INCREASED RECOVERIES AND CONCENTRATE GRADES AT OPOSURA

Advanced metallurgical tests boost Oposura potential

HIGHLIGHTS:

- **Zinc recovery of 85.6% achieved producing a 57.2% zinc concentrate grade**
- **Lead recovery of 84.0% achieved producing a 61.4% lead concentrate grade**
- **Positive metallurgy significantly reduces processing and marketing risk**
- **Physical testwork for crushing, milling and abrasion indices completed**
- **Key elements of Oposura Scoping Study progressing well and on-schedule**

Azure Minerals Limited (ASX: AZS) ("Azure" or "the Company") is pleased to report that further metallurgical testwork continues to make significant improvements on the already positive results from its 100%-owned Oposura zinc-lead-silver project.

Locked cycle flotation tests, simulating the continuous operation of a typical sulphide flotation circuit, demonstrate that Oposura can expect increased zinc and lead recoveries with higher concentrate grades than those reported previously (refer ASX announcement of 12 April 2018).

The successful production of clean, commercial grade concentrates at high recoveries has eliminated a possible major project risk and strongly enhances the project potential.

DETAILS OF METALLURGICAL PROGRAM

Metallurgical Testwork

Metallurgical testwork has continued on the Oposura bulk composite sample at Blue Coast Research (Nanaimo, British Columbia, Canada). The latest testwork comprised a locked cycle test involving a typical lead-silver and zinc sulphide flowsheet which represents an industry standard flotation circuit.

The result of the locked cycle test was a zinc concentrate grading a high **57.2% zinc with a zinc recovery of 85.6%** and a lead concentrate grading **61.4% lead at a lead recovery of 84.0%**. Silver recovery to the lead concentrate was **67.1% silver at a concentrate grade of 323.8 g/t Ag (10.4 oz/t Ag)**.

Both the zinc and the lead concentrate grades achieved in the locked cycle test were significantly above the typical industry benchmark grades of 53% zinc and 60% lead, thereby improving the marketability of both products. Azure expects that, under standard operating parameters, recovery of zinc and lead into their respective concentrates would be greater than those achieved in the locked cycle test, should the Company wish to produce concentrates at the lower benchmark quoted concentrate grades.

A 100kg bulk composite sample averaging 6.4% Zn, 4.2% Pb and 28.8 g/t Ag was prepared from the drill core of eleven resource infill drill holes and is considered representative of the overall Oposura deposit. The laboratory split the bulk composite into several sub-samples to allow multiple batch and locked cycle flotation tests to be undertaken.

The locked cycle flowsheet, shown in Figure 1, involved:

- Primary grinding followed by lead rougher flotation;
- Lead rougher concentrate, representing 6.3% of the primary feed, was then subjected to a brief re-grind prior to two stages of lead cleaning flotation with the final lead concentrate representing 5.6% of the primary feed;
- Lead rougher tails, representing 93.7% of the primary feed, was forwarded for zinc flotation;
- Zinc rougher concentrate, representing 19.6% of the primary feed, was also subjected to a brief re-grind prior to three stages of zinc cleaner flotation, with the final zinc concentrate representing 9.3% of the primary feed.

