# JORC Code Table 1

The JORC Code includes a check list of assessment and reporting criteria referred to as JORC Code Table 1.

JORC Code Table 1 for the Pavlovskoye Deposit Mineral Resource estimate as of February 2021 published on 12 April 2021 is listed below.

## 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 (eg 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.<br>▪ Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.<br>▪ Aspects of the determination of mineralisation that are Material to the Public Report.<br>▪ In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg 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 (eg submarine nodules) may warrant disclosure of detailed information. | Samples used for the Mineral Resource estimate were mainly obtained by core drilling.<br>**Pre-2013 data:** Drill holes were cored with tungsten carbide bits and diamond bits. The final drilling diameter was 76 mm. Core was sampled using core saws taking half core samples. Sample preparation is discussed in Section 5.1.3.<br>**2013 - 2015 data:** Drill holes were cored with diamond bits and double tube barrels. The final drilling diameter was 76 mm and 95.6 mm. Core was sampled using core saws taking half core samples. Sample preparation is discussed in Section 5.2.3<br>**2020 data:** Drill holes were cored with diamond bits and double tube barrels. The final drilling diameter was 76 mm. Core was sampled using core saws taking quarter core samples. Sample preparation is discussed in Section 5.3.3 |
| **Drilling techniques** | ▪ Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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). | **Pre-2013 data:** Drilling was diamond and carbide bit drilling; half core was retained<br>**2013 - 2015 data:** All drilling was diamond drilling; half core was retained<br>**2020 data:** All drilling was diamond drilling; quarter core and half core was retained after metallurgical sampling. |
| **Drill sample recovery** | ▪ Method of recording and assessing core and chip sample recoveries and results assessed.<br>▪ Measures taken to maximise sample recovery and ensure representative nature of the samples.<br>▪ 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. | **Pre-2013 data:** The average core recovery for all rock types was 85%. In the mineralized zones the core recovery reached 95% to 100%. Grade-recovery relationship noted a decrease in grade associated with recovery under 90%.<br>**2013 - 2015 data:** Core recoveries were recorded; no issues with poor recovery are noted.<br>**2020 data.** Inspection of core photographs indicates core recovery was 95% to 100% in the majority of holes. |
| **Logging** | ▪ Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate | **Pre-2013 data:** Geological and mineralisation logging on hard copy logs was to a satisfactory level of detail. The digitized rock type information is rudimentary |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | Mineral Resource estimation, mining studies and metallurgical studies.<br>▪ Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.<br>▪ The total length and percentage of the relevant intersections logged. | but adequate for geological interpretation and resource estimation.<br>**2013 - 2015 data:** Geological and mineralisation logging in Excel files for each drill hole is to a reasonable standard. Rock type codes were added to drillhole database and are adequate for geological interpretation and resource estimation.<br>**2020 data:** All core was logged and sampled on 1 m intervals, with adjustment at geological boundaries. The consistent logging and sampling intervals helped to reduce sample identification errors and maintain consistency in geological and geotechnical observations. The logging sheet was highly-structured and wherever possible data was collected using a limited set of defined codes (such as rock type) or numeric values. The 2020 drill holes provide reasonable coverage across the East zone and a limited part of the Central zone. The geotechnical information is expected to be adequate for preliminary design of open pit slopes.<br>The rock type codes are the same for each period of drilling. This enables the principal metallurgical types to be inferred from the 2020 drilling and metallurgical testing programme. |
| **Sub-sampling techniques and sample preparation** | ▪ If core, whether cut or sawn and whether quarter, half or all core taken.<br>▪ If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.<br>▪ For all sample types, the nature, quality and appropriateness of the sample preparation technique.<br>▪ Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.<br>▪ 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.<br>▪ Whether sample sizes are appropriate to the grain size of the material being sampled. | **Pre-2013 data:** Core was sampled using mechanical means with half-core sent for assay Sample preparation was recorded as follows:<br>• Initial sample weight: 8 kg<br>• Split along core axis retain half core<br>• Crush half core in a jaw crusher to – 6 cm<br>• Crush in a jaw crusher to -1 mm<br>• Mix, cone and quarter to reduce sample size<br>• Split into two fractions of 2000 g (original plus duplicate)<br>• Split into two fractions of 1000 g (original plus duplicate)<br>• Split into two fractions of 500 g (original plus duplicate)<br>• Dry<br>• Pulverize to -0.074 mm<br>• Cone and quarter: 500 g for analysis in three different laboratories, 500 g retained as duplicate and metallurgy.