

# Orsu Metals Announces an Updated Inferred Mineral Resource at Its Sergeevskoe Gold Project, Russia

20.01.2020 | [ACCESS Newswire](#)

VANCOUVER, January 20, 2020 - [Orsu Metals Corp.](#) (TSXV:OSU) ("Orsu" or the "Company") is pleased to announce the results of an updated Mineral Resource estimate for its Sergeevskoe Gold Project in Zabaikalsky Krai, Russia. The Mineral Resource estimate was independently prepared by Wardell Armstrong International Ltd. ("WAI") in accordance with the guidelines of the JORC Code (2012)/CIM Definitions Standards and NI 43-101 requirements. A Technical Report covering the Mineral Resource estimate will be filed on SEDAR within 45 days of this news release.

## Highlights:

- An Inferred Mineral Resource of 30.42 million tonnes, grading 1.45 g/t gold and containing 1.417 Moz gold at a 0.5 g/t gold cut-off grade and US\$1450 per Troy ounce of gold, was optimized into an open pit constrained by the license boundaries at Sergeevskoe.

Dr. Alexander Yakubchuk, Director of Exploration of Orsu commented: "As a result of the 2019 exploration programme, Orsu was able not only to double the mineralized footprint to 2x1 km at Sergeevskoe, the Company also succeeded in increasing by 19.3% its previously announced maiden Mineral Resource. We have no doubt that it is possible to further grow this resource as, due to the size of the limited drilling programme, obvious gaps were left along the strike of mineral wireframes. In addition, the system remains widely open to the west and north."

An Inferred Mineral Resource was estimated for a large stockwork, containing 179 segments of sheeted subparallel quartz-tourmaline-sulfide veins in nine domains over a strike length of 2x1 km. The individual vein segments are separated by faults along the strike or unmineralized intervals across the strike. The mineralized envelope is divided by the Shirotnyi Fault (Figure 1) into two areas with largely northwest-trending stockworks in the Peak Klyuchi, Koziye West, and Klyuchi West domains (to the north of the fault) and west- to southwest-trending stockworks in Zone 23 West, Zone 23 Middle, Zone 23 East, and Adit 5 West and East domains (to the south). Based on 2019 exploration results, the veins in all domains were reshaped to greater or smaller extent (Figure 1). Exploration works at Peak Klyuchi yielded a swarm of new veins. After additional trenching, veins in Zone 23 West domain were reinterpreted to strike southwest. New veins were discovered at Koziye West. All veins between the Northeast Fault and Shirotnyi Fault are now interpreted to belong to a single domain of Klyuchi West. In Zone 23 East domain, previously constrained veins were discovered to continue downdip to a depth of 400 m. Several veins were discovered in the western part of Adit 5 West.

Figure 1. Plan view of maiden (left) and updated (right) Mineral Resource domains in the unconstrained model at Sergeevskoe. (To view the full-size image, please [click here](#))

From these domains, an Inferred Mineral Resource of 30.42 million tonnes, grading 1.45 g/t gold and containing 1.417 Moz gold at a 0.5 g/t gold cut-off grade and using a gold price of US\$1450 per Troy ounce was optimized into a pit constrained by the license boundaries to the east and southwest. The result was a 19.3% increase to the maiden Mineral resource estimate (see press release 17 April 2019).

Table 1 shows a sensitivity analysis of tonnage and grade for the Sergeevskoe project within a pit constrained at different cut-off grades ("COG").

Table 1. Open pit Mineral Resource estimate for the Sergeevskoe Gold Project with base case at 0.5 g/t cut off grade and using the US\$1450 per Troy ounce of gold prices for base case scenario, with sensitivity

analysis of tonnage and grade at different cut-off grades as at January 9, 2020.

| COG  | Tonnes (Mt) | Grade (g/t Au) | Contained Metal (Au &lsquo;000 oz) |
|------|-------------|----------------|------------------------------------|
| 0.0* | 30.59       | 1.45           | 1,426                              |
| 0.4  | 30.49       | 1.45           | 1,418                              |
| 0.5  | 30.42       | 1.45           | 1,417                              |
| 0.6  | 28.75       | 1.50           | 1,387                              |
| 0.7  | 25.56       | 1.61           | 1,320                              |
| 0.8  | 22.13       | 1.74           | 1,238                              |

