company's current expectations of future results and events and should not be solely relied upon by investors when making investment decisions.

The Group Production Target is derived from 34% of the Group's Mineral Resource Estimate tonnage reported at 30 June 2023. Tonnage from the Inferred Mineral Resource classification makes up 23% of the Group Production Target. The Group's Ore Reserve Estimate, reported at 30 June 2023, represents 60% of the Production Target tonnage.

The Production Target tonnage reported for the Peak Mine (Table 2) has increased to 4.7Mt which is a 15% increase relative to the 30 June 2022 estimate. The increase is attributable to a successful near mine exploration drilling program at Chesney, and improved price assumptions. The increase is partially offset by mining depletion.

 Table 2. Peak Mine Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Cu (%)	Au (g/t)	Zn (%)	Pb (%)	Ag (g/t)
Measured portion	670	310	0.9	3.5	2.3	1.9	12
Indicated portion	2,900	240	1.8	1.5	1.1	0.9	8
Inferred portion	1,200	210	2.2	0.9	0.2	0.1	7
Production Target	4,700	250	1.8	1.6	1.0	0.9	8

Note: The Peak Mine Au-Cu Production Target utilises A\$80/t NSR cut-off for development and A\$175-220/t NSR for stoping depending on the mine area. The Peak Mine Pb-Zn Production Target utilises A\$80/t NSR cut-off for development and A\$185-190/t NSR for stoping. Values are reported to two significant figures which may result in rounding discrepancies in the totals.

The Production Target tonnage of 370kt for the Dargues Mine (Table 3) has decreased by 42% relative to the 30 June 2022 estimate. This decrease is due to mining depletion and revised geological interpretation using the results from infill drilling, partially offset by additional mineable tonnage arising from updated economic parameters.

#### Table 3. Dargues Mine Production Target at 30 June 2023.

Category	Tonnes (kt)	NSR (\$A/t)	Au (g/t)
Measured portion	290	210	3.8
Indicated portion	66	130	2.3
Inferred portion	11	170	3.3
Production Target	370	190	3.5

Note: The Dargues Mine Production Target utilises A\$80/t NSR cut-off for development and A\$120/t NSR cut-off for stoping. Values are reported to two significant figures which may result in rounding discrepancies in the totals

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The Production Target tonnage of 4.0Mt for the proposed Federation Mine (Table 4) is supported by findings from the Feasibility Study and associated updates, progress with regulatory approvals for mining, and commencement of the exploration decline.

**Table 4.** Federation Mine Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Zn (%)	Pb (%)	Cu (%)	Au (g/t)	Ag (g/t)
Measured portion	0	0	0	0	0	0	0
Indicated portion	3,100	320	8.4	4.9	0.3	1.1	6
Inferred portion	910	260	8.5	5.0	0.2	0.2	5
Production Target	4,000	310	8.4	4.9	0.3	0.9	5

Note: The Federation Production Target utilises A\$80/t NSR cut-off for development and A\$140/t NSR for stoping. Values have been rounded to two significant figures which may result in rounding discrepancies in the totals.

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# This announcement has been approved for release by the Board of Directors of Aurelia Metals.

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#### **About Aurelia**

Aurelia Metals Limited (ASX: AMI) is an Australian mining and exploration company with a highly strategic landholding, and two operating mines in New South Wales (NSW). The Peak Mine is in the Cobar Basin in Western NSW, and the Dargues Mine is in south-eastern NSW. The Hera mining operation, also located in the Cobar Basin, has ceased and the surface facilities have been placed into care and maintenance. In addition, Aurelia has two consented high grade development projects. The polymetallic Federation Project is currently under construction with development ore expected in 2024. The development of the Great Cobar copper deposit will follow.

In FY23, Aurelia produced 86 thousand ounces of gold at a Group all-in sustaining cost (AISC) of A\$2,315 per ounce. The Peak cost base benefits from substantial by-product revenue credits from base metal production (including copper, zinc and lead).

#### **IMPORTANT INFORMATION**

This report includes forward looking statements. Often, but not always, forward looking statements can be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", "outlook" and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of the Company, anticipated production or activity commencement dates and expected costs or production outputs. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs of production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits, and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory environment, environmental conditions including extreme weather conditions, recruitment and retention of key personnel, industrial relations issues and litigation. Forward looking statements are based on the Company and management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control. Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law, including any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward looking statements .or to advise of any change in events, conditions or circumstances on which any such statement is based.

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# PREPARATION AND REPORTING OF PRODUCTION TARGETS

A Production Target is a projected estimate of potentially mineable mineralised material based on the application of mining modifying factors. The process and assumptions used to establish the Production Targets for Aurelia's mining operations and development projects are those used to prepare the Group's Ore Reserve Estimate reported as at 30 June 2023.

Production Targets are derived from Measured, Indicated and Inferred Mineral Resource classifications whereas the Group's Ore Reserve Estimate excludes material from the Inferred Mineral Resource classification. The Company has been guided by ASX Listing Rules Chapter 5 (5.16 to 5.19) for the preparation of Production Targets.

The Company highlights the following cautionary statement in relation to confidence in the estimation of Production Targets that incorporate Mineral Resources from the Inferred classification:

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 stated Production Targets are based on the Company's current expectations of future results and events and should not be solely relied upon by investors when making investment decisions.

The Company's Production Targets are prepared from the Mineral Resource Estimate prepared for each mine and reported as at 30 June 2023. The Ore Reserve Estimate for each mine as at 30 June 2023 is wholly included in, and forms a portion of, the Production Target.

