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Europa Metals Ltd

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

Phase III Metallurgical Testing and Ore Sorting Results for Toral Pb, Zn & Ag Project, Spain

Europa Metals, the European focused lead-zinc and silver developer, is pleased to announce in respect of its wholly owned Toral project ("Toral" or the "Toral Project"), located in northern Spain, the results of the Phase III, independent, metallurgical testwork conducted by Wardell Armstrong International ("WAI"), and the findings of a successful ore sorting analysis programme carried out by WAI and TOMRA GmbH ("TOMRA"), overseen by Bara Consulting ("Bara").

Following completion of this latest programme, Europa Metals' team is now working with Bara which has been tasked to complete an independent study to update the preliminary economics for the Toral Project. Its economic study will incorporate the significant amounts of new data obtained from the work conducted on Toral since completion of the 2018 Scoping Study.

Highlights:

- The Phase III metallurgical testwork, conducted by WAI, tested the grade and recoveries from three distinct sample types, namely:
  - TOD-025H, a high-grade sample; TOD-025L, a low-grade sample; and TOD-024, a weathered sample obtained from the Company's last drilling campaign.
- Recovery and grade results are believed by Europa Metal's Board to be significantly above average versus concentrates available in the current market, with the lead concentrate grade (combined to a cleaner+scavenger product), considered by the Board, to rank amongst the highest concentrate grades globally;
- Ore sorting analysis has demonstrated the potential for implementing an X-Ray Transmission ("XRT") process at Toral based on the findings of Bara's independent report with the samples being processed by WAI and TOMRA, a leading provider of ore sorting technology;
- Excellent grade and recovery results from metallurgical sample TOD-025H, comprising:
  - 83.9% Pb recovery to a 79.2% Pb concentrate;
  - 87.7% Ag recovery to 512ppm Ag within Pb concentrate; and
  - 87.7% Zn recovery to a 60.0% Zn concentrate.
- Ore sorting results from sample TOD-025L utilising XRT achieved:
  - 98% Pb, 94% Zn and 82% Ag recoveries;
  - 45%-50% waste rejected; and
  - c.3-4 times increase in head grade.
- Post ore sorting flotation results on sample TOD-025L concentrates were:
  - 89.4% and 81.5% Pb/Ag recoveries to a lead-silver concentrate grading 53.8% Pb and 640 g/t Ag respectively; and
  - 84.7% Zn recoveries to a 52.4% Zn concentrate grade.
- Ore sorting results for lower grade sample from TOD-024, an area previously not considered in the 2018 Scoping Study, utilising XRT achieved:
  - 98% Pb, 97% Zn and 92% Ag recoveries;
  - 45% - 50% waste rejection; and
  - 2 times increase in head grade.
- Post ore sorting flotation results on sample TOD-024 concentrates:
  - analysis indicates that this ore type may be beneficiated through sorting plus flotation of the sorted products; and
  - 73% Pb, 84% Zn and 81% Ag recoveries to 16.0% Pb, 18.6% Zn and 165 g/t Ag

concentrate grade were achieved

- Phase III metallurgical results and ore sorting analysis to be utilised, alongside all key work conducted since the 2018 Scoping Study, to update the Toral Project's estimated economics through an independent study being conducted by Bara.

Commenting today, Laurence Read, CEO of Europa Metals, said:

"*Today's Phase III metallurgical results, conducted by Wardell Armstrong International, and ore sorting analysis from TOMRA/Bara demonstrate excellent lead, zinc and silver recovery and grades for the Toral Project in addition to identifying certain economic benefits that could result from the implementation of ore sorting during potential future mining activities. While Europa Metals is extremely pleased with the results from the TOD-025, high-grade, sample, it is of particular note that ore sorting could well bring new areas of the deposit's overall resource into the mineable area having previously been discounted due to the low-grade nature of the ore.*

"*We are now progressing work with Bara to determine the impact of the recent metallurgical studies, ore sorting, updated resource estimate and other work conducted since the 2018 Scoping Study, on the prospective economics for the Toral Project. Europa Metals looks forward to updating the market on revised economic parameters for Toral and on the Pre-Feasibility Study workstreams underway in due course.*"

