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## OUTSTANDING SILVER, BASE METALS AND COBALT DRILL RESULTS CONFIRM BAWDWIN'S TIER 1 POTENTIAL

#### Highlights

- First assays from the current Reverse Circulation and Diamond Drilling program reinforce Bawdwin's world-class mineral potential. Best results include:
  - 46m @ 9.7% Pb, and 116g/t Ag from surface in BWDD001
  - 19m @ 6.6% Pb, 187g/t Ag, 0.5% Cu, and 1,078 ppm Co from 3m in BWDRC002
  - 15m @ 9.3%Pb, 125g/t Ag and 4.6% Zn from 21m in BWRC005
  - 23m @ 6.1%Pb, 336g/t Ag and 4.5% Zn from 9m in BWRC006
  - 7m @ 3.2%Pb, 79g/t Ag, 2.0% Zn and 1,232ppm Co from 37m in BWRC006
- Partial assay results from visually mineralised intervals have been returned from holes BWRC004-006 indicating significant cobalt mineralisation (as above) alongside high-grade silver, lead, zinc, copper and nickel results.
- Results continue to validate the overall Mineral Resource Estimate of 76.9 Mt at 118 g/t Ag<sup>1</sup>, 4.6% Pb, 2.3% Zn and 0.24% Cu comprising a high-grade primary deposit of 41.4 Mt at 178 g/t Ag<sup>2</sup>, 7.5% Pb, 3.5% Zn and 0.33% Cu and a 35.5 Mt low-grade "halo".
- Two diamond drill rigs continuing on site with further assay results expected shortly.

**Myanmar Metals Limited** (ASX: MYL) ("MYL" or "the Company") is pleased to report that it has received the first assay results from the current Diamond (DD) and Reverse Circulation (RC) drilling program.

The drilling results have confirmed the positions of multiple high-grade lodes defined by historic sampling and mapping, as well as detailing the position and tenor of the lower-grade, disseminated "halo" sulphide mineralisation, amendable to open pit mining.

Several holes have successfully defined remnant high-grade massive sulphide mineralisation on the peripheries of historic stopes as well as refining the position of several unmined footwall lodes, further enhancing the grade and potential of the broader "halo" mineralisation zone.

<sup>&</sup>lt;sup>1</sup> Announced to the ASX 6 March 2018

<sup>&</sup>lt;sup>2</sup> Announced to the ASX 17 October 2017





RC Drill Rig at Bawdwin (image: Valentis)

RC chip samples

The recognition of **significant levels of cobalt within the mineralised system**, often in association with nickel (and copper in historic underground sampling) is particularly exciting. The intersection of **19m @ 6.6% Pb, 187ppm Ag** and **1,100ppm Co** in BWRC002 and **7m @ 3.22% Pb, 1.97% Zn, 79 ppm Ag** and **1,232ppm Co** in BWRC006 clearly illustrates this additional mineral potential.

Myanmar Metals Limited's Chairman, John Lamb, commented:

"Early assays from our latest drilling program continue to confirm Bawdwin as a Tier 1 Silver and Base Metals deposit but they also reveal some significant surprises. Not only are we seeing the expected lead, silver and zinc values but we are also seeing significant levels of cobalt in the mineralised system, which is very exciting, particularly as it appears to be associated with nickel and copper which we have now shown exists in discrete zones within the mineralised system. Bawdwin is indeed a true polymetallic system and our understanding of the ultimate potential of this world-class mineral deposit continues to grow and evolve.

I am particularly pleased with the attention to detail in this drilling program, some holes have targeted the margins - the edges of old stopes and the high-grade ore boundary zone – which has made for tricky drilling. The Titeline crews have gone about their work safely and diligently and we are seeing good drilling accuracy and high sample recoveries as a result." Drill collar positions are provided in Table 1. Composite intervals are reported in Table 2 above a cutoff grade of 0.5% Pb for drill holes where sample analysis is complete. Table 2 lists composite intervals >0.5% Pb where samples have been sent from visually high-grade mineralised zones and where additional assays for intervening areas are still awaited and may allow consolidation of these intervals.

