

# INITIAL MINERAL RESOURCE ESTIMATE FOR LOMA BONITA

#### Highlights:

- 150,000 ounces gold and 4,800,000 ounces silver in Mineral Resource estimate
- 85% of total gold ounces are within the Indicated Mineral Resource category
- Gold mineralised zone remains open with significant exploration upside
- Loma Bonita resource represents a significant addition to the 27Moz silver resource at Mesa de Plata<sup>1</sup>

Azure Minerals Limited (ASX: AZS) ("Azure" or "the Company") is pleased to announce the first Mineral Resource Estimate for the Loma Bonita gold deposit at the Alacrán gold, silver and copper project located in Sonora, Mexico (see Figure 1).

This Mineral Resource estimate, which is based on 3,933m (27 holes) of Reverse Circulation (RC) drilling and 3,122m (17 holes) of HQ diamond core (DC) drilling, has been estimated and classified as Indicated and Inferred Mineral Resources in accordance with the JORC Code.

The estimate has approximately 85% of the total contained gold ounces within the Indicated Mineral Resource category (refer Table 1 below).

Cut Off Grada		Tonnos	G	old	Si	lver
(g/t Au)	Classification	(Mt)	(g/t)	(kOz)	(g/t)	(Moz)
≥ 0.5	Indicated Mineral Resource	2.87	1.25	115.7	33.9	3.14
	Inferred Mineral Resource	0.5	1.0	15	18	0.3
	Total	3.4	1.2	131	32.0	3.4
≥ 0.21	Indicated Mineral Resource	4.20	0.95	128.5	30.1	4.07
	Inferred Mineral Resource	1.2	0.6	22	18	0.7
	Total	5.4	0.9	150	28	4.8

Table 1: Loma Bonita Mineral Resource (	(in accordance with the JORC Code)

Notes

Block cut-off grade of  $\geq$  0.21 g/t Au equates to gold price assumption of 1,466 USD/troy ounce

Cut-off grade does not consider the value of silver credits

Gold and silver grades capped (98<sup>th</sup> percentile)

Numbers may not sum precisely due to rounding assumptions (two decimal places for Indicated Resources and one decimal place for Inferred Resources, as the latter are reported using a lower precision to convey the higher level of uncertainty). The JORC Code reportable estimate using the  $\ge 0.21$  g/t Au is inclusive of the  $\ge 0.5$  g/t Au estimate. The  $\ge 0.5$  g/t Au estimate is provided for information purposes to highlight that the bulk of the contained metal is within a higher grade zone.

<sup>1</sup> Refer to ASX release on 1 December 2016

Azure's Managing Director, Mr Tony Rovira, commented: "This mineral resource, estimated in accordance with the JORC Code, of 150,000 ounces of contained gold plus nearly 5 million ounces of contained silver can now be considered, along with the 27 million ounce silver Mineral Resource at nearby Mesa de Plata, in combined production studies.

"Similar to the nearby Mesa de Plata silver deposit, the Mineral Resource at Loma Bonita starts at surface and could be mined by conventional open pit methods. Metallurgical testwork has demonstrated that the Loma Bonita gold mineralisation responds favourably to conventional cyanidation testwork simulating both heap leach and milling process route options.

"Importantly, we believe this initial Mineral Resource shows the potential upside of Loma Bonita, as the mineralisation remains open and undrilled in several directions."



Figure 1: Location Plan - Alacrán Project



Figure 2: Location Plan – Loma Bonita Gold and Silver Deposit



Figure 3: Plan of Mineral Resource outlines, drill collars and sections

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Figure 4: Cross Section A - B with Loma Bonita Mineral Resource open to the East

Figure 5: Cross Section A' – B' with Loma Bonita Mineral Resource open to the North



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#### LOMA BONITA MINERAL RESOURCE ESTIMATE

The Loma Bonita Mineral Resource estimate has been prepared in accordance with the requirements and guidelines of the JORC Code and is detailed in the JORC Code summary tables appended to this release.

Mr Mark P. Murphy, Technical Director of Mining and Geology of Amec Foster Wheeler of Perth, Western Australia, has prepared the Mineral Resource estimate. Mr Murphy qualifies as a MRE Competent Person, as defined under the JORC Code.

#### **Geological Setting**

Gold and silver mineralisation at Loma Bonita is hosted at or near surface by intercalated and altered volcanic rocks that crop out along a northwest trending ridge, which lies parallel to, and to the east, of the nearby Mesa de Plata silver deposit.

At Loma Bonita, gold and silver mineralisation is hosted in near flat-lying horizons of residual quartz (vuggy silica) that are up to tens of meters thick and also as silicified breccia bodies that can be over 170m thick. These mineralised breccias may represent mineralising feeder structures to lithocaps such as the Mesa de Plata silver deposit. All mineralisation contained in the Mineral Resource is oxidised; no sulphide mineralisation was intersected by drilling.

The Mesa de Plata silver deposit, located between 200m to 400m west of Loma Bonita, was formed through high-sulphidation epithermal processes which preferentially altered and mineralised a favourable horizon, resulting in the mineralisation being hosted in a unit of volcanic rocks that are now silicified and altered to vuggy silica (refer ASX: 1 December 2016).

#### **Dimensions and Geometry**

Mineral Resource definition drilling confirmed that the gold-silver mineralisation within the Loma Bonita deposit extends along the full length and width of the Loma Bonita ridge which, in places, is up to 225m wide (east-west) and has a north-south strike length of 760m (refer to Figure 3).

Gold and silver mineralisation is found from the surface and the mineralised zone has a true vertical thickness ranging from 10m to 100m (refer to Figure 4). The mineralisation extends throughout Loma Bonita and there appears to be good internal continuity of gold and silver grades, albeit some internal waste zones have been identified in some areas.

A high grade zone (nominally  $\ge 0.5g/t$  Au) has been identified within a lower grade zone (nominally  $\ge 0.2g/t$  Au) using geochemical boundary analysis. The southern end of the deposit is more gold rich, while the northern end is more silver rich.

