Maiden Federation Resource Estimate

HIGHLIGHTS

- Maiden JORC-compliant Indicated and Inferred Mineral Resource Estimate (MRE) for the Federation deposit of **2.6 million tonnes at 7.7% Pb, 13.5% Zn, 0.8g/t Au & 9g/t Ag**, containing:

  - **197kt contained lead;**

  - **348kt contained zinc;**

  - **67koz contained gold; and**

  - **755koz contained silver**

- Estimate based on a A$120/t Net Smelter Return (NSR)[1] cut-off, consistent with the MRE at Aurelia's operating Hera Mine located ten kilometres to the north.

- **Average NSR for Federation MRE (A$373/t)** compares with existing Hera MRE of A$227/t (at 30 June 2019)[1]. Existing Hera MRE is 2.1 million tonnes at 1.8g/t Au, 2.8% Pb, 4.2% Zn & 34g/t Ag.

- The MRE is defined by over 29,000 metres of drilling since the first drill intercept in April 2019 at a discovery cost of less than US$9 per tonne of zinc metal (equivalent)[2].

- Mineralisation ranges from 80m to 550m depth and remains open in multiple directions; exploration drilling is ongoing with extensive further prospectivity to be tested.

- Scoping Study to evaluate project development options has commenced; currently anticipating processing through the existing plant at the Hera Mine.

SUMMARY

Aurelia Metals Limited (**Aurelia** or the **Company**) is pleased to announce the completion of a maiden Mineral Resource Estimate (MRE) for the Federation deposit, located ten kilometres south of the Company's operating Hera Mine near Nymagee, New South Wales. The MRE has been reported in accordance with the guidelines of the JORC Code (2012 Edition) using an NSR cut-off of A$120 per tonne[1].

The MRE contains Indicated and Inferred Resources totalling 2.6Mt at 7.7% Pb, 13.5% Zn, 0.8g/t Au and 9g/t Ag (**Table 1**). Indicated Resources are currently restricted to an area of higher density drilling at the top of the deposit. Resources have been modelled in fresh rock only, extending from 80 to 550 metres below surface (**Figure 1**). Indicative grade-tonnage curves are shown in **Figure 2**.

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

Class	Tonnage (Mt)	Grade					Contained Metal			
		Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	NSR[1] (A$/t)	Pb (kt)	Zn (kt)	Au (koz)	Ag (koz)
Indicated	0.1	6.3	12.1	2.2	9	$407	6	11	6	26
Inferred	2.5	7.7	13.5	0.8	9	$372	192	337	61	729
Total	**2.6**	**7.7**	**13.5**	**0.8**	**9**	**$373**	**197**	**348**	**67**	**755**

Note: The Federation MRE utilises a A$120/t NSR cut-off within mineable shape volumes that may include internal dilution. Tonnage estimates have been rounded to the nearest 0.1Mt and contained metal to the nearest 1,000 tonnes. Estimates may not sum due to rounding.

[1] NSR is the Company's estimate based on factors including assumed metal prices, metallurgical recoveries, payabilities and other offsite costs. Full details of these assumptions are given on page 7. For comparison, the average NSR of the 2019 Hera MRE when calculated using the Federation NSR metal price assumptions is A$224/t.

