ASX: EQE



7 August 2017

# **INITIAL METALLURGICAL TESTS SHOW POTENTIAL FOR**

# **HIGH RECOVERIES AND GRADES**

## **OF SILVER, LEAD AND ZINC IN CONCENTRATES**

Equus Mining Limited ('Equus') (ASX: EQE) is pleased to report highly encouraging results from initial metallurgical test work carried out on a composite sample from drill hole (LDD 001) at the Los Domos Gold-Silver Project. A rougher flotation test resulted in very high silver, lead and zinc recoveries and grades in concentrate. This indicates the potential for low cost beneficiation to produce a high quality silver-lead-zinc product.

## **Rougher Flotation Test Work**

A preliminary flotation test program has been carried out on a composite sample from drill hole LDD 001 at the Los Domos Gold-Silver Project in Chile. Hole LDD 001 recorded a high grade discovery intercept of **8.39m at 20.72% Pb, 7.07% Zn, 248 g/t Ag and 0.71 g/t Au** from 45.75m down hole. Refer to report titled Los Domos Gold-Silver Project High Grade Assay Results (ASX release dated 12 July 2017).

The purpose of the preliminary metallurgical test program was to determine initial flotation performance of the main metals of economic interest. A 37 kg composite sample was made up from the crushed coarse sample reject component generated from core splits prior to assaying.

The initial test work was a rougher stage flotation test carried out by ALS Canada. Flotation is a standard mineral beneficiation process, where after crushing and grinding, the minerals of value are concentrated and separated from minerals of no value by taking advantage of mineral hydrophobicity differences. Refer to Figure 1. Rougher flotation is the first stage of the flotation process where the maximum amount of the valuable mineral, at as coarse a particle size as practical, is concentrated. The rougher flotation results are outlined in Table 1.

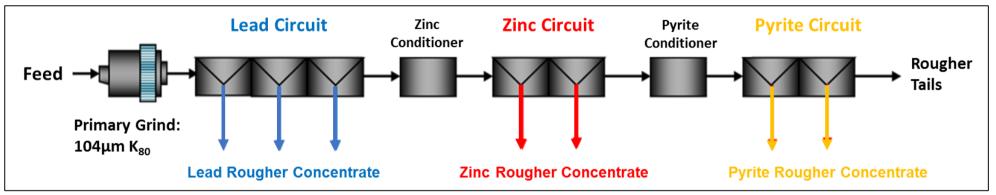
 Lead and Silver Rougher Flotation Recoveries: The rougher flotation test resulted in very high lead and silver recoveries and concentrate grades by industry standards. <u>First stage lead rougher</u> <u>flotation resulted in 97.7% Pb recovery to a concentrate grading 69.8% Pb.</u> The high lead recoveries and product grade demonstrates the fast flotation kinetics within the first stage of rougher flotation. Refer Photo 1.

In addition, <u>first stage lead rougher flotation resulted in 93.5% Ag recovery reporting to the lead</u> <u>concentrate grading 930 g/t Ag</u>. The high lead and silver recoveries and grades of this composite sample indicates the possibility for a one-stage lead rougher circuit producing a high quality lead/silver concentrate product with no need for regrinding and cleaning.

- Zinc Flotation Rougher Recoveries: The first stage zinc rougher floatation resulted in 64.8% Zn recovery to a concentrate grading 39.8% Zn with 21.3% Zn having been recovered in the first stage lead rougher concentrate where no zinc depressant reagents were applied. The possibility of producing a silver-lead rich bulk concentrate will be investigated as part of follow-up test work given the **combined zinc recovery for both zinc, lead and pyrite rougher circuits is 99.4%** with only 0.6% of the feed zinc being lost to the final rougher tail. It is worth noting that certain lead smelters will pay for zinc content in lead concentrates exceeding certain thresholds. In addition, pyrite is only 2.5% of the overall feed or 7% of the sulphide component. Refer Table 2.
- Gold Flotation Rougher Recoveries: The possibility of a bulk concentrate would allow for a reasonable recovery of gold given that the combined gold recoveries of the lead, zinc and pyrite rougher circuits is 93.2%.



## Figure 1. Rougher Flotation Flow Sheet



### Table 1. Rougher Flotation Metallurgical Results

Metal Grade	Lead Rougher Circuit			Weighted	Zinc Rougher Circuit		Weighted	Pyrite Rougher Circuit		Weighted	Rougher Circuit	Rougher	Average
Metal Orade	1	2	3	Average	1	2	Average	1 2		Average	Weighted Average	Tails	Average
Lead (%)	69.8	10.2	3.7	62.2	0.5	1.0	0.6	0.7	1.1	0.8	45.5	0.1	20.3
Silver (g/t)	930	216	114	838	96	66	91	42	22	36	633	2	283
Zinc (%)	4.5	21.7	14.1	6.4	44.4	15.8	39.8	0.9	0.6	0.8	13.5	0.1	6.1
Gold (g/t)	0.97	3.71	3.81	1.31	0.27	0.74	0.35	4.68	0.96	3.50	1.21	0.07	0.58
Conc. Weight (%)	28.4	2.9	1.1	32.4	8.3	1.6	9.8	1.5	0.7	2.2	44.5	55.5	100