The estimated Mineral Resource and Ore Reserve Estimates that underpin the Production Targets have been prepared by Competent Persons in accordance with ASX Listing Rules Appendix 5A (JORC Code). The Inferred portion of the Production Targets is not the determining factor in each mine's viability and does not feature as a significant proportion early in the mine plan.

Material assumptions used to prepare the Ore Reserve Estimate as at 30 June 2023 were also adopted for preparation of the Production Targets. These are described in the 2023 "Group Mineral Resource and Ore Reserve Statement" and Appendix of this statement.

Material from the Measured, Indicated and Inferred classifications of the Mineral Resource Estimate have been assessed for inclusion in the Production Target. Mining shapes that have more than 80% of tonnage from the Measured, Indicated and/or Inferred classifications have been reported in the Production Target. The selected shapes were interrogated against the Mineral Resource block model with the resulting confidence classifications shown in the Production Target tables.

The Production Target is reported from mining shapes that include dilution that has been allocated a confidence classification in the Mineral Resource block model. Dilution is reported in the Production Target under the confidence classification assigned from the Mineral Resource block model. Diluting material may be below the Mineral Resource cut-off value and therefore not reported in the Mineral Resource Estimate.

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Mining shapes that inform the Production Target may include some unclassified material. The metal value associated with unclassified material was removed so that the unclassified material tonnage remains in the Production Target as zero grade dilution. Dilution from unclassified material is prorated into the Production Target's Measured, Indicated and Inferred categories based on tonnage.

Prior Production Targets are described in the "2022 Group Production Target Statement" released to the ASX on 10 October 2022.

# PEAK MINE PRODUCTION TARGETS

The Peak Mine (North Mine and South Mine) extracts and treats gold bearing copper and zinc-lead sulphide mineralisation. These two dominant mineralisation types are batched and processed separately to maximise metallurgical recovery and metal payability in concentrate products. Separate Production Targets are therefore reported for the Peak Mine to represent the relative contribution of each sulphide feed type (Table 5 to Table 7).

 Table 5. Peak North Mine copper Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Cu (%)	Au (g/t)	Zn (%)	Pb (%)	Ag (g/t)
Measured portion	220	260	1.8	2.2	0.0	0.0	6
Indicated portion	2,200	230	2.2	1.2	0.0	0.0	5
Inferred portion	1,100	220	2.3	0.8	0.1	0.0	7
Production Target	3,600	230	2.2	1.1	0.0	0.0	6

Note: The Peak North Mine copper Production Target utilises A\$80/t NSR cut-off for development and A\$175-180/t NSR for stoping depending on the mine area. Values have been rounded to two significant figures which may result in rounding discrepancies in the totals.

 Table 6. Peak South Mine gold-copper Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Au (g/t)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)
Measured portion	150	320	4.9	0.5	0.2	0.1	4
Indicated portion	180	260	3.9	0.6	0.1	0.2	4
Inferred portion	24	140	2.0	0.4	0.1	0.1	3
Production Target	360	280	4.2	0.5	0.1	0.1	4

Note: The Peak South Mine gold-copper Production Target utilises A\$80/t NSR cut-off for development and A\$185-220/t NSR for stoping depending on the mine area. Values have been rounded to two significant figures which may result in rounding discrepancies in the totals.

#### Table 7. Peak South Mine zinc-lead Production Target as at 30 June 2023.

Category	Tonnes (kt)	NSR (A\$/t)	Zn (%)	Pb (%)	Cu (%)	Au (g/t)	Ag (g/t)
Measured portion	300	350	5.1	4.3	0.5	3.7	21
Indicated portion	460	280	6.4	5.3	0.4	2.0	22
Inferred portion	39	230	4.0	2.5	0.1	2.5	13
Production Target	800	300	5.8	4.8	0.4	2.7	21

Note: The Peak Mine zinc-lead Production Target utilises A\$80/t NSR cut-off for development and A\$185-A\$190/t NSR for stoping depending on the mine area. Values have been rounded to two significant figures which may result in rounding discrepancies in the totals.

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The following cautionary statement applies to the Production Target at the Peak Mine:

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 aggregated Production Target of 4,700kt for Peak Mine (Table 2) was prepared from the 2023 Mineral Resource Estimate of 19,000kt. The Production Target represents 25% of the tonnage reported in the Mineral Resource. The Ore Reserve proportion of the Production Target is 57%. The Inferred proportion of the Production Target is 26%. A positive economic evaluation of the Production Target is not dependent on the Inferred category material.

The tonnage reported in the Peak Mine Production Target increased relative to the prior (30 June 2022) estimate, as illustrated in Figure 2. Positive adjustments due to a successful near mine exploration drilling program at Chesney and improved price assumptions outweighed negative adjustments due to mining depletion.

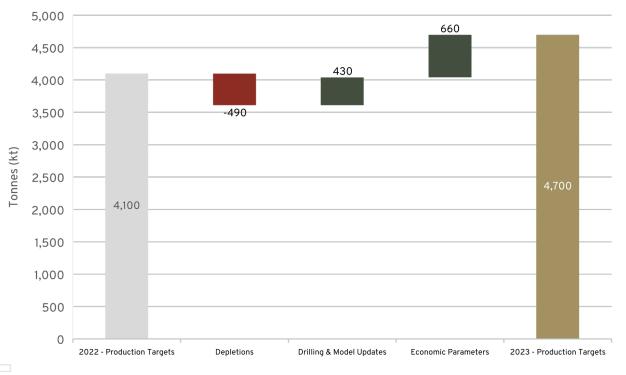


Figure 2. Change in Peak Mine Production Target tonnage relative to 30 June 2022.