Hole_ID	Туре	Easting (mE)	Northing (mN)	RL (m)	True Az ( °)	Dip ( °)	EOH (m)	Status
BWDD001	DDH	325417	2556881	1006	60	-50	127.00	Complete
BWDD003	DDH	325584	2556656	1020	247	-61	201.50	Complete
BWRC001	RCD	325427	2556835	1007	64	-50	105.40	Complete
BWRC002	RC	325471	2556802	1004	64	-57	75.00	Complete
BWRCD003	RCD	325475	2556864	1017	244	-65	197.90	Complete
BWRC004	RC	325436	2556715	988	69	-60	139.00	Complete
BWRC005	RC	325608	2556518	997	65	-50	114.00	Complete
BWRCD006	RCD	325487	2556599	975	65	-70	200.00	DD Tail Pending 99m-200m

Table 1. Drill hole collar information (UTM WGS84 Zone 47)

Datum UTM WGS85 Zone 47 North

Table 2. Significant composite intervals for drill holes where all results have been returned, reportedabove a cut-off grade of 0.5% Pb with a maximum of 2m internal dilution.

Hole_ID	From (m)	To (m)	Interval (m)	Pb%	Zn%	Cu%	Ag ppm	Ni%	Co ppm
BWDD001	0	46	46	9.69	0.31	0.20	116	0.04	186
BWRC001*	8	36	28	3.56	0.24	0.05	36	0.01	109
BWRC001*	41	56	15	1.29	0.01	0.23	13	0.02	232
BWRC001*	74	77	3	0.13	0.73	2.35	67	0.30	494
BWRC002	3	22	19	6.59	0.25	0.54	187	0.30	1078
BWRC002	30	37	7	0.08	0.17	0.80	22	0.17	1075
BWRC002	40	43	3	0.15	0.64	0.58	33	0.12	1002
BWRC003*	4	14	10	2.58	0.31	0.14	40	0.02	117
BWRC003*	21	35	14	4.86	1.13	0.02	48	0.01	93
*RC Precolla	r								

#### **Final Results**

Table 3. Significant composite intervals for drill holes where visual high-grade mineralised intervalshave been sent for priority assay while additional assays for intervening intervals still awaited,reported above a cut-off grade of 0.5% Pb with a maximum of 2m internal dilution.

Hole_ID	From (m)	To (m)	Interval (m)	Pb%	Zn%	Cu%	Ag ppm	Ni%	Co ppm
BWRC004	24	31	7	5.05	0.39	0.02	29	0.02	109
BWRC005	12	14	2	2.94	0.36	0.07	112	0.00	10
BWRC005	21	36	15	9.34	4.63	0.07	125	0.02	94
BWRC005	39	43	4	5.44	3.58	0.00	99	0.01	78
BWRC005	48	58	10	5.48	1.00	0.03	81	0.03	178
BWRC005	61	78	17	2.48	0.59	0.02	54	0.02	166
BWRC005	89	94	5	5.84	3.88	0.00	120	0.02	150
BWRC005	103	109	6	1.59	0.86	0.01	19	0.02	158
BWRC006*	9	32	23	6.07	4.45	0.47	336	0.04	209
BWRC006*	37	44	7	3.22	1.97	0.17	79	0.15	1232
BWRC006*	49	53	4	6.43	12.27	0.86	379	0.21	982
BWRC006*	79	83	4	11.0	2.49	0.01	249	0.05	122
BWRC006*	90	95	5	5.03	0.76	0.04	148	0.12	819
*RC Pre	collar								

