METALLURGICAL TESTWORK PROGRAM

Highlights

- **Phase 1 of 2021 metallurgical testwork program commenced.**
- **Substantial body of pre-existing testwork underpinning revised flowsheet means the focus of the current program is predominantly optimisation rather than validation.**
- **Bulk sulphide flotation and POX flowsheet designed to recover more metal into higher quality, higher payability products that minimise downstream charges.**
- **Current metallurgical program to inform Walford Creek Pre-Feasibility Study, due for completion in H1 CY2022.**

Aeon Metals Limited (ASX: AML) (Aeon or the Company) provides an update on the metallurgical testwork program for its 100%-owned Walford Creek Copper-Cobalt Project (Walford Creek) located in north-west Queensland. This update provides further detail with respect to the bulk sulphide flotation and pressure oxidative leach flowsheet outlined in Aeon ASX release dated 15 April 2021, *Walford Creek PFS Update and Next Steps*.

The new bulk sulphide flotation and pressure oxidative leach flowsheet is largely based on commercially proven processes and testwork already completed by Aeon, and therefore, the focus for the upcoming testwork program is predominantly optimisation rather than validation. This testwork program complements the 2021 exploration program outlined in Aeon ASX release dated 27 May 2021, *Walford Creek 2021 Exploration Program Commences*.

Aeon Interim Managing Director and CEO, Dr Fred Hess, commented:

"The extensive existing process testwork dataset facilitated the evaluation of a new process route for Walford Creek and has confirmed it to be the preferred metallurgical pathway forward. The 2021 metallurgical testwork program will build on the substantial body of knowledge already accumulated by Aeon and enable the refinement and optimisation of the overall revised flowsheet design.

"Completion of drilling, sample collection and the metallurgical testwork are set to form the basis of plant design, including operating and capital cost estimates, culminating in the targeted delivery of the Walford Creek Pre-Feasibility Study in the first half of 2022."

Flowsheet overview

The bulk sulphide flotation and pressure oxidative leach flowsheet is designed to substantially improve payable metal recovery into higher quality, higher payability products that will minimise downstream treatment charges and deleterious element penalties. The flowsheet can be separated into four broad process stages:

1. Comminution and flotation to produce a bulk sulphide concentrate and tailings.
2. Bulk sulphide concentrate leaching to produce a high tenor pregnant leach solution (**PLS**) and an autoclave leach residue.
3. Sequential extraction of metals (copper, zinc, cobalt, nickel) from the PLS to produce high quality end-products and an impurities residue containing mainly iron and arsenic.

4. Extraction of silver by cyanide leaching of the autoclave leach residue followed by elution, electrowinning and smelting to produce silver doré bars.

The bulk sulphide flotation (versus sequential base metal concentrates and pyrite concentrate flotation) delivers major advantages:

- Approximately 50% by mass of the flotation feed stream is rejected at a much coarser grind size (now 80% passing ~150µm verses 80% passing 60µm) yielding a reduction in primary comminution equipment sizing and associated operating costs.
- A substantial reduction in flotation operating costs and associated operational complexity.
- Achieving market dictated levels of concentrate quality is eliminated as a requirement.
- Cross contamination of metals into other concentrate streams (with a loss of payable value and sometimes a penalty) is eliminated as a constraint.

Substantial bodies of pre-existing testwork results already underpin flowsheet stages 1 and 2, and elements of stage 3, for Walford Creek ore.

Flowsheet stages 3 and 4, designed to extract high quality end-products from leach solutions, are widely practised globally and are therefore already well understood.

Stage 1: Comminution and bulk sulphide flotation

The preliminary design for the bulk sulphide flotation is shown in Figure 1. Run of mine ore is subjected to conventional three stage size reduction consisting of primary crusher, SAG mill and ball mill. The comminution circuit product is then pumped to a conditioning tank where reagents are added followed by three stages of flotation. The primary objective of the flotation circuit is to maximise sulphide recoveries, regardless of the metal. As a result, the division of the feed into various metallurgical ore types is largely rendered irrelevant for the purposes of maximising flotation performance.

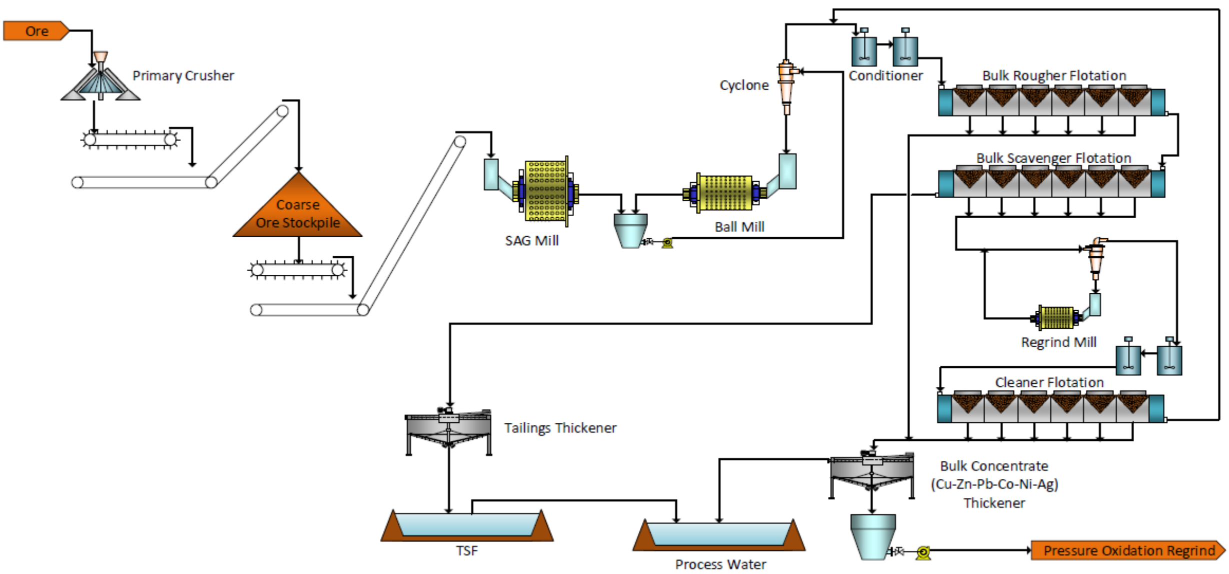

Figure 1: Bulk sulphide flotation circuit

The majority of the flotation tests undertaken to date were performed at 60µm with a limited number at 150µm. No significant difference in metal recoveries for the two grind sizes was observed. Phase 1b which is currently under way and Phase 2 will extend the size of the 150 µm dataset. In addition, extensive sequential flotation testwork was previously undertaken at 60µm with a limited number at

38µm and 150µm. Once again, the 150µm test results did not exhibit any significant difference in recovery from that obtained for the finer grind sizes. As a result, a relevant set of over 100 of these test results sequentially producing copper, zinc, lead and pyrite concentrates were summed to derive the results indicative of that achievable for the production of a bulk sulphide concentrate. The results in Table 1 represent the summation of individual metal recovery test results for each concentrate stream into a combined result. This result is unoptimised and therefore suggests that further improvement might be possible.