#### **Sampling Details**

Mineral Resource definition drilling comprised 27 RC and 17 DC holes completed on a nominal 50m  $\times$  50m spacing, across and along the strike of the Loma Bonita Ridge. All RC holes were drilled vertically and the DC holes were drilled with a variety of azimuths and dips. For the Mineral Resource, 26 RC and 14 DC holes intersected mineralisation.

Cuttings from the RC holes were sub-sampled over 1.5m intervals using a Jones riffle splitter to produce 1/4 split sub-samples with an average mass of 6kg. All samples were collected in dry ground conditions.

DC drilling cores were sampled by wet-cutting with a diamond saw longitudinally and quarter core samples were cut for assay. Sample lengths for assay purposes were guided by changes in geology and varied from 0.15m to 1.5m, with an average sample mass of 1.4kg.

#### Sample Preparation and Assaying

Bureau Veritas Mineral Laboratories prepared all the samples from Loma Bonita at their sample preparation facilities in Hermosillo, Sonora, Mexico. Samples were weighed, assigned a unique bar code and logged into the laboratory tracking system. Samples were then dried and each sample was crushed to sub 2mm before a 250g sub-sample was collected for pulverising to sub 75 microns. The 250g sample pulps were then dispatched via courier to Bureau Veritas Mineral Laboratories in Vancouver, Canada for gold and silver analysis.

The analytical technique used for gold grade determination was a fire assay method followed by AAS analysis. The analytical method used was FA430, which is a 30g charge fire assay with an AAS finish. The maximum detection limit for gold is 10g/t Au. All AAS results of >10g/t Au were re-analysed by assay method FA530, which is a 30g charge fire assay with gravimetric finish. Both methods are considered a total digest for gold.

The analytical technique used for silver grade determination was a four-acid digest followed by multi-element ICP-MS analysis. This technique is considered a total digest for silver. Following the four-acid digest, the analytical method used was MA300 which is an ICP-MS method with a maximum detection limit for silver of 200g/t Ag. All ICP-MS results of >200g/t Ag were re-analysed by assay method FA530.



Figure 6: Cross Section "A-B" through Mesa de Plata Block Model

Notes: Section centred on 572,545mE / 3,415,208mN looking southwest with a  $\pm 20$ m view window (see Figure 3 for location of section). The red outline is the section plane intersection of the High Grade Zone wireframe and the dark green outline is the Low Grade Zone wireframe section plane intersection. The grey outline is a zone of internal waste, and the magenta outline is within the volume classified as Inferred Mineral Resource. The drill hole paths are coded by gold grade according to the 'LB.Au.ppm.dh' legend, with histogram bars on the drill hole paths indicating sample gold grades colour coded by the same legend. The Mineral Resource blocks are the estimated gold grades (by ordinary block kriging) colour coded according to the 'LB.Au.ppm.md' legend, which represents the capped block grade estimates. Grid coordinates are in metres in the NAD27 MEX12 projection and datum.

#### **Metallurgical Test Results**

Industry standard bottle roll tests were undertaken at the laboratories of Kappes, Cassiday and Associates in Reno, Nevada, USA. The testwork focused on two different size fractions, comprising ground (average size of ground samples is 80% passing 80 microns) and crushed (average size of crushed samples is 80% passing 11.3mm) particle sizes. These sizes were tested to simulate gold recoveries that might be expected to be achieved from conventional milling (eg carbon-in-pulp or carbon-in-leach processing) and heap leach gold processing, respectively.

Tests were conducted on 20 core samples (10 fine ground and 10 coarse crushed), collected and composited from diamond drill holes selected from across the deposit. Gold grades of these

composite samples ranged between 0.25g/t Au and 3.1g/t Au and were sourced from depths varying from surface to 74m below surface. These samples are considered to be representative of the currently known grade range of the gold mineralisation, and the strike and depth extents of the Loma Bonita mineralised zone. All mineralisation contained in the Mineral Resource is oxidised with no sulphide mineralisation intersected by drilling.

Metallurgical testwork for this deposit focused on maximising gold recovery rather than the accessory silver. High gold recoveries of between 88% and 97% were achieved on the ground material, with an overall average recovery of greater than 93%. Tests on the crushed material achieved gold recoveries of between 42% and 89%, with an overall average recovery of more than 73%. The recovery of silver by cyanide leaching is low, with tests returning average silver recovery of between 9% and 27% for ground material and 1% and 7% for crushed samples.

Leach kinetics were excellent with rapid gold recoveries. Final gold recoveries on the ground material were achieved within a 24 hour period, and over a period of 192 hours (8 days) on the crushed material.

Further testwork is proposed to optimise recovery and processing conditions.

## Density

Azure collected a total of 64 density measurements from drill core samples with 29 samples within the bounds of the reported Mineral Resource. The volume of each core piece was measured using a 3D scanner. The high precision scans provide an accurate volume for the scanned material. Azure calculated density for these core samples by dividing the dry weight of the sample by the scanned volume. A top and bottom capped (upper and lower 2.5% cap) mean density of these samples was applied to the respective High and Low Grade zones of the deposit.

#### **Geological Estimation Domains**

For the Mineral Resource estimation control, two estimation domains were identified, based on a grade-boundary analysis of gold grade thresholds. The volumes of the domains were modelled using conventional sectional interpretation followed by digital wireframing methods. The wireframe models were reviewed and accepted by Azure and then used to code a digital block model as follows:

- High Grade Zone defined using a nominal ≥>0.5g/t Au grade cut-off and identified by abrupt spikes in gold, silver and antimony grades. There is a distinct zone of significantly higher grade gold mineralisation in the south parts of the deposit in some areas, and presents as a narrow flat lying zone at surface sheet in other areas.
- Low Grade Zone defined as being between a lower grade cut-off of ≥0.2g/t Au and an upper grade cut-off of ≥0.5g/t Au. This zone forms a halo generally surrounding the High Grade Zone. The zones have been estimated using only the data within the respective volumes.

Sub-blocks were included in the block model to closely match the estimation domain boundaries and the topographic surface.