[2] Zinc equivalent utilises identical metal prices and metallurgical recoveries to those assumed in the NSR estimates (see page 7) and is only referenced for discovery cost calculation. A zinc equivalent value was not used for mineral resource estimation or reporting.
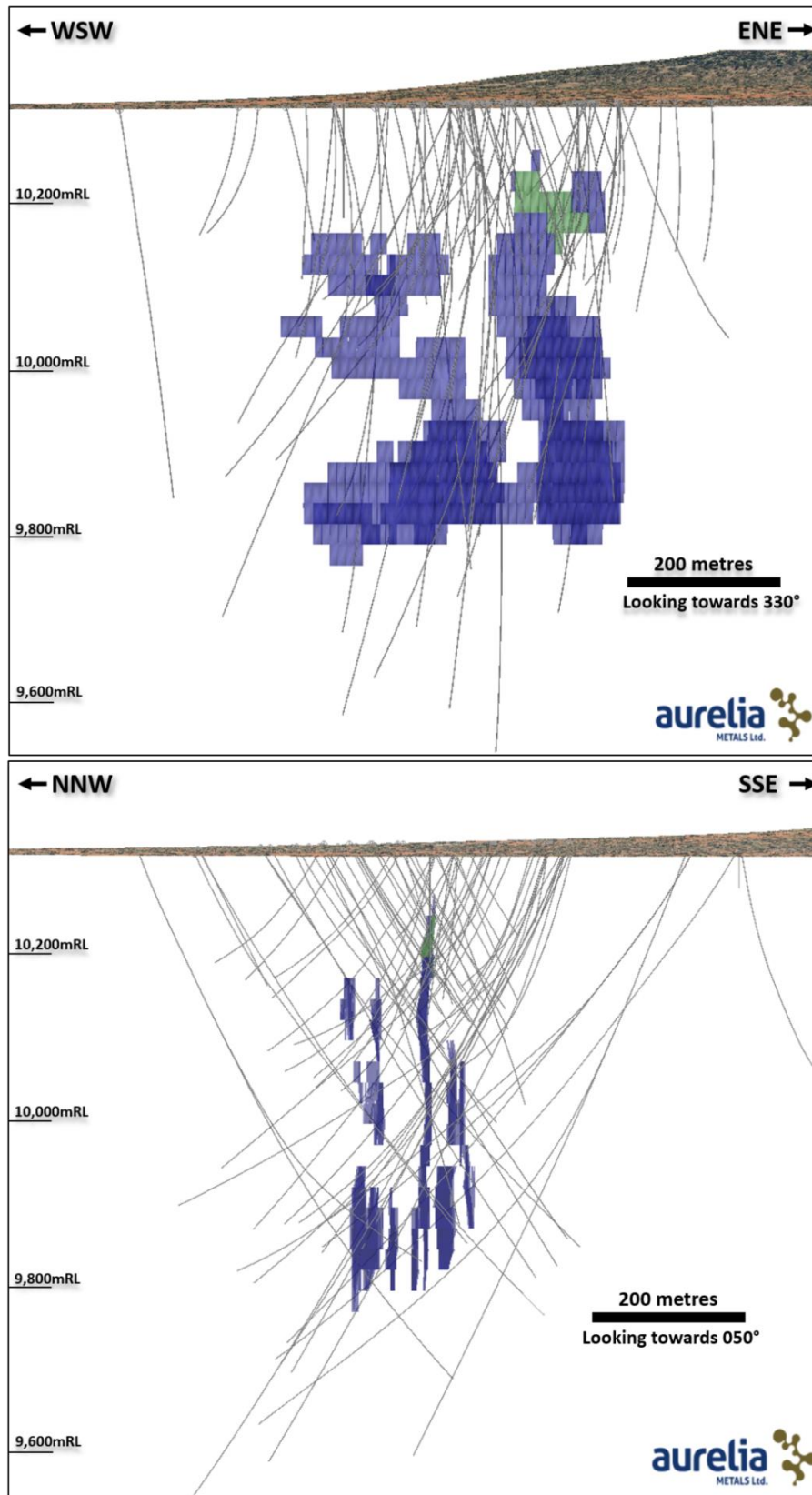
Figure 1. Long sectional (top) and cross sectional (bottom) view of the Federation MRE model showing drilling and surface topography, with Indicated in green and Inferred in blue.
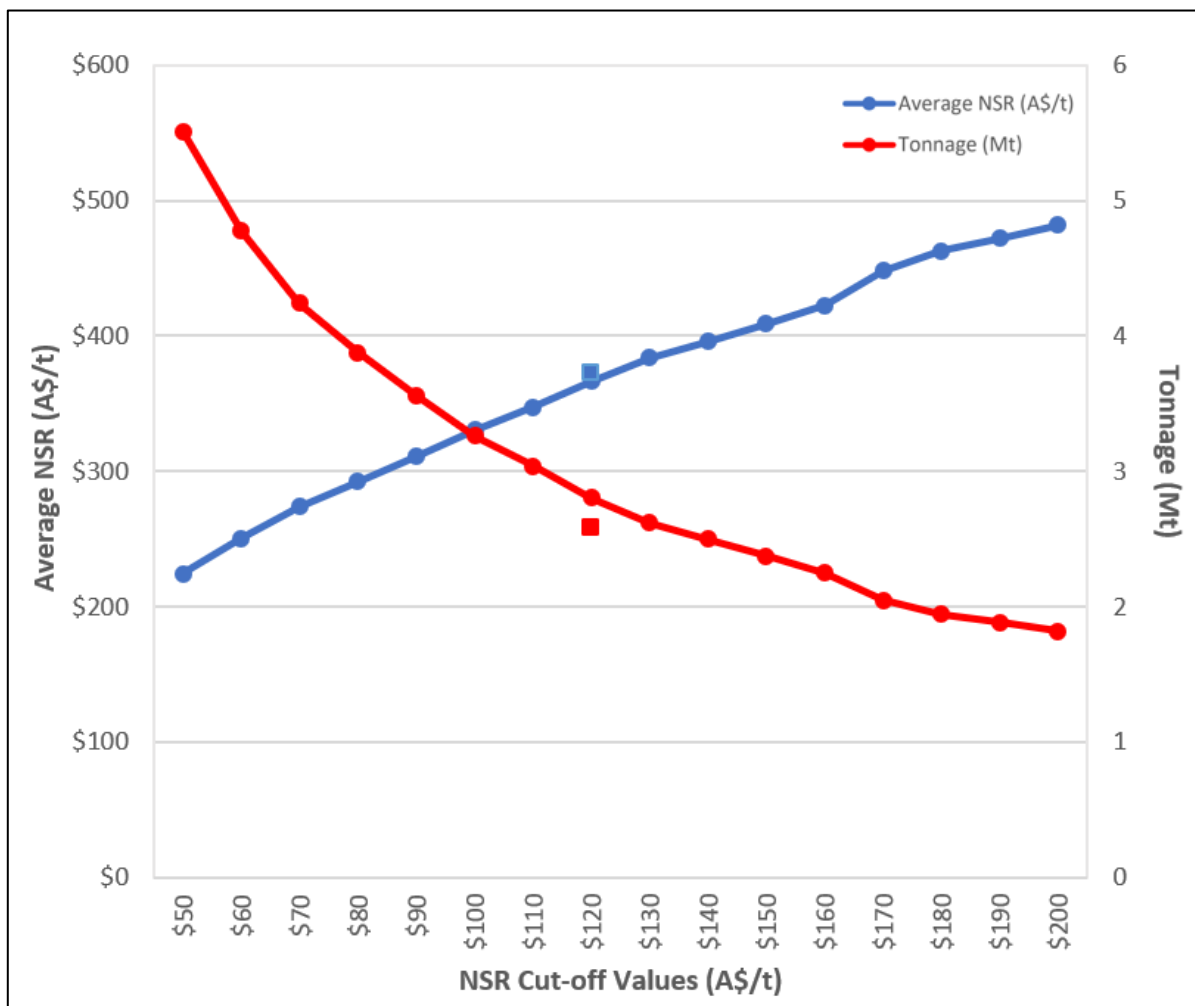
Figure 2. Indicative grade-tonnage curves for the Federation deposit on a block by block basis. The square points at A$120 NSR correspond to the MRE showing a minor reduction in tonnage after delineation of minable shapes (note that the close agreement for the two evaluation methods shown at A$120 NSR may not be true for all grade ranges)