Myles Campion, Executive Chairman of Europa Metals, further commented:

"*This latest set of metallurgical results indicate the potential to exploit further the resource at Toral. In addition, by investigating the use of XRT in our process route, we expect increased optionality in terms of mining rates and throughput flexibility. Combining the ore sorting results with the very impressive lead concentrate grades achieved from the TOD-025 sample, we firmly believe that Europa Metals is continuing to demonstrate that Toral can provide a high-grade concentrate, whilst allowing for a flexible mining approach.*

"*Today's results will now be combined with our previous metallurgical testwork to inform an updated set of economic parameters and provide a roadmap into our next phase of work.*"

Objectives of the Phase III metallurgical testwork and ore sorting analysis

WAI conducted tests on metallurgical samples, representing the expected ore types from Toral, to develop a flowsheet for the potential economical feasible beneficiation of Toral ores to produce marketable concentrates, as well as establishing basic processing data for input into engineering studies. Such work builds on the positive results from WAI's two previous metallurgical programmes, with the design based on its previous recommendations. Work has also been undertaken with Bara regarding an analysis of the potential for ore sorting at the Toral Project, in order to refine a potential future production process for the discrete treatment of different areas of the resource with increased metal recovery.

Three samples were submitted to WAI for testing, representing different ore types likely to be encountered within Toral during potential future production, with all of the ore sorting samples firstly subjected to an ore sorting process followed by flotation testing. The representative samples were as follows:

1. High-grade intersection from drill hole TOD-025 (TOD-025H), which was subjected to flotation tests.
2. Low-grade fresh sample from drill hole TOD-025 (TOD-025L) for determining the use of XRT ore sorting technology.
3. Weathered, low-grade, sample from drill hole TOD-024, also subjected to XRT analysis.

Summary of ore sorting

Ore sorting has been identified as having the potential to unlock value in the shallower, lower grade zones previously not considered to be economically mineable in the 2018 Scoping Study. Testing was therefore undertaken to investigate the potential of pre-concentrate material from the Toral deposit by means of sensor-based sorting. If successful, pre-concentration of the ore could provide a number of potential benefits for the project including:

- Reducing the size of the requisite process plant (crushing, grinding and dewatering circuits) whilst maintaining the same overall throughput;
- Enabling ore that may otherwise be sub-economic based on grade to be processed; and
- Allowing higher mining rates without necessarily having to increase the size of the processing plant.

Overall, the sorting results for both the TOD-024 and TOD-025L samples are considered

to be excellent, with between 45% - 50% of the mass rejected at, for the TOD-024 sample, 98% Pb recovery, 97% Zn recovery and 92% Ag recovery, and at, for the TOD-025L sample, 98% Pb recovery, 94% Zn recovery and 82% Ag recovery.

The increasing head assay is also pleasing with the TOD-024 sample increasing from 1.04% Pb and 1.01% Zn in the feed to 2.34% Pb and 2.15% Zn and an approximate doubling of the grade in the sorter product. In the TOD-025L sample the increase in grade was more pronounced with uplifts in the Pb grade from 1.13% Pb to 4.03% and Zn grade from 0.62% Zn in the feed to 2.06% Zn in the sorter product.

Ore sorting process

Ore sorting by means of XRT is an established process for sorting Pb/Zn ores by way of rejecting waste dilution from ores at low cost prior to more conventional processing by flotation. Sensor-based sorting was selected for this investigation as it offers a number of benefits over alternative pre-concentration methods, such as Dense Media Separation (DMS), including the ability to change the sorting criteria depending on the feed material and target specific metals/minerals of interest along with the added flexibility of not having to be continuously operated.

Toral ore sorting analysis

Based on the minerals of interest in the feed (galena/sphalerite) and the predominant host mineralisation (calcite/dolomite), sorting by means of XRT sensing was selected for investigation as part of the study as it allows detection of the minerals of interest both on the surface and within the particle being sorted.