<br>**2013 - 2015 data:** Core was sampled using core saws taking half core samples. Samples were prepared in the exploration camp at Pavlovskoye using a similar protocol to that shown above. Cone and quarter splitting method was used: 350 g was sent for analysis, 350 g retained as duplicate and for metallurgy.<br>**2020 data:** Core was sampled using core saws taking quarter core samples. After drying samples were crushed to -1 mm in a Rocklabs Boyd crusher at site then split by quartering method to 350 g, packed in plastic bags and sent to ALS Laboratory in Moscow, where it was pulverized to -0.074 mm in a disc pulverizer and analyzed. Quarter core duplicates were taken at the same time as the primary quarter core samples. The field duplicate results were satisfactory, but for future exploration it is recommended to accurately split the fines between the sample and the duplicate left in the core box. Concrete bricks were inserted into the sample preparation stream every 25 samples to monitor possible |

| Criteria | JORC Code Explanation | Commentary |
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|  |  | contamination. No sample contamination was identified. Coarse duplicates were selected at a rate of 1 in 50 samples after the 1mm crushing stage to assess sample splitting accuracy. The coarse duplicate results were satisfactory.<br>In AMC's view sample sizes are appropriate to the grain size of the material being sampled and the sample preparation was of satisfactory standard. |
| **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.<br>▪ 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.<br>▪ Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. | **Pre-2013 data:**<br>Assaying was carried out in Sevzapgeologia laboratory and the Party of nuclear physics research methods (Russian abbreviation spells "PYAFMI") of the Polar Offshore Exploration Expedition ("PMGRE").<br>In Sevzapgeologia laboratory, zinc and lead were analysed by atomic absorption spectrometry (NSAM 155-XC method). Method detection limits are 0.02% to 20% for Pb and 0.005% to 20% for Zn. Silver was determined by AAS method NSAM 130-C. Method lower detection limit is 0.005ppm Ag and upper detection limit is 2,000 ppm Ag.<br>In the PYAFMI PMGRE Laboratory, lead and zinc were analysed by X-ray fluorescence (XRF) following industry standard method No. 311-YaF. Method detection limits are 0.01% to 5% for Pb and 0.02% to 5% for Zn.<br>Pavlovskoye deposit grades for the 2001-2002 sampling were estimated based on AAS data of the Sevzapgeologia laboratory. XRF analysis data were used to compare with the results of the AAS method to assess the possibility of using as the main assay method.<br>A total of 1,802 samples were analysed for lead, zinc and silver during the 2001-2002 exploration period.<br>**2013 - 2015 data:** Samples taken during the 2013 field season were all analysed in Central Laboratory of the North-West Branch of Nevskgeologiya of the State financial institution Urangeologorazvedka (Nevskgeologiya laboratory).<br>Lead assays were completed according to the updated X-ray spectrometry method NSAM-80 RS, implemented on the ARF-6 spectrometer produced in Russia by JSC Bourevestnik. Method lower detection limit is 0.001% Pb and upper detection limit is 5% Pb.<br>Zinc was determined by atomic absorption spectrometry (AAS) method NSAM 155-XC. NSAM 155-XC comprises digestion of 0.1 g of the sample in a mixture of hydrofluoric, perchloric and nitric acids with an AAS finish. Method lower detection limit is 0.005% Zn and upper detection limit is 20% Zn.<br>Silver was determined by AAS method NSAM 130-C. Method lower detection limit is 0.005ppm Ag and upper detection limit is 2,000 ppm Ag.<br>Samples taken during the 2014 field season were analysed in three laboratories: Nevskgeologiya laboratory, Sosnovgeologiya laboratory and Irkutskgeofizika laboratory |

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<p>Lead assays were completed in Nevskgeologiya and Sosnovgeologiya by X-ray spectrometry method NSAM-80 RS. Zinc was determined in Nevskgeologiya and Irkutskgeofizika by atomic absorption spectrometry (AAS) method NSAM 155-XC. Silver was determined in Irkutskgeofizika by AAS method NSAM 130-XC.</p>
<p>Sample analysis for the 2013-2014 drilling campaign</p>
<table>
<tr><th>Laboratory</th><th>Pb assays</th><th>Zn assays</th><th>Ag assays</th></tr>
<tr><td>Nevskgeologiya</td><td>5,153</td><td>5,153</td><td>5,153</td></tr>
<tr><td>Sosnovgeologiya</td><td>1,497</td><td>0</td><td>0</td></tr>
<tr><td>Irkutskgeofizika</td><td>0</td><td>1,497</td><td>1,497</td></tr>
<tr><td>Total</td><td>7,723</td><td>7,723</td><td>7,194</td></tr>
</table>
<p><b>2020 data:</b> Pavlovskoye resource samples were analyzed at the Stewart Geochemical and Assay LLC laboratory (part of the ALS Group) in Moscow, Russia (ALS). The Stewart Geochemical and Assay Laboratory is a certified laboratory with ISO/IEC 17025:2005 International Standard requirements.</p>