\*- All Mineralisation within Wireframe Model

Notes: (1) CIM Definition Standards were followed for Mineral Resources; (2) Mineral Resources reported for the Sergeevskoe Gold Project are classified as Inferred by Phil Newall, an independent Qualified Person as defined by CIM Definition Standards; (3) Mineral resources are limited to an optimised open pit shell based on appropriate economic and reasonable mining parameters as provided by [Orsu Metals Corp.](#); (4) Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility Study or Pre-Feasibility Study; (5) All figures are rounded to reflect the relative accuracy of the estimate, and apparent errors may occur due to rounding; (6) Contained metal refers to estimated contained metal in the ground not adjusted for metallurgical recovery; (7) The mineral resources reported represent the sub-celled model with no account of potential mining dilution of the mineralisation.

Table 2 shows sensitivity of the open-pit constrained resources to different gold prices.

Table 2. Sensitivity analysis of updated pit- and license-constrained mineral resources at different gold prices using the NPV Scheduler.

| Gold Price | Mineralized Material (Mt) | Waste (Mt) | Au (g/t) | Gold, Moz |
|------------|---------------------------|------------|----------|-----------|
| US\$1,350  | 30.07                     | 283.56     | 1.45     | 1.402     |
| US\$1,450  | 30.42                     | 293.94     | 1.45     | 1.417     |
| US\$1,550  | 30.73                     | 303.23     | 1.45     | 1.429     |

Figure 2 shows distribution of gold grade in mineralized veins. In the area to the north of Shirotnyi Fault, one can recognize a 1000x100 m northwest-trending High-Grade Zone ("HGZ"), grading in excess of 2 g/t Au, roughly along the apparent axis of the stockwork. To the northeast and southwest, it is accompanied by narrow high- and medium-grade veins, striking in parallel to the HGZ. The stockwork is split into three domains by the two northeast-striking faults. It is obvious that the updated resource model has gaps along the strike, which remained undrilled by Orsu. Similarly, the short veins in the northeast were discovered in trenches in the end of the 2019 field season and remained untested downdip and along strike. These areas indicate further potential for immediate growth.

Figure 2. Gold grade distribution in stockworks to the north and south of the Shirotnyi Fault in the \$1450/oz Au open pit at the Sergeevskoe gold project. Gaps along the strike of the stockwork were not yet drilled or trenched by Orsu, representing future opportunities within the pit shell. HGZ=High-grade zone. (To view the full-size image, please click here)

To the south of the Shirotnyi Fault, within three domains of Zone 23, the stockwork tends to change its strike

from the east-west to the southwest. At Adit 5 East, the veins strike to the southwest and then to the south. In the Adit 5 West domain, the stockwork maintains a northwest orientation. The axial parts of these domains also host higher-grade veins.

Similarly to the maiden Mineral Resource, some portions of the veins near the eastern and southwestern license boundaries could not be optimized into the open pit, although they possess viable gold grades (Figure 3).

Figure 3. The north-looking long vertical projection showing grade distribution with updated Mineral Resource pit outlines at \$1350/oz Au, \$1450/oz Au, and \$1550/oz Au, constrained by Sergeevskoe license boundary. (To view the full-size image, please [click here](#))

## GROWTH POTENTIAL

Orsu once again confirmed that the full potential of the Sergeevskoe gold system remains unconstrained. Together with the adjacent Klyuchevskoe gold deposit to the east, the Company is dealing with part of the world-class gold system, collectively containing in excess of 8 Moz gold. As it was shown above, the mineralization envelope can be further grown. The mineralization remains open both along the strike to the northwest and in subparallel veins to the north. It also remains open downdip in all domains.

In addition, there are numerous occurrences of gold mineralization and geochemical/geophysical anomalies not yet tested by Orsu beyond the area of detailed works within the Company's 7.6 square km license area of the Sergeevskoe project (see press release dated September 21, 2016).

## DETAILS OF MINERAL RESOURCE ESTIMATE DATED 9 JANUARY 2020

### Details of Mineral Resource estimate dated 9 January 2020

The Mineral Resource estimate was prepared by WAI under the direction of Phil Newall and Andrey Tsoy. Dr Phil Newall is a Qualified Person as defined by National Instrument 43-101 ("NI 43-101"). Mineral Resources for the Sergeevskoe Gold Project have been prepared in accordance with the guidelines of the JORC Code (2012) and the 2014 CIM Definition Standards by Phil Newall, an independent Qualified Person as defined by the 2014 CIM Definition Standards. WAI has approved this written disclosure of the Mineral Resource estimate.