Metal Recovery	Lead Rougher Circuit				Zinc Rougher Circuit			Pyrite Rougher Circuit			Rougher Circuit	Rougher	Total
Metal Recovery	1	2	3	Total	1	2	Total	1	2	Total	Total	Tails	Total
Lead (%)	97.7	1.5	0.2	99.3	0.2	0.1	0.3	0.1	0.0	0.1	99.7	0.3	100
Silver (%)	93.5	2.2	0.4	96.2	2.8	0.4	3.2	0.2	0.1	0.3	99.6	0.4	100
Zinc (%)	21.3	10.5	2.5	34.4	60.7	4.1	64.8	0.2	0.1	0.3	99.4	0.6	100
Gold (%)	47.9	18.9	7.2	74.0	3.9	2.0	5.9	12.2	1.2	13.4	93.2	6.8	100



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# Table 2. QEMSCAN BMA mineral composition data

Minerals	Mineral Content (wt. %)						
Copper Sulphides	0.1						
Galena	23.3						
Sphalerite	9.4						
Pyrite	2.5						
Siderite	7.5						
Quartz	50.5						
Feldspars	4.0						
Kaolinite (Clay)	0.9						
Titanium Minerals	0.1						
Others	1.7						
Total	100						
Notes 1) Copper Sulphpides include Chalcopyrite, Tetrahedrite and trace							
amounts of Tennantite/Enargite.							
2) Siderite may include Goethite/Limonite.							
3) Feldspars include K-Feldspar.							
4) Titanium Minerals Rutile/Anatase.							

5) Others include trace amounts of Calcite, Apatite, Fluorite, Muscovite, Biotite/Phlogopite and unresolved mineral species.





Commenting on this preliminary metallurgical test work Equus's Managing Director, Ted Leschke said:

"Having recently reported results from our first hole (LDD001) at the T7 Structural Prospect we are now further encouraged by this preliminary metallurgical test work.

Early evidence that you can recover metals of value through an economically-viable processing route is as important a step as encountering high grade mineralisation in drill core samples.

While there is still a significant amount of work to be done, the excellent recovery rates and grades using standard flotation practices provides us with confidence that in time we will be able to produce an in-demand high-grade concentrate with excellent payabilities."

#### For further information, please contact:

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#### About Equus Mining and the Los Domos Gold-Silver Project

Equus Mining Limited (Equus, ASX: EQE) has acquired the rights to acquire 100% of the Los Domos gold-silver project located in the XI Region of Chile from Terrane Minerals SpA under a staged earn-in agreement. Upon completion of an initial 2,000 metres drill programme Terrane will transfer the Los Domos project assets into a Joint Venture (JV) Company in which Equus will hold an initial 51%. Equus then has a two-year option period to buy the remaining 49% interest in the JV Company by issuing Terrane \$450,000 worth of Ordinary Shares at an issue price of 1.2c

The Los Domos gold-silver project is well located 15km south of the township of Chile Chico and adjacent to the Cerro Bayo gold-silver mine. See Map 1. This mine was until recently producing approximately 2 Mozpa of silver and 20 Kozpa gold or approximately two thirds nominal flotation plant capacity of 500ktpa throughput, however production has been suspended indefinitely and *force majeure* declared following a mine flooding event in June 2017 (www.mandalayresources.com). With an altitude range of 800m to 1,200m and a dry, moderate climate, the Los Domos Project is able to be explored year round.

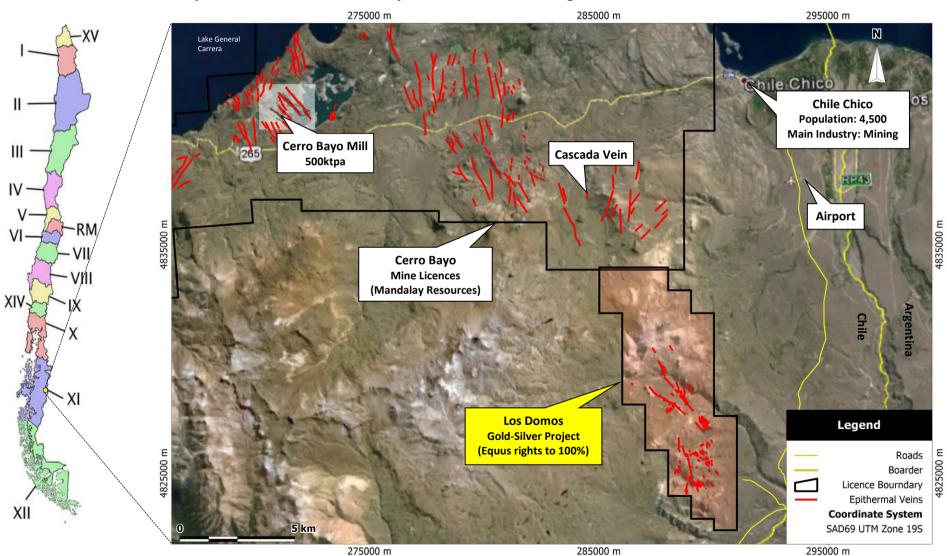
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(i)All the material assumptions underpinning exploration results for sample numbers LDD0001 to LDD00050 are outlined in Table 1 in the report titled Significant High Grade Assays From Shallow Depth Intercept In First Drill Hole At Los Domos Gold-Silver Project (see ASX release dated 12 July 2017) continue to apply and have not materially changed.

#### **COMPETENT PERSON'S STATEMENT:**

The information in this report that relates to Exploration Results for the Los Domos Gold-Silver project is based on information compiled by Damien Koerber. Mr Koerber is a geological consultant to the Company. Mr Koerber is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activities which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Koerber has a beneficial interest as shareholder and Director of Terrane Minerals SpA ('vendor') in Los Domos Gold-Silver project and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.





Map 1. Los Domos Gold-Silver Project Location in Chile's Region XI

275000 m