	Mean Calculated Recovery to Bulk Sulphide Concentrate						
	Cu	Co	Ni	Zn	As	Pb	Ag
Recovery	96%	83%	79%	95%	88%	90%	90%

Table 1 – Calculated metal recoveries to a bulk sulphide concentrate derived using the summation of individual sequential flotation testwork results for copper, zinc, lead and pyrite concentrates

Stage 2: Pressure oxidation (POX)

The second flowsheet stage (see Figure 2 for preliminary design) consists of leaching by pressure oxidation (POX) in an autoclave. The bulk sulphide concentrate from the flotation circuit is subjected to further size reduction to increase its chemical reactivity and to reduce residence time in the autoclave. Under conditions that will be optimised in the forthcoming testwork, the metal sulphides are oxidised at moderate temperature and pressure (likely in the range 150°-180°C and 10-14 bar) using oxygen. Under these conditions, the metal sulphides react vigorously in a strongly exothermic reaction, breaking down to release most of the valuable metals (copper, zinc, cobalt, nickel) and also unwanted gangue and deleterious metals (including some of the iron and arsenic) into solution. The autoclave leach solids' residue comprises mainly undissolved metals (eg iron as jarosite, lead as plumbojarosite, silver as metal) along with elemental sulphur. It is important to note that lead recovery has been assumed to be uneconomic and has been excluded in the proposed flowsheet.

From the extensive suite of testwork results to date on Walford Creek ore, pressure oxidative leaching in an autoclave was demonstrated to yield the highest extractions of valuable metals into the PLS. Table 2 shows results achieved at approximately 70% oxidation. For the proposed pressure oxidative leach conditions, the lead and silver would remain predominantly in the solid leach residues and will largely not be leached into solution. Importantly, the metal concentrations in the PLS would be significantly higher than alternative leaching processes, such as bacterial and atmospheric leaching. This increases the number of process options for subsequent selective extraction of metals from solution, significantly decreases reagents costs, and facilitates the production of higher quality metal end-products.

	Extraction from Autoclave Feed to Leach Solution							
	Cu	**Zn**	**Fe**	**As**	**Co**	**Mg**	**Ag**	**Ni**
Extraction	98%	97%	71%	67%	99%	84%	8%	97%

Table 2: Pressure Oxidation preliminary testwork results (conditions not optimised)

Upon exiting the autoclave, the acidic slurry is partially neutralised ahead of counter current decantation which separates the solids residue from the PLS. The PLS is directed into stage 3 of the flowsheet while the solids residue is directed into stage 4.

Stage 3: Sequential metal extraction

In stage 3, the PLS is progressively treated in a series of controlled process steps to sequentially extract the contained metals (both valuable and non-valuable). Initially, copper is removed selectively by solvent extraction. Once extracted, the copper is electrowon onto stainless steel plates to yield LME deliverable 99.99% copper cathodes. The SX/EW process is used to produce over 20% of the world's copper.

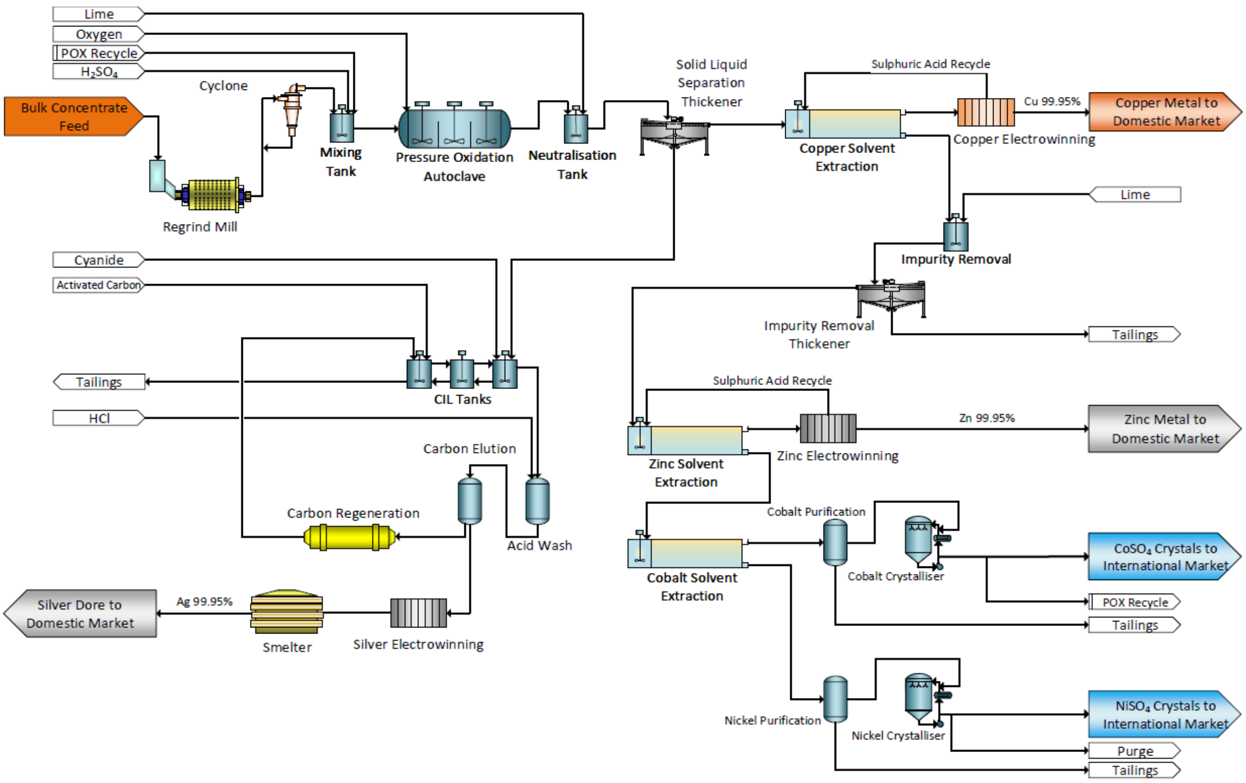

Figure 2: POX leach and metal extraction circuits

After copper extraction, the pH is adjusted upward and reagents added to precipitate predominantly impurity metals (predominantly iron and arsenic) from the PLS. This process step was previously demonstrated on Walford Creek ores in testwork at the Outotec laboratory in Finland, and was more recently successfully replicated at the Burnie ALS laboratory in Tasmania.

Following removal of the impurities as a solid precipitate, the PLS contains essentially zinc, cobalt and nickel only in solution. The zinc is removed selectively by solvent extraction. Once extracted, the zinc is electrowon to yield LME deliverable 99.99% zinc cathodes. Cobalt and nickel are separated by solvent extraction and the respective cobalt and nickel streams purified before forming separate high purity nickel and cobalt sulphates produced in a crystalliser.