### Section 1 Sampling Techniques and Data

| 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.
- Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
- Aspects of the determination of mineralisation that are Material to the Public Report.
- In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.

- Sampling was predominantly carried out using a combination of diamond core and trench ch

Drilling Campaign 2017-2019

- Diamond drilling was used to obtain predominant 1.0m samples (minimum length 0.25m to a maximum of 3.00m) that were subsequently cut in half along its length to produce half core for preparation (crushing/pulverising) to produce a sample for laboratory analysis.

Trenching

- Trenching was used to obtain predominant samples (minimum length 0.10m to maximum 2.00m). The entire material was used for sample preparation (crushing/pulverising) to produce a sample for laboratory analysis.

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).

- Drilling at Sergeevskoe has included diamond drilling only.
- In the majority of drillholes the core was oriented from the commencement of every run to allow for measurements to be made and all holes are subject to down-hole survey at generally 2m intervals.
- Data from HQ (63.5mm) and NQ (47.6mm) diamond drillholes is used for interpretation of grade estimation.
- The main drill campaigns at Sergeevskoe have been taken place in 2017-2018. A further 14 drillholes (for 3,555.45m) was completed in 2019.
- A total of 96 diamond holes had been drilled to a total depth of 20,660m.

Drill sample recovery

- Method of recording and assessing core and chip sample recoveries and results assessed.
- Measures taken to maximise sample recovery and ensure representative nature of the samples.
- Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.

- WAI is not aware of any specific measures taken to reduce losses through drilling or that any of the drill campaigns suffered from poor recovery.
- Diamond drill recovery averages 95%.
- Due to good drilling practices followed at Sergeevskoe samples are considered homogeneous and representative.
- No apparent relationship is observed between sample recovery and grade.

Logging

- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.
  - Whether logging is qualitative or quantitative in nature. Core (or core, channel, etc) photography.
  - The total length and percentage of the relevant intersections logged.
- Core was logged on site by company geologists and personnel using a standardised logging code to a level sufficient to support geological interpretation, modelling, and subsequent resource estimation.
  - Core was geologically logged including a description of lithology, alteration/weathering structures, mineralisation, and veining, where performed on a qualitative basis.
  - Core was logged manually before transfer to an electronic system using Excel spreadsheets.
  - Rock Quality Designation (RQD) measurements were also completed by the field geologists.

Sub-sampling techniques and sample preparation

- If core, whether cut or sawn and whether quarter, half or all core taken.
  - If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.
  - For all sample types, the nature, quality and appropriateness of the sample preparation technique.
  - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
  - Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.
  - Whether sample sizes are appropriate to the grain size of the material being sampled.
- Sample preparation has followed standard practices:
  - Diamond drill core was cut lengthways along long axis with half core used for subsequent sampling and the other half retained for reference purposes.
  - Sample preparation for Sergeevskoe has predominantly been carried out by SGS lab in Russia. The sample preparation flowsheet generally comprised:
  - Drying at 105°C;
  - Samples crushed and pulverised, note even sample screened to ensure satisfactory crush and
  - Pulp sample produced for assay analysis.
  - The sample preparation techniques at Sergeevskoe has carried out by SGS lab and has followed recognised industry standards and are deemed appropriate.
  - Sub-sampling quality control has been maintained through use of company SOP's being adopted to ensure consistency by following a standardised practices throughout the process.
  - The use of duplicate sample analysis has been used throughout the drill campaign at Sergeevskoe in order to monitor precision and reproducibility.

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.
- For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.

- No geophysical or portable analysis tools were used to determine assay values stored in the database. Handheld XRF machine was only used as a guide while drilling and readings have not been included in review of the data.
- For the diamond drill samples and for trench channel samples QC results (blank, duplicate, standards) were in line with commercial procedures, reproducibility and accuracy. Standards (CRM) samples were initially obtained from Geostats Pty Ltd (Australia).
- Sample preparation and analysis was carried out at SGS lab (Chita). Analysis was conducted for Au and Ag using FA with AA finishing for gold and with ICP ending for silver;
- Blank sample results show no significant contamination issues and the assays of the laboratory standards, which cover a range of values for each of Cu show no bias.
- No systematic bias appears to be present in the results.
- The quality control and assurance data reviewed by the QP indicates the assays are generally within expected limits. The QP is satisfied the quality assurance and control data is sufficient to support the Mineral Resource classification presented herein.

