# ADVANCED METALLURGICAL TESTWORK FOR HIGH-GRADE SILVER AT MESA DE PLATA

- **Three holes recently drilled into the Mesa de Plata silver deposit collected high-grade samples for gravity separation testwork, including (ASX: 4 March 2020):**
  - **MDPC-150:  6.0m @ 1,284g/t Ag within 10.5m @ 805g/t Ag from 12.0m**
  - **MDPC-151:  3.0m @ 1,832g/t Ag within 15.0m @ 677g/t Ag from 39.0m**
  - **MDPC-152:  3.0m @ 1,006g/t Ag within 10.5m @ 774g/t Ag from 1.5m**

- **Previous metallurgical studies demonstrated silver recoveries up to 76% when processed by flotation and cyanide leaching with follow-up tests showing the unrecovered silver can be concentrated and collected by gravity separation to produce a high-grade silver concentrate**

- **Next stage of testwork will refine the density-based gravity separation methodology followed by flotation and leaching to determine the optimum processing route**

- **If processing by a combination of gravity separation, flotation and leaching is successful, the Company is aiming for total silver recoveries of ~90%**

Azure Minerals Limited ("Azure" or "the Company) (ASX: AZS) is pleased to announce that samples of high-grade silver mineralisation from the Mesa de Plata silver deposit on the Company's 100%-owned Alacrán Project in Sonora, Mexico, have been despatched to the AMTEL laboratory in Ontario, Canada for advanced metallurgical testwork.

Previous metallurgical studies (ASX: 17 December 2015) completed by Azure demonstrated that while a majority of the Mesa de Plata silver mineralisation is recoverable by a combination of flotation followed by cyanide leaching of the tailings stream, a proportion of the silver is not captured by either of these processing methods. Subsequent testing demonstrated that a dense, silver-rich mineral called romeite, which neither floats nor leaches, is recoverable by gravity separation methods into a high-grade silver concentrate.

Three Reverse Circulation holes were recently drilled into the high-grade zone of the Mesa de Plata silver deposit specifically to collect samples containing the silver-rich romeite. Selected samples from these holes will be used for advanced metallurgical testwork to optimise the process flowsheet for a Mesa de Plata mining and processing operation.

The high-grade silver zone outcrops as the ridge capping on top of the Mesa de Plata hill. It contains Measured and Indicated Mineral Resources of **15.5Moz silver in 1.8Mt @ 275g/t Ag** within the overall Mesa de Plata Mineral Resource of **27.4Moz silver in 10.5Mt @ 82g/t Ag** (ASX: 1 December 2016; refer Table 1 for Mineral Resource).

## PREVIOUS METALLURGICAL TESTWORK

In 2015/2016, a series of mineralogical and metallurgical tests were undertaken on silver mineralisation collected from the Alacrán silver deposit. These studies:

- characterised the mineralogy of the mineralisation and identified silver-bearing species;
- identified favourable processing routes;
- extracted silver by cyanide leaching, flotation and gravity methods; and
- identified options to improve grades and recoveries.

It was established that the Alacrán silver mineralisation consists of four different silver species: native silver, bromargyrite (AgBr), acanthite ($Ag_2S$) and romeite (a silver antimonate).

Metallurgical testwork demonstrated excellent recoveries of the first three of these silver minerals, with a combination of flotation and cyanide leaching producing total silver recoveries of up to 76%.

Mineralogical analysis indicated that the tailings contained a significant quantity of silver mineralisation in the form of a high-density mineral called romeite, which was not recoverable by flotation or leaching. However, subsequent testing indicated that the romeite could be recovered and concentrated by density-based gravity separation.

The current metallurgical program will undertake multiple gravity separation tests, processing the high-grade mineralisation through Knelson concentrators to maximise romeite recoveries into a high-grade, silver-rich concentrate. The tailings from the gravity separation will then undergo grinding, flotation and cyanide leaching to maximise the overall silver recovery.

## MINERAL RESOURCES

The Alacrán project hosts two deposits; the Mesa de Plata silver deposit and the adjacent Loma Bonita gold-silver deposit (refer Tables 1 & 2 for Mineral Resources).

**Table 1: Mesa de Plata Mineral Resource (in accordance with the JORC Code 2012)**

| Zone | Measured Mineral Resource | | | Indicated Mineral Resource | | | Total Mineral Resource | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tonnes | Silver | | Tonnes | Silver | | Tonnes | Silver | |
| | (Mt) | (g/t Ag) | (Moz) | (Mt) | (g/t Ag) | (Moz) | (Mt) | (g/t Ag) | (Moz) |
| High-Grade | 1.21 | 307.4 | 12.0 | 0.54 | 201.7 | 3.5 | 1.75 | 274.7 | 15.5 |
| Mid-Grade | 8.43 | 43.0 | 11.7 | 0.28 | 36.2 | 0.3 | 8.71 | 42.8 | 12.0 |
| **Total** | **9.64** | **76.2** | **23.6** | **0.82** | **145.4** | **3.8** | **10.46** | **81.6** | **27.4** |
| Note: for details refer to ASX announcement dated December 1, 2016 | | | | | | | | | |

**Table 2: Loma Bonita Mineral Resource (in accordance with the JORC Code 2012)**

| Cut-Off Grade (g/t Au) | JORC Code Classification | Tonnes (Mt) | Gold | | Silver | |
|---|---|---|---|---|---|---|
| | | | (g/t) | (kOz) | (g/t) | (Moz) |
| ≥ 0.5 | Indicated Mineral Resource | 2.9 | 1.25 | 116 | 33.9 | 3.1 |
| | Inferred Mineral Resource | 0.5 | 1.0 | 15 | 18.0 | 0.3 |
| | **Total** | **3.4** | **1.2** | **131** | **32.0** | **3.4** |
| ≥ 0.21 | Indicated Mineral Resource | 4.2 | 0.95 | 128 | 30.1 | 4.1 |
| | Inferred Mineral Resource | 1.2 | 0.6 | 22 | 18.0 | 0.7 |
| | **Total** | **5.4** | **0.9** | **150** | **28.0** | **4.8** |
| Note: for details refer to ASX announcement dated December 21, 2016 | | | | | | |

**-ENDS-**

Authorised by Mr Brett Dickson, Company Secretary

**For enquiries, please contact:**

**Tony Rovira**
Managing Director
Azure Minerals Limited
Ph: +61 8 9481 2555

**Media & Investor Relations**
Michael Weir / Cameron Gilenko
Citadel-MAGNUS
Ph: +61 8 6160 4903

or visit www.azureminerals.com.au

**Competent Person Statements:**

*Information in this report that relates to previously reported Exploration Results has been cross-referenced in this report to the date that it was reported to ASX. Azure Minerals Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.*

*Information in this report that relates to Mineral Resources for the Alacrán Project is extracted from the reports "Silver Resource Upgraded at Mesa de Plata" created and released to the ASX on 1 December 2016 and "Initial Mineral Resource Estimate for Loma Bonita" created and released to the ASX on 21 December 2016 and are available to view on www.asx.com.au. Azure Minerals Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.*