Stage 4: Silver extraction

The POX solids residue contains over 90% of the silver from the autoclave feed. The preliminary flowsheet design (as shown in figure 2) envisages that silver will be recoverable by cyanide leaching using a circuit common within the gold industry. A series of preliminary leaching tests using cyanide to recover the silver are currently underway to determine to what extent the silver might be recoverable in this manner.

Planned 2021 metallurgical testwork program

The 2021 testwork program is designed to build on, expand and optimise the results of the previous preliminary autoclave leach testwork.

The only metal without previous testwork to support its extraction from the POX residue is silver. In the previous flowsheet, a portion of the silver was recovered into the copper and lead concentrates.

Phase 1

Phase 1 of the 2021 testwork program uses currently available ore samples and has already commenced.

The two active work streams correspond to:

- Phase 1A – optimisation testwork for the production of bulk sulphide concentrates at the ALS laboratory in Burnie.
- Phase 1B – preliminary testwork to confirm the extraction of silver from POX residue at the ALS laboratory in Perth

In phase 1A, the variables being optimised include both the primary and regrind sizing, flotation reagents, flotation residence time, and circuit configuration. The objective is to maximise valuable metals recovery into the bulk sulphide concentrate. The results of Phase 1A are expected to be finalised in Q3 CY2021.

Phase 1B is to be used to demonstrate the level of extraction of silver from the POX solids residue. It should be noted that the recovery of refractory gold and silver in pyrite via POX is a method already widely adopted successfully within the gold industry.

Phase 2

Phase 2 of the testwork program is aimed at confirming the overall metallurgical responses over the principal geological domains (Transition, Py1 and Py3 for Vardy, Marley, and Amy zones). The program involves the collection of 2.5 tonnes of drill core from the Walford 2021 drilling program (as outlined in Aeon ASX release dated 27 May 2021, *Walford Creek 2021 Exploration Program Commences*). This is to be followed by further optimisation of the bulk sulphide concentrate flotation, leaching and metal extraction.

The initial bulk sulphide flotation testwork from Phase 2 should provide the bulk of the material necessary to complete stages 2, 3 and 4 of the flowsheet optimisation testwork. As noted above, the stage 2 optimisation testwork will be focussed on refining the autoclave feed and operating conditions in order to maximise valuable metal extraction while minimising extraction of unwanted metals.

Once sufficient PLS and autoclave residue solids are produced from the stage 2 flowsheet testwork, then the stages 3 and 4 flowsheet metal extraction into end-product testwork can begin. This is expected to commence during Q3 CY2021. It is anticipated that this testwork will be undertaken using bench scale equipment and will be relatively straightforward.

The overall 2021 metallurgical testwork program is designed to generate sufficient results in order to support completion of the Walford Creek Pre-Feasibility Study (**PFS**) in H1 CY2022. The preliminary schedule for undertaking this work program is shown in Figure 3.

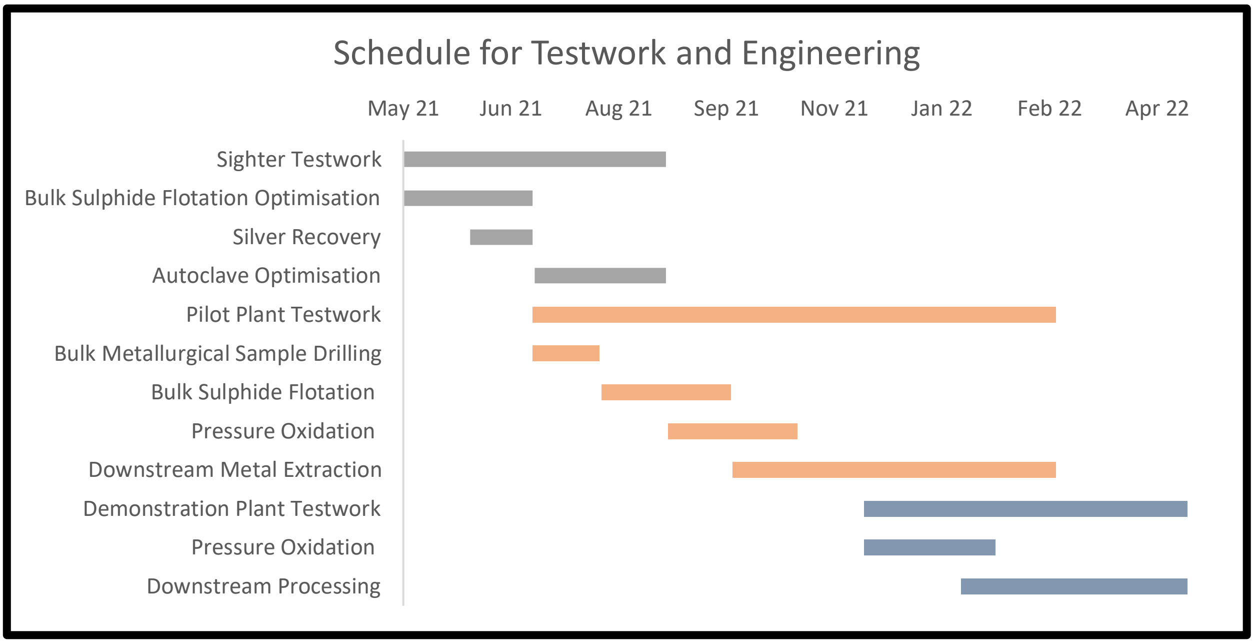

Figure 3 – Schedule for metallurgical testwork and engineering studies

This ASX release has been authorised for and on behalf of the Aeon Board by:

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ABOUT AEON METALS

Aeon Metals Limited (**Aeon**) is an Australian based mineral exploration and development company listed on the Australian Securities Exchange (ASX: AML). Aeon holds a 100% ownership interest in the Walford Creek Copper-Cobalt Project (**Walford Creek Project**) located in north-west Queensland, approximately 340km to the north north-west of Mount Isa.

A Pre-Feasibility Study on the Walford Creek Project is targeted for completion in H1 2022.

Appendix 3 - JORC Code, 2012 Edition – Table 1 Walford Creek

Section 1 Sampling Techniques and Data

(Criteria in 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report.	WMC: 1986-1994 completed diamond ("DD") core and Reverse Circulation ("RC") drilling on nominal 400 x 40m grid spacing. The holes were generally drilled vertically to appropriately target the stratabound Pb-Zn mineralisation. Sampling procedures were in line with industry standards of the day (as documented in historic reports); all RC drilling was sampled at 1m intervals and drill core was split/sawn into approximately 1m half-core samples. All samples were analysed in-house by Atomic Absorption Spectrometry. Copper Strike: 2004-2005 RC drilling was completed to infill the existing grid by WMC. RC drilling was used to obtain continuous 1m samples. Dry samples were split at the rig and wet samples speared. Approximately 2kg samples were weighed, dried, crushed and pulverised at a commercial laboratory for analysis by a four-acid digest with an ICP finish. Aston to Aeon: 2010-2018 infill and extension diamond drilling with some RC precollars and some RC drillholes in areas of poor core recovery; good quality predominantly HQ core was obtained from which 1m sawn half-core samples were collected and weighed, dried, crushed and pulverised at a commercial laboratory for analysis by a four-acid digest with an ICP finish. Drill core and RC sample recoveries were recorded in the database. All over range results (termed Ore Grade) were assayed via OG62 four-acid digest by ALS.