FEDERATION MAIDEN MINERAL RESOURCE ESTIMATE

Background

The maiden Federation MRE is the culmination of more than 29,000 metres 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 base metals concentrate. The MRE has been prepared by Rupert Osborn of H & S Consultants, with Aurelia responsible for compilation of exploration and drilling data, assay validation and geological interpretations.

Location and Geology

The Federation deposit is located fifteen kilometres south of the historic copper mining town of Nymagee and ten kilometres 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, while strong lead and zinc sulphide mineralisation was intercepted at the Federation prospect in April 2019. The 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* the Burthong Road, which also services the Hera mine site (**Figure 3**).
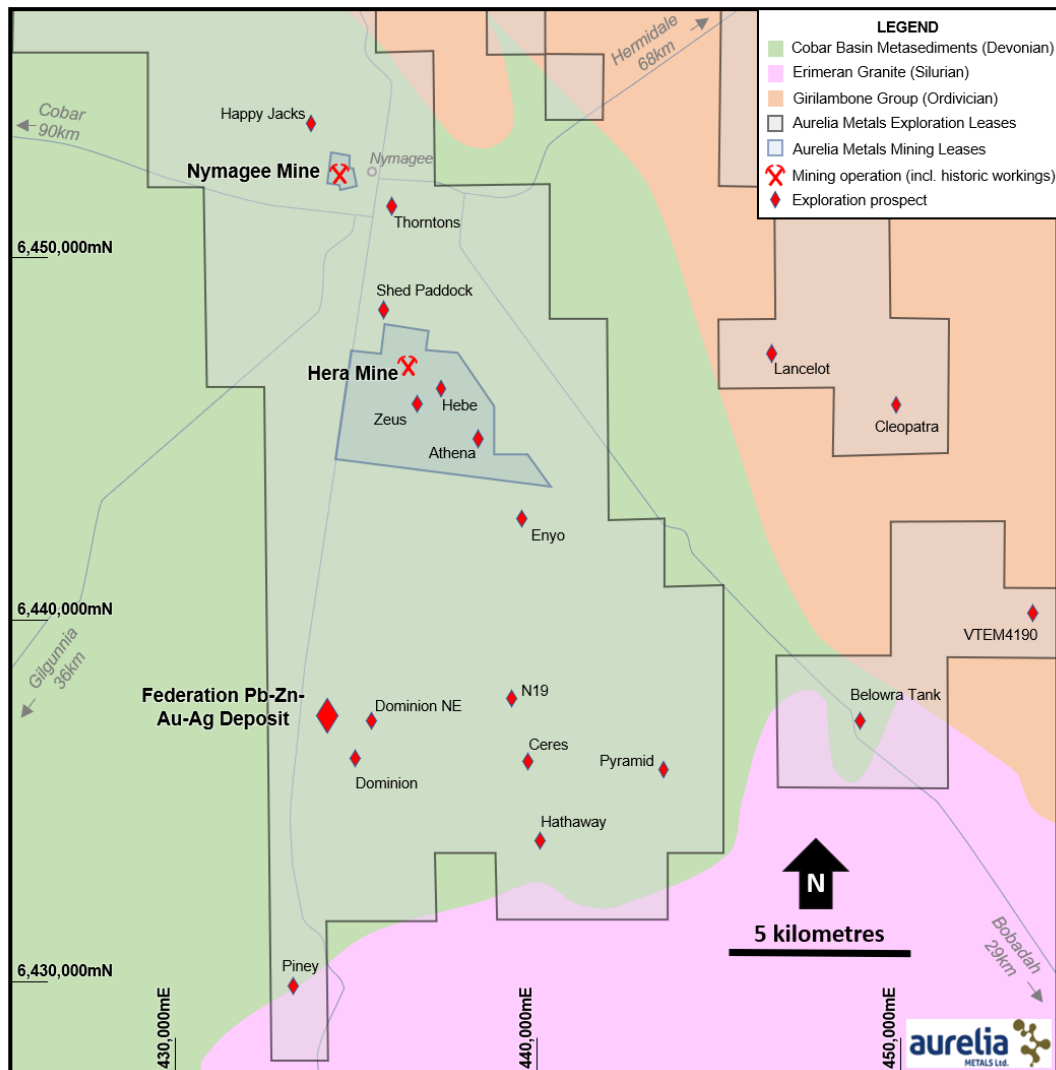
Figure 3. Location of the Federation Pb-Zn-Au-Ag deposit near Nymagee, NSW.