<p>The following analytical suite was followed:</p>
<p>• Multielement 4-acid digest (total) ICP-OES. ALS method code ME-ICP61 that comprises 33-element package with element detection range limits for lead from 0.0002% Pb to 1% Pb; for zinc from 0.0002% Zn to 1% Zn; for silver from 0.5 g/t Ag to 100 g/t Ag; for sulphur from 0.01% S to 10% S.</p>
<p>• Ore grade 4-acid digest for zinc, lead and silver over range. ALS method OG-62 that comprises 15-element package with element detection range limits for lead from 0.001% Pb to 20% Pb; for zinc from 0.001% Zn to 30% Zn; for silver from 1 g/t Ag to 1500 g/t Ag; for sulphur from 0.01% S to 50% S.</p>
<p>• Sulphur over 5% S by ICP repeated by LECO IR methods. ALS method S-IR08 with element detection range limits for sulphur from 0.01% S to 50% S (where zinc and lead not high enough to trigger OG-62 methods).</p>
<p>Pavlovskoye 2020 drilling programme assay statistics</p>
<table>
<tr><th>Assay Method</th><th>No of assay records*</th></tr>
<tr><td>ME-ICP61</td><td>5,608</td></tr>
<tr><td>OG62</td><td>2,884</td></tr>
<tr><td>S-IR08</td><td>2,142</td></tr>
<tr><td>Total</td><td>5,608</td></tr>
</table>
<p>*Note the statistics include quality control samples</p>
</td></tr>
<tr><td><b>Verification of sampling and assaying</b></td><td>▪ The verification of significant intersections by either independent or alternative company personnel.</td><td>The drilling in 2020 infilled between earlier drill holes. The 2020 drill holes generally intersected mineralization in the expected positions and grades were similar to those indicated by earlier drill holes. Differences between drill holes</td></tr>
</table>

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | ▪ The use of twinned holes.<br>▪ Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.<br>▪ Discuss any adjustment to assay data. | indicate that local variability in the thickness of mineralized zones, the proportion of limestone fragments in the sulphide breccias and in zinc and lead grades can be expected. It is likely that some of variations will be the result of faults and structural features that cannot be identified with the current drillhole spacing. |
| **Location of data points** | ▪ Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.<br>▪ Specification of the grid system used.<br>▪ Quality and adequacy of topographic control. | The 2020 collars were surveyed after completion of the drill hole. The following equipment was used for surveying.<br>• Base receiver: GNSS geodetic receiver Leica GS10.<br>• Mobile receiver (rover): GNSS geodetic receiver Leica GS08 plus.<br>• Controller: Leica CS10 3.5G with field software Leica Smart Worx Viva.<br>• Radio modem SATEL GFU30 (403-473 MHz).<br>Accuracy of position survey depends on various factors, including the number of satellites tracked, their cumulative geometries, observation times, ephemeris accuracy, ionospheric disturbances, multipath, and ambiguous resolution. Accuracy values are given as root-mean-square deviation values based on real-time measurement processing and comprise: 8 mm +0.5 mm/km in the plane and 15 mm +0.5 mm/km in height.<br>The pre-2020 drillhole collars listed in exploration reports were checked against the database. Drilling in 2020 generally intersected mineralisation in the expected locations, which provides indirect confirmation of the reliability of the locations of pre-2020 drill hole data.<br>Limited downhole surveying was completed prior to 2020. All but seven holes were drilled vertically. Holes drilled in 2020 were surveyed down-hole with Compass 1.3.0.0, a magnetic multi-shot instrument for borehole surveying based on modern MEMS technology that records dip, magnetic azimuth, and magnetic intensity at 6 m down-hole intervals. Deviations were very small. |
| **Data spacing and distribution** | ▪ Data spacing for reporting of Exploration Results.<br>▪ 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.<br>▪ Whether sample compositing has been applied. | AMC concludes that the 2020 drilling indicates that the pre-2020 drilling can be used with a moderate level of confidence, for global resource estimation. However, there is insufficient QA/QC data for a high level of confidence in the resources estimated at the local scale using just the pre-2020 samples.<br>The Pavlovskoye deposit has been tested by 25 m close-spaced drilling on 50 m spaced primary sections, and wider-spaced drilling on 100 m spaced sections. The shapes of the mineralized zone are well-defined by the drilling on the East zone, but poorly defined on the Central zone.<br>The 2020 infill drilling demonstrated that the drill spacing is sufficient to define the geological structure and the location and general character of the mineralized zones, and to assume geological continuity. However, the 2020 drilling indicates that there is significant local variability in the thickness and grade of the mineralized zones. The data spacing is within the modelled variogram ranges for zinc and lead and it is sufficient for Measured at 25 m spacing, and at 50 m spacing for Indicated Mineral Resources. In locations where the data is more-widely spaced up to 100 m spacing, Inferred Mineral Resources have been estimated.<br>Resource estimates were based on 3 m composites. |