## **Reporting Cut-off Grade**

The  $\geq 0.21g/t$  Au Mineral Resource reporting block cut-off was selected based upon order of magnitude cost estimates from current open pit gold mining and heap leach processing operations in northern Mexico, with heap leach recovery inferred from current metallurgical tests, and assumed mining and metal pricing parameters. More details are given in the JORC Table 1 Section 3 appended to this ASX release.

#### Grade Caps

To reduce the spatial influence of extremely high grade samples, and based on decile analyses and probability plots, the 1.5m long estimation composite grades were capped to the following maximum values prior to block grade estimation:

- High Grade Zone 5.06g/t Au (11 out of 505 capped, maximum 14.1 g/t Au)
- Low Grade Zone 0.82g/t Au (6 out of 284 capped, maximum 1.14 g/t Au)

The caps selected, that were applied to the estimation-sample composites, are the 98<sup>th</sup> percentiles of respective domain composite populations both of which do not have extreme outlier values apart from the maximum value in each data set. Silver grade caps were set to 140 g/t Ag and 71 g/t Ag for the respective High and Low Grade Zones, again using the 98<sup>th</sup> percentile thresholds of data within the respective estimation zones.

## Criteria used for classification

The criteria used for JORC Code classification included data quality, geological understanding, data spacing, estimation methodology and validation, with data spacing being the primary consideration along with assessment of local geological continuity and complexity. The majority of the deposit has been classified at Indicated Mineral Resource based on the continuity of gold and silver grades, which are partly confirmed in grade continuity analyses (variography) of gold and silver composites.

Deeper parts of the mineralisation on the southern three drill fences of the deposit have been classified as Inferred Mineral Resource, despite the zone having similar data spacing to other regions of the deposit as the depth may or may not support open pit mining. Additional drilling and a first pass Ore Reserve study is required to confirm whether these zones can be included in Indicated Mineral Resource.

Refer to the JORC Table 1 summaries in the appendix for full details.

#### **Estimation and Validation Methodology**

Using the estimation-zone coded block model, the capped gold grades were estimated from the capped composites (1.5m long) using ordinary block kriging into a parent block size of 12.5mE  $\times$  12.5mN  $\times$  5m in elevation, with sub-block grades estimated using parent block assumptions. The composite search routine for each block estimate was set to search to match the trends identified in grade continuity analyses and find up to 24 composites from the nearest drill holes with a maximum of four composites from any one drill hole.

As such, most block estimates reflect the kriging weighted average of up to 24 capped composites, with a minimum acceptance of eight samples for a block to be estimated. A multi-

pass search strategy with an expanding search after each pass was used to ensure estimates were made for all blocks within each estimation zone. For the final pass the minimum samples required for an estimate was reduced to four samples.

The block model estimates were validated by on-screen visual inspection and statistical comparisons of (composite) input and (block estimate) output mean grades on a global and local basis. The block model grade validation results were deemed to be acceptable by the MRE Competent Person.

#### **Modifying Factor Assumptions**

In terms of key modifying factors, it has been assumed that the deposit could be exploited by conventional truck and shovel open pit mining with ore processed either by heap leach methods or by cyanide leach in plant processes, with the metallurgical recoveries indicated by preliminary metallurgical test results. Using these assumptions and reasonable public forecast ranges of future gold prices, a block reporting cut-off grade of  $\geq 0.21g/t$  Au was selected as a reasonable optimistic basis for reporting the Mineral Resource.

Azure has further assumed that given the long history of mining in the Sonora region of Mexico that there are reasonable expectations that a mine and processing operation could be developed at Loma Bonita should (or when) future studies result in the definition of an Ore Reserve

#### BACKGROUND

Azure acquired rights to the Alacrán Project in December 2014 through its fully owned Mexican subsidiary Minera Piedra Azul S.A. de C.V. Azure signed an Option/Shareholders agreement ("Agreement") with Minera Teck S.A. de C.V. ("Teck"), the Mexican subsidiary of Teck Resources Limited to acquire 100% of the property, subject to an underlying back-in right retained by Teck and a 2% NSR retained by Grupo Mexico. Teck Resources Limited is Canada's largest diversified resource company. Grupo Mexico is Mexico's largest and one of the world's largest copper producers.

Azure completed US\$5 million aggregate expenditure on the Alacrán Project and delivered notice to Teck (ASX: 31 October 2016) that it had achieved this milestone ("Notice"), thereby earning a 100% legal and beneficial interest in the project, pursuant to the terms of the Agreement.

Teck notified Azure (ASX: 19 December 2016) that it had exercised its back-in right, by which it can re-acquire a 51% interest by sole funding US\$10 million of expenditure over a four year period. This includes a US\$0.5 million cash payment to Azure.

Additionally, upon reaching its 51% interest, Teck may further increase its interest to 65% by sole funding an additional US\$5 million of expenditure, including a US\$1.5 million cash payment to Azure.

#### -ENDS-

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#### **Competent Person Statement:**

Information in this document that relates to the JORC Code Loma Bonita Mineral Resource estimate is based on information compiled by Mr Mark P Murphy, who is a Registered Professional Geoscientist and Member of the Australian Institute of Geoscientists. Mr Murphy is Technical Director of Mining and Geology in Amec Foster Wheeler's Perth Office in Western Australia. Mr Murphy has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity 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 Murphy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# Appendix A: JORC Table 1

This appendix contains JORC Table 1 prepared by the Competent Persons to supporting Public Reporting of the Loma Bonita MRE.