#### Partial Results - Visually mineralised zones

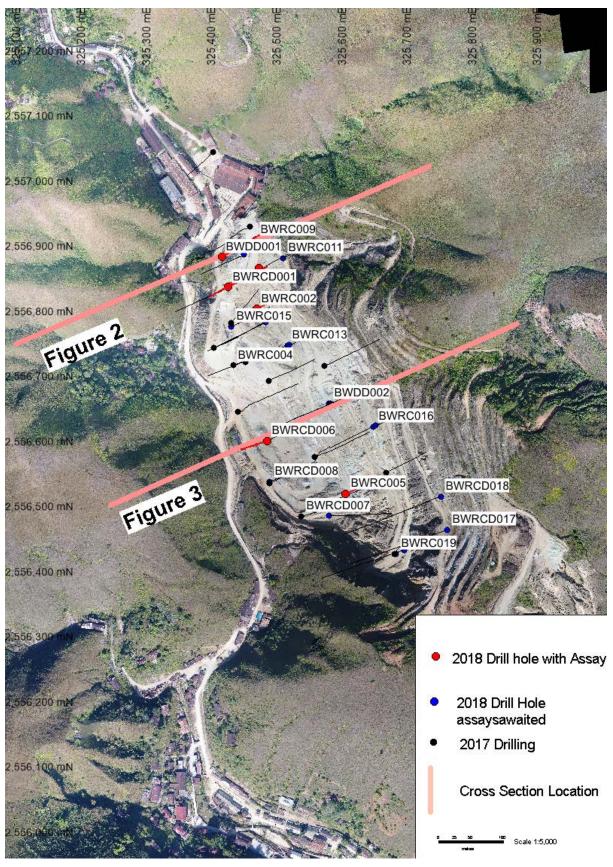


Figure 1. Location of schematic cross sections shown in Figures 2 and 3.

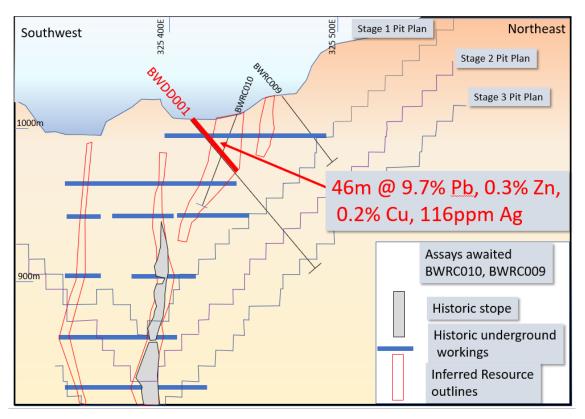


Figure 2 Oblique Cross Section PXSec\_1 (looking Northwest) BWDD001

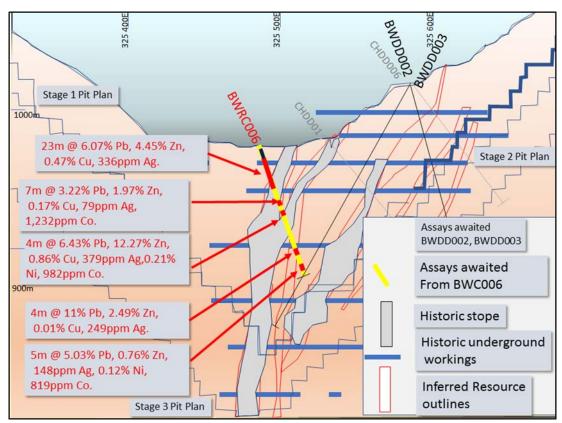


Figure 3 Oblique Cross Section PXSec\_1 (looking Northwest) BWDD001 (in Progress)

#### Bawdwin: A True World Class Polymetallic System

Historically, the smelter at Namtu produced a range of products from Bawdwin ore including nickel "speiss" containing on average **27.5% Ni** and **1.5% Co**, as well as copper "dross", zinc concentrate and both silver and lead metal in ingot form. High silver content was a feature of all of these products. "Antimonial Lead" in ingot form was also produced, suggesting the presence of economic grades of antimony within the system.

The Company has a re-assaying program currently underway using pulps retained from the 2017 drilling campaign, to test these for a full suite of elements.



Historical mill and smelter products on display at WMM's Namtu office. Image: MYL

#### **Bawdwin – Next Steps**

Further results from the current drilling programme, which is now approximately 70% complete, are expected to be received in the coming weeks and will be released to the ASX in due course. These results, along with additional specific gravity determinations and refined stope positions, will be used to further refine the resource model and progress upgrade of the Inferred Resource within the Stage 1 pit design to Indicated status.

This will lead to an update of the Scoping Study which will also incorporate results of metallurgical testwork that is currently underway.