| Criteria | JORC Code Explanation | Commentary |
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| **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.<br>▪ 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. | The orientation of the mineralized zones is well-understood in the East zone. The 2020 drilling defined the folded anticline at appropriate angles to minimize the apparent thickness apart from on the western limb that dips steeply. The general trend of the mineralisation in the Central zone is understood, but detailed local orientation is less certain. The drill holes generally pass through the zone of mineralization at 45° – 90°. The rocks at Pavlovskoye do not have strong planar fabrics such as bedding or foliations. There is no evidence of significant deflection in the drill hole orientations nor of bias between holes drilled in different directions. |
| **Sample security** | ▪ The measures taken to ensure sample security. | No special measures were taken to ensure sample security. The samples were marked outside and tagged inside the sample bags to ensure sample information is appropriately recorded on site, and in the analytical laboratory.<br>The 2020 core is kept in the core shed built in 2020. It is recommended during the next field season to construct an additional facility for the pre-2020 core that is currently kept outside in core boxes. |
| **Audits or reviews** | ▪ The results of any audits or reviews of sampling techniques and data. | The execution of field procedures was reviewed on site by AMC twice in 2020. No significant problems were identified. |

## 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.<br>▪ 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. | JSC First Ore Mining Company (JSC FOMC) is currently the holder of two licences related to the Pavlovskoye project area, namely licences APX 01565 TЭ and APX 01564 БП.<br>The first exploration licence for the area of the Bezymyannaya River basin of the Novaya Zemlya archipelago was granted to FOMC in 2000. Due to changes in the legal form of FOMC, the licence was re-issued two times in 2011 and 2016. The current exploration-only licence APX 01564 БП was registered on 29 August 2016. It comprises an area of 1,150 km$^2$ and the depth of licence area is limited only by the depth of geological exploration. The licence expiration date is 31 December 2026, as registered in the amendments to the licence.<br>As a result of exploration carried out within the licence area between 2000 and 2002, Pavlovskoye lead-zinc deposit was discovered, which is verified by the Certificate of Acknowledgement of the Discovery of a Mineral Deposit No APX 02 MET 1005 dated 22 May 2002.<br>On 23 May 2014, ZAO “Pervaya gornorudnaya kompania” (CJSC First Ore Mining Company, CJSC FOMC) was granted with licence APX 15730 TЭ for mineral exploration and mining of the Pavlovskoye deposit.<br>On 29 August 2016 licence APX 15730 TЭ was re-issued to AO “Pervaya gornorudnaya kompania” (JSC First Ore Mining Company, JSC FOMC) due to the change in the legal form from Closed joint-stock company to Joint Stock Company. The licence was registered at the Federal Agency for Subsoil. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | | The licence was given a new number APX 01565 TЭ and is valid until 01 May 2034. The licence provides the right to use the subsurface for mineral exploration and mining of the Pavlovskoye deposit. Lead-zinc ore components, including silver, are listed as predominant commodities of the licence area.<br>On 20 November 2019 Amendment #1 for the licence APX 01565 TЭ was registered. It incorporated two amendments to the licence agreement. The time of approval of detailed development plan of the Pavlovskoye deposit was postponed by two years until 01 October 2021 and mine commissioning was postponed by two years until 01 December 2024.<br>On 28 December 2020 Amendment #2 for the licence APX 01565 TЭ was registered, correcting a technical error in the value of the area of the mineral licence.<br>The subsoil licence covers an area of 14.5 km$^2$ and is limited to a depth of estimated reserves. |
| **Exploration done by other parties** | ▪ Acknowledgment and appraisal of exploration by other parties. | Lead-zinc mineralisation in the Bezymyannaya River basin was identified in 1991 by geologists of the West-Arctic prospecting and survey party of the Polar Marine Geological Expedition (PMGRE) during state geological survey at a scale of 1: 50,000. From 1993 to 1994 the site area underwent geological mapping and mineragenic studies at a 1: 50,000 scale. In September 2000, FOMC received an exploration licence for the area of the Bezymyannaya River basin. From 2000 to 2002, the area underwent prospecting and appraisal works carried out by PMGRE as a subcontractor for FOMC. As a result, the Pavlovskoye lead-zinc deposit was discovered including three constituting blocks: Eastern, Central and Western. |