# Section 1 – Sampling Techniques and Data

This section of Table 1 applies to all succeeding sections

Item	Comments
Sampling techniques	<ul> <li>The sampling techniques Azure Minerals Limited (Azure) has used to collect data for the Loma Bonita Mineral Resource Estimate (MRE) are reverse circulation percussion (RC) drilling and sub-sampling of the RC chips, and diamond core drilling (DC) to collect core samples. Azure has also used the DC drilling cores for in-situ density estimation and to collect samples for metallurgical testing. The full details of the drilling and associated sub-sampling and assaying are described in the relevant sub-sections further below.</li> </ul>
	• The primary measures taken to ensure sample representivity have been the use of face sampling bits in RC drilling and DC drilling to cross-check the RC results. Dry ground conditions have assisted the RC chip recovery.
	• The MRE Competent Person for this Public Report considers that there are no other material aspects of the mineralisation that are not discussed in the following relevant sections of this JORC Table 1.
Drilling techniques	• The MRE drill hole database provided by Azure for MRE work includes 27 RC drill holes (total of 3,932.8m) and 17 DC holes (having 3,121.8m of sampling). For the MRE work, the MRE Competent Person included 26 RC holes (3,701.8m) and 14 DC holes (2,187.7m). One RC and three DC holes were outside the interpreted zone of mineralisation and were excluded from the MRE data set.
	• The RC drilling was completed using a 133 mm (5 ¼") diameter face-sampling bit with holes collared on nominal 50 m × 50 m grid. The drill grid is oriented oblique to the strike of the Loma Bonita Ridge with an across the strike bearing of ≈ 110°. All RC drilling has been completed in dry ground conditions. Drilling is both vertical and inclined along drill grid line orientations.
	• The core diameter for the DC holes is 63.5 mm (HQ size).
Logging	• Azure's RC chip and DC logging is qualitative in nature with key geological features captured such as rock type, textures, key minerals, oxidation, colour and other accessory geological features.
	Azure has taken photographic records of all drill core.
	• Azure has quantitatively logged rock quality designation and core recovery in DC holes. Azure has also collected the sample mass received at the laboratory of RC sub samples.
	The total lengths of all drill holes relevant to this Public Report have been logged.
	• The MRE Competent Person considers that all drill holes relevant to the MRE have been geologically logged to a level of detail that is appropriate to support MRE work, and any future metallurgical and mining studies.
Drill sample recovery	• For DC drilling, Azure has estimated core recovery as the recovered core length divided by the drill run length, with core blocks in the core trays used as the records of run length. The average DC core recovery is 86% for all core holes drilled with ≈ 20% of core intervals having core recovery of less than 70%.

Item	Comments		
	• Sa Ge	ample recovery for RC MRE drilling is logged qualitatively as being good, fair or poor. enerally the qualitative RC recovery was logged as good.	
	<ul> <li>The call</li> <li>a</li> <li>qu</li> <li>de</li> </ul>	The MRE Competent Person found that Azure's designated sample preparation laboratory optures the masses of RC samples received, with the average mass received being 6.5kg with standard deviation of 1.6kg. The mean mass-received is consistent with expectations for a uarter-split from a 1.5m long sample from a 133mm diameter drill hole and average deposit ensity of 2.3t/m <sup>3</sup> .	
	• Sa	ample mass received for DC samples was 1.44 kg with a standard deviation of 0.59 kg. Azure enerally collects shorter samples in higher grade zones.	
	• Th gr lo	ne MRE Competent Person found that there is no correlation between gold grade or silver rade with core (or mass) recovery in the RC or DC drilling, other than Azure tends to collect nger DC core samples in low grade or barren material.	
Sub- sampling	• Az m	zure sub-sampled the RC drill hole cuttings over 1.5m (5ft) intervals. The primary 1.5m lot ass is $\approx$ 48kg and is reduced to a $\approx$ 6kg sub-sample using a multi-tiered Jones riffle splitter.	
and sample	• As	s ground conditions are dry, all RC chips were split dry.	
preparation	• Fo	or DC holes Azure targeted a core sampling interval of 1.5m, but samples of longer or shorter ngth were collected as necessary to terminate the sample on geological features of interest.	
	<ul> <li>Az</li> <li>al</li> <li>al</li> <li>th</li> </ul>	zure sub-sampled the DC core by cutting the core in half (with a wet diamond saw blade) ong the core axis to prepare a ½-core sample. The ½-core sub-sample was then wet-cut ong the core axis to prepare a ¼-core sub-sample for laboratory dispatch. Azure retained be second half of core and residual ¼ core in core trays.	
	• Th ar cc	ne MRE Competent Person considers that the methods of sub-sampling employed by Azure re consistent with good industry standards for the style of mineralisation under onsideration.	
	• Fo	or sub-sampling and assay quality control monitoring, Azure:	
	0	Submitted replicate DC ¼-cores anonymously to the laboratory in order to monitor the precision of this sub-sample type.	
	0	Instructed the sample preparation laboratory to collect replicate riffles splits of samples received, in order to monitor the precision of samples following crushing.	
	0	Instructed the laboratory to collect and assay replicates of pulp samples in order to monitor the precision of the pulp material dispatched for assay.	
	0	Submitted known grade value pulp references anonymously to the laboratory in order to monitor the accuracy of grades reported.	
	0	Submitted nominal barren 'blank' samples anonymously to the laboratory in order to monitor potential cross contamination between samples during sample preparation.	
	<ul> <li>Az of sa cc de</li> </ul>	zure did not complete any heterogeneity tests to estimate the theoretical sampling precision the sub-sample sizes relative to the grain sizes of the materials being sampled at each sub- impling stage. However the MRE Competent Person considers that the sub-sample sizes ollected by Azure are appropriate to support MRE work given replicate monitoring results emonstrate acceptable levels of repeat sampling precision.	

