ASX Announcement
23 February 2021

ASX: AMI

Updated Federation Mineral Resource Estimate

HIGHLIGHTS

- Updated Mineral Resource Estimate (**MRE**) supported by nearly 55,000m of drilling
- Federation MRE now totals **3.5Mt at 5.5% Pb, 9.8% Zn, 1.4g/t Au, 7g/t Ag & 0.3% Cu**
- Delivers an outstanding average grade of 19.6% ZnEq[1]
- Represents a 35% increase in tonnage (+0.9Mt) and 134% increase in contained gold (+91koz)
- Positions Federation as one of the most significant discoveries in the Cobar region in recent decades
- Indicated Resources increased by 1.0Mt, comprising 31% of the updated MRE (1.1Mt at 26.3% ZnEq)
- Copper now reported in the MRE following positive metallurgical test work findings
- Deposit remains open in multiple directions with intensive drilling ongoing
- Federation Scoping Study remains on track for completion in the current quarter

SUMMARY

Aurelia Metals Limited (**Aurelia** or the **Company**) is pleased to announce an updated Mineral Resource Estimate (MRE) for the Federation deposit, located 10km south of the Company's operating Hera Mine near Nymagee, New South Wales. The MRE has been reported in accordance with the JORC Code (2012 Edition) using a A$120 Net Smelter Return (NSR) cut-off, equating to a zinc equivalent (ZnEq) of 6.1%[1]. The Company has moved to a dominant metal equivalency for Resource grades following guidance from the ASX.

The MRE comprises Indicated and Inferred Resources totalling 3.5Mt at 5.5% Pb, 9.8% Zn, 1.4g/t Au, 7g/t Ag and 0.3% Cu (**Table 1**). An estimate for copper is included for the first time following positive findings from metallurgical test work conducted for the Federation Scoping Study. The MRE includes a shallow oxide component of 0.08Mt at 6.0g/t Au and 2g/t Ag. Mineralisation reported in the MRE extends from 25 to 550 metres below surface with a total strike length of over 500 metres (**Figure 1**).

Table 1. Summary of the Federation Mineral Resource Estimate (MRE).

Class	Tonnage (Mt)	Grade						Contained Metal				
		Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Cu (%)	ZnEq[1] (%)	Pb (kt)	Zn (kt)	Au (koz)	Ag (koz)	Cu (kt)
Indicated	1.07	6.1	10.7	3.6	8	0.4	26.3	66	115	125	263	4
Inferred	2.41	5.2	9.4	0.4	7	0.3	16.6	127	227	32	552	6
Total	**3.49**	**5.5**	**9.8**	**1.4**	**7**	**0.3**	**19.6**	**192**	**342**	**158**	**815**	**10**

Note: The Federation MRE utilises a A$120 NSR cut-off within mineable shape volumes that may include internal dilution. Tonnage estimates have been rounded to the nearest 10,000 tonnes. Contained metal estimates have been rounded to the nearest 1,000 tonnes/ounces. Estimates may not sum due to rounding.

[1]Zinc equivalent (ZnEq) was calculated using the formula ZnEq% = Zn(%) + 1.063*Pb(%) + 2.431*Cu(%) + 2.221*Au(g/t) + 0.010*Ag(g/t). Both the NSR and zinc equivalent calculations factor in assumed metal prices, relative metallurgical recoveries, payabilities and other offsite costs - full details of which can be found on pages 7-8.

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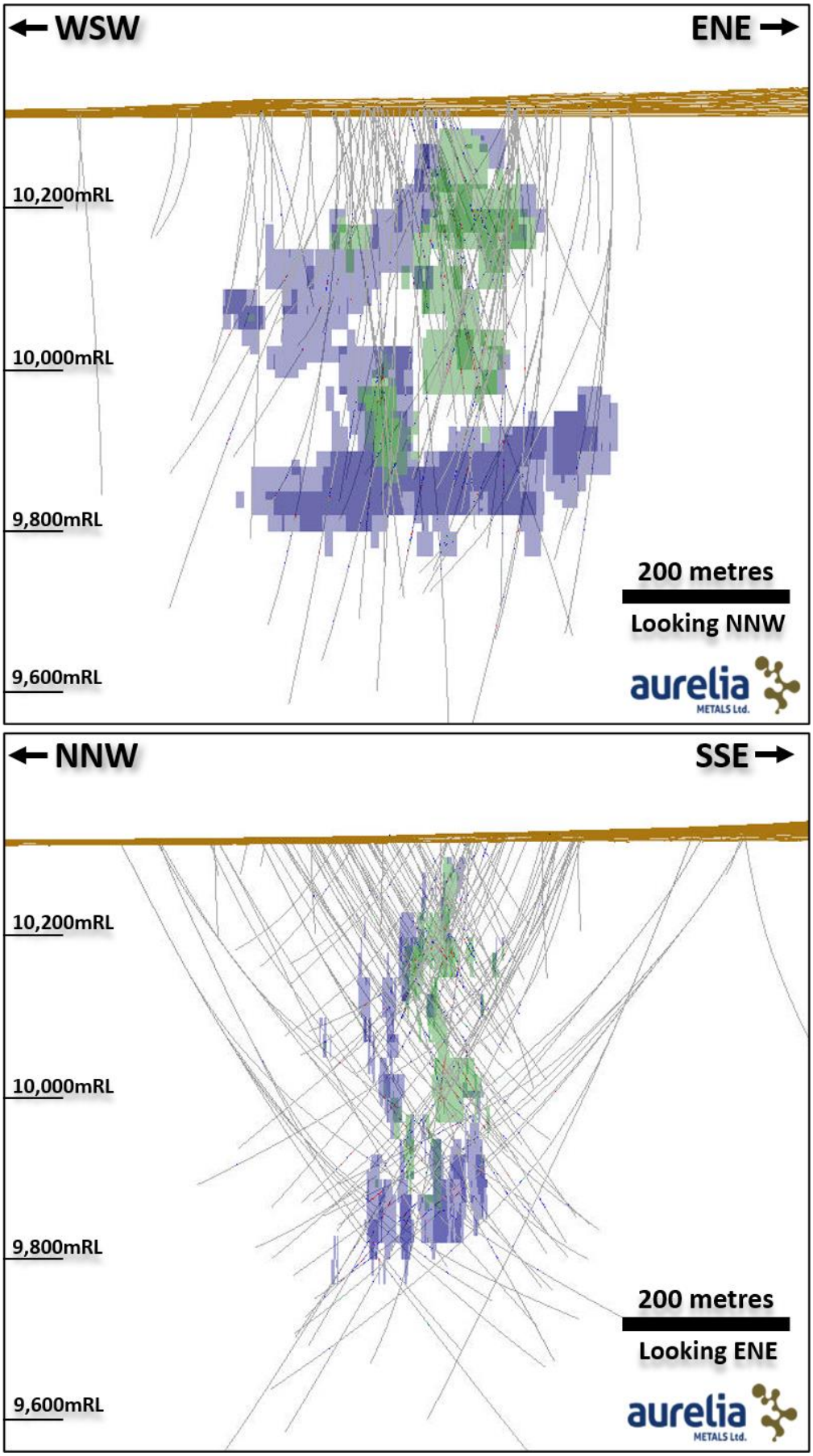

Figure 1. Long sectional (top) and cross sectional (bottom) view of the Federation MRE model showing drilling, surface topography and Indicated (green) and Inferred (blue) Resources.