Verification of sampling and assaying

- The verification of significant intersections by either independent or alternative company personnel.
- The use of twinned holes.
- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.

- All work has been supervised by senior technical staff.
- The Competent Person has verified the data on information provided by Orsu Metals and through site visits.
- Significant intersections have not been verified by either independent or alternate company personnel.
- Logging data in the first instance was recorded on hand to form documentation for each hole which includes collar and down hole survey information and assay information once available. This information is transferred to an electronic database.
- WAI completed a number of checks on the data and data entry process. Based on the verification work completed, WAI is confident the compiled database is an accurate reflection of the available drilling data.
- No adjustments to assay data have been made.
- WAI visited the site in 2016 and 2018, and during drilling and sampling was being undertaken at the time the visit WAI was able to review the procedures followed and the results obtained.

Location of data points

- Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.
- Specification of the grid system used.
- Quality and adequacy of topographic control.

- All data was supplied in the World Geodetic System 1984, Zone 50 Northern Hemisphere (UTM).
- Collar positions for all holes were laid out by an on-site surveyor using a differential GPS and checked again once drilling was completed.
- Downhole surveys were carried out for all of the diamond drillholes.
- Topographic surveys were conducted in 2012, that being used for the current Mineral Resource Estimate.
- The small differences between the GPS readings and the topographical survey data do not impact the mineralisation widths.

Data spacing and distribution

- Data spacing for reporting of Exploration Results.
- Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
- Whether sample compositing has been applied.

- Data spacing is down to 40m x 40m in a few places, though is generally between 60m and 100m, and is sufficient to establish geological and mineralisation continuity appropriate for the reporting of Mineral Resources.
- Mineral Resources are classified as Inferred in accordance with the guidelines of the JORC Code (2012), and through geostatistical analysis considering the spatial distribution of samples.
- Sample compositing was carried out as part of the mineral resource estimation process.
- The diamond drill and trench data spacing was deemed by the QP to be sufficient to imply geological and grade continuity, sufficient for the classification of Inferred resources only.
- The average length of the samples is 1.10m, therefore the composite length of 1.0m was chosen.

Orientation of data in relation to geological structure

- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
- If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.

- In general drilling is carried out so that the intersections of holes with mineralised zones occurs at a high angle which results in limiting sample bias.
- The basis of the geological model in different domain is broadly:
  - Domains 100 and 200 - south-west to south-east striking;
  - Domains 300, 500 and 900 north-west striking;
  - Domain 800 - south-east striking;
  - Domains 600, 700 and 1000 east-west striking;
  - Sub-vertical steeply dipping mineralisation, hence drilling is generally inclined at -60° to the strike of the zones.
- Intercepts are reported as apparent thicknesses except where otherwise stated.

|                   |   |   |
|-------------------|---|---|
| Sample security   | <ul style="list-style-type: none"> <li>● The measures taken to ensure sample security.</li> </ul>                         | <ul style="list-style-type: none"> <li>● Samples were transported regularly (typically weekly during the drilling campaigns) by commercial carrier to SGS lab in Chita in s bags.</li> <li>● After preparation in the field, samples were into bags and dispatched to the freight forwarder directly by the Company. All bags were transported by the Company directly to the sample preparation/assay laboratory. The assay lab audits the samples on arrival and reports any discrepancies back to the Company.</li> <li>● Sample security was managed by the Company. The QP was not able to inspect the sample dispatches and relies on the Company's representative to ensure that no discrepancies occurred, and the chain of custody is accepted.</li> </ul> |
| Audits or reviews | <ul style="list-style-type: none"> <li>● The results of any audits or reviews of sampling techniques and data.</li> </ul> | <ul style="list-style-type: none"> <li>● The QP has visited the Sergeevskoe Project in 2016 and 2018 and reviewed the sampling techniques with Company personnel.</li> <li>● The QP considers that the sampling techniques and data obtained is satisfactory and suitable for the subsequent Mineral Resource Estimate.</li> </ul>  |