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	In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Aeon 2018: infill and extension diamond drilling with some RC precollars and some RC drillholes in areas of poor core recovery; good quality predominantly HQ core was obtained from which 1m sawn half-core samples were collected and weighed, dried, crushed and pulverised at a commercial laboratory for analysis Genalysis Laboratory was used. Technique employed a 4-acid digest with ICP finish and ore grade via four-acid digest (termed 4AH/OE by Intertek Genalysis). Aeon 2019: infill and extension diamond drilling with some RC precollars and some RC drillholes in areas of poor core recovery; good quality predominantly HQ core was obtained from which 1m sawn half-core samples were collected and weighed, dried, crushed and pulverised at a commercial laboratory for analysis ALS used and is employing a 4-acid digest with ICP finish and ore grade via four-acid digest.. Where RC sampling was undertaken, mostly for pre-collars, Aeon has utilised riffle splitting of 1m bagged sample passed through a cyclone. Where RC sampling was undertaken through ore zones, the bags were weighed for recoveries. Where half HQ core is taken for metallurgical analysis, the half core is quarter cut for assaying.
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	986 to 1994 WMC: 45 Diamond holes for 12,735m & 49 RC holes for 3,678m; NQ & minor BQ Diamond drilling, no mention of core orientation in any historic WMC report. 2004 to 2005 Copper Strike: 30 RC holes 3,162m; RC drilling bit type/size not reported by CSE. 2010 to 2012 Aston Metals: 92 diamond holes for 14,929m; HQ Triple Tube Diamond drilling with some RC pre-collars. Core oriented, where possible, by Reflex ACT tool and structural data recorded in the database.

	oriented and if so, by what method, etc).	2014 Aeon Metals Limited: 19 RC, RCDD and DD holes completed for 9,021m. HQ Triple Tube Diamond drilling with some RC pre-collars. Core oriented, where possible, by Reflex ACT 111 tool and structural data recorded in the database. 2016 to 2019 Aeon Metals Limited; RC (5.5-inch hammer bit) and diamond drilling (minor PQ and HQ Triple tube). Core oriented, where possible, by Reflex ACT 111 tool and structural data recorded in the database. 2016 = 4,030m - 28 holes 2017 = 6,865.65m - 48 holes 2018 = 36,032m – 147 holes 2019 = 13,481.15m – 60 holes
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.	WMC: No known written record (however, any core loss intervals were recorded graphically in geological logs). Copper Strike: No written record. Copper strike have noted some areas of poor sample recovery through mineralised zones due to high water pressure, but noted that grades were comparable to WMC diamond drilling and therefore assumed any bias based on drilling technique and / or sample type was low. Aston and Aeon Metals: HQ Triple Tube drilling to improve recovery which is generally >90%; Lower recoveries can in some cases be associated with higher mineral grades attributed to hydrothermal brecciation & dissolution at the top of the Dolomite Unit rather than due to drilling or sampling practice. 2014 recoveries are considered to be better than the 2012 recoveries. 2016 recoveries are considered the same or better than 2014. Shallow holes close to the Fish River Fault generally have poorer recoveries. Recoveries of samples in the 2017, 2018 and 2019 drilling have been similar and are considered good being > 90%

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.	WMC: Detailed hard-copy lithological logging of all holes transcribed by AML into an Access Database with a full set of logging codes acquired from BHP Billiton. Core photographs were taken but could not be recovered from the data archives. A few core photographs were made available to AML as scans. Copper Strike: Digital logging of all holes loaded into AML's Access database with a full set of logging codes acquired from Copper Strike. No chip tray photographs were made available. Aston and Aeon: Detailed digital geological and geotechnical logging of all holes with a full set of logging codes transcribed into an Access database; • a full set of core photographs. • All logging has been converted to a series of qualitative and quantitative codes in the Access database. • Some geotechnical logging of diamond drill core undertaken in both 2018 and again in 2019 for geotechnical assessment for integration into mining studies. • All relevant intersections were logged.
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. For all sample types, the nature, quality and appropriateness of the sample preparation technique.	WMC: Split/sawn half core under geological control with no record for RC; 1m RC samples and half core samples of typically 1m, but as small as 0.25m sent for in-house lab assay. Copper Strike: Dry RC samples were riffle split and wet samples speared; 1m samples (of approximately 2kg) sent to commercial laboratory with appropriate sample prep process. Aston and Aeon: Company procedures for core handling documented in a flow sheet; sawn half core under geological control; 1m samples sent to commercial laboratory with appropriate sample prep ie sample dried, crushed and pulverised to appropriate levels; Company procedure for RC sample handling documented in flowsheet; bulk 1m samples in most cases rotary split from rig with only some riffle split; sample dried, crushed and pulverised to appropriate levels; use of field duplicates and quarter core checks were completed and indicated comparable results with the original samples.

	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	In 2016 PQ and HQ core were collected for metallurgical samples. Sawn half core was submitted for metallurgical testing, from mineralised intervals, with the remaining half core sawn and quarter section samples sent for multi-element analysis at ALS.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Ongoing gathering of metallurgical sample has continued in 2017, 2018 and 2019 where mineralised intercepts encountered.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	All sampling methods and sample sizes are deemed appropriate. Sampling in 2017, 2018 and 2019 conducted in the same manner as previous years.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	WMC: In-house analysis by Atomic Absorption Spectrometry (digest recorded as PBKRS) as cited in annual reports of the day by WMC. The relevant QA/QC was not reported, and the drill core is no longer available.
	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.	Copper Strike: Appropriate analytical method using a 4-acid digest with ICP finish with ore grade analysis for Cu, Pb, Zn & Ag. Assaying was carried out by ALS, an accredited laboratory. CSE did not make use of any standards or run duplicate samples for QA/QC. Aston Metals drilled 4 HQ Triple Tube diamond core twin holes with comparable results.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e.	Aston and Aeon pre-2017: analytical procedure documented as a flowsheet; Appropriate analytical method using a 4-acid digest with ICP finish. Ore grade analysis for Cu, Pb, Zn & Ag by OG62 method. Assaying was carried out by ALS, an accredited laboratory. Extensive QA/QC programme with standards, blanks, laboratory duplicates & secondary lab checks. Acceptable outcomes were received.