Since the release of the Maiden MRE in June 2020, infill drilling has provided better definition of the known mineralisation and supported greater estimation confidence, especially in the upper portion of the deposit, to inform the Federation Scoping Study. The drill program targeted the higher grade gold, zinc and lead mineralisation at the core of the deposit that successfully delivered a 1.0Mt increase in Indicated Resources.

The lower zinc and lead grades in the updated Resource are a result of better definition of the mineralised boundaries, identification of high gold material with lower zinc and lead grades, the inclusion of copper-dominant mineralisation in the estimate and new metallurgical test work that shows potential for improved economic terms for each concentrate product.

FEDERATION MINERAL RESOURCE ESTIMATE

Background

The Federation MRE is informed by nearly 55,000m of drilling completed by Aurelia since the discovery of high-grade lead, zinc and gold mineralisation in April 2019. Intensive exploration at the Federation site has been managed from the Company's nearby Hera Mine which currently produces gold doré and a combined lead-zinc bulk concentrate. The MRE has been prepared by Timothy O'Sullivan who is a full-time employee of Aurelia Metals Limited.

Location and Geology

The Federation deposit is located 15km south of the historic copper mining town of Nymagee and 10km south of Aurelia's operating Hera Mine in central western New South Wales. Significant supergene and sulphide base metal and gold mineralisation was discovered at the nearby Dominion Prospect in September 2018 with strong lead and zinc sulphide mineralisation intercepted at the nearby Federation prospect in April 2019. The Federation deposit is located on the southwestern portion of Exploration Licence (EL) 6162, owned 100% by Hera Resources Pty Ltd (a wholly owned subsidiary of Aurelia Metals). Access to the Federation site is via Burthong Road, which also services the Hera mine site (**Figure 2**).

Mineralisation in the region occurs near the eastern edge of the Palaeozoic-age Cobar Basin, hosted in folded sandstones and siltstones of the Mouramba and Amphitheatre Groups. Federation also occurs close to the non-conformable contact with the Silurian-aged Erimeran granite to the south. The rocks in the area have been metamorphosed to low-middle greenschist facies and display a moderately well-developed, near vertical cleavage. Structurally the deposit falls within a northeast–southwest oriented fault corridor that links the Rookery Fault zone in the east to a parallel fault system along the western side of the Erimeran Granite.

Mineralisation

Mineralisation at Federation is epigenetic and structurally controlled with several steeply dipping vein breccia/massive sulphide lenses developed in the centre of a broad northeast-southwest striking corridor of quartz–sulphide vein stockwork mineralisation. The mineralisation is hosted by fine-grained sedimentary rocks and is best developed within open upright anticline closures in areas of strong rheology contrast imposed by early stratiform alteration.

Massive sulphide and sulphide breccia base metal mineralisation is typically zinc-rich and associated with intense cross-cutting black chlorite alteration in the lower parts of the known deposit, with silica-sulphide dominant infill in the upper parts. Moderate to high grade gold mineralisation is best developed in a steeply plunging shoot in the northeast of the deposit, with recent drilling also highlighting high grades in other parts of the deposit. Late bedding-parallel faults have been identified that may have caused some brittle offset within the system. These structures possibly started as extensional faults and could have been important in focusing hydrothermal fluids during alteration and mineralisation.

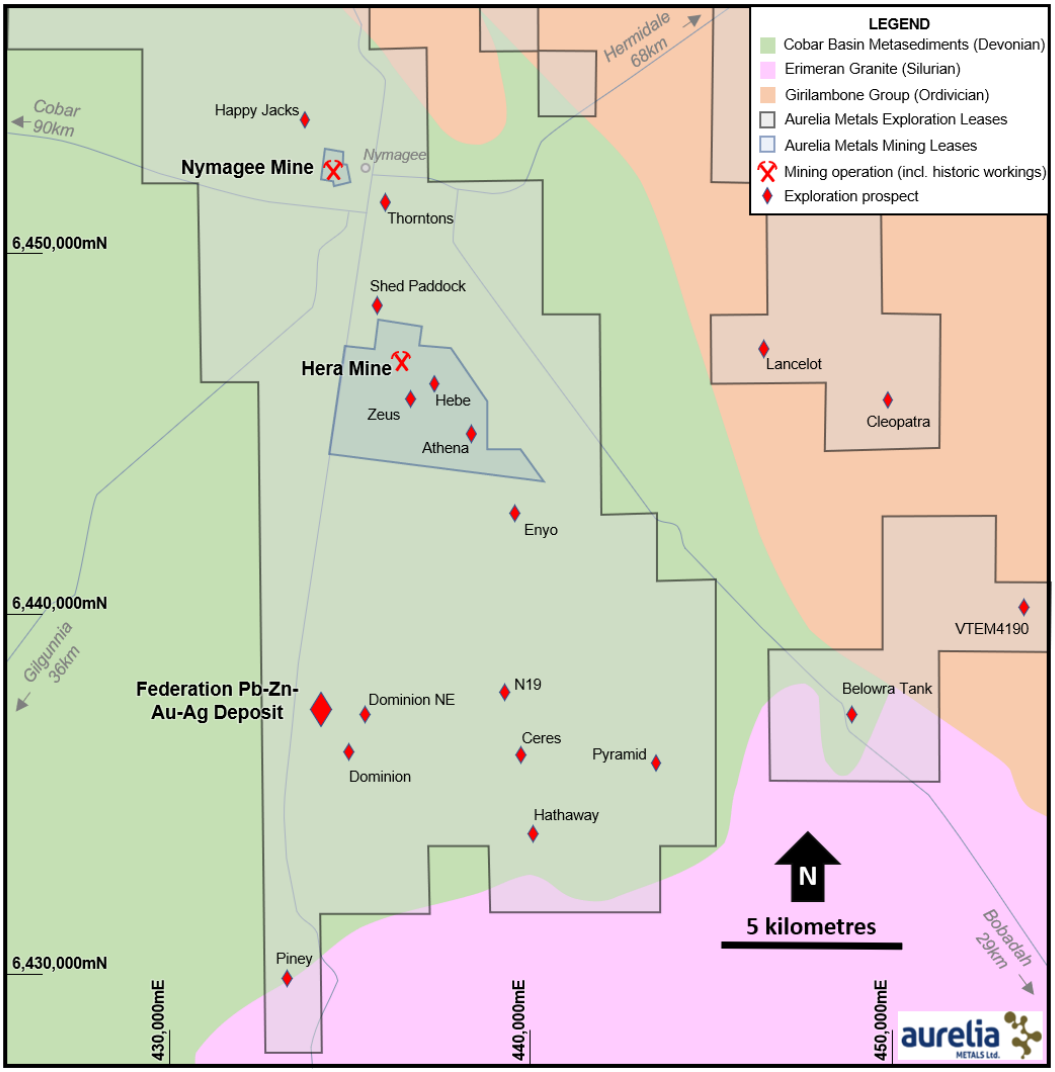

Figure 2. Location of the Federation deposit near Nymagee, NSW.

Drilling, Sampling and Assays

Exploration drilling has been undertaken using reverse circulation (RC) percussion and diamond drilling methods. A number of deeper holes have employed a combination of RC pre-collars with diamond tails. With the exception of four relatively shallow RC holes completed at the prospect in 2013 by YTC Resources (the predecessor company to Aurelia), drilling has been completed by the Company between April 2019 and December 2020 as shown in **Table 2**.