Long sections of the mining shapes reported in the Production Target are presented in Figure 3 and Figure 4.

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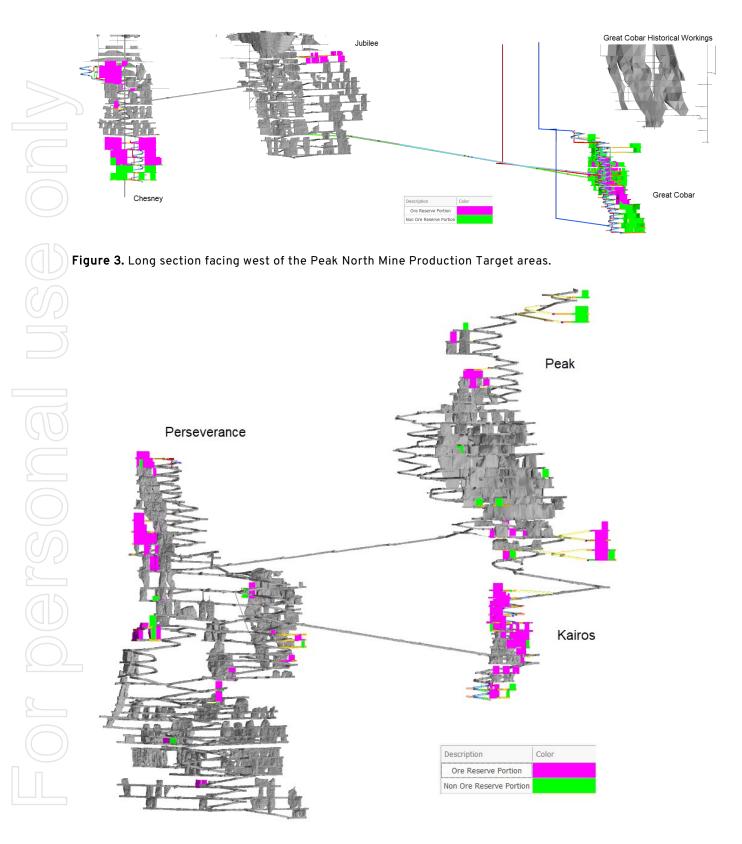


Figure 4. Long section facing west of the Peak South Mine Production Target areas.

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# DARGUES MINE PRODUCTION TARGETS

A Production Target of 370kt for the Dargues Mine (Table 8) has been prepared from the 2023 Mineral Resource Estimate of 850kt. 44% of the Mineral Resource tonnage is reported in the Production Target. The Ore Reserve proportion of the Production Target is 97%.

 Table 8. Dargues Mine Production Target at 30 June 2023.

Category	Tonnes (kt)	NSR (\$A/t)	Au (g/t)	Au (koz)
Measured portion	290	210	3.8	35
Indicated portion	66	130	2.3	5
Inferred portion	11	170	3.3	1
Production Target	370	190	3.5	41

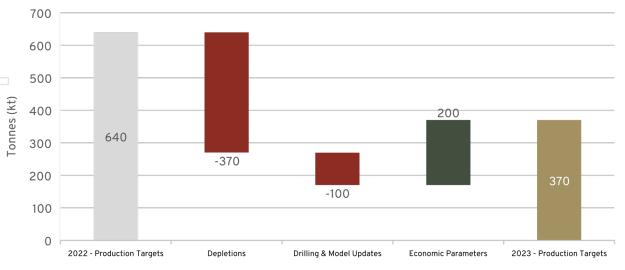
Note: The Dargues Mine Production Target utilises A\$80/t NSR cut-off for development and A\$120/t NSR cut-off for stoping. Values are reported to two significant figures which may result in rounding discrepancies in the totals.

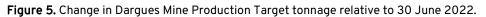
The following cautionary statement applies to the Production Target at the Dargues Mine:

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.

Notably, 360kt of the Production Target, having a gold grade of 3.5g/t, is reported from the Measured and Indicated portions of the Mineral Resource Estimate, equating to 97% of the contained gold. The Inferred proportion of the Production Target is 3% by tonnage and contained gold. A positive economic evaluation of the Production Target is not dependent on the Inferred category material.

The tonnage reported in the Production Target has decreased by 270kt (42%) relative to the prior 30 June 2022 estimate, as illustrated in Figure 5. Mining depletion accounted for 370kt of the reduction in the Production Tonnage. Resource drilling, geological interpretation and modelling have reduced the Production Target tonnage by a further 100kt. The adjustment of economic factors, including price assumptions and NSR cut-off value changes, yielded a 200kt increase.





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#### A long section of the mining shapes reported in the Production Target is presented in Figure 6.

Figure 6. Long section facing north of the Dargues Mine Production Target areas.

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# FEDERATION MINE PRODUCTION TARGET

A Production Target of 4,000kt for the proposed Federation Mine (Table 9) has been prepared from the 2023 Mineral Resource Estimate of 4,800kt. 83% of the Mineral Resource tonnage is reported in the Production Target. The Ore Reserve proportion of the Production Target is 60%. The Inferred proportion of the Production Target is 23% by tonnage. A positive economic evaluation of the Production Target is not dependent on the Inferred category material.