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 (**Figure 4**). 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. Late bedding-parallel faults have been identified at Federation and 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.
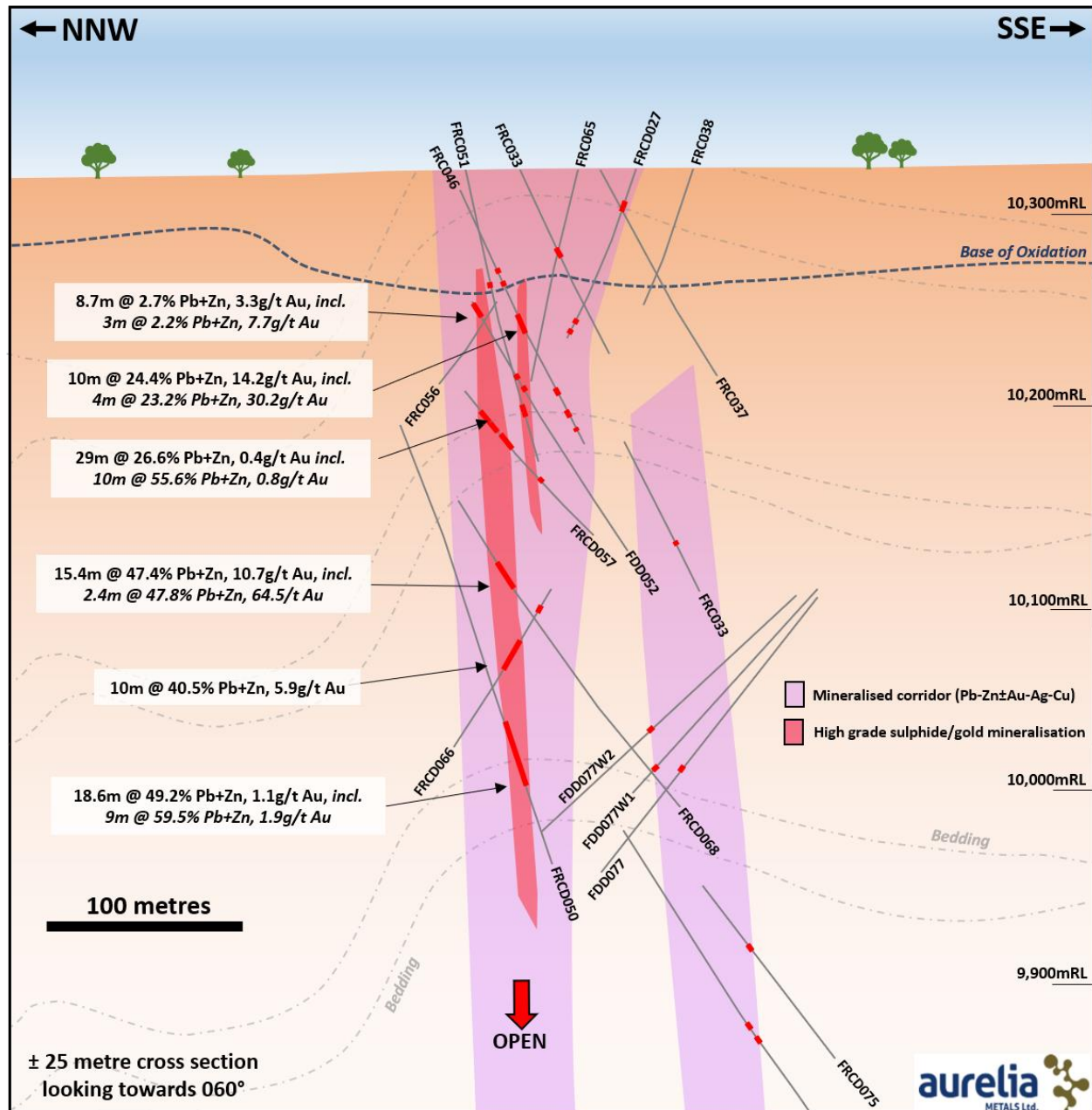
Figure 4. Cross section through part of the high grade northeastern mineralised corridor showing the interpreted geometry of the mineralisation, along with selected drill intercepts (full drill hole details can be found in the Company's Group Exploration Updates for 2020, available at www.aureliametals.com.au).

Drilling, Sampling and Assays

Exploration drilling has been undertaken using reverse circulation (RC) percussion and diamond drilling methods. A number of deeper holes at Federation 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 fore-runner company to Aurelia), the vast bulk of drilling has been completed by the Company between April 2019 and May 2020 (as shown in **Table 2**).

All RC drilling at Federation has been completed using 143mm face sampling bits. Sampling of RC chips is directly off 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 1 metre basis, with duplicates collected on average every 25 samples.

Table 2. Federation drilling details.

Company	Period	Drill Type	No. of Holes	Metres Drilled
YTC Resources Limited	2013	RC Percussion	4	858.0
Aurelia Metals Limited	2019 to 2020	RC Percussion	52	14,971.0
		Diamond	31	14,047.5
Total			**87**	**29,876.5**

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 150 metres 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 are nominally 1 metre but can range from 0.5 to 1.5 metres as necessitated by geology or mineralisation contacts.

Samples were dried, crushed and pulverised to 85% passing 75 microns. Gold was assayed by 30g fire assay with an AAS finish, with a detection level of 0.01ppm. For base metals a 0.5g charge is 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 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

Seven broad wireframes were produced for the purposes of estimation. The boundaries between the seven zones are nominal low grade breaks that parallel the orientation of mineralisation. An additional high grade wireframe was created to encompass a massive sulphide lens that lies entirely within one of the broad wireframes. This wireframe was used to limit the extrapolation of very high lead and zinc grades.

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 10 metre Y and vertical block dimensions were chosen to reflect drill hole spacing and to provide definition for potential mine planning. 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).