Table 2. Federation deposit drilling details.

Company	Period	Drill Type	No. of Holes	Metres Drilled
YTC Resources Limited	2013	RC Percussion	4	858
Aurelia Metals Limited	2019 to 2020	RC Percussion	55	15,992
		Diamond	76	38,016
Total			**135**	**54,866**

All RC drilling at Federation has been completed using 143mm face sampling bits. Sampling of RC chips was directly from the rig on a dry basis. Both rotary cone splitters and riffle splitters have been employed in the current program. RC sampling at Federation has been on a universal one metre basis, with duplicates collected on average every 25 samples.

Diamond drilling was typically triple tube at HQ size with NQ core also common (particularly in wedge holes). Limited PQ-sized core has been drilled at the deposit, mostly restricted to pre-collars in the upper

150m of these holes. All core drilled at Federation has been oriented in-hole to assist with interpretation of structural and lithological features. The core is sampled with a diamond saw with half sent for assay and the remaining half retained. Quarter core sampling was utilised for PQ sized drill core. Core sample sizes were nominally one metre but ranged from 0.5 to 1.5m as necessitated by geology or mineralisation contacts.

Samples were dried, crushed and pulverised to 85% passing 75µm. Gold was assayed by 30g fire assay with an AAS finish and a detection level of 0.01ppm. For base metals a 0.5g charge was dissolved using aqua regia digestion with detection levels of 0.2ppm Ag, 2ppm As, 1ppm Cu, 0.01% Fe, 2ppm Pb, 0.01% S and 2ppm Zn. Gold samples greater than 0.2g/t were re-assayed by screen fire assay using the entire sample to improve accuracy. The majority of samples from Federation have been assayed at ALS Laboratories in Orange, NSW, with a smaller number assayed with comparable methods by Intertek Genalysis in Townsville.

During drilling quality control samples including duplicates, standards and blanks were routinely inserted into the sample batches at least every 25 samples to monitor performance. Analysis of the duplicate samples generally showed a good correlation with original samples. All standards and blanks were returned within acceptable limits.

Resource Estimation

Geological and structural interpretation of the Federation deposit has been updated based on new information gained from the recent drilling programmes. The interpretation is based on drill core logging that captures lithology, alteration, mineralisation style and orientation, weathering and major structures.

Several broad wireframes were produced for the purposes of the estimation. The boundaries between these zones were based on a combination of geology, structure, mineralisation orientation and weathering. Exploratory data analysis (EDA) was then performed on these wireframed domains to optimise the number of domains used in the estimation. The final domains used the best representation of mineralisation orientation, structures and weathering as well as limiting the extrapolation of very high gold, lead and zinc grades into zones of lower grade background mineralisation.

The block model was set up on a rotated grid to honour the main mineralisation orientation. Parent block dimensions are 2x10x10m (X, Y, vertical respectively). The 10m Y and vertical block dimensions were chosen to reflect drill hole spacing and to provide adequate definition for mine design. The shorter 2m X dimension was used to reflect the narrow mineralisation width and down hole data spacing. Discretisation was set to 2x5x5m (X, Y, vertical respectively).

Samples were composited to nominal 1.0m intervals whilst honouring the domain wireframes. The minimum composite length was set to 0.5m.

Variography was carried out using the software program Isatis.neo on the 1.0m composites. Each domain was estimated separately using only data from within that domain. The orientation of the search ellipse and variogram models were controlled by coding the block model with local anisotropy to best reflect the local orientation of the mineralised structures.

The concentrations of gold, silver, lead, zinc, copper, iron, sulphur and antimony were estimated on density weighted values to better reflect the contained metal within each interval.

All estimates were carried out using dynamic interpolation so that the orientation of the search ellipse and variogram models was aligned parallel to the local mineralisation orientation.

The density weighted concentration of gold was estimated using Multiple Indicator Kriging (MIK). MIK is considered an appropriate estimation method for the gold grade distribution because it specifically accounts for the changing spatial continuity at different grades through a set of indicator variograms at a range of grade thresholds. It also reduces the need to use the practice of top cutting.

The density weighted concentrations of silver, lead, zinc, copper, iron, sulphur and antimony were estimated using Ordinary Kriging (OK). Density was also estimated using OK on drill hole data. OK is considered appropriate because the grades are reasonably well structured spatially. Vulcan software was used for both the MIK and OK dynamic estimates.

Each block was assigned as either fresh or oxidised based on a base of complete oxidation surface (BOCO) created from the drill hole logs and assay data.

A three pass search strategy was used for estimation. Each pass used a search ellipse with four radial sectors. The maximum number of samples per sector was set to four with a maximum of six data per sector for each pass. Additional search parameters were:

Pass 1: 5x35x35m search, 8-24 samples, minimum 3 drill holes used, maximum 10 data per hole
Pass 2: 10x70x70m search, 8-24 samples, minimum 2 drill holes used, maximum 10 data per hole
Pass 3: 15x100x100m search, 4-24 samples, minimum 1 drill holes used, maximum 10 data per hole

Minimal grade cutting was applied to silver, lead, zinc, copper and arsenic on a domain-by-domain basis in order to reduce the influence of extreme values on the estimates. The top cut values were chosen by assessing the high end distribution of the grade population within each domain and selecting the value at which the distribution became erratic.

Table 3. Federation MRE reported by oxidation type and classification.

Weathering	Class	Tonnage (Mt)	Grade						Contained Metal				
			Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Cu (%)	ZnEq (%)	Pb (kt)	Zn (kt)	Au (koz)	Ag (koz)	Cu (kt)
Oxide	Indicated	0.06			6.7	2		15.0			12	4	
	Inferred	0.02			4.1	1		9.2			3	1	
	Total	**0.08**			**6.0**	**2**		**13.4**			**15**	**5**	
Fresh	Indicated	1.02	6.5	11.3	3.5	8	0.4	26.9	66	115	113	259	4
	Inferred	2.39	5.3	9.5	0.4	7	0.3	16.7	127	227	30	552	6
	Total	**3.41**	**5.6**	**10.0**	**1.3**	**7**	**0.3**	**19.7**	**192**	**342**	**143**	**811**	**10**
Total	Indicated	1.07	6.1	10.7	3.6	8	0.4	26.3	66	115	125	263	4
	Inferred	2.41	5.2	9.4	0.4	7	0.3	16.6	127	227	32	552	6
	Total	**3.49**	**5.5**	**9.8**	**1.4**	**7**	**0.3**	**19.6**	**192**	**342**	**158**	**815**	**10**

Note: The Federation MRE utilises a A$120 NSR cut-off within mineable shape volumes that may include internal dilution. Tonnage estimates have been rounded to the nearest 10,000 tonnes. Contained metal estimates have been rounded to the nearest 1,000 tonnes/ounces. Estimates may not sum due to rounding. Pb, Zn and Cu are not reported for oxide material as they are unlikely to be recoverable.