## Section 2 Reporting of Exploration Results

| Criteria                                | JORC Code explanation  | Commentary  |
|---|--|---|
| Mineral tenement and land tenure status | <ul style="list-style-type: none"> <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 license to operate in the area.</li> </ul> | <ul style="list-style-type: none"> <li>● The Sergeevskoe license is located in eastern part of Zabaikal Region, Russia, some 440km from Chita city, the region capital, and centred on coordinates 53°32'N, 116°25.5'E.</li> <li>● LLC SC "Alexandrovskoe", a subsidiary of Orsu Investments Limited ("Sibzoloto"), a Cyprus registered company and the sole owner of the project, is the owner of Alexandrovskoe.</li> <li>● The license was issued on 31 December 2016 and is valid until 31 December 2031.</li> <li>● Orsu acquired privately owned Sibzoloto project in 2017 in a share and cash transaction. Orsu now owns 90% share in Sibzoloto.</li> <li>● The Sergeevskoe license covers an area of approximately 100km<sup>2</sup>.</li> <li>● The QP is not aware of any known impediments to obtaining and maintaining a licence to operate in the Sergeevskoe Project.</li> <li>● The QP has relied on the information provided by Orsu Metals that the tenement is in good standing and all fees are paid.</li> </ul> |

Exploration done by other parties

- Acknowledgment and appraisal of exploration by other parties.

- Sergeevskoe is brownfield site, the previous work has included soil-geochemistry and sampling at 1:10,000 scale as well as different ground and airborne geophysical survey methods.
- Prospecting/exploration activities include trenching, restricted amount of drilling and underground developments (shallow shaft adits with cross-cuts).
- Predominately the exploration activity was carried out in the 1960s-1970s as part of prospecting at the vicinities of Kluchevskoe Gold Deposit, immediately to the east of the Sergeevskoe license boundary. The work was then carried out by state-owned geological enterprises.

Geology

- Deposit type, geological setting and style of mineralisation.

- Sergeevskoe Property is part of Davenda-Kluchevskoe metallogenic zone. More than 60% of Sergeevskoe area is occupied by early Jurassic Davenda intrusion of the Amur intrusion complex which is represented by biotite-hornblende diorite, diorite, quartz diorite and porphyry granite. Proterozoic granite occupies the northern part of the area. The host rock is represented by biotite granite, gneiss and migmatite. The contact of the Davenda intrusion and Proterozoic granitoid has a northeast-southwest strike.
- The mineralisation occurs on north-west-south-east endocontact of Proterozoic intrusion where it coincided with Jurassic intrusions.
- Mineralisation is controlled by Shirotnyi (north-south-east-west fault at Kluchevskoe deposit) and Alekseevsko-Glubokinskiy faults. The mine is located within the dextral strike-slip duplex tectonic structures formed by these faults.
- Mineralisation is accompanied by alteration represented by silicification, potassic alteration, chloritization, tourmalinisation, pyritization and alteration.
- Mineralised zones are grouped into several types of predominately east-west, north-west and south-south-west strike.
- The mineralised structures are sub-vertical.

Drill hole Information

- A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
  - easting and northing of the drill hole collar
  - elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar
  - dip and azimuth of the hole
  - down hole length and interception depth
  - hole length.
- If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.

● Exploration data held in the database and the mineral resource estimate can be summarised as follows:

- Number of drillholes - 96;
- Number of trenches - 62;
- East collar ranges - 20,658292m to 20,658292m
- North collar ranges - 5,936,321m to 5,936,321m
- Collar elevation ranges - 928.5m to 1,091.5m
- Azimuth ranges - 0° to 360°
- Dip ranges - 50° to -90°
- Length of holes/trenches - 8m to 500m
- The data of drillholes SDH18-56 and trenches STR19-55 were not included in the MRE as mineralised intervals cannot reliably be linked/interpreted with other intersections
- Both diamond drillhole and trench information and assay results were used in the Mineral Resource Estimation.

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.
- Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
- The assumptions used for any reporting of metal equivalent values should be clearly stated.

- Top cutting was used during the mineral resource estimation process to reduce the potential for high grades to have an overbearing effect on the block grades. Top-cutting is based on detailed analysis and log probability graphs for all elements (applied to Au and Ag (detailed in the main body of the text)).
- No metal equivalent equations were used in the mineral resource estimation procedure or
- Samples were composited to 1m lengths in the mineral resource estimation procedure to ensure a consistent level of support during the estimation process.