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

Variography was carried out using the software program GS3 on the one metre composited data from the two domains that contain the most data. The other domains used the variogram parameters from a nearby domain. Each domain was estimated separately using only data from within that domain. The orientation of the search ellipse and variogram model was controlled using surfaces designed to 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. The estimated density weighted concentrations were then divided by the estimated density to produce grade estimates for each block. Arsenic was also estimated but was not density weighted.

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. A similar approach has been successfully employed at Hera for estimating gold.

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. Micromine software was used for both the MIK and OK dynamic estimates.

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: 4x35x35m search, 12-24 samples, minimum 3 drill holes used, maximum 6 data per hole
Pass 2: 5x60x60m search, 12-24 samples, minimum 2 drill holes used, maximum 6 data per hole
Pass 3: 5x60x60m search, 6-24 samples, minimum 1 drill holes used, maximum 6 data per hole

Minimal grade cutting was applied to density weighted values for gold, silver, lead, zinc, copper and arsenic on a domain by domain basis in order to reduce the influence of extreme values on the resource 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 Datamine's Mine Shape Optimiser (MSO). The MSO 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 MSO shapes is 5 metres long, 25 metres high, with a minimum width of 2 metres. The weighted-average grade of each shape must reach a minimum A$120/tonne to be included in the MRE. Mineralisation outside these shapes remains unclassified as it is unlikely to meet the criterion of eventual economic extraction. A similar approach has been adopted for Mineral Resource reporting at all of Aurelia's other operating mines and projects in the region.

Metallurgy, Metal Price and Net Smelter Return (NSR) Assumptions

An NSR value was applied to the Federation MRE. NSR values are commonly used to assign a dollar value to polymetallic mineralisation, a practice used at AMI's operating mines in the region. The NSR represents the net recoverable value per tonne at any particular combination of Pb, Zn, Au and Ag grades. The NSR calculation considers recoveries associated with each of the process streams, along with metal prices, payabilities, exchange rates, freight, treatment charges and royalties. Metal prices and exchange rates used for the NSR calculation are given in **Table 3**.

Table 3. Metal price and exchange rate assumptions used to calculate the NSR values for Federation.

Commodity	Unit	Assumed Value
Lead	A$/t	3,081
Zinc	A$/t	3,514
Gold	A$/oz	2,100
Silver	A$/oz	25.40
Exchange Rate	A$/US$	0.74

Given the close proximity of the Federation deposit to the operating Hera Mine, and the similarity in mineralisation styles, the NSR for Federation has been developed with the assumption that material from this deposit could be processed at the Hera processing facility. Hera produces a bulk lead-zinc concentrate by flotation and gold doré via gravity separation and leaching processes.

Metallurgical test work on the Federation deposit is still in the early stages. 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.

Preliminary test work on sulphide material from Federation was designed to simulate the flotation

parameters used in the Hera processing plant. Both low and high grade composite samples were tested, with more than 91% lead and 92% zinc recovered to a bulk concentrate of +50% Pb+Zn in each case. This performance compares well with the current lead and zinc recoveries at Hera (90% and 91% respectively) and the Hera parameters were therefore adopted for the Federation NSR calculation. The same test work also demonstrated comparable recoveries of silver in the Federation mineralisation to the ores at Hera (90%).

Test work to establish the likely recoveries for the gold at Federation is underway. Historical gold recovery at Hera is 90% with a slightly lower recovery (85%) assumed for the Federation NSR calculation to account for an overall lower gold grade. Minor near-surface oxide and transitional mineralisation is present at Federation but was excluded from the MRE as metallurgical recoveries in these zones is uncertain. A list of recovery and concentrate parameters used in the Federation NSR calculation is shown in **Table 4**, along with a comparison to the Hera resource NSR parameters.

Table 4. Recovery and concentrate grade parameters used in the Federation NSR estimate, along with a comparison to the NSR parameters used for the Hera MRE.

Parameter	Federation NSR	Hera NSR
Lead Recovery to Bulk Concentrate	**90%**	90%
Zinc Recovery to Bulk Concentrate	**91%**	91%
Gold Recovery to Doré	**85%**	90%
Silver Recovery - Total	**90%**	90%
Bulk Concentrate Grade (Pb+Zn)	**55%**	55%

Classification of Resources

The MRE classification is based on the search passes used to estimate the blocks. Pass 1 nominally equates to an Indicated classification and Pass 2 and 3 nominally forms the Inferred classification.

In order to produce a single classification, the passes were averaged for each MSO shape. The classification of a limited number of stopes was manually altered to reflect the local confidence in the estimate and to consolidate areas of a single classification.

The Indicated Resources are restricted to an area drilled on a nominal 25 metre spacing. Inferred Resources occur in areas where drill hole spacing does not meet the criteria for Indicated. The maximum distance of extrapolation from drill hole data is 60 metres in the major axes. Around 45% of the reported resource was estimated using data from only one nearby drill hole and may therefore be considered to be extrapolated (**Figure 5**).
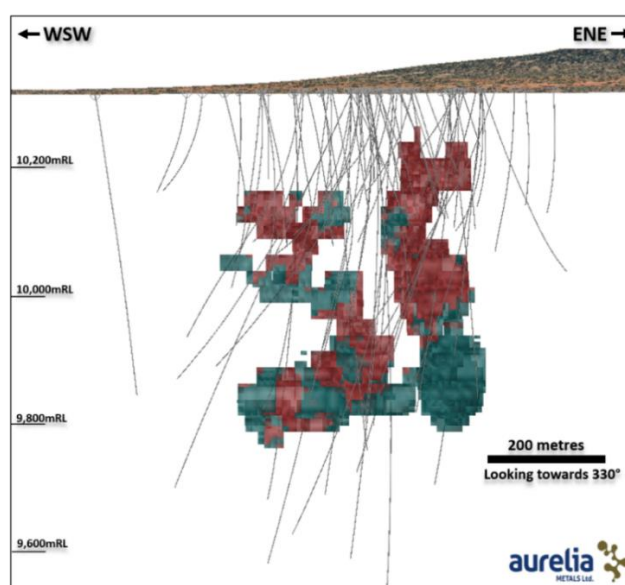

Figure 5. Relative locations of interpolated (red) and extrapolated (green) resources in the Federation MRE block model.