Figure 1: Locked Cycle Flotation Test Flowsheet
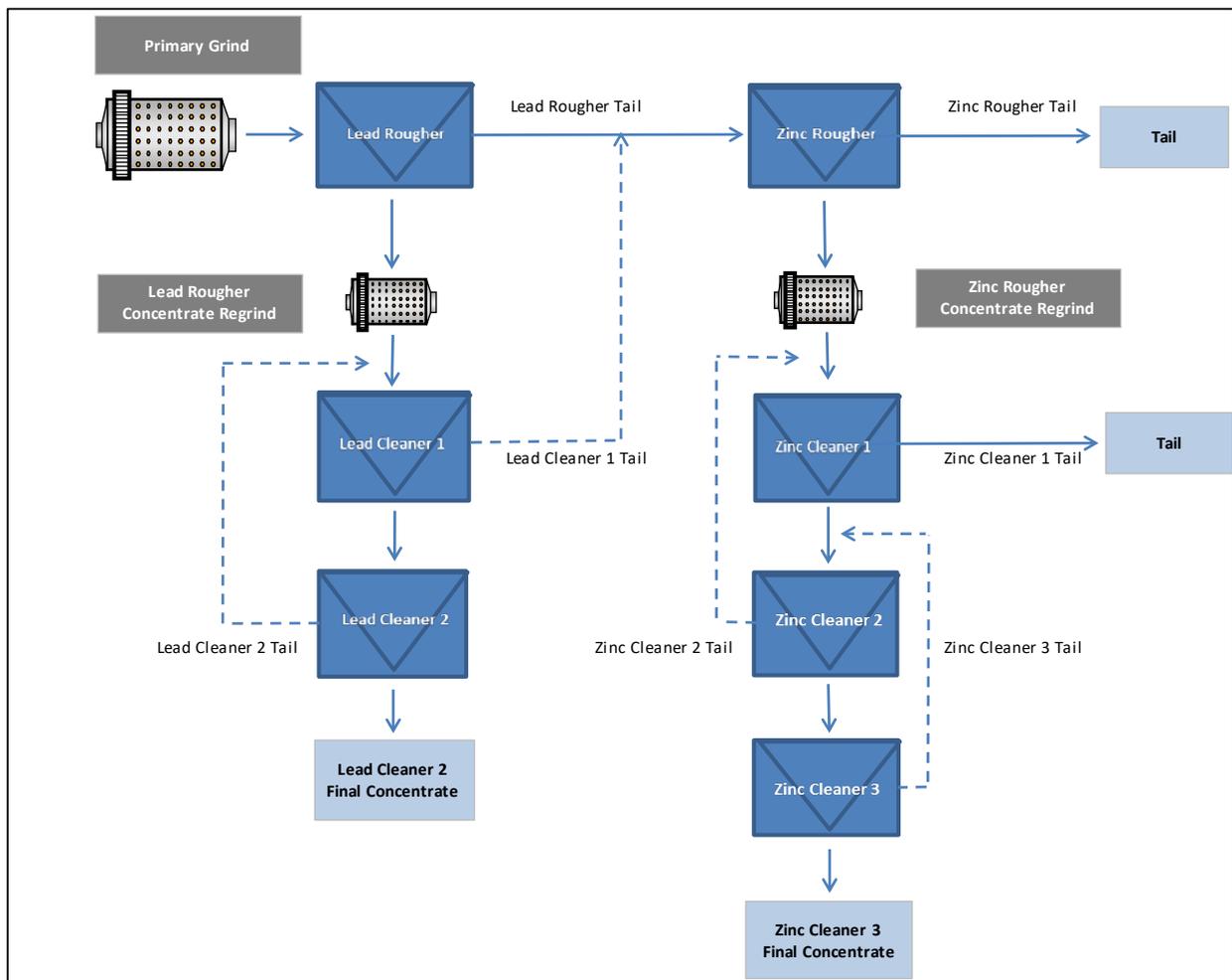
Physical Testwork

Physical testwork to assess crushing, grinding and abrasion characteristics for both the bulk composite sample and a high-grade sample (representing a post-Dense Media Separation (DMS) product) have been completed and are shown in Table 1.

The crusher and ball mill work indices are a measure of the amount of power required respectively to crush and grind mineralisation and are quoted in kilowatt hours per tonne (kWhr/t). The higher the number, the more power that is required to crush and grind the mineralisation prior to flotation.

The abrasion index is a measure of weight loss of metal when in contact with mineralisation. It is used to select materials for items such as mill liners and chutes and to determine how often these items need to be replaced based on wear rates.

All three of the indices are within the range of expected power requirements and wear rates for typical zinc-lead sulphide mining projects.

The high-grade, post-Dense Media Separation product, with more sulphides and less waste rock, has lower work indices. This may have important economic benefits for the project when refining the overall process flowsheet, and will be subject to further evaluation.

Table 1: Oposura Bond Work Indices

	Bulk Composite	High Grade (DMS Product)
Bond Crusher Work Index (kWhr/t)	8.7	8.4
Bond Ball Mill Work Index (kWhr/t)	18.6	13.3
Bond Abrasion Work Index (g)	0.375	0.163

Further Testwork

Although further testwork is not likely be required for the purposes of the Scoping Study / Preliminary Economic Assessment, which is underway and due for completion in late Q3 2018, additional testing may be conducted during future studies to further optimise grind sizes, metal recoveries and reagent regimes.

-ENDS-

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