 Table 9. Federation Mine Production Target as at 30 June 2023.

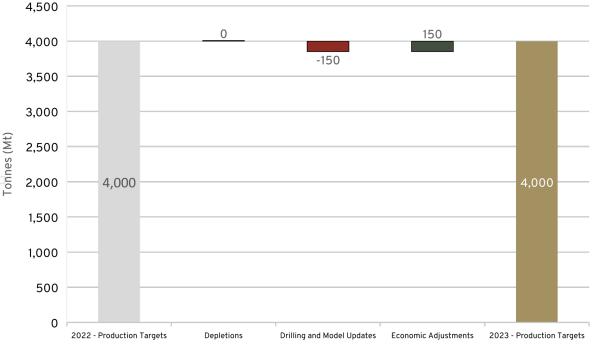
Category	Tonnes (kt)	NSR (A\$/t)	Zn (%)	Pb (%)	Cu (%)	Au (g/t)	Ag (g/t)
Measured portion	0	0	0	0	0	0	0
Indicated portion	3,100	320	8.4	4.9	0.3	1.1	6
Inferred portion	910	260	8.5	5.0	0.2	0.2	5
Production Target	4,000	310	8.4	4.9	0.3	0.9	5

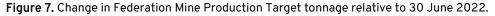
Note: The Federation Production Target utilises A\$80/t NSR cut-off for development and A\$140/t NSR for stoping. Values have been rounded to two significant figures which may result in rounding discrepancies in the totals.

The following cautionary statement applies to the Production Target at the Federation Mine:

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 tonnage reported in the Production Target has been maintained relative to the prior 30 June 2022 estimate, as illustrated in Figure 7. Resource drilling, geological interpretation and modelling have reduced the Production Target tonnage by 150kt. The adjustment of economic factors, including price assumptions, yielded a 150kt increase.





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A long section of the mining shapes reported in the Production Target is presented in Figure 8.

Figure 8. Long section facing north of the Federation Mine Production Target areas.

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# **APPENDIX – MATERIAL ASSUMPTIONS**

# PEAK MINE

# Mineral Resource Estimate for Conversion to Production Target

The Peak Mine Production Target is prepared from the Mineral Resource Estimate reported at 30 June 2023. The Mineral Resource Estimate is inclusive of the Production Target.

# **Operational Status**

The Peak Mine is an operating mine. It has a current Life of Mine plan and annual budget that has considered material matters relating to the ongoing operation of the Peak Mine.

# **Cut-off Parameters**

A NSR cut-off of A\$80/t was applied for development material. The stoping cut-off varies by deposit to reflect the relative complexity of the different mining areas. The economic viability of the NSR cutoff values has been demonstrated through cashflow modelling completed for the Peak Life of Mine plan and budget.

 Table 10. NSR cut-off values used for the Peak Mine Production Target.

Mineralisation Type	Deposit	NSR Cut-off (A\$/t)
Zinc-lead	Chronos	190
Zincheau	All others	185
	Great Cobar	175
Coppor	Jubilee, Chesney	180
Copper	Perseverance Deeps	220
	All others	185

These are marginal cut-off values assessed during the Life of Mine Planning process. Cut-off values consider the full cost of development, stoping, haulage and processing. Costs beyond the mine gate including concentrate haulage, port facilities, shipping, treatment charges, penalties and royalties are netted from revenues of gold and concentrates and form the NSR estimates.

# **Mining Factors or Assumptions**

The Life of Mine plan and annual budget include material from the Inferred Mineral Resource classification that is also included in the Production Target. The inclusion of the Inferred material is not material to the viability of the operation.

The Peak Mine uses a combination of uphole and downhole stoping with rockfill, progressing in a bottom up sequence. This mining method and Peak's mine development design were used for the Production Target.

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Stope shapes are a combination of current mine design shapes and stope shapes created using SO software. The mine design shapes are used in preference, and updated using the SO shapes if changes to the geology model caused material changes to the stope shapes.

Settings used in the SO included 0.5m hangingwall and footwall dilution with a minimum mining width of 3m. Stope strike lengths and heights vary across the operation and have been aligned with current mine designs.

Additional mining dilution and recovery factors have been applied. Development has 15% mining dilution applied and 100% recovery. Downhole stoping has 5% mining dilution applied with 95% recovery. Uphole stoping has 2% mining dilution applied with 75% recovery. Sill pillar mining has 2% mining dilution applied with 60% recovery.

Stope shapes that are current mine design shapes have recovery and dilution parameters applied by deposit as shown in Table 11.

Deposits	Recovery (%)	Dilution (%)
Chesney, Great Cobar, Peak	90	10
Chronos, Hinge, Hulk	90	14
Kairos	92	18
Perseverance	92	16
Jubilee	92	14
S400	92	12

Table 11. Mining Factors by deposit.

The mining methods selected are consistent with those currently used at the operation. As such the infrastructure requirements are largely in place, and well understood. These include orebody access, ventilation, pumping, power, water, communications and secondary means of egress.

The Great Cobar PFS documented the additional infrastructure required for the extraction of Great Cobar, inclusive of a twin decline access, a return air rise, an underground primary fan installation and dewatering of the Great Cobar historic workings (refer to the announcement "Great Cobar PFS outcomes & Peak Ore Reserve increase" released on 27 January 2022 which is available to view on www.aureliametals.com.au and www.asx.com.au).