Item	Comments		
Quality of assay data and laboratory tests	• Azure dispatched all field samples in batches of 60 to 70 samples to a Bureau Veritas Laboratory in Hermosillo (BVL-H), Mexico, which is accredited with an ISO 9001:2008 registered Quality Management System.		
	<ul> <li>BVL-H dried, weighed and then crushed the whole sample received so that at least 70% of the particles in the lot (by mass) had a particle diameter smaller than 2 mm. BVL-H then collected a 250g sub-sample (using a riffle splitter or rotary splitter) from each sample. This sub-sample was then pulverised so that at least 85% of the particles in the lot (by mass) had a particle diameter less than 75µm. The pulp sample was then stored in a bar-coded paper packet for assay dispatch.</li> </ul>		
	• BVL-H dispatched the 250g pulps described above to Bureau Veritas Laboratory in Vancouver (BVL-V), Canada, for final analysis. This analysis involved a four-acid digestion of a 0.25 g aliquot from the pulp (collected by spatula) then analysis of the re-dissolved digestion salts using inductively coupled mass spectroscopy (ICP-MS) – method MA300. The lower detection limit of the MA300 method for silver is 0.5ppm and the upper precision limit 200ppm.		
	• For gold, analysis method FA430 was applied. This is a 30 g lead-collection fire assay with an AAS read. FA430 has a lower detection limit of 0.005 g/t Au. When a gold result exceeded 10ppm Ag, the pulp was re-assayed using a FA530 method, which involves a gravimetric final analysis.		
	• For the majority of analyses, if results from MA300 analyses were found to exceed 200ppm, BVL-V collected a second aliquot from the pulp to be analysed using method FA530-Ag, which is a 30g charge fire assay method that has a 50ppm Ag detection limit, followed by gravimetric analysis of the silver in the FA prills. For the last batch of assays (the last five RC holes drilled) the threshold to trigger a FA530 analysis for silver was reduced to 90ppm Ag.		
	• The MRE Competent Person considers that all the assay analysis methods described above can be considered to achieve total extraction of gold and silver.		
	• Quality control samples (as described in the previous section of this table) confirm that acceptable levels of precision and accuracy for gold and silver grades have been demonstrated to be at expected levels for the style of mineralisation under consideration. The frequency and levels of cross-contamination were found to be negligible.		
Verification of sampling and assaying	• Zones of significant mineralisation have been inspected and reviewed by Senior Azure Geological Staff.		
	• Geoscientific data capture on site was via hard copy logging templates for geology, sample numbers, sample recovery and so on. The data were then entered on site into an industry recognised geoscientific data management system (DataShed). All digital data are stored on Azure's company servers and backed-up off-site to a cloud provider.		
	• For MRE purposes, Azure set below detection limit values of silver and gold grades to half detection limit, which is a routine industry practice for MRE work.		
	No twin RC-DC holes have been drilled.		
Location of	Locations of all drill hole collars were initially recorded by hand-held GPS.		
data points	• All MRE database drill collars were then located in three dimensions by a licensed surveyor using differential GPS equipment. The surveyor downloaded the results into Microsoft Excel files for loading into the central database. The survey accuracy is considered better than ±10cm in three dimensions.		

Item	Comments		
	<ul> <li>Generally, down hole path surveys were not completed on vertical RC drill holes, as the RC hole path deviation for relatively short holes (&lt;100 m) was assumed by Azure to be negligible. The MRE Competent Person agrees with this assumption. Four deeper vertical RC holes that do have down hole surveys (every 10 m down hole) have average inclinations within ±5 ° of vertical</li> </ul>		
	• DC holes and inclined RC did have down hole path surveys, which were captured at 10m to 30m down hole intervals using industry standard down hole survey tools (Reflex). The MRE Competent Person noted that the deviations in DC and inclined RC holes were minor.		
	• The grid system of the data and the MRE is datum NAD27 and projection UTM Zone 12N (EPSG: 26712) for easting and northing, which is also known as MEX12.		
	<ul> <li>Azure engaged a reputable contractor to prepare a LiDAR based digital terrain model (DTM) of Azure's tenement holdings. The resulting DTM has, in theory, centimetre-scale precision in three dimensions. The MRE Competent Person found that the MRE drill hole collar surveys agreed with the DTM model and the DTM was used to model the topography over the MRE area.</li> </ul>		
	• The MRE Competent Person made no adjustments to the survey database provided, as the level of survey precision is considered more than acceptable to support estimation of Indicated and Inferred Mineral Resources.		
Data spacing and distribution	• The MRE drill holes were collared on a nominal 50m × 50m grid, with the grid oriented obliquely along and across the strike of the zone of mineralisation – refer to the collar map in the main body of this Public Report.		
	<ul> <li>Vertical sample intervals are nearly all 1.5m (5ft) long, with shorter samples collected in the DC drill holes where deemed appropriate Azure.</li> </ul>		
	• The MRE Competent Person reporting the MRE considers that data spacing for the MRE drill hole data set is sufficient to establish the degree of geological and grade continuity for MRE work.		
	• Sample compositing to 1.5m has been applied to the MRE dataset within estimation domains to ensure constant sample support for the cases of shorter sample intervals found in the DC holes.		
Orientation of data in relation to geological structure	• The general trend of the geology and mineralisation is flat-lying and, as such, vertical drill holes give robust estimates of the true mineralised thicknesses.		
	• The MRE Competent Person considers that there is low likelihood of sampling biases occurring due to the relationship between sampling orientation and geological structure for the style of deposit under consideration.		
Sample security	• At the drill sites, Azure's sampling teams collected RC riffle split samples into labelled calico sample bags, with the ticket-book method used to track samples and ensure the calico-bag samples were correctly labelled.		
	• The sampling team then placed the RC sub-samples into larger polywoven plastic bags and these bags were tied with a numbered tamper-proof seal, which were then used to track sample dispatches.		
	• The polywoven bags were then transported by Azure's sampling teams to an interim storage facility (core yard) in the nearby town of Cananea, where BVL-H personnel regularly collected the samples for transport to BVL-H in Hermosillo.		

Item	Comments		
	• DC cores were collected into plastic sample trays, which were labelled with drill hole name and depth intervals, then secured with a core tray lid and ties before transport to the Cananea core-yard for cutting, sub sampling and sample dispatch. Once cut, cores underwent the same sample transport and security protocols as the RC samples.		
	• BVL-H and Azure cross-checked sample dispatch information to ensure all samples were received as expected (according to dispatch sheets) before assay preparation commenced.		
	• Core stored at Cananea is within a fenced and secured core yard. Crusher and pulp reject samples are stored in the core yard facility in a well organised manner on under-cover shelving and racks.		
	• The MRE Competent Person considers that Azure implemented robust security controls to ensure that samples were tracked, and not lost or contaminated either accidentally or deliberately.		
	• BVL-H has a robust sample management system based on bar coding, LIMS and other controls expected for an ISO certified laboratory. Pulp samples from BVL-H to BVL-V were transported by a reputable commercial courier.		
Audits and reviews	• Azure's senior geological staff have regularly visited site during drilling programs to ensure correct sampling protocols were followed.		
	• A USA-based Amec Foster Wheeler geologist visited site during the drill programme being completed on the near-by Mesa de Plata deposit in April 2016. This geologist independently reviewed the site geology, geomorphology, sampling protocols and data systems in order to provide the MRE Competent Person with an independent review of the key aspects of sampling and data. The drilling at Loma Bonita used the same drilling rigs and sampling protocols as used at nearby Mesa de Plata.		
	• For the MRE report, the MRE Competent Person completed a number of reviews as part of the MRE process, including conversations and Q&A with Azure's senior geological staff in Perth, e-mail communications with Azure's site personnel, review of quality data and original data records. Teck Resources Limited ("Teck"), Azure's JV partner, has also reviewed the MRE Competent Person's findings regarding sampling and data.		