| **Geology** | ▪ Deposit type, geological setting and style of mineralisation. | Pavlovskoye deposit belongs to the Mississippi Valley-Type (MVT) group of deposits. On a regional scale, Bezymyanskaya area, which includes the Pavlovskoye deposit, is part of the Paykhoy-Novaya Zemlya fold belt, the formation of which belongs to the early phases of the Cimmerian tectogenesis (the end of the Triassic - the beginning of the Jurassic). Pavlovskoye project area is composed of Silurian and Devonian clastic terrigenous, clay and carbonate rocks, which form a major Bezymyanskaya anticline with limbs extending up to 3 km to 4 km from the crest.<br>The core of the anticline is composed of Silurian to Devonian clastic terrigenous and clay sequences of the Pankovskaya Formation. The ore-hosting carbonate rocks of the Early Devonian Gribovskaya Formation are localised along the periphery of the anticline core, plunging gently to the south and southeast. Pb-Zn mineralisation is associated with organogenic limestones, and to a lesser extent with fine-grained limestone. Sedimentary breccias, dolomitic and clayey limestones comprise host rocks for the minor part of total Pavlovskoye mineralisation. |
| **Drillhole Information** | ▪ A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:<br>☐ easting and northing of the drillhole collar<br>☐ elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar | A summary of all drillhole collar information is included in Appendix B of this report. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | ▫ dip and azimuth of the hole<br>▫ down hole length and interception depth<br>▫ hole length<br>▪ 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 (eg cutting of high grades) and cut-off grades are usually Material and should be stated.<br>▪ 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.<br>▪ The assumptions used for any reporting of metal equivalent values should be clearly stated. | Exploration Results are not presented in this report. |
| **Relationship between mineralisation widths and intercept lengths** | ▪ These relationships are particularly important in the reporting of Exploration Results.<br>▪ If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.<br>▪ If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). | Exploration Results are not presented in this report. |
| **Diagrams** | ▪ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views. | Exploration Results are not presented in this report. |
| **Balanced reporting** | ▪ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. | Exploration Results are not presented in this report. |
| **Other substantive exploration data** | ▪ Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. | Relevant data are reported |
| **Further work** | ▪ The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).<br>▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | Exploration results are not presented in this report. The deposit has been explored to a level suitable for prefeasibility studies. Additional drilling is required in the Central zone to better define the thinner discontinuous zones that could potentially add resources within the likely pit extents. |

## 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.<br>▪ Data validation procedures used. | Drilling data from pre-2020 was examined in detail and recompiled by AMC based wherever possible on primary data sources such as assay certificates. The 2020 drilling was compiled by AMC directly from site based on digital logs and information collected on the rig (eg downhole surveys and orientations).<br>The data validation of drill hole locations was completed in 2020 by a detailed drill hole pick up using best practice DGPS systems. Analytical results were validated by checking instantly on a batch-by-batch basis by AMC geologist as they arrived from the lab. AMC also assembled and verified the 2020 database. |
| **Site visits** | ▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits.<br>▪ If no site visits have been undertaken indicate why this is the case. | Ekaterina Pelenkova, AMC Geologist visited the Pavlovskoye site from 28 August to 2 September 2020 and from 27 September to 6 October 2020. Discussions were held with the geological team. Drill core, core logging procedures, density measurement and sample preparation procedures were observed. Minor issues with sample splitting methods and core mark-up were identified and corrected. No significant problems were identified. |
| **Geological interpretation** | ▪ Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.<br>▪ Nature of the data used and of any assumptions made.<br>▪ The effect, if any, of alternative interpretations on Mineral Resource estimation.<br>▪ The use of geology in guiding and controlling Mineral Resource estimation.<br>▪ The factors affecting continuity both of grade and geology. | Infill drilling has demonstrated that the drill spacing is sufficient to define the geological structure and the location and general character of the mineralized zones, and to assume geological continuity. The mineralised zones have been interpreted using rock type coding, supported by assays. The mineralized zones were modelled in three dimensions using Datamine software in the more coherent East zone and Leapfrog software in the Central zone. A stratigraphic model was created based on the major stratigraphic units as correlation of rock types between holes was insufficient to be of value.