The Company is focused on the exercise of the option by 21 May 2018 and thereafter, a bankable feasibility study will be prepared.

John Lamb

**Chairman and Chief Executive Officer** 

#### For More Information:

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#### **Forward Looking Statements**

The announcement contains certain statements, which may constitute "forward –looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties, which could cause actual values, results, performance achievements to differ materially from those expressed, implied or projected in any forward-looking statements.

#### **Competent Person Statements**

The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The Information contained in this announcement has been presented in accordance with the JORC Code.

The information in this report that relates to Geology and Exploration Results is based, and fairly reflects, information compiled by Dr Neal Reynolds, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Dr Reynolds is employed by CSA Global Pty Ltd, independent resource industry consultants. Dr Reynolds has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Reynolds consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based, and fairly reflects, information compiled by Serikjan Urbisinov, who is a Member of the Australian Institute of Geoscientists. Mr Urbisinov is employed by CSA Global Pty Ltd, independent resource industry consultants. Mr Urbisinov has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Urbisinov consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# **APPENDIX: JORC Code**, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The 2018 evaluation program at Bawdwin included diamond core and RC.</li> <li>The diamond core drilling commenced in January 2018 and is still in progress, using PQ, HQ and NQ triple tube diameter coring.</li> <li>Drill core was geologically logged, cut and then ½ core samples sent to Intertek Laboratories for sample preparation in Yangon, Myanmar and then analysis in Manila, Philippines. The sample interval was nominally 1 metre or to geological and mineralisation boundaries.</li> <li>RC Drilling was commenced in January and was completed in March 2018 with 23 holes completed. The Hanjin DB30 multi-purpose drill rig was used drilling a nominal six-inch diameter hole. A face sampling hammer was used and samples were split into a bulk sample and a sub-sample collected in plastic bags at 1m intervals. Samples were split using a riffle splitter, with the bulk sample being stored on site, and an approximately 2kg sub sample was sent to Intertek Laboratories for sample preparation in Yangon, Myanmar and then analysis in Manila, Philippines</li> </ul>
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).	<ul> <li>Drilling was completed by Titeline Valentis Drilling Myanmar ('TVDM') using two Elton 500 drill rigs. Drilling is a combination of triple tubed PQ, HQ and NQ diameter diamond coring. Holes were typically collared in PQ, then reduced to HQ around 50m, and later to NQ if drilling conditions dictated. Holes ranged from 63.4 metres to 260.1 metres depth.</li> <li>Attempts were made to orientate the core but the ground was highly fractured and broken with short drilling runs. Obtaining consistently meaningful orientation data was very difficult.</li> <li>Titeline Valentis Drilling Myanmar ('TVDM') subcontracted a Hanjin DB30 multi-purpose drill rig for the RC drilling. The rig drilled a nominal six-inch diameter hole. A face sampling hammer was used and samples were split into a bulk sample and a sub-sample collected in plastic bags at 1m intervals. Samples were split using a riffle splitter, with the bulk sample being stored on site.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>To maximise core recovery, triple tube PQ, HQ and NQ core drilling was used, with the drilling utilising TVDM drillers experienced in drilling difficult ground conditions. Drill penetration rates and water pressure were closely monitored to maximise recovery.</li> <li>During the diamond drilling the length of each drill run and the length of sample recovered was recorded by the driller (driller's recovery). The recovered sample length was cross checked by the geologists logging the drill core and recorded as the final recovery.</li> <li>Core recoveries were variable and often poor with a mean of 80% and a median of 87%, with lowest recoveries in the 10 to 30% range. Low recoveries reflect poor ground conditions and previously mined areas. Core recoveries were reviewed and two intervals were excluded due to very poor recovery.</li> <li>At present, no relationships between sample recovery and grade bias due to loss/gain of fines or washing away of clay material has been identified. It is assumed that the grade of lost material is similar to the grade of the recovered core.</li> <li>RC Drilling was conducted to maintain sample recoveries. Where voids or stopes were intersected recoveries were reduced, and such occurrences were recorded by the supervising geologist.