Relationship between mineralisation widths and intercept lengths

- These relationships are particularly important in the reporting of Exploration Results.
- If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
- If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').

- The nature of the main zones of mineralisation at Sergeevskoe is well recognised as being dipping narrow vein structures.
- In general drilling is carried out so that the intersections of holes with mineralised zones are at a high angle to minimise sample bias.
- Down hole length reflects drilled meters not the width of the mineralised structures.

Diagrams

- Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.

- Appropriate data tabulations, plans and sections showing the nature of the mineralisation, and final mineral resource estimate are included in the main body of the 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.

- Individual exploration results are not being reported. This section is not considered relevant to the reporting of the mineral resource estimate.
- 95 diamond drillholes and 61 trenches have been used for the current Mineral Resource Estimation.

|                                    |   |  |
|------------------------------------|---|--|
| Other substantive exploration data | <ul style="list-style-type: none"> <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> | <ul style="list-style-type: none"> <li>● Metallurgical testwork was used to define factors during pit optimisation used as a limiting potential Mineral Resources base expectation of economic extraction.</li> <li>● Geotechnical data of adjacent Kluchevskoe was used at Sergeevskoe.</li> <li>● Density measurement was completed on samples for oxide material and 203 samples primary material.</li> </ul>   |
| Further work                       | <ul style="list-style-type: none"> <li>● The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <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 style="list-style-type: none"> <li>● Over the next 12 months, Orsu will be focussing on upgrading the current resource base through targeted RC drilling (circa 3,000m) and infill (circa 3,500m) programme. Subject to positive results, these results will be used for the pilot mining and metallurgical testwork at processing plant.</li> <li>● Mineralisation is open along strike toward east and north-west as well as down dip.</li> <li>● Appropriate plans and sections are included in the main body of the report.</li> </ul> |

### Section 3 Estimation and Reporting of Mineral Resources

| Criteria           | JORC Code explanation   | Commentary   |
|--------------------|---|--|
| Database integrity | <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>● Historical data are completely excluded from mineral resource database.</li> <li>● The project database is held in .csv and DXF format files. Data held includes; collar location, downhole surveys, assay information, lithology, oxidation. Also held in Microsoft Excel spreadsheet is information on duplicate samples and certificate reference materials.</li> <li>● Access to the Sergeevskoe drilling/trenching database used for resource estimation is restricted to geological and selected technical staff.</li> <li>● WAI completed a number of checks on the data supplied by Orsu Metals and is satisfied that the data does not contain significant errors nor has been corrupted.</li> <li>● Validation of the database was carried out through import of the data in to Datamine Studio 3.1.2. In production of the mineral resource estimation, no major issues were found with duplicate or overlapping samples.</li> </ul> |
| Site visits        | <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>● The Qualified Person (Dr Phil Newall) visited the site between the 2 and 3 November 2016 and 1 and 7 June 2018.</li> <li>● The site visit included inspection of the Orsu drilling and trenching operations, and discussions with on-site technical and geological staff to verify the database, geological model and resource estimation.</li> </ul>   |

Geological interpretation

- Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.
- Nature of the data used and of any assumptions made.
- The effect, if any, of alternative interpretations on Mineral Resource estimation.
- The use of geology in guiding and controlling Mineral Resource estimation.
- The factors affecting continuity both of grade and geology.

- Grade estimation for Sergeevskoe uses direct drilling and trench sampling only.
- The confidence in the geological interpretation is deemed good. Exploration drilling has been carried out on a grid down to 40m x 40m, though not typically between 60m and 100m, and geological logging is comprehensive.
- Geological logging has been carried out from core samples and in trenches and used to define mineralised domains within the resource model.
- The wireframes used to constrain the block model and grade interpolation were constructed based on Orsu's understanding of the geology, mineralisation and alteration of the Sergeevskoe deposit.
- Namely, the resource model reflects the interpretation of an east-west, north-west and south-west orientated multi-vein system (zone) reflecting areas of elevated mineralisation.