<br>A series of prominent cross-cutting faults have been taken into account, but the previously interpreted faults based on gravity and magnetics were not fully included due to unknown impacts on mineralisation and lack of evidence in drilling. Infill drilling indicate that local variability in the thickness of mineralized zones mainly in the Central zone, the proportion of limestone fragments in the sulphide breccias and in zinc and lead grades can be expected. It is likely that some of the variations will be the result of faults and structural features that cannot be identified with the current drillhole spacing. A different overall geological interpretation does not seem feasible. Alternative interpretations are possible at the local scale but are unlikely to have a material impact on the Mineral Resource estimate. |
| **Dimensions** | ▪ The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. | The deposit occurs in two zones, the first East zone occurs in an anticline, the second – Central zone - a shallowly dipping set of lobes dipping to the east-northeast. The East zone mineralization extends about 550 m along the axis of the fold open to the north where it crosses the Bezymyannaya river it is about 350 m across strike, and up to 300 m below surface and open at depth. The Central zone has a 1 km dip length from surface, with sporadic mineralisation over 800 m wide and reaches to over 250 m below surface. |
| **Estimation and** | ▪ The nature and appropriateness of the estimation technique(s) | Resource estimation was carried out using Datamine software. A block model |

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr>
<td><b>modelling techniques</b></td>
<td>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.<br>▪ The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.<br>▪ The assumptions made regarding recovery of by-products.<br>▪ Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).<br>▪ In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.<br>▪ Any assumptions behind modelling of selective mining units.<br>▪ Any assumptions about correlation between variables.<br>▪ Description of how the geological interpretation was used to control the resource estimates.<br>▪ Discussion of basis for using or not using grade cutting or capping.<br>▪ The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</td>
<td>was developed and Zn, Pb, Ag, S, Fe, Cd, and As estimated using ordinary kriging. Density was estimated using inverse distance squared. Only Zn, Pb and Ag are reported as Mineral Resource.<br>Each of the mineralized zones was estimated separately. Extreme values were cut. Estimation parameters were derived from a study of variography using a data sub-set selected from the relatively consistent mineralised domain on the eastern flank of the East zone. The East zone was then estimated using dynamic anisotropy defined by a set of strings in plan and section to define trends in the data around the anticline. Modelling of the Central zone used a surface defined in Leapfrog software to represent the general dip trend of the mineralisation.<br>The variograms (as correlograms) for zinc, lead, silver and sulphide sulphur at Pavlovskoye were updated by AMC using Isatis software. A subset of the data was used to compile the variograms as AMC considers there is significant uncertainty with respect to continuity in the Central zone and in areas covered by wider spaced drilling. Limited data for some of the estimation variables precluded the development of robust variograms (cadmium, iron, arsenic, density). Detailed descriptions of the variography applied are include in Section 8.<br>The mineralized zones are folded and some are very thin. A relatively small block size was required to provide a good representation of the mineralized zones. A parent block size of 10 m by 10 m by 5 m was selected was selected for model construction and assignment of geology codes. To improve the resolution of zone boundaries, sub-blocks of 2.5 m by 2.5 m by 1.25 m were used. All sub-blocks were estimated with the same grade of the parent block. The block model was coded with the wireframe models exported from Leapfrog software, and wireframe models of topography and base of alluvium/colluvium.<br>Zinc, lead, silver, iron, arsenic, cadmium and sulphur grades were estimated into the model using OK with 3 m composites controlled by the interpreted mineralised zones.<br>Grades within each mineralised zone were estimated only with data from within that zone. Interpolation was carried out using dynamic anisotropy to simulate the folded nature of the mineralised zones.<br>The mineralisation wireframes generated in Leapfrog and had a dense network of triangulation points. For each fault block the mineralisation wireframes were combined and the dip and dip direction of the mineralized zones were established at each point. The estimated orientations were then used to orientate the search ellipse during grade estimation. A five-pass system was used to populate all blocks in the model.