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All diamond core samples were geologically logged in a high level of detail down to a centimetre scale. Quantitative logging for lithology, stratigraphy, texture, hardness, RQD and defects was conducted using defined logging codes. Colour and any other additional qualitative comments are also recorded.</li> <li>All RC samples were geologically logged for lithology, alteration and weathering by Geologists.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field</li> </ul>	<ul> <li>All core was half-core sampled. Most core was cut using an electric diamond saw and some more friable intervals were split manually. All core for sampling was pre-marked with the cut line, and only the left-hand side of the core was sent for assay to maintain consistency.</li> <li>The core sampling intervals were generally at one metre intervals which were refined to match logged lithology and geological boundaries. A minimum sample length of 0.5m was used.</li> <li>RC samples were collected in plastic bags at 1m intervals from a cyclone located adjacent to the drill rig. Valentis field staff passed the bulk sample through a riffle splitter to produce a nominal 2kg sub</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	sample. Given the nature of the RC drilling to pulverise the sample into small chips riffle splitting the sample is an appropriate technique for a sulphide base metal deposit. The 2kg sub-sample was deemed an appropriate sample size for submittal to the laboratory.
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>The Valentis diamond drilling and RC samples were all sent to Intertek Laboratories in Yangon for sample preparation.</li> <li>All samples were dried and weighed and crushed to in a Boyd Crusher. A representative split of 1.5kg was then pulverised in a LM5 pulveriser. A 200-gram sub-sample pulp was then riffle split from the pulverised sample. The crusher residue and pulverised pulp residue were stored at the Yangon laboratory.</li> <li>Sample pulps were sent to the Intertek analytical facility in Manila, Philippines where they were analysed using ICP-OES – Ore grade 4 acid digestion. Elements analysed were Ag, Fe, Cd, Co, Ni, Pb, Cu, Mn, S and Zn.</li> <li>Quality Control (QAQC) samples were submitted with each assay batch (certified reference standards, blanks and duplicate samples). Laboratory inserted QAQC samples were also analysed. All assay results returned were of acceptable quality based on assessment of the QAQC assays.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All diamond drill core samples were checked, measured and marked up before logging in a high level of detail.</li> <li>RC Samples were sampled logged at the drill rig. A small subsample from each metre was placed into a plastic ship tray to allow re-logging if required.</li> <li>The diamond and RC drilling, sampling and geological data were recorded into standardised templates in Microsoft Excel by the logging/sampling geologists.</li> <li>Geological logs and associated data were cross checked by the supervising Project Geologist</li> <li>Laboratory assay results were individually reviewed by sample batch and the QAQC data integrity checked before uploading.</li> <li>All geological and assay data were uploaded into an Access database.</li> <li>The Access database was loaded into Micromine databases. This</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>data was then validated for integrity visually and by running systematic checks for any errors in sample intervals, out of range values and other important variations.</li> <li>All drill core was photographed with corrected depth measurements before sampling.</li> <li>No specific twin holes were drilled; however, two daughter holes were inadvertently cut due to challenging drilling conditions during re-entry through collapsed ground. The daughter holes intersected mineralisation of very similar tenor and grade to the parent hole.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The diamond and RC drilling utilised UTM WGS84 datum Zone 47 North.</li> <li>All diamond drill holes and pit mapping sampling traverse locations were surveyed using a Differential Global Positioning System (DGPS). The DGPS is considered to have better than 0.5m accuracy.</li> <li>All diamond drill holes have downhole surveys. These were taken using a digital single shot camera typically taken every 30 metres.</li> <li>The RC Holes were surveyed in the rods every 30m, however because of interference from the steel only dips could be recorded.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	The diamond and RC drill holes completed at the open pit are
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Drill holes were generally drilled on 065 azimuth (true) which is perpendicular to the main north and NNE striking lodes. Holes were generally inclined at -50 degrees to horizontal. Some holes were also drilled on 245 azimuth (true) because of access difficulties due to topography and infrastructure.</li> <li>The drilling orientation is not believed to have caused any sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	• Drill core was taken twice daily from the drill rig, immediately following completion of day shift and night shift respectively.