# **Metallurgical Factors or Assumptions**

Ore is to be processed through the Peak Gold processing facility at a nominal throughput rate of 800ktpa. The processing facility incorporates a gravity gold recovery circuit, a two-stage flotation circuit and a CIL circuit to produce a gold-silver doré and separate copper, zinc and lead concentrate.

Gold (and silver) is recovered in a gravity circuit via Knelson concentrators. The gravity concentrate is leached in an In-line Leach Reactor with the precious metals recovered from solution by electrowinning and smelting to produce gold-silver doré bars.

When treating copper ore any floatable gold and silver not recovered in the gravity circuit is recovered with copper to a copper concentrate utilising a single stage flotation circuit.

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When treating zinc and lead ore any floatable gold and silver not recovered in the gravity circuit is recovered with lead to a lead concentrate and with zinc to a zinc concentrate as part of a two-stage floation circuit.

Flotation tailings are processed in a conventional CIL circuit to leach any remaining cyanide leachable gold and silver. Gold and silver in solution is recovered via carbon adsorption with the loaded carbon then recovered, stripped and the high grade gold/silver solution subjected to electrowinning and smelted to produce gold doré bars.

The main deleterious elements present at the Peak Mine deposits are Silica (SiO2), Iron (Fe), Sulphur (S) and Bismuth (Bi). Iron is present in varying proportions of pyrite and pyrrhotite in the sulphides treated and are both diluents in all of the concentrates. Bismuth is a penalty in copper concentrate when high levels are present in the ore deposits.

Metallurgical recovery assumptions are based on current site operating ranges and are shown in Table 12.

 Table 12. Peak Mine metal recovery and concentrate grade parameters.

Parameter	
Au Recovery - Gravity	30-43%
Au Recovery - Total	80-95%
Ag Recovery - Total	60-80%
Pb Recovery	60-88%
Zn Recovery	60-68%
Cu Recovery	75-95%
Cu Grade - Concentrate	23-25%
Pb Grade - Concentrate	20-55%
Zn Grade - Concentrate	45-52%

# Environmental

Peak Gold Mines Pty Ltd (**Peak**) (a subsidiary of Aurelia Metals Limited) owns and operates the Peak Mine. There are several development consents and mining leases that govern the operation of the Peak Mine. The development consents are supported by environmental assessments that identify the potential impacts of mining and processing operations. The environmental assessments have been shared with regulatory authorities and the community and mitigating actions developed and implemented in consultation with these stakeholders.

Waste rock generated at the Peak Mine is stored and managed in waste rock emplacements onsite. In addition, there are legacy waste rock emplacements and process residue storages. The facilities contain potentially acid forming and non-acid forming residues and/or waste rock. The facilities are designed to mitigate these impacts. The facilities are approved via various development consents and other regulatory approvals.

Peak has numerous environmental monitoring requirements including air quality, greenhouse gas emissions, groundwater, surface water, noise, blasting, meteorological and biodiversity. A range of techniques including real-time monitoring are utilised in assessing potential impact.

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## Infrastructure

As an operating mine, most of the surface infrastructure required for the extraction of the Ore Reserve is in place. Including:

• Emergency facilities

Peak boxcut ar	nd portal
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- ROM Pad
- portal
- Shaft and headframe
- Processing Facility Process water dams
- Primary vent fan installations
- Concentrate Storage Facility

- Maintenance Facility
- Store
- All weather access roads
- Office facilities
- Waste rock dumps •

The Tailings Storage Facility (TSF) has recently completed the Stage 5 raise. This gives the TSF 6 years of capacity, sufficient for the processing of the Ore Reserve. Life of Asset planning has been completed to 2035, with Stage 6 and Stage 7 at concept design stage.

The Great Cobar PFS documented the additional infrastructure required for the extraction of Great Cobar, inclusive of a twin decline access, a return air rise, an underground primary fan installation and dewatering of the Great Cobar historic workings (refer to the announcement "Great Cobar PFS outcomes & Peak Ore Reserve increase" released on 27 January 2022 which is available to view on www.aureliametals.com.au and www.asx.com.au).

Ongoing sustaining capital and infrastructure underground including declines, level accesses, escapeways, vent accesses and rises are required for the full extraction of the Ore Reserve Estimate. These works have been included in the Life-of-Mine Plan and Budget processes.

## Costs

Capital and operating costs have been estimated based on historical actual costs, and forecast costs, as part of the Life of Mine and Budgeting process. Contracts are in place that allow reliable estimates of transport costs, treatment costs and refining costs, including penalties that may be applicable.

The Great Cobar PFS used cost estimates supplied by contractors, consultants, equipment manufacturers and suppliers to a ±25% accuracy.

No allowance has been made for deleterious elements. All deleterious elements are expected to remain within tolerances and no penalties have been applied to cash flow estimations.

Allowances have been made for NSW State Government Royalty payable at 4% on the assessable value of metals.

# **Revenue Factors**

The metal price and exchange rate assumptions used in the preparation of the Production Target (Table 13) have been benchmarked against industry peers and based on consensus forecasts.

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Metal	Unit	US\$ 2023
Gold	Oz	1,600
Silver	οz	21.5
Copper	t	7,937
Lead	t	1,984
Zinc	t	2,646
AUD/USD		0.73

#### Table 13. Peak Mine metal price and exchange rate assumptions.

## **Market Assessment**

The Peak Mine has in place all necessary logistics arrangements for the transportation of concentrate to customers. From 1 January 2024, a long-term offtake agreement with Trafigura Pty Ltd is in place for zinc, lead and copper concentrates.