Two low grade samples were taken and submitted for analysis to WAI for sorting testwork alongside TOMRA, a leading provider of ore sorting technology based in Germany and overseen by Bara. The objective of the work was to identify the potential economic benefits of processing low-grade and weathered material through beneficiation circuits during the future mine life of Toral alongside the central, high-grade core of the project. The samples analysed were TOD-025L and TOD-024.

The results, presented in Table 1 below, show lead and zinc stage recoveries in excess of 94.5% for the TOD-024 sample and in excess of 89.2% for the TOD-025L sample.

Overall, taking into account the metal contained within the -10.0mm "fines" fraction, the data shows that in excess of 94% of the overall lead and zinc in the feed could be recovered through the ore sorting process whilst rejecting a minimum of 40% of the original mass.

Table 1: Summary of ore sorting results from the TOD-024 and TOD-025L samples:

TOD-024 (Sort+Float) Sorter Test Results									
Size Fraction (mm)	**Product**	**Mass**		**Assay**		**Sorter Recovery (%)**		**Overall Recovery (%)**	
		(kg)	**(%)**	**Pb (%)**	**Zn (%)**	**Pb**	**Zn**	**Pb**	**Zn**
-25.0+10.0	Stage 1 Product	5.21	22.76	2.34	2.15	96.43	94.52	51.08	48.23
	Stage 2 Product	2.16	9.41	0.08	0.07	1.40	1.33	0.74	0.68
	Stage 2 Waste	9.06	39.54	0.03	0.05	2.17	4.15	1.15	2.12
-10.0	Fines	6.48	28.29	1.73	1.75	-	-	47.03	48.98
Feed	**-**	**22.90**	**100.00**	**1.04**	**1.01**	**-**	**-**	**100.00**	**100.00**
TOD-025 (Sort+Float) Sorter Test Results									
Size Fraction (mm)	**Product**	**Mass**		**Assay**		**Sorter Recovery (%)**		**Overall Recovery (%)**	
		(kg)	**(%)**	**Pb (%)**	**Zn (%)**	**Pb**	**Zn**	**Pb**	**Zn**
-25.0+10.0	Stage 1 Product	3.91	14.24	4.03	2.06	96.08	89.22	50.81	46.97
	Stage 2 Product	2.73	9.96	0.13	0.18	2.24	5.52	1.19	2.90
	Stage 2 Waste	8.59	31.31	0.03	0.06	1.68	5.27	0.89	2.77
-10.0	Fines	12.20	44.49	1.20	0.66	-	-	47.11	47.36
Feed	**-**	**27.42**	**100.00**	**1.13**	**0.62**	**-**	**-**	**100.00**	**100.00**

TOD-025L sample

Products from ore sorting testwork on the TOD-025L sample were subjected to open circuit flotation testing comprising rougher and cleaner flotation tests resulting in an c.3-4 times uplift in the head assay. Test conditions were optimised in terms of residence time and reagent dosages. Results of the testing are summarised in Table 2 below.

Results for the benchmark cleaner flotation test (FCT1) conducted using optimal residence and reagent dosing conditions for lead, demonstrated lead and silver recoveries of 89.4% and 81.5% to a lead-silver concentrate grading 53.8% Pb and 640 g/t Ag

respectively. Results of the zinc cleaner flotation test (Cl 2) demonstrated zinc recoveries of 84.7% to a concentrate grading 52.4% Zn.