Mining Method and Cut-off Grade

AMI 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 fill method similar to that employed at the Company's operating Hera and Peak mines, with anticipated processing through the established Hera facility. MREs for the Company's operations at Hera and Peak are also reported using a A$120 NSR cut-off.

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 is also set to begin immediately in the upper parts of the deposit, aiming to build confidence in the MRE and gather data for mining and processing evaluations.

The Company has also now commenced a Scoping Study to investigate project development options. The Scoping Study will consider mining, processing and infrastructure scenarios to identify a viable subset for more detailed evaluation during a Pre-Feasibility Study. Baseline environmental studies have been initiated and will proceed in parallel with the Scoping Study to inform project decisions and facilitate permitting and approvals.

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 Rupert Osborn, BSc, MSc, MAIG, who is an employee of H&S Consultants Pty Ltd. Both Dr McKinnon and Mr Osborn 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 Osborn 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.

For further information contact:

Dan Clifford
Managing Director and CEO
Aurelia Metals Limited
+61 7 3180 5000

Media contact
Michael Vaughan
Fivemark Partners
+61 422 602 720

Section 1. Estimation and Reporting of Mineral Resources (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.*	• RC percussion and diamond core drilling was undertaken by Budd Exploration Drilling Pty Ltd. • Chip samples were collected using a rotary cone or riffle splitter directly off the drill rig. All samples were collected on a dry basis. • Core samples were defined by Aurelia geologist during logging to honour, geological and mineralogical boundaries, cut in half by diamond saw, 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 1 metre length. Diamond drilling was used to obtain core samples of a nominal 1 metre 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 75 microns. 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: Ag-0.2ppm, As-2ppm, Cu-1ppm, Fe-0.01%, Pb-2ppm, S-0.01%, Zn-2ppm. 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). Reverse circulation percussion (RC) methods used in this program utilised a face sampling 143 millimetre bit. Pre-collars with RC down to between 100 and 350 metres 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 through the use of 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 resource estimate. 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. Data collected includes: • Nature and extent of lithologies • Relationship between lithologies • Amount and mode of occurrence of ore 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 recovery, RQD, fracture frequency, qualitative 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) • Both qualitative and quantitative data is collected • 100% of all recovered core is geologically and geotechnically logged, 100% of all recovered 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*	• Core is sawn 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 ¼ sampled. • All RC samples were split using a rotary cone or riffle sampler directly off 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.

	dry.	• Samples are dried, crushed and pulverised to 85% passing 75 microns. This is considered to appropriately homogenise the sample to allow subsampling for the various assay techniques.
	• *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.*	• 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 2 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 Au 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.
	• *Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second- half sampling.*	• Systematic duplicate sampling was employed during the Federation RC program. A regular duplicate was taken at predetermine sample intervals (averaging 1:25 samples). Further, samples occurring in mineralised zones are duplicated, increasing the duplicate rate to one sample every 15-20 samples.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• 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 reference material 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 intersection 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 ±5cm picked up by the mine surveyors. • Drill holes are downhole-surveyed from collar to the end of hole by drilling personnel using 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 6-30m. 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.*	• As the prospect discussed represents a relatively new discovery, data spacing is extremely variable. Drill hole spacing at Federation ranges from 25 to 125 metres. • The drill spacing is considered appropriate to support the predominantly Inferred classification for the Federation MRE. Additional closer spaced drilling will be required in the future to upgrade the resource to higher classifications. • 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. However, an audit and review of the sampling regime at Hera, which uses identical sampling procedures, was undertaken by H&S Consultants in November 2015. Recommendations from this review form part of the current sampling practices at Hera and regionally.

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. As discussed in the report, 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 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 include 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: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o 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.	• As this report predominantly concerns the MRE for Federation, full exploration details are not discussed in detail in this report.

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.*	• As this report predominantly concerns the MRE for Federation, full exploration details are not discussed in detail in this report.
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').*	• As this report predominantly concerns the MRE for Federation, full exploration details are not discussed in detail in this report.
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.*	• See body of report.
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.*	• As this report predominantly concerns the MRE for Federation, full exploration details are not discussed in detail in this report. All drill results from the 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). Preliminary mineralogical and metallurgical test work results 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 currently ongoing at the Federation prospect, targeting the deposit down plunge and along strike. Future work will include additional infill drilling to upgrade selected portions of the resource from Inferred to Indicated status. The scale of this drilling is yet to be determined and will vary depending on the progress and outcomes of a planned scoping study to commence in July 2020. • 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	**Explanation**	**Deposit Specific Information**
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.*	All geological data is stored electronically prior to upload into a secure offsite database, managed by Maxwell Geoservices. The drill hole database was provided to H&SC as a Microsoft Access database. H&SC did not modify these tables and any 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 by H&SC 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*	Dr McKinnon, who takes responsibility for the data underpinning the Mineral Resource Estimate, works full time at the Hera Mine and visits the Federation site regularly. Dr McKinnon has a thorough understanding of the geology and data on which the Mineral Resource Estimate is based. Dr McKinnon has helped to manage the strategy for drilling, exploration and geological data collection. The observed similarities of Federation to Hera in mineralisation style have led to the adoption of some of the same strategies demonstrated to be successful at Hera (e.g. universal