Following the estimation of zinc, lead, gold, silver and copper a Vulcan script was run to calculate the NSR for each cell in the block model. DESWIK.SO (stope optimiser) program was used to outline shapes that identify mineable areas. A vertical stope orientation method was used with orientation in the XZ plane. The optimisation region has been aligned to the block model. Section length was set at 5m, level height 10m, no hangingwall or footwall dilution, 2m minimum stope width and 8m stope pillars. The cell centreline evaluation method was used targeting a constant cut-off of $120/t NSR. The NSR field used is a value field, and as such the software seeks to maximize the total value of the shape above the cut-off. Shapes created that are less than the cut-off are considered sub-economic and removed from the final Resource. The stope optimised (SO) designs were then used to constrain the reported MRE by identifying mineralisation that may have reasonable prospects for eventual economic extraction. A similar approach has been adopted for Mineral Resource reporting at Aurelia's other operating mines and projects in the region. The MRE is presented in **Table 3**.

Metallurgy, Metal Price and Equivalency Assumptions

The Federation MRE was reported using an NSR cut-off value to determine the proportion of the deposit having reasonable prospects for eventual economic extraction. The NSR methodology is used at AMI's operating mines in the region and considers metallurgical recoveries assumed with each of the product streams, along with metal prices, payabilities, exchange rates, freight, treatment charges and royalties.

The formula for calculating the NSR is as follows:

> *NSR = [metal grade x expected metallurgical recovery x expected payability x metal price] – [transport and treatment charges, penalties and royalties]*

The Federation MRE is reported with a zinc equivalent (ZnEq) grade. The calculation of the zinc equivalent considers relative metallurgical recoveries to each of the potential product streams, metal prices, payabilities, exchange rates, freight, treatment charges and royalties.

It is in the company's opinion that all elements used in the zinc equivalent calculation have a reasonable potential to be recovered and sold as demonstrated by its current operations at Peak and Hera.

The formula used for calculating the zinc equivalent is as follows:

$$ZnEq\% = Zn(\%) + 1.063*Pb(\%) + 2.431*Cu(\%) + 2.221*Au(g/t) + 0.010*Ag(g/t)$$

Identical metal prices and exchange rates have been employed for the calculation of the NSR and zinc equivalency calculations as shown in **Table 4**.

Table 4. Metal price and exchange rate assumptions used to calculate the Federation NSR and zinc equivalent calculations.

Commodity	Unit	Assumed Value
Lead	US$/t	$2,280
Zinc	US$/t	$2,690
Copper	US$/t	$7,055
Gold	US$/oz	$1,554
Silver	US$/oz	$18.80
Exchange Rate	A$/US$	0.74

Mineralogical analysis and metallurgical test work programs have been performed on material from Federation to evaluate the potential for sequential flotation of copper, lead and zinc minerals to produce separate concentrates and to confirm gold deportment to doré and base metal concentrates.

Mineralogical analysis of Federation drill core samples has shown a very similar sulphide mineralogy to Hera, dominated by iron bearing sphalerite and galena with lesser chalcopyrite, pyrrhotite and pyrite. Gold is also similar in occurrence to Hera, tending to be irregularly distributed and present as discrete (often visible) grains not uniquely associated with any specific sulphide phase.

Recent metallurgical test work results, performed as part of a Scoping Study, confirmed the viability of producing saleable copper, lead and zinc concentrates from samples of Federation mineralisation. No concentrate penalty elements were identified. Given the positive results of the recent test work programs, a process flowsheet with crushing, grinding, gravity gold and sequential flotation producing gold doré and separate copper, lead and zinc concentrates has been assumed. The recovery and concentrate parameters adopted in the Federation NSR and zinc equivalency calculations are shown in **Table 5**.

Very minor near surface oxide and transitional mineralisation is present at Federation and is included in the MRE. Metallurgical recoveries for gold and silver in these zones was assumed to be 85%, consistent with other operations in the area. Further metallurgical test work is underway to improve the understanding of metallurgical recoveries from mineralisation in the oxide zone. It has been assumed that no base metals will be economically recoverable from the oxide zone.

Table 5. Recovery and concentrate grade parameters used for fresh material in the Federation NSR and zinc equivalency calculations.

Parameter	Assumed Value
Copper Recovery to Copper Concentrate	Calculated on a fixed tail grade of 0.1% Cu
Lead Recovery to Lead Concentrate	85%
Zinc Recovery to Zinc Concentrate	85%
Gold Recovery to Doré	55%
Gold Recovery to Copper Concentrate	10%
Gold Recovery to Lead Concentrate	5%
Gold Recovery to Zinc Concentrate	10%
Silver Recovery to Doré	1%
Silver Recovery to Copper Concentrate	15%
Silver Recovery to Lead Concentrate	60%
Silver Recovery to Zinc Concentrate	5%
Copper Grade in Copper Concentrate	18%
Lead Grade in Lead Concentrate	65%
Zinc Grade in Zinc Concentrate	55%

Classification of Resources

The MRE classification is based on drilling density, estimation passes and confidence in the geological interpretation.

The estimation was constrained within the SO designs to report the MRE by selecting mineralisation that may have reasonable prospects for eventual economic extraction. Material drilled on a nominal 25m spacing and estimated in the first estimation pass, has been classified as Indicated. Material that has a nominal drill hole spacing of less than 50m, estimated in either pass 1 or 2 and does not meet the criteria for Indicated has been reported with an Inferred classification. All remaining blocks are coded as unclassified. At this stage no mineralisation has been classified as Measured.

Mining Method and Cut-off Grade

The Company has adopted a A$120 NSR value as an appropriate cut-off for a deposit of this type based on the potential for mining using an underground stope and backfill method similar to that employed at the Company's operating Hera and Peak Mines. MREs for the Company's operations at Hera and Peak are reported at comparable cut-off grade.

It is anticipated that mineralisation would be processed through facilities at the Hera or Peak Mines.

Other Modifying Factors Considered in Resource Cut-off

Study status

- The Company is finalising a Scoping Study on the Federation Project and will consider proceeding to a Pre-Feasibility Study in the near term.
- The Scoping Study has considered a range of factors related to a potential mine development at the Federation site including (but not limited to) site access and layout, mining methods, mine design, production schedules, mineralogy and metallurgical test work, minerals processing flowsheets, tailings management, power supply, human resources, project approvals and capital requirements. These considerations have informed the MRE.

Cut-off parameters

- The cut-off value used in the MRE are base on extensive operational experience at the Company's operation, particularly the nearby Hera Mine.

- The cut-off value considers sustaining capital, development, stoping, haulage, processing and administration expenditure. Costs beyond the mine gate include metal content payability, concentrate transport, penalties and royalties.

Mining factors/assumptions

- The method of extraction assumed for the Federation deposit is long hole stoping over 25 metre sub-levels, consistent with the nearby Hera operation. Stope backfilling was assumed.
- Geotechnical studies conducted as a part of the Scoping Study have indicated similar geotechnical conditions to those at the Hera Mine. Minimum stoping widths of 3 metres have been assumed.
- The MRE contains only internal dilution.

Metallurgical factors/assumptions

- Metallurgical test work to date has included XRD mineralogical analysis, optical mineralogy, gold deportment by MLA, Bond Abrasion Index (BAI) determinations, SMC tests, Bond Ball Mill Work Index determinations, bulk rougher and cleaner flotation test work, sequential copper-lead-zinc flotation test work, concentrate specification tests and gravity gold testwork.
- Metallurgical samples were taken from 13 different locations across the Federation deposit to ensure representivity.
- A process flowsheet with crushing, grinding, gravity gold and sequential flotation producing gold doré and separate copper, lead and zinc concentrates has been demonstrated with this test work.
- The process flowsheet is similar to the beneficiation techniques used for ores at the Hera and Peak Mines.
- Process recovery and concentrate grade assumptions are listed in **Table 5**.
- Test work to date has not identified any deleterious elements that would cause a penalty in the sale of the concentrate products.