Criteria	JORC Code explanation	Commentary
		<ul> <li>Core was transported to the core facility where it was logged and sampled.</li> <li>RC samples were collected from the rig upon hole completion.</li> <li>Samples were bagged and periodically sent to the Intertek laboratory in Yangon for preparation. All samples were delivered by a Valentis geologist to Lashio then transported to Yangon on express bus as consigned freight. The samples were secured in the freight hold of the bus by the Valentis geologist. The samples collected on arrival in</li> </ul>
		Yangon by a Valentis driver and delivered to the Intertek laboratory.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>Integrity of all data (drill hole, geological, assay) was reviewed before being incorporated into the database system.</li> <li>No external reviews have been completed</li> </ul>

### Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Bawdwin Mine is in NE Shan State, Myanmar</li> <li>The project owner is Win Myint Mo Co. Ltd ("WMM") who hold a Mining Concession which covers some approximately 38 square kilometres.</li> <li>WMM has a current Production-sharing Agreement with the Myanmar Government.</li> <li>Myanmar Metals holds an exclusive six-month option agreement with WMM, which can be extended to 12 months, under which it can acquire an 85% interest in the Project from WMM subject to approval by the Myanmar government</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The Bawdwin Mine was operated as an underground and open pit base metal (Pb, Zn, Ag, Cu) mine from 1914 until 2009.</li> <li>The only modern study on the mine was completed by Resource Service Group (RSG) in 1996 for Mandalay Mining. RSG compiled the historic underground data and completed a JORC (1995) Mineral Resource estimate. The digital data for this work was not located and only the hardcopy report exists</li> </ul>

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Bawdwin deposit is hosted in volcanic (Bawdwin Tuff), intrusive (Lo Min Porphyry) and sedimentary (Pangyun Formation) rocks of late Cambrian to early Ordovician age.</li> <li>The historic mine was based on three high-grade massive Pb-Zn-Ag-Cu sulphide lodes, the Shan, China and Meingtha lodes. These lodes were considered to be formed as one lode, and are now offset by two major faults the Hsenwi and Yunnan faults.</li> <li>The major sulphides are galena and sphalerite with lesser amounts of pyrite, chalcopyrite, covellite, gersdorffite, boulangerite, and cobaltite amongst other minerals.</li> <li>The lodes are steeply-dipping structurally-controlled zones and each lode incorporated anastomosing segments and footwall splays.</li> <li>The lodes occur within highly altered Bawdwin Tuff which hosts extensive stockwork and disseminated mineralisation as well as narrow massive sulphide lodes along structures. This halo mineralisation is best developed in the footwall of the largest China Lode.</li> <li>The main central part of the mineralised system is approximately 2 km in length by 400m width, while ancient workings occur over a strike length of about 3.5 km</li> <li>The upper portion of the China Lode was originally covered by a large gossan which has been largely mined as part of the earlier open pit. The current pit has a copper oxide zone exposed in the upper parts, transitional sulphide mineralisation in the central areas and fresh sulphide mineralisation near the base of the pit</li> <li>The Bawdwin deposit is interpreted as a structurally-controlled magmatic-hydrothermal replacement deposit emplaced within a rhyolitic volcanic centre</li> </ul>
Drill hole Information	<ul> <li>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: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul></li></ul>	<ul> <li>All collar and composite data are provided in tables in the body of the document or as Appendices</li> </ul>

Criteria	JORC Code explanation	Commentary
	• 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	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Length-weighted composites have been reported based on lower cut- off criteria that are provided in the composite tables, primarily 0.5% Pb. Additional composites based on cut-off of 0.5% Cu have been reported to highlight copper-rich zones.</li> <li>No top-cut has been applied. The Bawdwin deposit includes extensive high grade massive sulphide lodes that constitute an important component of the mineralisation; top-cuts will be applied if appropriate during estimation of mineral resources</li> <li>Composite incorporate a maximum of 2 metres internal waste</li> <li>Metal equivalents are not reported here.</li> </ul>
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Drill holes were orientated at an azimuth perpendicular to the main orientation of mineralisation with a dip at about 40-50° from the dip of mineralisation; reported drill composite intercepts are down-hole intervals, not true widths</li> </ul>
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.	<ul> <li>Diagrams that are relevant to this release have been included in the main body of the document.</li> </ul>
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.	<ul> <li>Results have been reported for all drill holes to the cut-off criteria provided</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	All relevant data have been reported
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).	<ul> <li>The details of additional work programs will be determined by the drilling program and Scoping Study that are currently underway.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>It is envisaged that a substantial drilling program will be undertaken to improve confidence in the Mineral Resource and to test extension targets, supported by geology, geochemistry and geophysics</li> </ul>