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 mineralisation is split on a few domains which have east-west, north-west and south-west orientations. The overall mineralisation dimension is approximately 1,650m in east-west direction and approximately 1,050m from south to north.
- The current mineral resource is constrained by an optimised open pit with a strike length of 1,080m, width of 1,080m at the crest, and a maximum depth of pit = 440m (measured from northern high to the pit bottom).
- The unconstrained block model has a maximum depth of mineralisation to 500m from the surface.

Estimation and modelling techniques

- The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters 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.
- The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
- The assumptions made regarding recovery of by-products.
- Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).
- In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
- Any assumptions behind modelling of selective mining units.
- Any assumptions about correlation between variables.
- Description of how the geological interpretation was used to control the resource estimates.
- Discussion of basis for using or not using grade cutting or capping.
- The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.
- Multiple domains were created to represent the mineralised structures (zones).
- DTM surfaces were created to represent the topographical surface, overburden material base of oxide/primary material.
- A block model was created using the geological mineralised zone wireframes as boundaries. A parent block size of 10m (X) x 10m (Y) x 1m (Z) was used in the block model with key fields established for geological and mineralised domains. Additional key fields were established to describe oxide and fresh rock domains.
- Grade capping: Grade capping was carried out to stop local overestimation of grade from high outlier samples. Grade capping was used for variables on a zone by zone basis where outlier grades were identified using a combination of variogram analysis and a review of log-probability plots.
- Composites: A 1m composite length was used to ensure consistent sample support during estimation. Composites were limited to the boundaries of mineralised domains.
- Variography: A variographic study by domain was carried out to identify reasonably robust variogram models for Au across seven domains.
- Estimation: Estimation was carried out using distance (squared) as the primary method. Kriging estimate was carried out for validation purposes. Only composite samples within a zone were used for estimation of grade. Estimation parameters were based on the results of grade continuity produced during geostatistical analysis. Dynamic anisotropy was used to account for variations of dip and strike. Minimum and maximum search criteria, an octant search restriction and restrictions of number of composite samples per single drillhole were employed during grade estimation to assist with declustering and to reduce local grade bias. A multiple pass estimation was carried out with expanding search ellipses and restrictive estimation parameters for estimation of blocks in more poorly sampled areas.
- Estimation was carried out into parent cells to reduce risk of conditional bias. Estimation was carried out using a discretisation of five points in each dimension.
- The block model was verified first by comparing drillhole composite sample values with estimated block values on a sectional and plan basis. A comparison was also carried out statistically to ensure the global grade estimate was unbiased. Grade profile (swath) plots were also constructed to compare modelled grades and input composite grades in slices of varying width. During the validation a comparison was made between declustered and clustered data to identify any possible local bias introduced by irregular grade spacing.
- No estimation of deleterious components was carried out.
- The estimated block model was validated by inspection of block grades in comparison with drillhole data, and comparison of the block model statistics.

|                                      |  |  |
|--------------------------------------|--|--|
| Moisture                             | <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>● All tonnages are reported as dry tonnages.</li> <li>● Moisture content has been measured using weighing waxed samples and dried ones.</li> </ul>  |
| Cut-off parameters                   | <ul style="list-style-type: none"> <li>● The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>   | <ul style="list-style-type: none"> <li>● Mineralised zones are defined at a natural grade of 0.5g/t Au.</li> <li>● The mineral resource estimate is restricted to material falling within an NPV Scheduler open pit shell as described below in "Mining factors and assumptions", and above a cut-off grade representing breakeven cut-off grade derived from open pit optimisation parameters for each zone (Oxide and Fresh).</li> </ul>   |
| Mining factors or assumptions        | <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>● The Project is deemed to be appropriate to be mined by the continuation of standard open pit mining operations.</li> <li>● Reporting of mineral resources suitable for extraction were limited by the creation of an optimised open pit shell in NPV Scheduler. The shell was created with the following major parameters:                         <ul style="list-style-type: none"> <li>● Gold price of US\$1,450/oz</li> <li>● Oxide mineralisation mining cost of US\$1.2/t</li> <li>● Primary mineralisation mining cost of US\$1.2/t</li> <li>● Waste mining cost of US\$1.2/t</li> <li>● Overburden mining cost of US\$1.0/t</li> <li>● Total processing cost of US\$8.0/t</li> <li>● G&amp;A cost of US\$1.5/t</li> <li>● Royalty cost of US\$6.0/t</li> <li>● Processing recovery for Oxide of 93.0% and Primary of 85.0%</li> <li>● Slope angle between 51°</li> <li>● Mining dilution of 0% and mining losses of 0%</li> </ul> </li> </ul> |
| Metallurgical factors or assumptions | <ul style="list-style-type: none"> <li>● 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.</li> </ul>                             | <ul style="list-style-type: none"> <li>● Metallurgical recovery was utilised during the construction of an optimised pit shell used to limit limiting mineral resources based on an expected of eventual economic extraction.</li> <li>● Metallurgical recovery is based on the limited metallurgical testwork carried out in 2017 and</li> </ul>  |

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.