Table 2: Sample TOD-025L sorting and flotation results

TOD-025 (Sort+Float) Flotation Test Results									
Test	Conc	Stage	Mass (%)	Assay			Recovery (%)		
				Pb (%)	Zn (%)	Ag (ppm)	Pb	Zn	Ag
FT1	Pb	Ro	3.2	**50.98**	1.86	616	**90.25**	5.41	78.36
	Zn	Ro	5.3	2.97	**19.11**	93.8	8.75	**92.46**	19.86
FCT1	Pb	Ro	2.9	53.80	2.17	640	89.43	5.93	81.54
		Cl 1	0.7	**60.46**	3.02	1,975	**23.08**	1.90	57.80
	Zn	Ro	4.8	3.40	20.12	77.3	9.41	91.60	16.41
		Cl 1	2.0	7.19	**47.38**	153	8.28	**89.71**	13.58
FCT2	Pb	Ro	3.1	46.54	2.00	647	88.03	5.96	80.58
		Cl 1	1.7	**71.34**	1.62	1,078	**71.66**	2.56	71.30
		Cl 2	1.1	**71.10**	1.48	1,207	**47.91**	1.51	51.39
		Cl 3	0.2	**54.97**	3.14	2,727	**8.26**	0.74	26.98
	Zn	Ro	14.8	3.71	20.05	91.8	10.74	91.49	17.47
		Cl 1	2.1	7.61	44.41	176	9.80	90.24	14.98
		Cl 2	1.7	7.75	52.36	165	7.94	84.68	11.13
		Cl 3	1.3	6.94	**55.49**	134	5.57	**70.32**	7.08

TOD-024 sample

Overall, recoveries of 73% Pb, 84% Zn and 81% Ag to a combined concentrate grading 16.0% Pb, 18.6% Zn and 165 g/t Ag were demonstrated. The complex mineralogy and complex mineral associations observed, presently suggests that an optimal route for this ore type would target a bulk polymetallic concentrate marketable either to ISF smelters in the region or alternatively to operators of either PoX or Albion process circuits.

The TOD-024 low-grade weathered sample was subjected to a total of three rougher flotation tests to investigate flotation performance. While this shallower, weathered ore type was not considered in the 2018 Scoping Study, the sorting testwork undertaken suggests that this ore type may indeed be amenable to beneficiation by sorting plus flotation of the sorted products. Results for the flotation of the sorted products from the TOD-024 sample are presented in Table 3.

Further work on this option is required, including metallurgical optimisation for recovery of non-sulphide zinc species, lead-zinc separation, as well as work on treatment charges and payabilities obtainable for a potential bulk polymetallic concentrate.

Table 3: Sample TOD-024 sorting and flotation results

TOD-024 (Sort+Float) Flotation Test Results								
Test	Conc	Mass (%)	Assay			Recovery (%)		
			Pb (%)	Zn (%)	Ag (ppm)	Pb	Zn	Ag
FT1	Pb	5.2	**23.72**	27.62	246	**59.92**	69.29	66.96
	Zn	4.2	6.43	**7.32**	64.83	13.33	**15.06**	14.45
FT2	Pb	4.5	**24.69**	26.64	242	**58.09**	61.08	63.37
	Zn	4.5	5.25	**9.58**	56.01	12.59	**22.40**	14.94
FT3	Pb	4.3	**28.43**	25.39	290	**57.84**	52.21	65.57
	Zn	5.2	5.25	**13.08**	53.16	12.79	**32.20**	14.39

TOD-025H sample

Following a single stage of cleaning, the final recovery of lead to a combined cleaner+scavenger product was 83.9% at a grade of 79.2% Pb whilst zinc recovery was 87.7% to a grade of 60.0% Zn. These results represented a significant improvement in both the grade and recovery of both metals when compared with previous testing.

In overview, whilst test data in terms of concentrate grade and recovery to concentrate can be attributed in part to high feed grades in the test sample, the test still demonstrates the potential for excellent recovery of lead, silver and zinc to a concentrate assaying lead and zinc values significantly above those typically found in the market for these ore types.