<table>
<tr><th>Classification</th><th>Criteria</th></tr>
<tr><td>Measured</td><td>Zinc estimation pass 1 or 2 and average distance <=30 m</td></tr>
<tr><td>Indicated</td><td>Zinc estimation pass 1, 2 or 3 and average distance <=60 m</td></tr>
<tr><td>Inferred</td><td>Zinc estimation average distance <=110 m</td></tr>
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<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Number of holes and composites informing each domain are defined in the report Section 7.1. Waste blocks were estimated using OK. The very thin weakly weathered zone was not estimated separately.<br>Model validation included visual inspection of the block model on cross sections, verification of block and wireframe volumes, comparison with previous estimates and comparison of the model estimates against drilling assays and composite grades.<br>The new resource model incorporates a little more low-grade material than was included in the previous model due to the nature of the modelling of the Central zone.</td></tr>
<tr><td><b>Moisture</b></td><td>▪ Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</td><td>Tonnage was estimated on a dry basis.</td></tr>
<tr><td><b>Cut-off parameters</b></td><td>▪ The basis of the adopted cut-off grade(s) or quality parameters applied.</td><td>The resource is reported at a NSR cut-off value of US$34/t inside an optimised pit at a 1.0 revenue factor. The cut-off value represents the likely break even cost of material in the ground at an average resource grade. The NSR methodology considers metallurgical recoveries assumed for each of the product streams, along with metal prices, payabilities, exchange rates, freight, treatment charges and royalties.
<table>
<tr><th>Element</th><th>Realised price (US$)</th><th>Unit</th><th>Recovery (%)</th><th>Zinc equivalent factor</th></tr>
<tr><td>Zn</td><td>3,145</td><td>US$/t</td><td>90.3%</td><td>1.00</td></tr>
<tr><td>Pb</td><td>2,176</td><td>US$/t</td><td>53.3%</td><td>0.408</td></tr>
<tr><td>Ag</td><td>30</td><td>US$/oz</td><td>30.0%</td><td>0.003</td></tr>
</table>
<table>
<tr><th>Parameter</th><th>Assumed Value</th></tr>
<tr><td>Zinc recovery to zinc concentrate</td><td>90.3%</td></tr>
<tr><td>Lead recovery to lead concentrate</td><td>53.3%</td></tr>
<tr><td>Silver recovery to lead concentrate</td><td>30%</td></tr>
<tr><td>Payable Zn in concentrate</td><td>85%</td></tr>
<tr><td>Payable Pb in concentrate</td><td>95%</td></tr>
<tr><td>Russian Ruble to US Dollar conversion</td><td>82.60</td></tr>
<tr><td>Royalties for zinc, lead and silver</td><td>8%, 8%, 6.5%</td></tr>
</table></td></tr>
<tr><td><b>Mining factors or assumptions</b></td><td>▪ 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</td><td>The estimate has been prepared for evaluation as an open pit mine. It is proposed that the pit will be mined using conventional truck and excavator / shovel at 5 m to 10 m bench heights.<br>The Pavlovskoye Mineral Resource is a moderately sized zinc-lead deposit with good continuity in parts and grades that are comparable to other operating zinc-lead mines around the world. The resources are close to surface and have clear potential for open pit mining. The zinc and lead occur in very fine-grained</td></tr>
</table>

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | should be reported with an explanation of the basis of the mining assumptions made. | sphalerite and galena, which are amenable to flotation but may require very fine grinding to liberate them from the associated pyrite. Similar very fine-grained massive sulphide ores have been successfully mined and processed at Macarthur River in Australia.<br>In the Competent Person's opinion, these factors indicate that the mineral resource has reasonable prospects of eventual economic extraction. |
| **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. | The zinc and lead occur in very fine-grained sphalerite and galena, which are amenable to sequential flotation but may require very fine grinding to liberate them from the associated pyrite. Similar very fine-grained massive sulphide ores have been successfully mined and processed at Macarthur River in Australia. |
| **Environmental factors or assumptions** | ▪ Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. | It was assumed that waste rock from the proposed open pit mine and residues from the process plant can be stacked on site. Iron and sulphur grades and rock type have been estimated for all blocks in the model; this will allow classification of waste rock according to potential environmental impact. |
