

18 December 2019

## Europa Metals Ltd

("Europa Metals", the "Company" or the "Group") (AIM, AltX: EUZ)

### Preliminary Metallurgical Results Received Confirming Saleable Levels of Concentrate Product, Toral Pb, Zn & Ag Project, Spain

Europa Metals, the European focused lead-zinc and silver developer, is pleased to announce that it has received a preliminary independent metallurgical testwork report (the "Report") from Wardell Armstrong International ("Wardell Armstrong"), in respect of the Company's 100% owned Toral lead, zinc and silver project (the "Toral Project" or "Toral") in the region of Castilla y León, north west Spain.

#### Highlights:

- First metallurgical testwork results received for the Toral Project.
- 61.6kg sample taken from the Company's 2019 drill programme was submitted to Wardell Armstrong for analysis.
- Locked cycle testing confirms saleable concentrate quality of the lead, zinc and silver, with good grades reported for each concentrate:
  - o 57.5% lead;
  - o 55.8% zinc; and
  - o 1,457 parts per million ("ppm") (approximately 1.5kg/t) silver grade reporting to the lead concentrate.
- Locked cycle testing demonstrates good recoveries for each metal:
  - o 84.3% lead recovery;
  - o 70.7% zinc recovery; and
  - o 90.3% silver recovery reporting to the lead concentrate.
- No testing for deleterious elements or by-products has been undertaken for the purposes of the Report.

Based on the preliminary findings set out herein, the Company will now proceed with the next phase of preliminary metallurgical work, adopting the recommendations made by Wardell Armstrong in the Report. This second phase of testwork is expected to be completed during Q1 2020. Sufficient core remains available for testing and the additional testwork will comprise, *inter alia*, the following:

- Second phase locked cycle testwork examining an increased depression of zinc during lead flotation, with the aim of increasing zinc recoveries; and
- Full testing for deleterious elements and by-products following such second phase locked cycle testwork.

Today's preliminary metallurgical results follow the Company's announcement of 29 October 2019, which detailed an updated JORC (2012) Mineral resource estimate at the 4% cut-off, including a first Indicated resource of approximately 2.7Mt @ 8.9% Zn Equivalent (including Pb credits), 5% Zn, 4.2% Pb and 32g/t Ag and an Inferred resource of approximately 16Mt @ 7.2% Zn Equivalent (including Pb credits), 4.5% Zn, 2.9% Pb and 22g/t Ag.

#### Laurence Read, Executive Director of Europa Metals, commented:

*"The lead, zinc and silver grades obtained from Wardell Armstrong's preliminary testwork are, in comparison with the Company's peers, very encouraging, particularly in the context of the strong lead recovery. Zinc recovery is in line with the industry average, when compared to producing projects, and the next stage of metallurgy and process design work will focus on optimising zinc retention. Further to the recommendations made by Wardell Armstrong, we shall also commence testing for deleterious elements within the next phase of metallurgical testwork, which is expected to commence shortly and be concluded in Q1 2020. Today's results will enable us to progress the Toral Project and further demonstrate its potential strengths in terms of resource, grade and future saleable material."*

#### Myles Champion, Technical Director of Europa Metals, further commented:

*"We are very pleased with the results from this first-pass testwork seeking to identify future saleable concentrates. The initial grades in the concentrates are good, particularly in relation to the lead and silver,*

whilst the zinc grade is also encouraging. The zinc recoveries are to be refined via the additional testwork. We look forward to the results of the second phase of testwork in due course."

## Report's Key Findings

### Comminution testwork

A series of comminution tests were undertaken to investigate the crushing and grinding characteristics of the sample. The testing conducted investigated conventional crushing technologies, the results of which are summarised in Table 1 below.

| Comminution Test                      | Units | Value  |
|---------------------------------------|-------|--------|
| Unconfined Compressive Strength (UCS) | MPa   | 51.8   |
| Bond Abrasion Index                   | -     | 0.5227 |
| Bond Rod Mill Work Index              | kWh/t | 12.69  |
| Bond Ball Mill Work Index             | kWh/t | 9.83   |

Table 1: Comminution testwork results

### Flotation testwork

A series of tests were undertaken to investigate the recovery of lead and zinc and to separate concentrates by means of froth flotation. The testing conducted consisted of eight rougher flotation tests; four first-stage cleaner flotation tests; six three-stage cleaner flotation tests; and a single locked cycle flotation test.