Environment

- The Company is proposing to leverage established infrastructure at the Hera mine site. Hera is in full operation and has all environmental and statutory approvals and licenses to operate in place for current operations.
- The Company has commenced baseline environmental monitoring and test work at the Federation site to contribute to an EIS for full project approvals.
- Waste rock storage and characterisation has been considered as a part of the Scoping Study

Infrastructure

- The Scoping Study for Federation considers a proposed site layout for the Federation including a box cut and portal, haul roads (back to Hera), ROM and waste rock stockpiles, workshop and offices, water management structures and other supporting infrastructure.
- Processing of the Federation material is proposed to leverage the existing infrastructure at Hera, with processing and tailings facilities already in place.

Tenure

- The Federation prospect is located within Exploration Licence 6162, owned 100% by Hera Resources Pty. Ltd. (a wholly owned subsidiary of Aurelia Metals Limited). At the time of reporting there were no known impediments to operating in these areas.
- The Company will look to apply to the NSW state government for a mining lease and development consent in due course.

Next Steps for Federation

Exploration at Federation is ongoing with drilling currently targeting down plunge extensions to the unconstrained massive and semi-massive sulphide mineralisation in the northeast of the deposit. Infill delineation drilling will continue in the upper zones of the deposit, continuing to build confidence in the MRE and gathering data for mining and processing evaluations.

Competent Persons Statement

Compilation of exploration and drilling data, assay validation and geological interpretations for the Mineral Resource Estimate were coordinated by Adam McKinnon, BSc (Hons), PhD, MAusIMM, who is a full time employee of Aurelia Metals Limited. The Mineral Resource Estimate has been prepared by Timothy O'Sullivan, BSc (Hons), MAusIMM, who is a full time employee of Aurelia Metals Limited. Both Dr McKinnon and Mr O'Sullivan have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr McKinnon and Mr O'Sullivan consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

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

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JORC Code 2012 (Table 1) - Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves - AusIMM.

Section 1. Sampling Techniques and Data (Criteria listed this section apply to all succeeding sections)		
Criteria	***JORC Code explanation***	***Commentary***
Sampling techniques	• *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.*	Reverse circulation percussion (RC) and diamond core drilling was undertaken by Budd Exploration Drilling Pty Ltd and Mitchell Services Limited. Chip samples were collected using a rotary cone or riffle splitter directly from the drill rig. All samples were collected on a dry basis. Core samples were defined by Aurelia's geologists during logging to honour, geological and mineralogical boundaries then cut in half by diamond saw along the core axis with half core sent to external laboratories.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	Sampling and QAQC procedures are carried out using Aurelia Metal's protocols as per industry best practice. Drilling is oriented perpendicular to the strike of the mineralisation as much as possible to ensure a representative sample is collected.
	• *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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	RC drilling was used to obtain representative samples of 1m length. Diamond drilling was used to obtain core samples of a nominal 1m length. RC chips were sub-sampled off the rig with a rotary cone or riffle splitter to produce samples of between 2 to 4 kg. Core and RC samples are dried, crushed and pulverised to 85% passing 75µm. This is considered to appropriately homogenise the sample. Gold analysis is by 30g fire assay with AAS finish, (method Au – AA25) with a detection level of 0.01ppm. For base metals a 0.5g charge is dissolved using aqua regia digestion (Method ICP41-AES) with detection levels of 0.2ppm Ag, 2ppm As, 1ppm Cu, 0.01% Fe, 2ppm Pb, 0.01% S, 2ppm Zn. Overlimit analysis is by OG46 - aqua regia digestion with ICP-AES finish. Gold samples greater than 0.2g/t are re-assayed by screen fire assay using the entire sample to improve accuracy, especially where coarse gold is present.

Drilling techniques	• *Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Drilling by triple tube diamond coring generally commences as PQ core until fresh rock is reached. The PQ rods are left as casing then HQ coring is employed. NQ coring is also used (particularly in wedge holes). RC methods utilised a face sampling 143mm bit. Pre-collars with RC down to between 100 and 350m below surface are also employed at Federation.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	Chip recoveries are generally monitored visually at the rig by the size of the individual bags. Any low recoveries will be noted by the geologist at the rig. Recoveries for core are generally greater than 95% once in fresh rock. Measures taken to maximise recovery include triple tube drilling in soft or broken rock and slower drilling rates in poor ground. The relationship between sample recovery and grade has been assessed for diamond core samples using conditional expectation plots and scatter plots. No obvious relationship exists and sample bias due to the preferential loss or gain of material is not considered to be significant to the Mineral Resource Estimate (MRE). The relationship between sample recovery and grade for RC sampling has not been assessed.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Systematic geological and geotechnical logging is undertaken. Both qualitative and quantitative data collected. Data collected includes: • Nature and extent of lithologies • Relationship between lithologies • Amount and mode of occurrence of potentially economic minerals • Location, extent and nature of structures such as bedding, cleavage, veins, faults etc. (core only) • Structural data (alpha & beta) are recorded for orientated core (core only) • Geotechnical data such as core recovery, RQD, fracture frequency, qualitative intact rock strength (IRS), microfractures, veinlets and number of defect sets. For some geotechnical holes the orientation, nature of defects and defect fill are recorded (core only) • Bulk density by Archimedes principle at regular intervals (core only) 100% of all recovered core is geologically and geotechnically logged. 100% of recovered RC chips are geologically logged. The geological and geotechnical logging is considered to have been carried out at a sufficient level of detail to support Mineral Resource estimation
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*	Core is sawn along its axis with half core submitted for assay. Sampling is consistently on one side of the orientation line so that the same part of the core is sent for assay. PQ core is quarter sampled. All RC samples were split using a rotary cone or riffle sampler directly from the drilling rig. Two samples were collected for every metre to allow for duplicate samples to be taken at any interval. All sampling was on a dry basis.

	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second- half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Samples are dried, crushed and pulverised to 85% passing 75 µm is is considered to appropriately homogenise the sample to allow subsampling for the various assay techniques. Certified Standard Reference Materials and blanks are inserted at least every 25 samples to assess the accuracy and reproducibility. The results of the standards are to be within ±10% variance, or two standard deviations, from known certified result. If greater than 10% variance the standard and up to 10 samples each side are re-assayed. ALS conduct internal check samples every 20 samples for gold and every 20 for base metals. Assay grades are occasionally compared with mineralogy logging estimates. If differences are detected a re-assay can be carried out using the bulk reject or the assay pulp. Systematic duplicate sampling was employed during the Federation RC program. A regular duplicate was taken at predetermine sample intervals (averaging 1 in 25 samples). Further, samples occurring in mineralised zones are duplicated, increasing the duplicate rate to one sample every 15-20 samples. Sample sizes are considered appropriate for the material being sampled.
Quality of assay data and laboratory test	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Standard assay procedures performed by a reputable assay lab (ALS Group) were undertaken. Gold assays are by 30g fire assay with AAS finish, (method Au-AA25). Ag, As, Cu, Fe, Pb, S, Zn are digested in aqua regia then analysed by ICP-AES (method ME-ICP41). Comparison with 4 acid digestion indicate that the technique is considered total for Ag, As, Cu, Pb, S, Zn. Fe may not be totally digested by aqua regia but near total digestion occurs. A small number of samples from Federation were also assayed by Intertek Genalysis in Townsville using comparable methods. Gold samples greater than 0.2g/t were re-assayed by screen fire assay using the entire sample to improve accuracy. No geophysical tools were used in the determination of assay results. All assay results were generated by an independent third-party laboratory as described above. Certified Standard Reference Materials or blanks are inserted at least every 25 samples. Standards are purchased from Certified Reference Material manufacture companies: Ore Research and Exploration, Gannet Holdings Pty Ltd and Geostats Pty Ltd. Standards were purchased in foil lined packets of between 60g and 100g. Different reference materials are used to cover high grade, medium grade and low grade ranges of elements: Au, Ag, Pb, Zn Cu, Fe, S and As. The standard names on the foil packages were erased before going into the pre-numbered sample bag and the standards are submitted to the lab blind.

Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	All significant drilling intersections are verified by multiple Company personnel Due to the relatively recent discovery history at Federation, no twinned holes have been used at this stage. Drill hole data including meta data, any gear left in the drill hole, lithological, mineral, survey, sampling and occasionally magnetic susceptibility is collected and entered directly into a Logchief database using drop down codes. When complete the Logchief database XML file is emailed to an external geological database administrator, the data is validated and uploaded into an SQL database. Assay data is provided by ALS via .csv spreadsheets. The data is validated using the results received from the known certified reference material. Using an SQL based query the assay data is merged into the database.
Location of data points	• *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.* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	Drill hole collars are initially located using hand held GPS to ±5m. Upon completion collars are located with differential GPS to ±50mm picked up by the mine surveyors. Drill holes are downhole-surveyed from collar to the end of hole by drilling personnel using a downhole survey tool (Reflex). Downhole north-seeking gyroscopic survey instruments have also been regularly employed at Federation to improve survey accuracies. Drill holes are surveyed by single shot camera during drilling at intervals ranging between 6 to30m. All survey data for every hole is checked and validated by Aurelia Metals personnel before being entered into the database. All coordinates are based on Map Grid Australia zone 55H Topographic control is considered adequate as it is based on a high precision Lidar survey completed over the area in 2019.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	Federation represents a relatively new discovery hence data spacing is extremely variable. Drill hole spacing at Federation ranges from 25 to 1m. Drill spacings are considered appropriate to support the Indicated and Inferred classifications for the Federation MRE. Additional closer spaced drilling will be required to upgrade the Resource to the higher confidence Measured classification. Sample compositing is not applied.

Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	Drilling is orientated to cross the interpreted, steeply dipping mineralisation trend at moderate to high angles. Holes are drilled from both the footwall and hangingwall of the mineralisation where possible. No known bias has been introduced due to drilling orientation.
Sample security	• *The measures taken to ensure sample security*	Chain of custody is managed by Aurelia Metals. Samples are placed in tied calico bags with sample numbers that provide no information on the location of the sample. Samples are transported from site to the assay lab by courier or directly delivered by Aurelia Metals personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data*	No audit or review of the sampling regime at Federation has been directly completed.

Section 2. Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)		
Criteria	***JORC Code explanation***	***Commentary***
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Federation prospect is located within Exploration Licence 6162, owned 100% by Hera Resources Pty. Ltd. (a wholly owned subsidiary of Aurelia Metals Limited). At the time of reporting there were no known impediments to operating in these areas.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	The area has a 50 year exploration history involving reputable companies such as Cyprus Mines, Buka, ESSO Minerals, CRAE, Pasminco, Triako Resources and CBH Resources. Previous exploration data has been ground-truthed where possible. Historic drill hole collars have been relocated and surveyed. YTC Resources completed a total of four, relatively shallow RC drill holes at the Federation prospect in 2013, prior to the discovery of high grade mineralisation in 2019.
Geology	• *Deposit type, geological setting and style of mineralisation.*	All known mineralisation in the area is epigenetic “Cobar” style. Deposits are generally structurally controlled quartz + sulphide matrix breccias grading to massive sulphide. In a similar fashion to the other Cobar deposits, the Federation prospect occurs to the west of the Rookery Fault, a major regional structure with over 300km strike length. The deposits are near the boundary of the Devonian Lower Amphitheatre Group and the underlying Roset Sandstone. Both units show moderate to strong ductile deformation with tight upright folding coincident with greenschist facies regional metamorphism. A well developed sub vertical cleavage is present. Mineralisation at Federation occurs in several steeply dipping vein breccia/massive sulphide lenses developed in the centre of a broad NE–SW striking corridor of quartz–sulphide vein stockwork mineralisation. The mineralisation is hosted by fine grained sedimentary rocks and is best developed within open upright anticline closures in areas of strong rheology contrast imposed by early stratiform alteration. Sulphide mineralisation identified at Federation includes sphalerite-galena±chalcopyrite-pyrrhotite-pyrite in veins and breccias.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on 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.*
		This report relates to the MRE for Federation hence full exploration details are not provided.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	This report relates to the MRE for Federation hence full exploration details are not provided.

Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	This report relates to the MRE for Federation hence full exploration details are not provided.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Diagrams are provided in Figures 1 and 2.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	This report relates to the MRE for Federation hence full exploration details are not provided. Drill results from recent programs have been reported in full in previous announcements.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; 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.*	As this report predominantly concerns the MRE for Federation, full exploration details are not discussed in detail in this report but are covered in the Company's regular exploration updates (further details available at www.aureliametals.com.au). Findings from mineralogical and metallurgical test work are discussed in the body of the report (pages 7-8).
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Exploration drilling is ongoing at the Federation prospect, targeting the deposit down plunge and along strike. Future work will include additional infill drilling to upgrade further portions of the Resource. The scale of this drilling is yet to be determined and is likely to depend on the outcomes of the current Scoping Study. Diagrams in the body of the report show the current extent of current drilling, with the main targets for extensions down plunge and along strike. Full details for any future drilling programs are yet to be finalised.