- WAI is unaware of any environmental factors that would preclude the reporting of Mineral Resources.

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.
- 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.
- Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.

- Density measurements have been taken for oxide and primary material with respect to natural moisture.
- A total of 97 density measurements have been taken for oxide material and 203 measurements for primary material.
- Measurements were made using the Archimedes water immersion method, the results were recorded and imported into Excel spreadsheet.
- Density was assigned to the block model for Mineral Resource estimation by applying the density values for oxide material and following formula for primary material:

$$\text{Density} = - 0.00072 \times (\text{Au g/t})^2 + 0.1363 \times (\text{Au g/t}) + 2.6687$$

- Moisture content was measured and applied to both oxide and primary material.

Classification

- The basis for the classification of the Mineral Resources into varying confidence categories.
- 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).
- Whether the result appropriately reflects the Competent Person's view of the deposit.

- Mineral Resource classification in accordance with the guidelines of the JORC Code (2012).
- Sergeevskoe Gold Project is considered to be at an early stage of development, based on limited exploration data, and that the interpretation of mineralisation is largely based on assumed geological/structural features of the deposit rather than on the existing mineralised intercepts. Furthermore, there is no robust definition of oxide/primary mineralisation based on the available appropriate assay data and/or metallurgical testwork and as such the resources are reported as Inferred category only.
- The mineral resource estimate classification reflects the Competent Person's view of the Sergeevskoe Gold Project.
- Mineral Resources were limited using an open pit shell using parameters as laid out in the "Mining section" of the report and as described in "Mining factors and assumptions" above.
- The mineral resource estimate has been limited to the surveyed surface as detailed in the map.

Audits or reviews

- The results of any audits or reviews of Mineral Resource estimates.

- WAI is not aware of any audits or reviews of Mineral Resource Estimate other than internal review.

Discussion of relative accuracy/confidence

- Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.
- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

- The relative accuracy and confidence in the resource estimate is reflected in the reported mineral resource as set out in the JORC Code (2012)
- The statement relates to global estimates of tonnage and grade.
- The classification applied to the mineral resource estimate is based upon; confidence of confidence of mineralisation, quality of data (QA/QC) and validation of the block model.

#### Qualified Person

Alexander Yakubchuk, the Company's Director of Exploration, Ph.D., MIMMM, a Qualified Person as defined by NI 43-101, has reviewed and approved the exploration information disclosures contained in this press release.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

#### Cautionary Statement:

This news release contains forward-looking statements that are based on the Company's current expectations and estimates. Forward-looking statements are frequently characterized by words such as "plan", "expect", "project", "intend", "believe", "anticipate", "estimate", "suggest", "indicate" and other similar words or statements that certain events or conditions "may" or "will" occur. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause actual events or results to differ materially from estimated or anticipated events or results implied or expressed in such forward-looking statements. There may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.

ENDS

For further information, please contact:

Alexander Yakubchuk, Director of Exploration, [Orsu Metals Corp.](#)  
Doris Meyer, Corporate Secretary, [Orsu Metals Corp.](#)

Tel: +1-604-536-2711 ext 6

SOURCE: [Orsu Metals Corp.](#)

View source version on [accesswire.com](https://www.accesswire.com):

<https://www.accesswire.com/573482/Orsu-Metals-Announces-an-Updated-Inferred-Mineral-Resource-at-Its-Sergeevsk>

---

Dieser Artikel stammt von [Rohstoff-Welt.de](#)

Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/342760--Orsu-Metals-Announces-an-Updated-Inferred-Mineral-Resource-at-Its-Sergeevskoe-Gold-Project-Russia.html>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer!](#)

---

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!

Alle Angaben ohne Gewähr! Copyright © by Rohstoff-Welt.de -1999-2026. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).