# Section 2 – Reporting Exploration Results

Item	Comments		
Mineral tenement and land tenure status	• The MRE for Loma Bonita deposit is located wholly within the mining concessions of Kino 10 (Title No. 166317) and Kino 15 (Title No. 166365). These tenements are included in a parcel of 22 tenements making up the 'Alacrán' project, with all tenements 100% owned by a Mexican entity named Minera Teck SA de CV, which is a subsidiary of Teck.		
	• On 15 December 2014, Azure entered into an agreement with Teck whereby:		
	<ul> <li>Azure agreed to acquire 100% ownership of the Alacrán concessions by spending USD</li> <li>5 million on exploration over four years.</li> </ul>		
	<ul> <li>Azure has completed the USD 5 million aggregate expenditure on the Alacrán Project and delivered notice to Teck on 31<sup>st</sup> October 2016 that it has achieved this milestone ("Notice"). Pursuant to the terms of the agreement, Azure has now earned a 100% legal and beneficial interest in the project, and Teck has initiated the transfer process.</li> </ul>		
	• Teck retains a back-in right to re-acquire a 51% interest by sole funding USD 10 million of expenditure over a four year period, including a USD 0.5 million cash reimbursement to Azure. Teck has 60 days from the date of the Notice in which it can elect to exercise its back-in right.		
	<ul> <li>Additionally, upon achieving the 51% interest, Teck may further increase its interest to 65% by sole funding a further USD 5 million of expenditure within another two years, including a USD 1.5 million cash reimbursement to Azure.</li> </ul>		
	• A 2% Net Smelter Royalty (for all minerals) is held by a prior tenement holder named Grupo Mexico.		
	• At the time of the preparation of this Table 1, Azure provided the MRE Competent Person, written confirmation that, as at 22 Nov 2016, all obligations in relation to statutory reporting requirements and statutory payments have been met and are current for Kino 10 and Kino 15.		
	• As such, the MRE Competent Person considers that the tenement is in good standing and no known impediments exist to obtaining a licence to operate on Kino 10 and Kino 15, or to develop and progress to the grant of mining approvals should an Ore Reserve be defined in the future.		
Exploration done by other parties	• The Alacrán project area has a history of industrial-scale commercial mining and small-scale artisanal mining dating back to the early 20 <sup>th</sup> century. However, mining activity ceased during the Mexican Revolution, which spanned the decade from 1910 to 1920, and did not recommence.		
	• Several companies carried out exploration over the Alacrán property between the 1930s and 2013 (Anaconda 1930s to 1960s, Consejo de Recursos Minerales [Mexican Geological Survey] 1960s to 1970s, Grupo Mexico 1970s to 1990s, Teck 2010s). In every case, exploration was focused on copper with little exploration undertaken for silver of gold. No work was carried out over the Loma Bonita deposit.		
	• In 2013, Minera Teck S.A. de C.V., a Mexican subsidiary of Teck Resources Limited acquired the property and undertook preliminary surface exploration.		
	• In 2014, Azure acquired the rights to the project under the terms and conditions described in the previous section of this summary table.		

Item	Comments
Geology	<ul> <li>Loma Bonita is located in the north of Sonora State in northern Mexico, ≈ 50km south of USA border. The region is within the western Mexican Basin and Range tectonic zone, which is characterised by north west trending mountain ranges consisting of Palaeozoic to Mesozoic meta-sedimentary rocks, which are overlain by Mesozoic to Cenozoic volcanic rocks. North-trending, elongate plutons of Laramide-age intrude the volcanic rocks. The valleys between mountain ranges are filled with Tertiary conglomerates, volcanics, and Quaternary gravels.</li> </ul>
	• Loma Bonita is hosted by the Cretaceous-age Mesa Formation, which consists of an upper dacite member that extends from Cananea to the Sonora River in northern Mexico. Below the base of the Mesa Formation dacite is a crystal tuff unit up to 100m thick, which is interpreted as the outfall from a caldera that was active around 66 Ma ago.
	• At Loma Bonita, silicification occurs as near flat-lying lithocaps of vuggy silica that are up to a few tens of meters thick and also as silicified breccia zones that can be over 170m thick. The mineralised breccia zones at Loma Bonita are hypothesised to represent feeder structures to mineralised lithocaps such as the Mesa de Plata silver deposit.
	• Based on the observed alteration mineralogy, Loma Bonita fits the characteristics of a high- sulphidation ('HS') epithermal style deposit. Vuggy quartz, a common quartz texture in high sulphidation systems is observed and inferred to be the product of alteration by low-pH hydrothermal fluids, whereby only quartz remains immobile.
	• The higher grade gold and silver mineralisation is correlated with elevated antimony concentrations.
Drill hole information	• The drill hole information supporting the MRE reported in this Public Report is not listed. Investors should refer to previous Public Reports by Azure for examples of significant intercept results relating to the MRE.
Data	No data aggregation criteria are relevant for this report.
aggregation methods	• No metal equivalent values are reported for the MRE the reporting cut-off grade is based on gold grade, albeit silver concentrations for the gold cut-off are also reported.
Relationships between mineralisation widths and intercept lengths	• The MRE Competent Person has found no relationships occur between the thickness of mineralisation in Loma Bonita and the intercept lengths.
Diagrams	• The body of this Public Report includes a plan of the drill holes used for the MRE. The report body also includes schematic cross sections and an example long section of the deposit MRE model.
Balanced Reporting	• The MRE includes all available drilling information and as such the MRE Competent Person considers the report is balanced in this respect.
Other substantive exploration data	• Azure has completed preliminary metallurgical tests to demonstrate the metallurgical amenability and potential recovery methods of Loma Bonita gold and silver mineralisation. More detail is given in the table section below relating to assumptions for metallurgical modifying factors for the MRE.
Further work	• The MRE Competent Person has made no recommendations regarding exploration and further work.