The high-grade fresh TOD-025H sample was subjected to a programme comprising open circuit rougher and cleaner flotation tests, the results of which are set out in Table 4:

Table 4: Results from sample TOD-025H

TOD-025 (Sort+Float) Flotation Test Results									
Test	Conc	Stage	Mass (%)	Assay			Recovery (%)		
				Pb (%)	Zn (%)	Ag (ppm)	Pb	Zn	Ag
FT1	Pb	Ro	3.2	**50.98**	1.86	616	**90.25**	5.41	78.36
	Zn	Ro	5.3	2.97	**19.11**	93.8	8.75	**92.46**	19.86
FCT1	Pb	Ro	2.9	53.80	2.17	640	89.43	5.93	81.54
		Cl 1	0.7	**60.46**	3.02	1,975	**23.08**	1.90	57.80
		Ro	4.8	3.40	20.12	77.3	9.41	91.60	16.41

	Zn	Cl 1	2.0	7.19	**47.38**	153	8.28	**89.71**	13.58
FCT2	Pb	Ro	3.1	46.54	2.00	647	88.03	5.96	80.58
		Cl 1	1.7	**71.34**	1.62	1,078	**71.66**	2.56	71.30
		Cl 2	1.1	**71.10**	1.48	1,207	**47.91**	1.51	51.39
		Cl 3	0.2	**54.97**	3.14	2,727	**8.26**	0.74	26.98
	Zn	Ro	14.8	3.71	20.05	91.8	10.74	91.49	17.47
		Cl 1	2.1	7.61	44.41	176	9.80	90.24	14.98
		Cl 2	1.7	7.75	52.36	165	7.94	84.68	11.13
		Cl 3	1.3	6.94	**55.49**	134	5.57	**70.32**	7.08

The flowsheet tested considers crushing, followed by sorting of low-grade ores using XRT, grinding of ores to between 106µm and 150µm, and flotation in 2 rougher and 3 cleaner stages in closed circuit to separate lead-silver and zinc concentrates. A schematic of the basic flowsheet is shown in Figure 1, which can be viewed via the link below:

http://www.rns-pdf.londonstockexchange.com/rns/3867X_1-2020-8-27.pdf

Figure 1: Basic Toral Flowsheet showing comminution, ore sorting, flotation, concentrate handling and dry stack tailings

Further work

Further to the highly encouraging results from the latest metallurgical testwork and ore sorting, Bara, having been commissioned by Europa Metals, has now commenced its work in respect of updating the economic parameters for the Toral Project, via an independent study. The Company is also progressing certain Pre-Feasibility Study workstreams and looks forward to providing further updates in due course.

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The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulation (EU) No. 596/2014.

Notes to Editors

Appendix: **Further information on the Toral project**

The latest Mineral Resource Estimate (August 2020) for the Toral deposit reported in accordance with JORC (2012) at a 4% cut-off was as follows:

- An Indicated resource of approximately 3.8Mt @ 8.3% Zn Equivalent (including Pb credits), 4.7% Zn, 3.9% Pb and 30g/t Ag, including:
  - 180,000 tonnes of zinc, 150,000 tonnes of lead and 3.7 million ounces of silver.
- An Inferred resource of approximately 14Mt @ 6.5% Zn Equivalent (including Pb credits), 4% Zn, 2.7% Pb and 23 g/t Ag, including:
  - 540,000 tonnes of zinc, 360,000 tonnes of lead and 10 million ounces of silver.
- A total resource of approximately 17Mt @ 6.9% Zn Equivalent (including Pb credits), 4.1% Zn, 2.9% Pb and 24 g/t Ag, including:
  - 720,000 tonnes of zinc, 510,000 tonnes of lead and 14 million ounces of silver.

Table 1: Summary of Indicated and Inferred mineral resources for the Toral property reported at a

4.0% Zn equivalent cut-off grade (including Pb and Ag credits) and estimated grade and tonnages at the various cut-off grades. Figures are rounded to reflect the accuracy of the estimate and, as such, totals may not cast.