### 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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>All historical underground drive sampling data was compiled into an Access database.</li> <li>Diamond drilling and RC sampling data was also compiled into an Access database.</li> <li>Data was imported into Micromine tables and drilling/underground sampling databases constructed. These were validated in Micromine for inconsistencies, overlapping intervals, out of range values, and other important items.</li> <li>All data was visually checked.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Dr. Neal Reynolds, a director of CSA Global, conducted site visits to the project area in August and October 2017. Although drilling was not underway, drill collars were observed and checked and drill core was examined and mineralisation in the open pit was observed. The historical systematic documentation of mining and exploration development, sampling and assaying was confirmed, and the assay laboratory was visited.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The Bawdwin Mine has a long underground and open pit mining history. The geological interpretation used for the resource estimate is based on historical sectional and plan underground geology interpretations and recent open pit mapping and new diamond drilling information. Stoped areas were also modelled and these provide a useful guide to the geometry and orientation of the major lodes. This data has been used to create a wireframed 3D model of geology, structure and mineralisation.</li> <li>Underground and open pit channel sampling, drill hole assay results have formed the basis for the geological interpretation.</li> <li>The major lodes were modelled in Micromine primarily in plan view and additionally in section view to integrate drill hole data. 3.5% Pb cut-off grade was applied for interpretation of the major lodes.</li> <li>Surrounding the major lodes, a "halo" zone was modelled based on 0.5% Pb cut-off grade and represents an alteration envelope around the high-grade lodes</li> <li>No alternate interpretations have been considered as the overall geometry of the mineralisation is generally well understood</li> </ul>