Gold and silver doré products produced on site are transported to a refinery under a refining agreement and the refined metals are either delivered into hedge book commitments and contracts or sold directly into the spot gold market.

### **Economic**

Peak is an operating mine. The Life of Mine Plan and budgeting process includes the completion of cash flow models. Inputs to these models are based on a combination of historical actual costs and forecast future costs. The cash flow models demonstrate a positive Net Present Value.

# **DARGUES MINE**

# Mineral Resource Estimate for Conversion to Production Target

The Dargues Mine Production Target is prepared from the Mineral Resource Estimate reported at 30 June 2023. The Mineral Resource Estimate is inclusive of the Production Target.

# **Operational Status**

The Dargues Mine is an operating mine. It has a current Life of Mine plan and annual budget that has considered material matters relating to the ongoing operation of the Dargues Mine.

# **Cut-off Parameters**

A NSR cut-off of A\$120/t was applied for material to be extracted by stoping methods and A\$80/t for development. The economic viability of the cut-off value has been demonstrated through cashflow modelling completed for the Dargues Life of Mine plan and budget.

These are marginal cut-off values assessed during the Life of Mine planning and budget process. Cutoff values consider full operating costs which include development, stoping, haulage, processing and

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administration. Costs beyond the mine gate including concentrate haulage, port facilities, shipping, treatment charges, penalties and royalties are netted from revenues of gold and concentrates and form the NSR estimates.

# Mining Factors or Assumptions

The Life of Mine plan and annual budget include material from the Inferred Mineral Resource classification that is also included in the Production Target. The inclusion of the Inferred material is not material to the viability of the operation.

Dargues uses a combination of uphole and downhole stoping with hydraulic fill, progressing bottom up. This mining method and Dargue's mine development design was used for the Production Target.

Detailed stope design has been completed for the Life of Mine Plan, and these shapes have been used as a preference. Mining dilution and recovery estimates for the various stoping types are applied. These include remnant stoping (30% mining dilution, 70% recovery), longitudinal stoping (20% mining dilution, 95% recovery), transverse stoping (10% mining dilution, 95% recovery) and narrow stoping (25% mining dilution, 95% recovery).

In addition, the geology model has been assessed by creating stope shapes using Deswik's SO software. Parameters used include 0.5m hangingwall and footwall dilution allowances, with stope strike length of 20m and a minimum mining width of 2m. These shapes are used where new drilling and modelling updates haven't been captured by the Life of Mine planning process. Mining dilution and recovery factors applied to these shapes includes downhole stopes (2% mining dilution with 95% recovery), uphole stopes (2% mining dilution with 90% recovery), and sill pillar mining (10% mining dilution with 85% recovery).

Development has 15% mining dilution applied with 100% recovery.

The mining methods selected are consistent with those currently used at the operation. As such the infrastructure requirements are largely in place, and well understood. These include orebody access, ventilation, pumping, power, water, communications and secondary means of egress.

# **Metallurgical Factors or Assumptions**

Ore is processed through the Dargues processing facility at a nominal throughput rate of 415ktpa. The processing facility incorporates a single stage flotation circuit producing a gold-rich pyrite concentrate. The concentrate is filtered and transported off-site where further gold extraction occurs (by others).

All deleterious elements are expected to remain within tolerances.

Metallurgical recovery assumptions are based on current site operating ranges and are shown in Table 14.

Table 14. Dargues Mine metal recovery assumptions

Metal	Recovery
Gold	90-98%

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# **Environmental**

Big Island Mining Pty Ltd (BIM) (a subsidiary of Aurelia Metals Limited) owns and operates the Dargues Mine. A development consent and mining lease govern the operation of the Dargues Mine. The development consent is supported by environmental assessments that identify the potential impacts of mining and processing operations. The environmental assessments have been shared with regulatory authorities and the community and mitigating actions developed and implemented in consultation with these stakeholders.

The Dargues Mine has active waste rock emplacements and process residue storages. The facilities contain potentially acid forming and/or non-acid forming residues and/or waste rock. The facilities are designed to mitigate these impacts. The facilities are approved via development consent and other regulatory approvals.

Dargues Mine has numerous environmental monitoring requirements including air quality, greenhouse gas emissions, groundwater, surface water, noise, blasting, meteorological and biodiversity. A range of techniques including real-time monitoring are utilised in assessing potential impact.

# Infrastructure

All surface infrastructure required for the full extraction of the Production Target is in place. Ongoing sustaining capital and infrastructure required for the full extraction of the Production Target have been included in the Life of Mine Plan and budget processes.

### Costs

Capital and operating costs have been estimated based on historical actual costs, and forecast costs, as part of the Life of Mine Plan and budgeting process. Contracts are in place that allow for reliable estimates of transport costs, treatment costs and refining costs, including penalties that may be applicable.

No allowance has been made for deleterious elements. All deleterious elements are expected to remain within tolerances and no penalties have been applied to cash flow estimations.

Allowance has been made for NSW State Government royalty payable at 4% on the assessable gold revenue. In addition, allowance has been made for a perpetual third party royalty payable to Triple Flag Precious Metals Group. The Triple Flag royalty is paid at a rate of 5.5% of gross gold revenue until cumulative production reaches 170koz; it then increases to 9.9% until 305koz; and thereafter reduces to 5.0%.