	why this is the case.	screen fire assays for gold over 0.2g/t). Rupert Osborn, who takes responsibility for the estimated grades, tonnages and classification has not visited the Federation deposit due to travel restrictions caused by the COVID-19 outbreak.
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 purely geological model of the Federation deposit has not been produced as there are no obvious lithological marker units to allow a lithology/stratigraphy model to be constructed. 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 resources are found in eight of these tabular bodies. The highest grade areas, in the northwest of the deposit, are hosted by massive sulphide mineralisation, which appears to plunge steeply to the northwest. The orientation of the mineralisation is supported reasonably by drill hole assay data although closer spaced drilling will be necessary to raise the classification of the estimated resources. 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 resource estimate. 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 resource estimate. 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. Only fresh rock, i.e. material below the TOFR surface, is reported as part of the Mineral Resource as it is assumed that the transitional and oxidised material will not be amenable to the sulphide processing facility already existing at Hera Mine. 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. Aurelia are currently investigating processing options as it may be possible to extract the relatively low grade gold mineralisation that occurs in the oxide and transitional zones, which may have a minor impact on the global resource estimate. There is some suggestion of faulting present in some of the diamond drill core although the orientation, displacement and impact on mineralisation is not well understood at this stage. As a result, no faulting has been included in the estimation process although this may change as a deeper understanding of the deposit is gained through additional drilling. It is possible that the inclusion of faults in the estimation will have a local impact but it is considered unlikely that the global resource estimate will be significantly altered.
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 resources are limited to mineable optimised stopes created using Datamine's Mineable Shape Optimiser. The reported resources span a length of around 400 m and consist of ten en echelon volumes that dip very steeply to the northeast. The entire resource occurs within a width of 140 m and is composed of stopes varying in width from 2 to 25 m wide. The upper limit of the reported estimates is limited by the Top of Fresh Rock surface, which occurs at a depth of around 80 m from surface and the lower limit of the resource extends to a depth of 550 m below the 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 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 concentrations of gold, silver, lead, zinc, copper, iron, sulphur and antimony were estimated on density weighted values in order to better reflect the contained metal within each interval. The estimated density weighted concentrations were then divided by the estimated density to produce grade estimates for each block. Arsenic was also estimated but was not density weighted.

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 estimates at Federation 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 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.

The Micromine software was used for both the MIK and Ordinary Kriging dynamic estimates.

The gold, silver, lead, zinc estimates are considered to be of economic significance. The copper, iron, sulphur, arsenic and antimony estimates are not considered to be of economic significance, with sulphur, arsenic and antimony being potentially deleterious.

H&SC produced seven broad wireframes to split the deposit up into smaller volumes for the purposes of estimation. The boundaries between the seven zones are nominally low grade breaks that parallel the orientation of mineralisation. An additional high grade wireframe was created to encompass a massive sulphide lens that lies entirely within one of the broad wireframes. This wireframe was used in order to limit the extrapolation of very high lead and zinc grades. The broad wireframes were used as hard boundaries for estimation so that blocks inside a wireframe were estimated using only samples from within the wireframe. The high grade wireframe was treated as a 'one-way' boundary so that blocks inside were estimated using samples inside and outside the wireframe but samples inside the wireframe were not used to estimate blocks outside the wireframe. It is likely that additional high-grade wireframes will be necessary to constrain the extrapolation of high lead and zinc mineralisation when new drill hole data is available. At this stage it is unknown whether this will increase or decrease the estimated tonnage and grades.

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 utilised a search ellipse with four radial sectors. The maximum number of samples per sector was set to four with a maximum of 6 data per sector for each pass. Additional search parameters are given below:

1. 4x35x35m search, 12-24 samples, minimum 3 drill holes used, maximum 6 data per hole
2. 5x60x60m search, 12-24 samples, minimum 2 drill holes used, maximum 6 data per hole
3. 5x60x60m search, 6-24 samples, minimum 1 drill holes used, maximum 6 data per hole

The maximum distance of extrapolation of estimates from data points is 60 m. Around 45% of the reported resource was estimated using data from the nearest single drill hole and may therefore be considered to be extrapolated. This extrapolation is supported by the fact that continuity of mineralisation appears to be greater than 300 m along strike and down plunge. |