Criteria	JORC-Code Explanation	Commentary
		The grade and to a lesser degree lithological interpretation forms the basis for the modelling.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The currently interpreted mineralisation of the Bawdwin area extends for approximately 1.8 km along a 325° northwest strike. The dip angle of the zone varies from -70 degrees to -90 degrees with most common dip angle at -80 degrees. The zone extends from surface to 475m below the surface.</li> </ul>
Estimation and modelling techniques	<ul> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. Sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul> <li>Grade estimation was by ordinary kriging (OK) using Micromine 2016.1 software. The interpretation was extended perpendicular to the corresponding first and last interpreted plan levels to the distance equal to a half distance between the adjacent underground levels.</li> <li>CSA Global carried out the reported Mineral Resource estimate in September – October 2017.</li> <li>The OK estimate was completed concurrently with two check Inverse Distance Weighting (IDW) estimates. The OK estimate used the parameters obtained from the modelled variograms. The results of the check estimates correlate well.</li> <li>No deleterious or non-grade variables were estimated.</li> <li>The block model was constructed using a 5 m E x 10 m N x 10 m RL parent block size, with sub-celling to 1 m E x 2 m N x 2 m RL for domain volume resolution. The parent cell size was chosen on the basis of the general morphology of mineralised zones and in order to avoid the generation of large block models. The sub-cell size was chosen to maintain the resolution of the mineralised zones. The sub-cells were optimised in the models where possible to form larger cells.</li> <li>The first search radii were determined by means of the evaluation of the semivariogram parameters.</li> <li>The first search radius was selected to be equal to the block size dimensions to use the grades from the workings that intercepted the block. The second search radius was selected to be equal to two thirds of the semivariogram ranges in all directions. Model cells that did not receive a grade estimate from the first interpolation run were used in the next interpolation with greater search radii long semivariogram ranges. When model cells were estimated using radii incremented by the full long semivariogram ranges, a restriction of at least three samples from at least two drill holes was applied to increase the reliability of the estimates.</li> <li>No selective mining units were assumed in this estimate.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
Estimation and modelling techniques (continued)	<ul> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>No strong correlations were found between the grade variables estimated.</li> <li>Grade envelopes were defined for Pb based on 3.5% Pb grade to define high grade lodes and 0.5% Pb for the "Halo" zone. Hard boundaries between the grade envelopes were used to select sample populations for grade estimation.</li> <li>Grade envelopes were defined for Cu based on 1.0% Cu grade to define copper mineralisation.</li> <li>Statistical analysis to determine top cut grade values was carried out separately for each element (Pb, Zn, Cu, Ag) and separately for high grade lodes and the "Halo" zone.</li> <li>Validation of the block model included comparison of the block model volume to the wireframe volume. Grade estimates were validated by statistical comparison with the drill data, visual comparison of grade trends in the model with the drill data trends, and by using a second interpolation technique.</li> <li>No reconciliation data is available.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul> <li>The tonnages are estimated on a dry basis</li> </ul>
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>The Mineral Resource above 750 metre RL was reported at 0.5% Pb and it reflects the pit optimisation which demonstrates potential for economic extraction in an open pit to this depth.</li> <li>A higher cut-off grade of 2% Pb has been applied to the reported Mineral Resource below the 750metre RL that has potential for eventual economic extraction by underground mining.</li> <li>Cut-off grade of 0.5% Cu has been applied to the reported Mineral Resource of the copper mineralisation.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
Mining factors or assumptions	<ul> <li>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.</li> </ul>	<ul> <li>A Scoping Study including a pit optimisation is currently assessing the open pit development opportunity at Bawdwin. It is expected that deeper parts of the deposit will be amenable to underground mining.</li> </ul>
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>It is assumed that Pb, Zn, Cu and Ag sulphide mineralisation can all be economically extracted using conventional flotation methods. These were all produced historically at the Bawdwin Mine and Namtu Smelter Complex.</li> <li>The oxide and transitional portions of the resource represent a minor proportion of the total resource. The historic Pb-oxide concentrator plant had difficulties in treating the mixed sulphide/oxide ores (Pb recoveries of 30%).</li> <li>A modern metallurgical test work program is required.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
Environmental factors or assumptions	<ul> <li>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.</li> </ul>	<ul> <li>Suitable sites for waste dumps are located in the neighbouring ER Valley.</li> <li>The Pangyun creek that flows on the margins of the deposit will require a diversion for a large open pit</li> <li>Ore processing sites are undergoing further evaluation but there are possible options to pump a slurry to Namtu along a pipeline following the old railway line to a new processing plant.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>A total of 625 bulk density measurements were taken from a suite of mineralised and unmineralised drill core using conventional water immersion techniques.</li> <li>The bulk density of mineralisation increases with sulphide content and hence Pb, Zn and Cu metal grade.</li> <li>For mineralised lodes and halo mineralisation bulk density has been estimated using a formula which assumes Pb is present as galena, Zn is present as sphalerite and Cu is present as chalcopyrite, with the remainder of the rock is gangue. The estimated values were calibrated against the measured densities from drill-core.</li> <li>Based on the bulk density measurements a density of 2.0 was used for oxide ore, 2.2 for transitional ore, 2.40 for un-mineralised Bawdwin Tuff and 2.40 for Lo Min Porphyry.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The Inferred Mineral Resource classification is based on the evidence from the available drill hole and channel sampling. This evidence is sufficient to imply but not verify geological and grade continuity.</li> <li>The Inferred classification has considered all available geological and sampling information, and the classification level is considered appropriate for the current stage of this project.</li> <li>The open pit mapping and diamond drilling all have been carried in accordance with modern industry best practice standards and have QAQC data to support the assay data. The historic underground sampling has no assay QAQC. The data quality is acceptable for the classification of Inferred.</li> <li>The overall structure of the major lodes is well understood from the underground data and open pit mapping.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
Audits or reviews.	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
Discussion of relative accuracy/ confidence	<ul> <li>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.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource to an Inferred classification as per the guidelines of the 2012 JORC Code.</li> <li>The statement refers to global estimation of tonnes and grade.</li> </ul>