# **Revenue Factors**

The metal price and exchange rate assumptions used in the preparation of the Production Target (Table 15) have been benchmarked against industry peers and based on consensus forecasts.

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#### Table 15. Dargues Mine metal price and exchange rate assumptions

Metal	Unit	Value	
Gold	οz	1,800	
AUD/USD		0.70	
	ΟZ		

## **Market Assessment**

The Dargues project has in place all necessary contracts and approvals for the transportation of concentrate to customers. A concentrate offtake agreement was put in place in June 2021 for a term of two years and has recently been extended through to June 2024.

## Economic

Dargues is an operating mine. The Life of Mine Plan, and budgeting process includes the completion of cash flow models. Inputs to these models are based on a combination of historical actual costs and forecast future costs. The cash flow models demonstrate a positive Net Present Value.

# **FEDERATION MINE**

# Mineral Resource Estimate for Conversion to Production Target

The Federation Mine Production Target is prepared from the Mineral Resource Estimate reported at 30 June 2023. The Mineral Resource Estimate is inclusive of the Production Target.

# **Study Status**

A Feasibility Study (FS) evaluation of the Federation deposit was completed in August 2022, and updated in April 2023. The FS has determined a detailed mine plan that is technically achievable, including consideration of material modifying factors. The FS demonstrates an economically viable outcome.

The FS evaluated the development of the Federation deposit as a greenfield underground mine with minerals processing to recover saleable base metals concentrates and gold doré. The FS involved:

- Geological drilling and data collection
- Geological modelling for mine planning
- Mine geotechnical data collection and assessment
- Mining method selection, access optimisation, mine design and production schedule development
- Mine infrastructure design and reticulation (power, dewatering, ventilation and communications)
- Mineralogical and metallurgical test work
- Design of a new processing facility and evaluation of processing through Aurelia's existing Cobar Basin facilities

#### For more information, contact us at:

- Tailings storage capacity assessment and design
- Surface infrastructure design
- Development of an operational organisational structure
- Project approvals scope and process
- Project implementation strategy
- Capital and operating cost estimates
- Financial analysis
- Risk assessment.

### **Cut-off Parameters**

A NSR cut-off value of A\$140/t was applied for material to be extracted by stoping methods and A\$80/t for development. The economic viability of the cut-off value has been demonstrated through cashflow modelling completed for the Feasibility Study.

### **Mining Factors or Assumptions**

The Federation mine design uses a combination of uphole and downhole stoping methods with rockfill, cemented rockfill and paste backfill, progressing in a bottom up sequence. The uphole and downhole stoping methods are consistent with the mining method used at the nearby Peak mining operation, and are considered appropriate for the Federation orebody. Longitudinal retreat longhole stoping is utilised where the deposit is narrow and transverse longhole stoping where the deposit is wider.

Geotechnical assessment for the Federation FS resulted in selection of level spacing, offset distances to capital infrastructure and a ground support regime. Various level spacings and stope strike lengths were adopted to account for variable ground conditions and dominant geological structures. The typical stope height is 30m floor to floor with a 25m stope strike length. In areas of identified weaker rock mass conditions, stope heights of 20m or 25m and a stope strike length of 20m were adopted to promote excavation stability and effective mining operations.

The geology model has been assessed by creating stope shapes using Deswik's SO software. Parameters used include 0.5m hangingwall and footwall dilution allowances, with stope strike length of up to 25m and a minimum mining width of 3.0m. Mining dilution and recovery factors applied to these shapes includes downhole stopes (5% mining dilution with 95% recovery), uphole stopes (5% mining dilution with 90% recovery), and sill pillar mining (10% mining dilution with 85% recovery).

Development designs had 15% mining dilution applied with 100% recovery.

The FS considered important elements of the mine design, equipment and support services that included:

- Decline and lateral development for level access
- Vertical development for fresh air, return air and secondary egress
- Ore stockpiles and waste rock dumps

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- Pastefill system and associated underground reticulation
- Fixed infrastructure including shotcrete batch plant, ventilation fans, dewatering pumps and pipes, raw water pipes, underground substations, and high voltage power supply.

# Metallurgical Factors or Assumptions

Federation ore is intended to be processed through both the Peak and Hera processing facilities with higher grade ore prioritised through the Peak facility. Crushed ore will be transported to the process plants by road train.

Where Federation ore is processed through the Peak processing facility it will be at a nominal throughput rate of 100t/h. The processing flowsheet will be similar to that used for treatment of Peak's zinc-lead ore and incorporates a gravity gold recovery circuit, a two-stage flotation circuit and a CIP circuit to produce a gold-silver doré and separate zinc and lead-copper concentrates.

Gold (and silver) recovered in the gravity circuit will be leached in an In-line Leach Reactor with the precious metals recovered from solution by electrowinning and smelting to produce gold-silver doré bars.

When treating Federation ore any floatable gold and silver not recovered in the gravity circuit is recovered with lead and copper minerals to a lead-copper concentrate and with zinc to a zinc concentrate as part of a two-stage floation circuit.

Flotation tailings are processed in a conventional CIL circuit to leach any remaining cyanide leachable gold and silver. Gold and silver in solution is recovered via carbon adsorption with the loaded carbon then recovered, stripped and the high grade gold/silver solution subjected to electrowinning and smelted to produce gold doré bars.

Metallurgical recovery assumptions for processing through Peak are based on laboratory test-work and existing Peak operation performance (where appropriate) and shown in Table 16.