Item	Comments
Database Integrity	• Azure's geological teams logged the drill hole information onto paper templates, with the geological data and sample number data subsequently entered into the central digital database on site. Refer to the previous relevant section regarding the logging information captured.
	• The assay results from the laboratory were then merged with the previously entered information using a unique sample number as the matching key. The database import routines captured all the important metadata, such as assay method, detection limit, date of assay and so on, into the database tables.
	• The MRE Competent Person carried out a check of the assay data in the database provided by comparing the database results to the results in the original laboratory files, and found perfect correspondence for gold and silver assays between the database provided for the MRE work and the original laboratory data files.
	• During the site visits (see below), Amec Foster Wheeler's geologists reviewed the data entry system and database interface and found the processes used to be in good order.
	• The MRE Competent Person is satisfied that the database accuracy is acceptable for MRE estimation purposes and the JORC Code classifications applied to the Mineral Resource.
Site visits	<ul> <li>The MRE Competent Person did not visit site. However, an independent site visit by a USA-based Amec Foster Wheeler geologist was completed in August 2016. The reviewing geologist found the sampling and data collection methods used by Azure were of a good industry standard and acceptable for MRE purposes. This conclusion confirmed an earlier opinion of a second Amec Foster Wheeler geologist who visited site in May 2016 to review the sampling and data process for the Mesa de Plata MRE drilling. Importantly, the sampling methods, drill rigs and processes used at Loma Bonita are the same as those used for the Loma Bonita data collection.</li> </ul>
Geological interpretation	• The geological controls on the gold and silver mineralisation at Loma Bonita are not fully understood, other than that the mineralisation is almost entirely hosted by volcanic rocks altered by a HS epithermal event to massive and vuggy silica.
	<ul> <li>An important feature of the deposit is strong non-stationarity (rapid grade changes) of silver and gold grades. Specifically, grade-boundary analyses have identified zones of step-changes in gold and silver grade resulting in a zoned 'onion-skin' distribution of gold grades, with significant changes in gold grades over short distances at thresholds of ≥ 0.2g/t Au and ≥ 0.5g/t Au. These step changes are mirrored by step-changes in silver and antimony grades.</li> </ul>
	• The MRE Competent Person interpreted closed digital volumes using conventional cross sectional interpretation and wire framing methods, for the gold grade thresholds described above, nesting the higher grade zone inside the lower grade zone.
	• A key assumption of this modelling approach is an assumption of approximate horizontal connectivity of high and lower grade zones between drill holes. The MRE Competent Person has confidence in the connectivity of both domains throughout most deposit, albeit the interpreted connectivity is locally complicated by zones of internal waste some drill sections.

# Section 3 – Estimation and Reporting of Mineral Resources

ltem	Comments		
	<ul> <li>Grade continuity analyses (variography) of gold and silver composite grades indicate that the sampling has identified low nugget effects and but the along and across strike variograms are poorly structured indicating some closer spaced drilling is required to confirm the ranges of continuity for gold and silver. Notwithstanding this requirement, there is reasonable evidence that the current data spacing is close to, or just within, the range of continuity.</li> </ul>		
	• The effect of not having a zone encapsulating higher gold grades would be that the higher grades could potentially be extrapolated over larger volumes, giving an estimate with an over-smoothed view of the grade tonnage distribution of the deposit.		
	• The main factors affecting grade and continuity appear to be some form of south east dipping small-scale horizontal geological control, possibly related to fluid pathways and vuggier silicification due to variations in the primary volcanic facies. However, the MRE Competent Person has found that gold grade distribution is the best guide to gold grade connectivity.		
Dimensions	<ul> <li>The MRE dimensions are:         <ul> <li>≈ 750 m along strike (with an approximately north west trend).</li> <li>≈ 50m to 320m wide with the narrower widths in the south-eastern tail of the deposit and in the extreme north.</li> <li>Up to 100 m of barren cover at the southernmost section of the deposit but otherwise mineralisation generally commences from surface</li> </ul> </li> <li>The mineralisation is closed-off at depth but open to the east and west on four drill sections, albeit the trends are generally towards thinner mineralisation.</li> </ul>		
Estimation and modelling techniques	• The MRE Competent Person prepared a digital block model and estimated block grades for silver and gold using the ordinary block kriging algorithms implemented in Datamine Studio RM geoscientific software (Version 1.1.20.0).		
	• Grades have been estimated into blocks of target dimensions of 12.5mE × 12.5mN in the horizontal (approximately ¼ of the collar spacing) and 5m in the vertical (the anticipated mining bench height). Estimation boundaries have been treated as hard boundaries during the estimation.		
	• Smaller sub-blocks were prepared to match the estimation zone contacts and volumes with sub block dimensions set to 2.5m in the horizontal and 0.1m in the vertical.		
	• Sample search controls were set to select four 1.5m long composites from the nearest drill holes for each block estimate (24 composites in total), using a ellipsoidal search oriented in a manner consistent with the interpreted orientations of gold and silver continuity.		
	• The gold grades in each estimation zone (High-grade and Low-grade) were capped to limit the influence of extreme values. The caps applied are at the 98 <sup>th</sup> percentile of the respective estimation zone gold and silver grade distributions.		
	• A check-estimate run with uncapped grades revealed that there was only a minor increase in grade using uncapped grades and, as such, the geological modelling and capping approach has suitably controlled the influence of extreme values.		
	• Other than silver, no by-products or potentially deleterious elements related to the anticipated metallurgical processing methods that could be applied to the deposit under consideration have been confirmed.		