		The drill hole spacing at Federation does not occur on a regular grid pattern. Nominally drill hole spacing is around 25 m along strike and down dip in the tighter drilled areas and increases to 50 m outside of this. Composite length is 1 m. The block model was set up on a rotated grid to honour the main mineralisation orientation. Parent block dimensions are 2x10x10 m (X, Y, vertical respectively). The 10 metre Y and vertical block dimensions were chosen to reflect drill hole spacing and to provide definition for mine planning. The shorter two metre X dimension was used to reflect the narrow mineralisation and down hole data spacing. Discretisation was set to 2x5x5 (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 GS3 on the one metre composited data from the two domains that contain the most data. The other domains used the variogram parameters from a nearby domain.
		Each domain was estimated separately using only data from within that domain. The orientation of the search ellipse and variogram model was controlled using surfaces designed to reflect the local orientation of the mineralised structures.
		Grade cutting was applied to density weighted values for gold, silver, lead, zinc, copper and arsenic on a domain by domain basis in order to reduce the impact of extreme values on the resource 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.
		This is the initial Mineral Resource Estimate of the Federation deposit so previous reported resources were unavailable for comparison. Mr. Osborn of H&SC conducted two previous estimates in November 2019 and April 2020 although these were not considered to be reportable under JORC due to lack of drill hole coverage and geological understanding. The current estimate is considered to take appropriate account of these estimates. No mining has occurred at Federation so production data are unavailable for comparison.
		The final H&SC block model was reviewed visually by H&SC and Aurelia and it was concluded that the block model fairly represents the grades observed in the drill holes. H&SC also validated the block model statistically using histograms, scatter plots, swath plots and summary statistics.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry weight basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade is a Net Smelter Return (NSR) value, which is used to assign a dollar value to the polymetallic mineralisation in order to simplify reporting. An NSR cut-off of AUD$120 was selected by Aurelia, consistent with a potential underground stope and fill operation. Mineral Resource Estimates for the Company's operations at Hera and Peak are currently reported using a $120 NSR cut-off.
		Aurelia provided the NSR calculation to H&SC and it is based on values used at the Hera Mine. Hera is an operating mine and the NSR calculation is well developed and informed. The NSR calculation takes into account the recoveries associated with each of the two processing routes; namely production of Au and Ag dore and Pb-Zn concentrate (that also includes Ag credits). The NSR also takes account of the metal price, exchange rates, freight and treatment charges and royalties. The metal recoveries and metal prices used in the NSR calculation are given below. Costs associated with royalties, processing and transport are considered to be commercially sensitive to Aurelia and are not given. The calculation formula is complex as it takes into account the two processing routes and the recoveries and costs associated with each. For this reason the formula is not provided. An AUD$ to USD$ exchange rate of 0.74 was assumed.

Recoveries:

Parameter	Recovery
Gold Recovery	85%
Silver Recovery - Dore	10%
Silver Recovery - Concentrate	80%
Lead Recovery - Concentrate	91%
Zinc Recovery - Concentrate	90%

Assumed metal prices:

Metal	Price (US$)
Gold (oz)	1,554
Ag (oz)	18.8
Lead (t)	2,280
Zinc (t)	2,600

All elements included in the NSR calculation are have the potential to be recovered and sold, as is currently the case for the Hera Mine.

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 longwall stoping. The reported resources are limited to blocks that lie within planned stopes that were designed using Datamine's Mining Shape Optimiser. The Smallest Mineable Unit (SMU) is 5 m long, 25 m high, with a minimum mining width of 2 m. The reported resources include all estimated blocks that lie within the planned stopes and therefore include internal dilution. Additional external mining 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.*	Given the similarity in mineralisation styles and close proximity, the NSR for Federation has been developed with the assumption that material from this deposit could be processed at the Hera processing facility. Hera currently produces a bulk lead-zinc concentrate and gold bullion via gravity separation and leaching processes. Metallurgical test work on the Federation deposit is still in the early stages. Preliminary test work on sulphide material from Federation has been designed to simulate the flotation parameters currently employed in the Hera processing plant. Both low and high grade composites were tested, with more than 91% lead and 92% zinc recovered to a bulk concentrate of +50% Pb+Zn in each case. This performance compares well with the assumed recoveries for lead and zinc at Hera (90% and 91% respectively), and the Hera parameters have therefore been adopted for the Federation NSR. The same test work also demonstrated comparable recoveries of silver in the Federation mineralisation to the ores at Hera (90%). Test work to establish the likely recoveries for the gold at Federation is still in progress. The assumed overall recovery of gold at Hera is 90%; a slightly reduced recovery of 85% has been assumed for the Federation MRE to account for an overall lower gold grade. Full details of the metallurgical assumption used in the MRE can be found on pages 7-8 of this report.

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 carried out. It is assumed that the environmental factors and requirements such as the disposal of waste and process residue will be similar to the steps taken 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 as stope fill and any remaining waste will be added to surface dumps.
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 measurements, the nature, size and representativeness of the samples.	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 the rock at Federation varies significantly. The density variations are largely due to sulphide mineralisation which has the effect of increasing density. Aurelia calculated 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 but
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 classification is based predominately on the search pass used to estimate the block. Pass 1 nominally equates to Indicated Resources and Passes 2 & 3 nominally forms the Inferred Resources. In order to produce a single classification for each stope the passes were averaged for each MSO stope. The classification of a few stopes was manually altered to reflect the confidence in the estimate and to consolidate areas of a single classification. The Indicated Resources are nominally restricted to an area drilled on 25 m spacing. Inferred Resources occur in areas where drill hole spacing does not meet the criteria for Indicated. The maximum distance of extrapolation from drill hole data is 60 metres. This scheme is considered by H&SC to take appropriate account of all relevant factors, including the relative confidence in tonnage and grade estimates, confidence in the continuity of geology and metal values, and the quality, quantity and distribution of the data. The classification appropriately reflects the Competent Persons' (Dr Adam McKinnon and Rupert Osborn) view of the deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	This Mineral Resource estimate has been reviewed by Aurelia personnel and the estimation process was peer reviewed by H&SC. No material issues were identified as a result of these reviews.

| 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 Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated JORC Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on H&SC's experience with a number of similar deposits in the Cobar region. The main factor that affects the relative accuracy and confidence of the Mineral Resource estimate is sample data density.

The vast majority of the reported resource is 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 exploration.

The estimates are global. The tonnages relevant to technical and economic analysis are limited to those classified as Indicated Mineral Resources. |