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***
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	Geological data is stored electronically prior to upload into a secure offsite database, managed by Maxwell Geoservices. The drill hole database was provided as a Microsoft Access database. Adjustments, such as compositing and top cutting, were carried out programmatically so a transcript of any changes is recorded and has been checked. Basic drill hole database validation completed include: • Intervals were assessed and checked for duplicate entries, sample overlaps, intervals beyond end of hole depths and unusual assay values. • Downhole geological logging was also checked for interval overlaps, intervals beyond end of hole depths and inconsistent data.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	Dr McKinnon, who takes responsibility for the data underpinning the MRE, works full time for Aurelia Metals and visits the Federation site regularly. Dr McKinnon has a thorough understanding of the geology and data on which the MRE is based. Dr McKinnon has helped to manage the strategy for drilling, exploration and geological data collection. The observed similarities between mineralisation styles at Federation and Hera have led to the adoption of some of the same strategies demonstrated to be successful at Hera (e.g. universal screen fire assays for gold over 0.2g/t). Timothy O'Sullivan, who takes responsibility for the estimated grades, tonnages and classification, has conducted regular site visits to review data collection, drilling procedures and to discuss interpretation and domaining.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	A better understanding of the lithology and structural framework has developed from higher drill density. This improved knowledge has allowed the construction and update of a geological model for the Federation deposit. It is expected that further drilling will improve geological knowledge and lead to continual improvement and refinement of the geological model. The host rocks of the mineralisation at Federation are predominantly interbedded fine-grained quartz–feldspar–mica sandstones and siltstones of the lower Amphitheatre Group. The lead, zinc, gold, silver and copper mineralisation at Federation appears to be structurally controlled and is associated with shearing, brecciation, quartz veining and massive sulphide mineralisation. The style of mineralisation at Federation is similar to other Cobar-style deposits such as the nearby Hera Mine. The mineralisation at Federation is interpreted as tabular bodies that strike northwest-southeast and dip almost vertically. The reported MRE is hosted in several of these tabular bodies. The highest grade areas, in the northeast of the deposit, are hosted by massive sulphide mineralisation, which appears to plunge steeply to the northeast. The orientation of the mineralisation is supported reasonably by drill hole assay data with closer spaced drilling expected to improve confidence in the MRE. The estimate was carried out using dynamic interpolation. A total of 11 surfaces were created in order to locally control the orientation of the search ellipse and variogram models. These surfaces are based on assay data and are intended to reflect the orientation of the structures hosting mineralisation. The confidence in the local orientation of these surfaces is reasonable although additional drilling

		may lead to changes. Alternative interpretations of the orientation and/or continuity of these structures may have a significant effect on the global MRE. Drill hole logging indicates that a paleo-channel composed of transported material covers a portion of the deposit. The drill hole logging was used as a basis to create a wireframe surface representing the base of the paleo-channel. This surface appears to be predictable and there is a relatively high level of confidence in its interpretation. Blocks above this surface were excluded from the MRE. Base of complete oxidation (BOCO) and top of fresh rock (TOFR) surfaces were created based on a combination of drill hole logging and sulphur assay data for the purposes of metallurgical assessment. These oxidation surfaces were also utilised to assign blocks to weathering domains (complete, moderate and fresh) for the purposes of assigning block densities to the moderate and completely weathered material. In this updated MRE only gold and silver have been assumed to be recoverable in the oxide zone, through either gravity or leaching as the base metals will most likely not be amenable to sulphide processing through facilities at either the Hera or Peak Mines. Future metallurgical test work may indicate that some of this material may be recoverable and will then be included in the resource. The depths of the BOCO and TOFR surfaces are reasonably variable and additional drilling may lead to modifications, although this is unlikely to significantly impact the Resource Estimate of the fresh material in the MRE. Several major structures have been identified in the diamond drill core with a predictable orientation, however the displacement and impact on mineralisation is still not well understood. Numerous smaller cross structures have been interpreted to offset mineralisation on a local scale however these structures have not been regularly intersected in drilling and as a result have not been included in the estimation process.
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.*	The reported MRE is constrained by mineable optimised shapes created using Deswik's Stope Optimiser (SO) software. The resource model extends over a length of around 500m and consist of several echelon volumes that dip very steeply to the northeast. The entire resource occurs within a width of 140m and is composed of shapes varying in width from 2 to 25m wide. The resource model extends to a depth of 550m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the*	The concentrations of gold, silver, lead, zinc, copper, iron, sulphur, arsenic and antimony were estimated on density weighted values to better reflect the contained metal within each interval. All estimates were carried out using dynamic interpolation so that the orientation of the search ellipse and variogram models were aligned parallel to the local mineralisation orientation. The density weighted concentration of gold was estimated using Multiple Indicator Kriging (MIK). The gold grades at Federation exhibit a highly positively skewed distribution with coefficients of variation within each domain of over 4.9. The gold estimation therefore show sensitivity to a small number of high grades. MIK is considered an appropriate estimation method for the gold grade distribution because it specifically accounts for the changing spatial continuity at different grades through a set of indicator variograms at a range of grade thresholds. It also reduces the need to use the practice of top cutting. The density weighted concentrations of silver, lead, zinc, copper, iron, sulphur, arsenic and antimony were estimated using Ordinary Kriging. Density was also estimated using Ordinary Kriging on drill hole data. Ordinary Kriging is considered appropriate because the grades are reasonably well structured spatially. Vulcan software was used for both the MIK and Ordinary Kriging dynamic estimates.

	block size in relation to the average sample spacing and the search employed. • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The gold, silver, copper, lead and zinc estimates are considered to have economic significance. The iron, sulphur, arsenic and antimony estimates are not considered to have economic significance, with sulphur, arsenic and antimony being potentially deleterious. Several broad wireframes were produced for the purposes of the estimation. The boundaries between these zones were based on a combination of geology, structure, mineralisation orientation and weathering. Exploratory data analysis (EDA) was then performed on all these domains to optimise the number of domains used in the estimation. The final domains used the best representation of mineralisation orientation, structures and weathering as well as limiting the extrapolation of very high gold, lead and zinc grades into zones of lower grade background mineralisation. Samples were composited to nominal 1.0 m intervals, whilst honouring the domain wireframes. The minimum composite length was set to 0.5 m. A three pass search strategy was used for estimation. Each pass used a search ellipse with four radial sectors. The maximum number of samples per sector was set to four with a maximum of six data per sector for each pass. Additional search parameters are given below: Pass 1: 5x35x35m search, 8-24 samples, minimum 3 drill holes used, maximum 10 data per hole Pass 2: 10x70x70m search, 8-24 samples, minimum 2 drill holes used, maximum 10 data per hole Pass 3: 15x100x100m search, 4-24 samples, minimum 1 drill holes used, maximum 10 data per hole Minimal grade cutting was applied to silver, lead, zinc, copper and arsenic on a domain by domain basis in order to reduce the influence of extreme values on the estimates. The top-cut values were chosen by assessing the high end distribution of the grade population within each domain and selecting the value at which the distribution became erratic. Following estimation, a series of optimised wireframe designs were produced using SO. The SO designs were used to constrain the reported MRE by identifying mineralisation that may have reasonable prospects for eventual economic extraction. The smallest unit for the SO shapes was 5m long and 10m high with a minimum width of 2m. The weighted average NSR values within each shape was required to be at least A$120 for inclusion in the MRE. Mineralisation outside these shapes was unclassified as it was considered unlikely to meet the criterion of eventual economic extraction. A similar approach has been adopted for Mineral Resource reporting at Aurelia's other operating mines and projects in the region. Drill hole spacing at Federation does not occur on a regular grid pattern. Nominal drill hole spacing is around 25m along strike and down dip in the tighter drilled areas and increases to 50m elsewhere. Composite length is 1m. The block model was set up on a rotated grid to honour the main mineralisation orientation. Parent block dimensions are 2x10x10m (X, Y, vertical respectively). The 10m Y and vertical block dimensions were chosen to reflect drill hole spacing and to provide definition for mine design. The shorter two metre X dimension was used to reflect the narrow mineralisation and down hole data spacing. Discretisation was set to 2x5x5m (X, Y, vertical respectively). No assumptions were made regarding the correlation of variables during estimation as each element is estimated independently. Variography was carried out using the software program Isatis.neo on the one metre composited. Each domain was estimated separately using only data from within that domain. The orientation of the search ellipse and variogram models were controlled by coding the block model with local anisotropy to best reflect the local orientation of the mineralised structures.