Cut-Off Zn Eq (PbAg)%	Tonnes (Millions)	Density	Zn_Eq (Pb)%	Zn Eq (PbAg)%	Zn %	Pb %	Ag g/t	Contained Zn Tonnes (000s)	Contained Pb Tonnes (000s)	Ag Troy Oz (Millions)
Indicated										
6	2.8	2.9	9.5	10	5.3	4.5	34	150	130	3.1
5	3.3	2.9	8.9	9.5	5	4.2	32	170	140	3.4
4	**3.8**	**2.9**	**8.3**	**8.9**	**4.7**	**3.9**	**30**	**180**	**150**	**3.7**
3	4.1	2.9	7.9	8.5	4.4	3.7	29	180	150	3.8
Inferred										
6	8	2.9	7.8	8.3	4.7	3.4	28	370	270	7.2
5	10	2.9	7.2	7.7	4.4	3	26	450	310	8.6
4	**14**	**2.9**	**6.5**	**6.9**	**4**	**2.7**	**23**	**540**	**360**	**10**
3	17	2.9	5.9	6.3	3.7	2.4	20	610	400	11
Total										
6	11	2.9	8.2	8.8	4.8	3.7	30	520	390	10
5	14	2.9	7.6	8.1	4.5	3.3	27	620	450	12
4	**17**	**2.9**	**6.9**	**7.3**	**4.1**	**2.9**	**24**	**720**	**510**	**14**
3	21	2.9	6.3	6.7	3.8	2.7	22	790	560	15
Transitional Oxide Material										
4	3	2.9	5.2	5.7	2.6	2.9	27	75	83	2.5
Unweathered Fresh Rock										
4	14	2.9	7.2	7.7	4.5	3	24	650	430	11

*Zn Eq % is the calculated Zn equivalent incorporating lead credits; (Zn Eq (Pb)% = Zn + Pb*0.926). Zn Eq (PbAg)% is the calculated Zn equivalent incorporating silver credits as well as lead; (Zn Eq (PbAg)% = Zn + Pb*0.926 + Ag*0.019). Zn equivalent calculations were based on 3-year trailing average price statistics obtained from the London Metal Exchange and London Bullion Market Association giving an average Zn price of US$2,680/t, Pb price of US$2,100/t and Ag price of US$16.2/oz.

Notes for Table 1 in this appendix:

1. No mineral reserve calculations have been undertaken. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
2. Numbers are rounded to reflect the fact that an Estimate of Resources is being reported as stipulated by JORC 2012. Rounding of numbers may result in differences in calculated totals and averages. All tonnes are metric tonnes.
3. Zn equivalent calculations were based on 3 year trailing average price statistics obtained from the London Metal Exchange and London Bullion Market Association giving an average Zn price of US$2,680/t, Pb price of US$2,100/t and Ag price of US$16.2/Oz. Recovery and selling factors were incorporated into the calculation of Zn Eq values. It is the Company's opinion that all the elements included in the metal equivalents calculation (zinc, lead and silver) have a reasonable potential to be recovered and sold.
4. Zn Eq (PbAg)% is the calculated Zn equivalent incorporating silver credits as well as lead and is the parameter used to define the cut-off grade used for reporting resources (Zn Eq (PbAg)% = Zn + Pb*0.926 + Ag*0.019).
5. Zn Eq is the calculated Zn equivalent using lead credits and does not include silver credits (Zn Eq = Zn + Pb*0.926).
6. The Mineral Resource Estimate set out above for the zinc, lead and silver mineralisation in the Toral project area is based on a 3D geologic model and wireframe restricted block model that integrated the exploration work on the Toral project up to 21 January 2020. The block model used uniform cell size of 25x10x25m to best suit the orientation of the mineralisation and sample spacing. The block model was rotated by 20° in plan view to best match the trend of mineralisation. Sub cells were applied to better fit the wireframe solid models and preserve accurate volume as much as possible. Cells were interpolated at the parent block scale using an Ordinary Kriging.
7. Following statistical analysis and assessment of the updated assay composite database top cuts of 125g/t Ag were applied to the data. No top cuts were applied for Zn or Pb.
8. The Indicated and Inferred mineral resource category for the Toral zinc-lead-silver project set out in Table 1 (at cut-off grades >4% Zn Equivalent) comply with the resource definitions as described in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).
9. The tonnes and grades reported at a cut-off grade of 3% Zn equivalent are below the economic cut-off grade of 4% and as such should not be considered mineral resources, they are shown here for comparison purposes only.

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