Table 16. Federation Mine – Peak plant processing metal recovery assumptions

Recovery	
60-95%	
60-80%	
75-95%	
80-95%	
80-95%	

Where Federation ore is processed through the Hera processing facility it will be at a nominal throughput rate of 340ktpa. The processing flowsheet will be similar to that for Hera ore treatment and incorporates a gravity gold recovery circuit and a bulk zinc-lead flotation circuit to produce a bulk zinc-lead concentrate.

Gold (and silver) recovered in the gravity circuit will be leached in an In-line Leach Reactor with the precious metals recovered from solution by electrowinning and smelting to produce gold-silver doré

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bars. No payment will be received for gold and silver in the bulk concentrate and is therefore excluded from the recovery assumptions.

Metallurgical recovery assumptions for processing through Hera are based on laboratory test-work and existing Hera operation performance (where appropriate) and shown in Table 17.

Table 17. Federation Mine – Hera plant processing metal recovery assumptions

Metal	Recovery	
Zinc	90-95%	
Lead	90-95%	
Gold	10-25%	
Silver	3-10%	

All deleterious elements are expected to remain within accepted ranges.

### **Environmental**

Hera Resources Pty Ltd (Hera Resources, a subsidiary of Aurelia Metals Limited) owns and operates the Federation Project. The development consent for the project was granted during 2023. The development consent application was supported by environmental assessments that identify the potential impacts of mining operations. The environmental assessments have been shared with regulatory authorities and the community and mitigating actions developed and implemented in consultation with these stakeholders.

The Federation Project is an active exploration prospect. It has active waste rock emplacements. The facilities contain potentially acid forming and/or non-acid forming residues and/or waste rock. The facilities are designed to mitigate these impacts. The facilities are approved via development consent and other regulatory approvals.

The Federation Project has numerous environmental monitoring requirements including air quality, greenhouse gas emissions, groundwater, surface water, noise, blasting, meteorological and biodiversity. A range of techniques are utilised in assessing the potential impacts.

There are no process residue storages at Federation.

### Infrastructure

The mineralogy of the Federation deposit is amenable to treatment through Aurelia's Cobar Basin process plants. Use of the existing process plants enables an accelerated mine production ramp-up and reduces upfront capital expenditure and project implementation risk.

Filtered tailings will be used in cemented pastefill to backfill stope voids. The remaining tailings will be stored within the established Hera and/or Peak tailings storage facilities. The Hera TSF will require at least one embankment raise to accommodate tailings generated by Federation ore that is not used for backfill.

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Power will be supplied from islanded liquid natural gas generators supplemented by a solar farm and battery energy storage system. The hybrid power solution will target a 25% reduction in carbon dioxide (CO2) emissions relative to an exclusively gas fired power station.

Project development will be implemented over three main phases including enabling works, mine development and plant construction. The Hera accommodation village was expanded in late 2021 while work underway at the Federation site includes surface clearing and drainage works, boxcut excavation, building construction and mobilisation of the mining contractor for development of the exploration decline. These activities are occurring under the exploration licence. Aurelia has received development consent for the Federation Project and reasonably expects to receive a mining lease and associated approvals from the NSW government to enable commercial production.

# Costs

The Federation Project's capital cost estimates are based on scope options described in the Feasibility Study. The estimates include direct costs which are based on quantities and pricing, engineering, common distributable charges, temporary construction facilities, freight, management and Owner's costs. Updated costs have been included as part of the Life-of-Mine Plan and budgeting process.

Operating costs for the Federation Project are estimated over the life of mine using first principles derivation of mining, processing and haulage costs, market rates for third party provision of power and crushing activities, actual costs for consumables and first principles build-up of salaries.

Operating cost estimates were developed in Australian dollars (\$). Contract rates from Aurelia's Hera and Peak Mines have been used for:

- Concentrate transport and port operations.
- LNG supply.
- Consumables (diesel, grinding media, mill reagents).

Current market rates were obtained for:

- Power supply.
- Primary and secondary crushing.

Salaries not included in contract rates have been built up from first principles.

Operating unit costs have been benchmarked with Aurelia's existing operations in the Cobar basin.

No allowance has been made for deleterious elements. All deleterious elements are expected to remain within tolerances and no penalties have been applied to cash flow estimations.

Metal Price and exchange rate assumptions have been benchmarked against industry peers and are informed by consensus forecasts.

Allowance has been made for NSW State royalty paid at a rate of 4.0% on assessable gold revenue and the outstanding balance of the 4.5% royalty payable to CBH Resources Ltd over the first 250,000 ounces of gravity gold recovered through the Hera process plant.

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## **Revenue Factors**

The metal price and exchange rate assumptions used in the preparation of the Production Target (Table 18) have been benchmarked against industry peers and based on consensus forecasts.

Table 18. Federation metal price and exchange rate assumptions.

Metal	Unit	2023
Gold	US\$/oz	1,600
Silver	US\$/oz	21.5
Copper	US\$/t	7,937
Lead	US\$/t	1,984
Zinc	US\$/t	2,646
AUD/USD		0.73

### **Market Assessment**

Federation expects to be able to use existing contractual arrangements or supply chains for the transportation of concentrate.

Concentrates produced from Federation ore are expected to be sold under long term offtake agreements.

### Economic

The FS includes the economic analysis of the Federation mine development, which was undertaken using discounted cash flow analysis. The analysis returns a positive post-tax NPV.

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