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<td>The estimation was compared against the prior estimate released in June 2020. The comparison illustrated that, with the increased drill density, mineralisation variability has been better reflected in the new estimation. The comparison also illustrated that the grade tonnage profile has improved. The current estimate is considered to be an improvement on the previous estimation. No mining has occurred at Federation so production data are unavailable for comparison.

The final block model was reviewed visually and it was concluded that the block model fairly represents the grades observed in the drill holes. The estimation was also validated statistically using histograms, scatter plots, swath plots and summary statistics.</td>
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<td>Moisture</td>
<td>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</td>
<td>Tonnages are estimated on a dry weight basis.</td>
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<tr>
<td>Cut-off parameters</td>
<td>• The basis of the adopted cut-off grade(s) or quality parameters applied.</td>
<td>A NSR cut-off was adopted for the polymetallic mineralisation to represent reasonable prospects for eventual economic extraction. The calculation of the NSR considers relative metallurgical recoveries to each of the potential product streams, along with metal prices, payabilities, exchange rates, freight, treatment charges and royalties. Tables 4 and 5 show the price and metallurgical assumptions adopted for the Federation NSR calculation.

A NSR cut-off of A$120 was selected, consistent with a potential underground stope and fill operation. MREs for the Company's operations at Hera and Peak are currently reported on a comparable basis.
Minor near surface oxide and transitional mineralisation is present at Federation and is included in the MRE. Metallurgical recoveries in these zones was assumed to be 85% which is consistent with other operations in the area. Further metallurgical test work is underway to improve the understanding of the recoveries in the oxide material.

Parameters and sources used for the NSR calculations.
<table>
<tr><th rowspan="2">NSR Parameter</th><th colspan="5">Assumed Parameter Value or Source</th></tr>
<tr><th>Au</th><th>Cu</th><th>Pb</th><th>Zn</th><th>Ag</th></tr>
<tr><td>Metal Price (USD)</td><td>$1,554</td><td>$7,055</td><td>$2,280</td><td>$2,690</td><td>$18.80</td></tr>
<tr><td>Exchange Rate</td><td>0.74</td><td>0.74</td><td>0.74</td><td>0.74</td><td>0.74</td></tr>
<tr><td>Recoveries to Con</td><td>25%</td><td>Fixed 0.1% tail grade</td><td>85%</td><td>85%</td><td>80%</td></tr>
<tr><td>Concentrate Grades</td><td>NA</td><td>18%</td><td>65%</td><td>55%</td><td>NA</td></tr>
<tr><td>Recoveries to Dore</td><td>55%</td><td>NA</td><td>NA</td><td>NA</td><td>1%</td></tr>
<tr><td>Payability deductions</td><td>Hera Sales Contract</td><td>Peak Offtake Contract</td><td>Peak Offtake Contract</td><td>Peak Offtake Contract</td><td>Hera Sales Contract</td></tr>
<tr><td>Refining</td><td>Hera Sales Contract</td><td>Peak Offtake Contract</td><td>NA</td><td>NA</td><td>Hera Sales Contract</td></tr>
<tr><td>Product Transport</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td></tr>
<tr><td>Treatment</td><td>NA</td><td>Peak Offtake Contract</td><td>Peak Offtake Contract</td><td>Hera/Peak Offtake Contract</td><td>NA</td></tr>
<tr><td>Freight and Assays</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td><td>Current Hera Contracts</td></tr>
<tr><td>State Royalties</td><td>4%</td><td>4%</td><td>4%</td><td>4%</td><td>4%</td></tr>
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Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.*	The proposed mining method for Federation is underground longhole stoping with cemented and unconsolidated backfill. The reported MRE is limited to blocks that lie within volumes generated by SO software. The smallest mining shape was set at 5m long and 10m high with a minimum width of 2m. The reported MRE includes all estimated blocks that lie within the mining shapes and therefore include internal dilution. Additional external dilution may be incurred during mining.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.*	Mineralogical analysis and metallurgical test work programs have been designed to evaluate the potential for sequential flotation of copper, lead and zinc minerals to produce separate concentrates and to confirm gold deportment to doré and base metal concentrates. Mineralogical analysis on material from Federation has shown a very similar sulphide mineralogy to Hera, dominated by iron-bearing sphalerite and galena with lesser chalcopyrite, pyrrhotite and pyrite. Gold at Federation is also similar in occurrence to Hera, tending to be irregularly distributed and present as discrete (often visible) grains not uniquely associated with any specific sulphide phase. The metallurgical test work results confirm the production of saleable copper, lead and zinc concentrates with no identified penalty elements. Given the results of the test work programs, the NSR and zinc equivalency calculations for Federation have been developed using a process flowsheet with crushing, grinding, gravity gold and sequential flotation producing gold doré and separate copper, lead and zinc concentrates.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	The Federation Project is at a relatively early stage and a full assessment of the environmental factors has not been completed. It is assumed that the environmental factors and requirements such as the disposal of waste and process residue will be similar to the practices used at the nearby Hera mine. It assumed that process residue disposal will take place in existing facilities at Hera Mine, which are currently licensed for this purpose. It is assumed that waste rock will be utilised for surface hard stand areas, road and stope backfill. Any remaining waste rock will be stored in surface stockpiles.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the*	Dry bulk density is measured on-site using an immersion method (Archimedes principle) on selected core intervals for full 1.0 m assay samples. A total of 1,312 density measurements have been taken from drill core at the Federation deposit. Measured density values show that the density of rock at Federation varies significantly. The density variations are largely due to the presence of sulphide mineralisation that has the effect of increasing density. Aurelia calculated

	measurements, the nature, size and representativeness of the samples.	the density values for drill hole intervals that had not been subjected to density measurements by calculating the normative mineralogy of each sample, and then species weighting the density calculation. This approach takes into account the density differences between galena, sphalerite, chalcopyrite, pyrrhotite and gangue and compares well with the actual measurements. This approach does not take voids into account.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The MRE classification is based on drilling density, estimation passes and confidence in the geological interpretation. The estimation was constrained within the SO designs to report the MRE by selecting mineralisation that may have reasonable prospects for eventual economic extraction. Material drilled on a nominal 25m spacing and estimated in the first estimation pass, has been classified as Indicated. Material that has a nominal drill hole spacing of less than 50m, estimated in either pass 1 or 2 and does not meet the criteria for Indicated has been reported with an Inferred classification. All remaining blocks are coded as unclassified. At this stage no mineralisation has been classified as Measured. The Competent Person considers this classification approach appropriate for the Federation deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No external audits have been performed on this estimation.
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 stated 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.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The relative accuracy and confidence level in the MRE is considered to be in line with the generally accepted accuracy and confidence of the nominated JORC Mineral Resource classifications. This has been determined on a qualitative, rather than quantitative, basis and is based on Aurelia Metals experience with a number of similar deposits in the Cobar region. The main factor that affects the relative accuracy and confidence of the MRE is sample data density. A significant proportion the reported Mineral Resource is classified as Inferred for which quantity and grade are estimated on the basis of limited geological evidence and sampling. Drill hole data and an understanding of the mineralisation style is sufficient to imply but not verify geological and grade continuity. It is considered reasonable to expect that the majority of Inferred Mineral Resources would be upgraded to Indicated Mineral Resources with continued infill and exploration drilling. The estimates are global. The tonnages relevant to technical and economic analysis are limited to those classified as Indicated Mineral Resource.