	lack of bias) and precision have been established.	Aeon 2017 and 2018: analytical procedure documented as a flowsheet; Appropriate analytical method using a 4-acid digest with ICP finish. Ore grade analysis, where appropriate, for Cu, Pb, Zn, Ag, S and As by 4AH/OE. Assaying was carried out by Intertek Genalysis in 2018, an accredited laboratory. 2019 – As for previous years with ALS acting as the main assaying laboratory. Genalysis undertaking the check analysis; Extensive QA/QC programme completed as above. All assay methods for both Aston and Aeon were appropriate at the time of undertaking.
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. Discuss any adjustment to assay data.	WMC: Hardcopy sampling and assay data has been compared with recent drilling work by Aston and Aeon. Aeon considers the data reliability to be reasonable. Copper Strike: Aston twinned 4 CSE holes to assess grade repeatability and continuity; results are comparable. All samples were submitted to an accredited laboratory, ALS. 1 hole was removed from the database because the geological logging and assay results appeared significantly at odds with several surrounding holes. Aston: H&SC 2010 site visit to review core confirms mineral intercepts; Twinned holes (4) to test RC drilling by Copper Strike; results are comparable. Aeon have core handling procedures as flowsheets. Aeon: 2014 site visit by H&SC to review core confirms mineral intercepts; Aeon using same core handling procedures, including similar data entry and logging as previous with same codes. Aeon database managed by Elemental Exploration Pty Ltd using GEOBANK with all final data stored off site. H&SC has reviewed all core photos noting all mineral zones. H&SC has completed a lithogeochemical interpretation of the multielement assays cross matching with core photos and geological logging. All below detection results have been converted to half lower detection limits.

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.	WMC: Survey pickup of collar locations by EDM in 1992 and tied to the datum grid point at drillhole WFDD1. The precision of pickups was ±100mm with respect to the datum on average. Downhole survey method not recorded; database contains azimuth and dip readings every 30-50m.
	Specification of the grid system used.	Copper Strike: Drill hole location and orientation data determined by CSE staff. Collars were buried and therefore validation by subsequent companies was not possible. Downhole survey methods were not recorded; database contains azimuth and dip readings based on collar and end of hole measurement.
	Quality and adequacy of topographic control.	Aston: DGPS on all AML holes in MGA94 Zone 54 grid projection by MH Lodewyk Surveyors, Mount Isa. AML also had WMC drill hole collar locations validated by DGPS with good accuracy. Down hole surveys were taken every 30m by REFLEX, EZI-SHOT. A detailed Digital Elevation Model (DEM) was generated by David McInnes, consulting geophysicist, as part of the process of developing the 2010 3D geological model. The DEM was generated using a combination of data from the drillhole collars (DGPS), the WMC Gravity survey (with a 3cm accuracy), with variable data point spacing of 100x100m – 500x500m, and high-resolution satellite data with an estimated 80m accuracy. Aeon: DGPS on all previous Aeon drill holes in MGA94 Zone 54 grid projection by MH Lodewyk Surveyors, Mount Isa in September 2014. 2016, 2017, 2018 and 2019 holes have been picked up by DGPS by D Ericson at Diverse Surveyors, Mt Isa. Down hole surveys were generally taken every 30m by REFLEX (ACT 111) EZI-SHOT or as ground conditions permitted. 2018, Aeon commissioned ANC to carry out a Digital Terrain Model (DTM) over the Vardy and Marley deposits. 2018 Seismic Survey, shot points and geophone locations were surveyed by RPS using GDA 94, MGA Zone 55.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drillhole section spacing is 25m to 50m in the eastern section of the deposit becoming 50-100m in the west. On section spacing is between 20m to 80m. 100m spacing is appropriate for geological continuity, 50m spacing allows for reasonable assessment of grade continuity. 25m by 20m can lead to Measured Resource status depending on continuity of both geology and grade.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and	Some holes have encroached closer than the nominal 25m by 20m due to hole deviation and also the necessity to relocate holes around geographical and or cultural features and or vegetation.

	Ore Reserve estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	Very limited sample compositing undertaken. 2018 Seismic, Spacing of phones at approximately 8m considered appropriate for the stratigraphic sequence being targeted.
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.	Drilling generally achieved a high angle of intercept with the stratabound mineralisation but local variation due to folding has been logged.
	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.	Any mineralisation related directly to structures with the same strike and dip of the Fish River Fault, has been intersected at a moderate angle. A broad alteration zone (with variable mineralisation) associated with both the stratabound mineral and the mineral proximal to the Fish River Fault has been intersected at reasonable angles. Drilling orientations are considered appropriate with no obvious bias. Holes have been steepened recent drilling of the deeper Py3 but the angle of intercept is still considered appropriate. 2018 Seismic, 5 lines were orientated north-south (perpendicular to structure) and 1 line east-west (along strike).
Sample security	The measures taken to ensure sample security.	WMC: All assaying in-house. No documentation available on sample security. Copper Strike: All assaying completed by ALS Townsville. No documentation available on sample security.

		Aston and Aeon: RC chip samples in calico bags are sealed in polyweave bags. Drillcore is contained in lidded core trays, strapped down and transported by a dedicated truck to Mount Isa. The core is cut and sampled by company employees in the Mount Isa core yard and sent directly to ALS Mount Isa where assaying is completed. After analysis all samples are returned to Isa, stored in a lock up shed and digitally archived. Core is stored in Mount Isa in a lock up shed. Previously sections of massive sulphide were kept in secure cool storage. Aeon – recent core crush of -9mm has been kept in cryovac bags with a nitrogen flush prior to sealing. This is aimed at eliminating the requirement to use cold storage for the core. The remaining core is stacked on pallets and then plastic wrapped prior to storage in a covered shed out of the weather. Visual inspection of drill core continues to show that assay grades match mineral assay distribution. 2016, 2017 and 2018 Metallurgical samples comprised sawn quarter/half core completed at an appropriate facility in Mt Isa by Aeon personnel. Core was then bagged and cryovac using nitrogen to expel oxygen and then protected in Mt Isa prior to use in test work at other secure sites including at ALS. All drillcore in core trays is wrapped in plastic and strapped to pallets on site at Walford and before transport to Mt Isa by either Aeon personnel in appropriate vehicles or via the local transport company from Doomadgee. This transport of core is considered satisfactory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	WMC: Data transcribed from historic reports and subsequently validated by Aston with no material inconsistencies evident. Copper Strike: Supplied digital database checked by Aston against hard copy with no material discrepancies found. Aston: All data checked and validated prior to loading into the internal database by Aston geologists and external database managers. As part of the process of developing the geological model Aston reviewed all of the recent and historic data and consider it suitable for the purposes of resource estimation. A QA/QC audit by ALS found no major discrepancies in the assay data. Aeon – all data now being received has undergone the same validation as used previously by Aston. A substantial QA/QC review was completed by H&SC as part of the resource estimate process. The resource estimates were subject to an Internal peer review by H&SC including the running of check models