| **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.<br>▪ 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.<br>▪ Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. | In the 2002 and in the 2014 field seasons, the dry bulk density of the core samples was measured by Archimedean method (199 records added to AMC database from 2002 and 362 records from 2014).<br>In the 2020 drilling programme, the dry bulk density of the core samples was measured by two methods; a calliper method using short length of whole core (49 samples) and an Archimedean method on the whole core samples before they were crushed (997 samples).<br>AMC compared the results of the two methods. The correlation is very strong and there is no significant bias. The comparison provided validation of the Archimedes method data (total 1558 records). Vughs recorded rarely in the mineralized zones drilled in 2020 and are not believed to present a significant risk of bias. The Archimedes method is preferred but has the disadvantage of measuring small (20 cm to 30 cm) pieces of core rather than the entire 1 m interval sent for assay.<br>As a result of the high density of sulphide minerals, there is a strong correlation between the grades of zinc, lead, iron and sulphur and density. Grade to Archimedean density correlation was establish in drilling completed in 2013-2014 and 2020 with a high level of confidence. The 2013-2014 data analysis showed better correlation due to the analysis being conducted separately on the individual pieces used for density measurements.<br>It is important that the density estimates in the resource model are correctly |

| Criteria | JORC Code Explanation | Commentary |
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| | | correlated with the local grade estimates. The dataset used for the density estimate was a combination of the density measurements made using the Archimedes principle and density values back calculated from modal and volume weighted proportions of assayed sulphur, zinc, lead, and iron values. The sulphur database is less populated compared to the zinc and lead database and so coverage is less complete for the modelled area. In order to use as much data as available to inform the density model AMC decided to use the pXRF sulphur, lead and zinc data where sulphur was not assayed. Density was estimated using ID2 with a NN estimate run concurrently as a check estimate. |
| **Classification** | ▪ The basis for the classification of the Mineral Resources into varying confidence categories.<br>▪ 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).<br>▪ Whether the result appropriately reflects the Competent Person's view of the deposit. | The Pavlovskoye Mineral Resource is assigned Measured, Indicated and Inferred classification in accordance with guidelines within the JORC Code 2012. Parameters considered included the distribution and density of drill data, confidence in interpreted geological continuity and of the mineralised zones, and confidence in the resource block estimates. The recent assay data is supported by assay quality control procedures. The interpretation is based on the geological distribution of massive or brecciated sulphide mineralization, stratigraphy and grade. A nominal cut-off grade of 1% ZnEq (Zn+Pb) was used as a guide to define the zones in the Central Zone. Where appropriate, lower grade intervals were included to reflect the continuity of the mineralized zones. Grade estimation parameters are based on a study of variography. The 2020 data supports the use of the Pre-2020 data. The classification reflects the Competent Person's view of the deposit. |
| **Audits or reviews** | ▪ The results of any audits or reviews of Mineral Resource estimates. | The Mineral Resource estimate has been subject to peer review by AMC. No external independent review was carried out. |
| **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.<br>▪ 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.<br>▪ These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. | AMC considers that the classification is appropriate for the global resources. The estimate is constrained to an interpretation of geological structure and mineralised zones that is moderately to well-defined by the drill hole data. Infill drilling in 2020, confirmed that the location, thickness and grade of the mineralized zones are reasonably predictable at the global scale. Local scale variations due to local depositional environment, folding, and faulting are to be expected but are not expected to have a material impact on the global resource estimate. Normal grade control processes should be sufficient to manage these variations. |