The results of the locked cycle test are summarised in Table 2 below.

Table 2: Locked cycle flotation test results

| Product               | Mass (%) | Assay  |        |          | Recovery (%) |        |        |
|-----------------------|----------|--------|--------|----------|--------------|--------|--------|
|                       |          | Pb (%) | Zn (%) | Ag (ppm) | Pb           | Zn     | Ag     |
| Pb Cl 3 Conc          | 2.5      | 57.47  | 10.06  | 1,457    | 84.30        | 9.65   | 90.35  |
| Zn Cl 3 Conc          | 3.4      | 1.16   | 55.78  | 38.6     | 2.25         | 70.71  | 3.17   |
| Zn Cl 1 Scav Tailings | 5.3      | 1.74   | 2.89   | 28.8     | 5.36         | 5.82   | 3.76   |
| Zn Ro Tailings        | 88.8     | 0.16   | 0.41   | 1.3      | 8.09         | 13.82  | 2.73   |
| Feed                  | 100.0    | 1.73   | 2.65   | 40.9     | 100.00       | 100.00 | 100.00 |

The locked cycle test achieved a lead recovery of 84.3% to a concentrate grading 57.5% lead and a zinc recovery of 70.7% to a concentrate grading 55.8% zinc. 90.3% of the silver was recovered to the lead concentrate at a grade of 1,457ppm Ag.

### Results in the context of potential future production

The grades of lead and zinc in their respective concentrates are expected to render them marketable products from potential future production at Toral. The lead concentrate is in the mid-range when compared with other European producers, whereas the zinc concentrate is of a higher grade than most currently being produced in Europe.

The lead also contains significant levels of silver, at 1,457ppm Ag, which is expected to allow for attractive payment terms on any future production. The levels of penalty elements in both concentrates are collectively unknown and therefore cannot be benchmarked at this stage.

### Deleterious elements and by-products

Wardell Armstrong has recommended that testing for deleterious elements and by-products be conducted during the second phase of metallurgical testing, once new reagents and zinc suppression processes are examined to avoid having to conduct the same work twice as the flow sheet evolves. At present no testing has occurred for deleterious elements or by-products and the Company expects to complete such second phase work during Q1 2020.

Whilst the Company considers these results to be encouraging, they represent the findings of a single test, conducted without any further optimisation of flotation performance under closed circuit conditions.

Furthermore, as the testing undertaken to date has not been exhaustive, today's results should only be considered preliminary in nature. Analysis of the department of the main elements of interest (i.e. the lead and zinc) showed that whilst 99.5% of the lead present was in the form of galena, which is readily amenable to recovery by means of froth flotation, only 88.6% of the zinc was present in the form of sphalerite, similarly amenable to recovery by flotation. Of the remaining 11.4% of the zinc, 5.8% was present in dolomite, 2.5% as smithsonite, 1.1% as willemite and 2.0% as other minerals, none of which are readily amenable to flotation which would limit the maximum amount of zinc that could be recovered by this methodology.

### **Second phase of metallurgical testwork**

Further to its review of the Report, Europa Metals now intends to commence a second phase of metallurgical testing, adopting the recommendations made by Wardell Armstrong. This second phase is expected to be completed during Q1 2020 and comprise:

- Staged addition of depressants during flotation;
- Modified flotation residence times;
- Testing with alternative zinc depressants;
- Utilisation of further data to balance zinc concentrate recovery towards zinc;
- Additional locked cycle testing examining the effects of recirculating loads on flotation performance, following initial test data clearly showing that this has a beneficial impact on overall metal recoveries for both concentrates; and
- Testing for deleterious elements and by-products.

A further announcement(s) will be made, as appropriate, in due course.

For further information on the Company, please visit [www.europametals.com](http://www.europametals.com) or contact:

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