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.	Walford Creek is located wholly within EPM 14220. The EPM is located 65km west-northwest of Doomadgee township and 340km north-northwest of Mount Isa.
	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.	Following a transfer of title (dated 12 March 2013) EPM 14220 is held 100% by Aeon Walford Creek Limited formerly Aston Metals (Qld) Limited and the previous Joint Venture Agreements no longer apply. The tenement currently consists of 41 sub-blocks. The tenement is a granted Exploration Permit for Minerals and no known impediments exist. As it currently stands, no Native Title claim is in existence over EPM 14220, however AML continue to operate under the premises of the previous agreements negotiated with the Carpentaria Land Council Aboriginal Corporation "CLCAC" representing the Waanyi and Gangalidda-Garawa peoples and signed prior to commencement of exploration.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Numerous companies have explored within the tenement area, largely concentrating on the discovery of a significant stratabound lead-zinc system. More recently, companies have been focused on targeting copper mineralisation in the hanging wall of the Fish River Fault. All exploration is considered to have been completed to a reasonable standard by experienced companies in a professional manner. Most exploration work has been appropriate but there are minor issues on historic documentation. Previous exploration of the Walford Creek Prospect is summarised below: **<u>1984-1996 WMC</u>** Re-evaluation of the Walford Creek area resulting in a major exploration program targeting Pb-Zn mineralisation near the Fish River Fault: Systematic grid-based mapping, rock chip and soil sampling. Detailed Tempest EM and aeromagnetic survey; gravity survey, 600-line km of SIROTEM.

		45 diamond and 49 percussion holes totalling approximately 16,500m of drilling on 400 and 800 m spaced drill hole fences. Isolated higher grade Pb-Zn-Cu-Ag intersections but no coherent economic Pb-Zn resource. Brief JV with MIMEX from 1995-1996. MIMEX completed CSAMT, EM and IP over 9 conceptual targets but no drilling. **<u>2004-2006 Copper Strike</u>** Exploration program targeting copper mineralisation at the Walford Creek Prospect in and along the Fish River Fault: A small RC drilling program was commenced in 2004 but curtailed prematurely due to the 2004-2005 wet season. A significant RC drill program was completed during 2005. 30 holes were drilled for a total of 3,162m, of which 60.7m was diamond cored. Estimation of an Inferred Mineral Resource for the Walford Creek Project of 6.5 million tonnes at 0.6% Cu, 1.6% Pb, 2.1% Zn, 25 g/t Ag and 0.07% Co. **<u>2010 to 2012 Aston Metals Limited</u>** Exploration undertaken by Aston followed on from the targeting approach adopted by Copper Strike in drilling along the Fish River Fault to test both the SEDEX lens and the associated copper/cobalt mineralisation close to the fault. Aston Metals drilled a total of 92 Diamond holes 14,929m; HQ Triple Tube Diamond drilling with some RC pre-collars. The 2012 Indicated and Inferred Resources of 48.3 million tonnes at 0.39% Cu, 0.83% Pb, 0.88% Zn, 20.4 g/t Ag and 731 ppm Co. All subsequent work since June 2014 has been undertaken by Aeon Metals.
Geology	Deposit type, geological setting and style of mineralisation.	At the Walford Creek Prospect structurally controlled, vein/breccia hosted or replacement Cu ± Co mineralisation, with minor Pb-Zn-Ag and stratabound, diagenetic Pb-Zn-Ag ± Cu mineralisation, are hosted in dolomitic and argillaceous sediments of the Paleoproterozoic Fickling Group, forming part of the Lawn Hill Platform stratigraphic sequence, along the east-west to east-northeast trending, steeply south-dipping Fish River Fault.

		The mineralisation typically occurs as early diagenetic sphalerite-galena-(chalcopyrite) to late epigenetic chalcopyrite-(galena-sphalerite) associated with three stacked massive pyrite lenses and talus, hydrothermal and tectonic breccias in the hanging wall of the Fish River Fault. Mineralisation shows affinities to both early sediment-hosted SEDEX-type and late Mississippi Valley-type mineralisation styles. The wide diversity of mineralisation styles reflects multiple events in a long-lived re-activated structural setting that originated as a growth fault. Further interpretation of the geological model is ongoing and views will reflect the geological teams' assessment as both the database grows in size and as the results are interpreted. Recent re-interpretation also shows strong analogies to some Zambian style sediment hosted copper deposits where elevated copper in association with high cobalt values is often a characteristic.
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.	Exploration results have not previously been reported in the public domain as Aston Metals, the previous company, was privately listed. Information on the pre-2016 drill holes is included in the 2015 Resource Estimate Report. Summary Information pertaining to the completed 2018 drilling holes is contained in previous ASX releases. Summary Information pertaining to the completed 2019 drilling is contained in the body of the relevant 2019 ASX releases.

	· 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.	
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.	Exploration results have not previously been reported in the public domain as Aston Metals, the previous company, was privately listed.
	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.	Aeon has not undertaken any cutting of grades as it currently believes that all the grades received are an accurate reflection of the sampled interval.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Aeon has maintained realistic intervals of dilution when stating mineralised intercepts, however further refinement of what are considered realistic mining widths will be understood following further resource calculations.
Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	Exploration results have not previously been reported in the public domain as Aston Metals, the previous company, was privately listed.

intercept lengths	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').	Drill hole angle relative to mineralisation has been a compromise to accommodate the flat-lying stratabound massive sulphide bodies with associated replacement breccias and the steeper dipping epigenetic mineralisation proximal to the Fish River Fault. Generally, the stratabound intercepts are closer to true width whereas epigenetic and/or overprinting mineralisation intercepts can be apparent widths depending on drill angle. This is modelled in the wireframes for the resource work.
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.	Appropriate maps showing the nature and extent of the mineralisation are included in the 2013 Resource Estimation report by H&SC for all work prior to 2014. Appropriate maps and sections have been provided for the 2016 and 2017 work to date. Appropriate sections have been included for some of the significant intercepts recorded from the 2016, 2017, 2018 and 2019 drilling. 2019 holes have been drawn on sections and provided in the relevant ASX releases together with appropriate location maps
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.	Exploration results have not previously been reported in the public domain by Aston as the previous company was privately listed. All results reported on by Aeon are considered to be accurate and reflective of the mineralised system being drill tested.
Other substantive	Other exploration data, if meaningful and material, should be reported	Aeon believes that the results and data provided give a meaning and material reflection of the geological lithologies and structure being tested at Walford Creek.

exploration data	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.	Metallurgical test work both undertaken continues to show that acceptable levels of mineralisation for all the important elements can be satisfactorily extracted from Walford Creek mineralisation. More definitive metallurgical test work is ongoing.
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.	Aeon's future exploration will focus on upgrading and expanding upon the current Inferred and Indicated Resource Estimates at the Walford Creek Prospect, through further drilling within and immediately outside the resource area.

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.	All relevant data were entered into an Access database where various validation checks were performed including duplicate entries, sample overlap, unusual assay values and missing data. Data linked to Surpac for wireframing, block model creation and resource reporting. Visual reviews of data were conducted to confirm consistency with topography and hole collars, logging and drillhole trajectories. Assessment of the data confirms that it is suitable for resource estimation.
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.	Simon Tear of H&SC completed a site visit to the property and Mt Isa core handling facility during the May 2016 drilling. Visit included review of core for 6 holes. Simon Tear H&SC visited in 2012 the project's core handling facility in Mt Isa and reviewed 5 diamond drillholes from the AML 2012 drilling.
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 Walford Creek Deposit is characterised by several different mineralisation styles dependent on the host rock and stratigraphic position. Primary base metal mineralisation is hosted in relatively flat lying sedimentary units. Sulphide mineralisation is dominant. The new resource estimates are primarily focussed on distinct, higher grade copper and cobalt mineralisation related to specific stratigraphic hosts and proximity to the Fish River Fault A detailed stratigraphic reconstruction has been completed noting minor structures as splays and parallel faults to the main Fish River Fault. Some oxidation of mineralisation has occurred with possible supergene enrichment noted for the PY1 and Dolomite ("DOL") unit zones.

	The factors affecting continuity both of grade and geology.	Mineralisation wireframes were designed on a nominal 150ppm Co cut-off grade (+/- silver support) and geological criteria including host lithology and stratigraphical relationship, structural position, lithogeochemical data, oxidation and geological sense. 3D wireframes and surfaces constructed include: updated cobalt mineral zones for a combined PY1 & DOL Unit and the PY3 Unit, Fish River Fault, Chert Marker, BOPO and BOCO. Wireframe extrapolation is 25m to 50m beyond the last drillhole; termination of wireframes is generally due to a lack of cobalt grades and/or drilling data. The existing interpretation honours all the available data; an alternative interpretation is unlikely to have a significant impact on the resource estimates.
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.	Mineralisation for Vardy & Marley can be modelled for 3.3km of strike length, with a range of down dip widths of 40 to 60m. The mineral lenses are part of a 160m thick, variably mineralised sedimentary sequence. The individual mineral lodes have thicknesses ranging from 2m to 60m. The depths below surface to the top of the mineralisation vary for the different lodes but an approximate overall range is from 25m to 35m for the uppermost PY1/DOL lode and 100 to 230m for the lowermost PY3 lode. The Amy deposit has a strike length of some 6km. Down dip extent ranges between 30 and 60m with thickness ranging between 5 and 40m averaging approximately 20m. Depth to the top of mineralisation is in the 350 to 550m range.
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 and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	3D mineral wireframes and geological surfaces are based on interpretations completed on sections with strings snapped to drill holes.

	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Surpac mining software was used for the interpretation and block model reporting. The Micromine mining software was used for block grade interpolation.
	The assumptions made regarding recovery of by-products.	Wireframes were used to control the composite selection and the loading of subsequently modelled data into the block model.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	· A set of calculated pyrite content values was created from the base metal & sulphur assays
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Geostatistics were performed for copper, lead, zinc, silver, cobalt, iron, sulphur, calculated pyrite, arsenic, nickel, thallium and molybdenum within individual PY1/DOL and PY3 mineral zones.
	Any assumptions behind modelling of selective mining units.	Correlation between the main economic elements was weak indicating possible mineral zonation, which is not an uncommon feature with the type of mineralisation.
	Any assumptions about correlation between variables.	Drillhole spacing for Vardy is generally 25m along strike and 30-80m on section, The Marley drillhole spacing is generally 50m along strike and 30-80m on section ranges along strike from 25 to 50m. For Amy the drilling ranges from 50 to 100m along strike and 30-80m on section.
	Description of how the geological interpretation was used to control the resource estimates.	Parent block sizes for Vardy and Marley were 10m in the X (east) direction, 5m in the Y (north) direction and 5m in the Z (RL) direction with no sub-blocking. At Amy the block size was 20m by 5m by 5m with no sub-blocking
	Discussion of basis for using or not using grade cutting or capping.	Ordinary Kriging with dynamic interpolation was the estimation method used.

	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	20,074 1m composites, 19,007 for Vardy and Marley and 976 for Amy, were extracted from the drillhole database constrained by the mineral wireframes; residuals of <0.5m were discarded. No top cutting was applied; the coefficients of variation for the relevant composite datasets suggest that the data is not sufficiently skewed or unstructured to warrant top cutting. 3 estimation search passes were used for all mineral zones with an increasing search radius and decreasing number of data points. A 4th pass was used to provide a measure of any exploration potential at Vary/Marley, and Inferred Resources at Amy. A 5th pass at Amy was used to generate a measure of exploration potential. Search size: 30 by 20 by 7.5m (Measured), 60 by 40 by 15m (Indicated) both with 12 minimum data and at least two holes and 60 by 40 by 15m (Inferred) with 6 minimum data and at least one hole. The 4th search pass was 90m by 60m by 20m with a minimum of 6 data. Variography was modest in all zones mainly due to a lack of drilling, particularly in the down dip direction in combination with localised thinness of some of the mineral zones and subtle undulations in the host stratigraphy. With dynamic interpolation, search ellipses were aligned to follow the strike, and dip of mineral-defined surfaces. Model validation has consisted of visual comparison of block grades and composite values and indicated a reasonable match. Comparison of summary statistics for block grades and composite values has indicated a small risk of overestimation of grade for certain elements for certain lodes usually in the Inferred category but with no consistent pattern. There are relatively limited changes to the February 2019 H&SC global resource estimates for the Vardy and Marley Zones and this provides a good level of confidence in the resource estimates and their classification. For Amy the Inferred Resources have increased nearly threefold as a result of the infill drilling but in line with expectations.
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.	Resource estimates have been reported for the combined Vardy & Marley areas using 0.5% Cu for the copper mineralisation and 600ppm for the peripheral cobalt mineralisation. For Amy just a 0.5% copper cut off has been used. The Marley and Vardy resources are reported from inside the mineral wireframe which acts as a hard boundary. A western constraint is also applied at the 210675m easting. At Amy the resources are reported from inside the mineral wireframe which acts as a hard boundary with east and west limits dictated by the 4th pass search. The cut-off grade at which the resource is quoted reflects the intended bulk-mining approach and was supplied by Aeon following a scoping study. Block centroids within the mineral zones are reported above the relevant cut offs. For Vardy/Marley
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	H&SC's understanding based on information supplied by Aeon is for a combination of open pit and underground mining scenarios including a heap leach operation The proposed mining method will be a truck shovel operation for the upper mineralisation. There is also the potential for an underground transverse retreat up hole bench stoping to target the lower PY3 mineral zone Geotechnical studies for both open pit mining and the selected underground mining method are currently at a PFS leve with no significant issues. Pit hydrology has been investigated and incorporated into the mine design.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding	A substantial amount of metallurgical testwork has been completed with sample selection ensuring both a spatial representation and a spread of copper, lead, zinc and cobalt assays

	metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Mineralisation is hosted within pyritic, dolomitic and carbonaceous sections of the resource. Multiple phases of pyrite mineralisation are associated with the different economic elements Primary base metal minerals comprise chalcopyrite, galena, sphalerite, and As-Co-Ni- pyrite. Within the transition zone, rimming and/or dendritic growths of covellite and/or sphalerite with pyrite have been observed. Secondary chalcocite is also present with unidentified weak acid soluble species. The polymetallic nature of Walford Creek and the presence a wide range of metals, equate to increasing complexity of metallurgical treatment. Comminution tests were completed by ALS Metallurgy, Balcatta, WA. Comminution variability samples were subjected to SMC, Bond Ball Mill Work Index (BWI) and Bond Abrasion Index tests. Copper samples had an average BWI of 13.4 kWh/t with minor variability. Lead-zinc samples had an average BWI of 11.5 kWh/t with minor variability. Only one sample was classified as transition material and reported a moderately high BWI value of 17.5 kWh/t. Flotation tests were completed by ALS Metallurgy, Burnie, Tas. The Walford Creek deposit is considered moderately complex from a flotation perspective but with the potential to produce saleable concentrates of copper, lead and zinc. Copper-cobalt locked cycle tests, produced on average a copper concentrate grade of 26% Cu, at a copper recovery of 82.7%. The accompanying cobalt circuit produced on average a cobalt-nickel-pyrite concentrate grade of 0.35% Co, at a cobalt recovery of 74.8%. Copper concentrate is anticipated to have Pb, Zn and As above penalty limits. Depending on smelter terms both Co and Ni content may generate penalties in the copper concentrate. Silver is above payable levels in the copper concentrate. The flotation of copper transition ore was characterised by very low upgrading of copper to copper concentrates. The potential of producing a bulk copper-cobalt for hydrometallurgical treatment was evaluated. On average, 83% of flotation feed copper and 79% of cobalt was recovered to the bulk concentrate. Mass recoveries were high and upgrade ratios low indicating significant activation of pyrite. To assess the potential of bulk ore sorting for Walford Creek five samples of known composition were sent to Scantech and analysed via GEOSCAN-M to develop a calibration for the GEOSCAN-M, with accuracy and repeatability performance evaluated. A flotation performance model was developed to allow performance estimation in a five-stage sequential flotation circuit,. Following ore sorting testwork the model was adapted to allow batch testwork of different ore types. Approximately 140 cobalt-nickel leach tests have been conducted to date, including both a calcine leach pilot plant and an agitated leach pilot plant. Roast-calcine leach, pressure oxidation and biological leach all have the potential for high cobalt extraction of >90%, with similar levels of copper and zinc extraction. Both roast-calcine leach and pressure oxidation produced low silver extraction compared to the biological leach which achieved 26.3%.	

Table 1-9 Summary of cobalt-nickel leach maximum extraction

Leach Type	Extraction from Leach Feed to Solution (%)							
	Cu	Zn	Fe	As	Co	Mg	Ag	Ni
Non-oxidative	19.2	72.0	3.6	11.5	17.0	94.1	0.2	4.3
Roast calcine leach (pilot)	92	93	32.5	80.5	86	n.a.	<0.1	77
Oxidative	39.0	67	2.1	5.7	5.9	68	2.4	2.4
Ultrafine grind, oxidative	86.9	94.4	12.0	53.5	50.0	96.2	<0.1	42.9
Pressure oxidation	98.0	96.5	71.4	66.9	98.8	84.1	7.7	96.7
Agitated bioleach (pilot)	56.2	80.3	69.0	82.3	96.1	n.a.	26.3	95.4
Agitated transition bioleach	76.3	26.6	16.1	28.9	69.7	n.a.	3.9	63.7
Heap bioleach	35.6	29.5	9.6	6.5	51.8	n.a.	0.8	46.2
Ferric sulphate leach	62.9	33.5	1.4	4.0	4.0	99.2	<0.1	3.0

All types of cobalt leach provide evidence of the refractory nature of cobalt and nickel within pyrite, with cobalt extraction directly linked to pyrite oxidation. Pressure oxidation provided the highest cobalt extraction at a given oxidation rate, with the agitated bioleach providing the second highest cobalt extraction rate.

Hydrometallurgical tests also included purification of pregnant leach solution (PLS) and precipitation of cobalt, copper and cobalt-nickel products. Generally good results were achieved for copper and cobalt-nickel

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	Baseline studies by Aeon are currently in progress • The area contains large flat areas suitable for waste dumps and tailings facilities. • No large river systems pass through the area. • Water courses are generally restricted. • There are abundant carbonate rocks, the Walford Dolomite, in the vicinity to provide material for control of any acid mine drainage.

	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.	
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.	9,770 samples were generated from single 10-15cm pieces of core that had SG values determined using the "Archimedes Principle" on a dry weight basis (weight in air/weight in water method).
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	A review of density data for the Walford Creek project comprised extracting the density samples from the database within the mineral wireframes and matching the smaller sample interval with the logged lithology and the relevant multielement assay interval. The review utilised 5,272 samples from the Aston/ Aeon drilling.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The lead, zinc, copper and sulphur assays were used to calculate the amount of the relevant sulphide species present in each sample using stoichiometric formulas i.e. galena, sphalerite and chalcopyrite, with the remaining sulphur used to calculate the pyrite content in the sample. Calcium and magnesium were used to calculate the amount of dolomite, via calcite and magnesite content, within each assay interval.

		Combining the dolomite and sulphide percentages allowed for the generation of a 'residual' siltstone percentage for each assay interval. Using the percentages of the three main components and attributing density values to each component, it was possible to generate density values that could be compared with the original source sample value. A reasonable straight line at 45º was achieved. This allowed for the calculation of a density value for each sample within the mineral wireframe. The new density dataset as modelled using Ordinary Kriging with dynamic interpolation (same as the metal grade interpolation) Some localised vuggy material may have an overstated density due to samples not sealed in wax prior to measuring the weight in water.
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, reliability of input data, 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.	Mineral resources have been classified on the estimation search pass category subject to assessment of other impacting factors such as drillhole spacing (variography), core handling and sampling procedures, QAQC outcomes, density measurements, geological model and previous resource estimates. The search pass category for the mineral zones was reviewed with the observation of a 'spotted dog' effect particularly at the margins of the mineralisation. To counteract this H&SC used the search pass categories on the entire drill sample dataset to generate pass categories which were then used to allocate resource classification. The classification appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	A previous internal check model was completed by H&SC for the cobalt mineralisation in the February 2019 estimates using dynamic interpolation of the composites, both constrained by the copper wireframes and unconstrained. A reported difference of <5% was achieved. This outcome is used to justify the use of dynamic interpolation for the current resource model

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 Mineral Resources have been classified for Vardy & Marley using the search pass category with Pass 1 = Measured, Pass 2 = Indicated and Pass 3 = Inferred. For Amy search passes 1 to 4 were classed as Inferred.
	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.	An additional qualitative assessment of a number of factors including the complexity of mineralisation (including metal zonation), variography (data point spacing), the drillhole spacing, QA/QC data has also been included.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The Mineral Resource estimates are considered to be accurate globally, but there is some uncertainty in the local estimates due to the current drillhole spacing and local geological complexities.

		The geological understanding has been progressively improved with the Aeon drilling campaigns. No mining of the deposit has taken place so no production data is available for comparison.