ltem	Comments		
	• Correlations between gold and silver are not important, with only weak correlations between the value elements.		
	The MRE Competent Person validated the block grade estimates by:		
	<ul> <li>Completing on-screen inspections of the MRE model in section and plan to visually compare the model inputs (drill hole composite gold and silver grades) to model outputs (block estimate gold and silver grades) – all results were found to be as expected.</li> </ul>		
	<ul> <li>Comparing the mean grades of the input and output gold and silver grades for each estimation zone – the global mean comparisons of the outputs were found to be within ± 3% relative to the inputs.</li> </ul>		
	<ul> <li>Comparing input and output means on moving window trend plots (swath plots)</li> <li>the input data trends were reproduced in the model blocks.</li> </ul>		
	• Comparing both capped and uncapped grade estimates to assess the effect of grade capping (which was found to be negligible globally)		
	• Reporting the MRE in two different software systems (Datamine and Excel).		
	• The MRE Competent Person found the MRE validation results acceptable for the level of JORC Code classification being applied and for the style of mineralisation under consideration.		
Moisture	Moisture has not been estimated.		
	Estimates reported are for dry tonnage.		
Cut-off Parameters	• The MRE Competent Person's methodology used to select the reporting cut-off for the MRE is as follows:		
	• All potentially economically viable Mineral Resources should be included in the reported MRE so as to be included in a preliminary Ore Reserve study.		
	• The cost of heap leach processing should be considered as the control on break- even grade, with heap leach silver-gold producers in Mexico reporting cash costs (inclusive of process costs) in the order of 7.5 USD/t.		
	• Preliminary metallurgical tests indicate gold recoveries $\approx$ 75% of the in situ gold, under the assumption that the mineralisation should be amenable to heap leach processing.		
	• Amec Foster Wheeler's internal guidance for gold price for Mineral Resource of 1,466 USD/tr.oz.		
	<ul> <li>Combining the assumptions above the MRE Competent Person found that a ≥ 0.21g/t Au block cut-off grade for MRE reporting was consistent with the assumptions of potential future viable extraction.</li> <li>The Mineral Resource has not been tested for economic limits by a preliminary pit ontimisation, this is an issue for a preliminary Ore Reserve study.</li> </ul>		
Mining factors and assumptions	<ul> <li>Given the style of the deposit under consideration, the MRE Competent Person has assumed that mining of Loma Bonita would be by conventional truck and backhoe shovel, with drill and blast over 5m high benches and possible flitch mining of half the blast height.</li> </ul>		
	• The MRE Competent Person has assumed the sub-block MRE model will be regularised to a 12.5mE × 12.5mN by 5m in elevation block in order to model the estimation zone boundary dilution effects that will occur during mining. The current Mineral Resource		

Item	Comments
	model incorporates allowances for internal dilution, but not geological or zone contact dilution.
Metallurgical factors or assumptions	<ul> <li>Azure has completed preliminary laboratory scale metallurgical tests on finely ground (to sub 80% below 80 micron) samples to simulate a milling process, and crushing (80% below 11.3 mm) to simulate a heap leach process. Cyanide leaching of these samples achieved 93% average recovery for the ground samples and 73% average recovery for the crush samples. For cut-off grade calculations the MRE Competent Person has assumed a 75% heap leach recovery given the preliminary test work is not optimised for crush size.</li> </ul>
	• The recovery of silver by cyanide leaching is low, with tests returning average silver recovery of between 9% and 27% for ground material and 1% and 7% for crushed samples.
Environmental factors or assumptions	• The determination of potential environmental impacts is at an early stage and Azure is yet to carry out a detailed environmental assessment. However, given the region has a long history of mining, the MRE Competent Person accepts Azure's assurances that there are reasonable expectations that approvals for a mine development would be given if Azure follows all statutory processes regarding permitting.
Bulk Density	<ul> <li>Azure has measured the density of 60 ≈ 10cm long DC ½ and ¼ core specimens using a laser scanning method to determine the core volume and then weighing the dry core to determine the specimen mass. From these two measures the in situ density can be calculated as mass on volume. The scanning method accounts for possible voids in the specimen volume.</li> </ul>
	• For MRE work there are 21 results available within the High-grade zone and 8 results available in the Low-grade Zone.
	• The MRE Competent Person found that the mean density for the low-grade domain averages 2.32 t/m <sup>3</sup> and the mean for the high grade domain was 1.96 t/m <sup>3</sup> . The density mean values have been estimated following capping the lower and upper 2.5% of results, effectively giving the 90% confidence interval density estimate. The High Grade Zone density is lower than that of the Low Grade Zone density, mainly due to the presence of several very low density ash-fall tuff units in the density dataset.
Classification	• The MRE Competent Person has classified the MRE as JORC Code Indicated and Inferred Mineral Resources based on:
	• Assessment of the data quality – in that the base data has quantified and acceptable levels of precision accuracy and lack of cross-contamination in the sample data.
	<ul> <li>Geological control, complexity and continuity – there is confident geological control, low nugget effects and while ranges of gold and silver continuity in variography are currently only partially confirmed. Specifically, the results support the JORC Code requirement that continuity can be reasonably assumed between data points for Indicated Mineral Resources.</li> </ul>
	<ul> <li>Data spacing and extrapolation – no part of the reported MRE is considered to be excessively extrapolated within the Low-grade Zone wireframe, which bounds the High-grade Zone extended ≈ 25m at most from the end of each drill fence.</li> </ul>
	<ul> <li>Quality of estimation and validation of block model estimation results – all validations confirmed good correspondence of inputs and outputs.</li> </ul>

Item	Comments
	<ul> <li>○ Reasonable (not overly optimistic) assumptions as to eventual potential economic extraction for a ≥0.21g/t Ag block cut-off grade – refer to the cut-off grade discussion above.</li> </ul>
	<ul> <li>Inferred Resources have been allocated at the southern end of the deposit where it is not clear whether the mineralisation will be viable for open pit mining. A preliminary Ore Reserve study is required to make this assessment and may result in reclassification of some of the Inferred Mineral Resource to Indicated Resource or possibly reclassified as not viable.</li> </ul>
	<ul> <li>The maximum extrapolation of grades away from data is in the order of 25m and as such, the MRE Competent Person considers that significantly extrapolated Inferred Mineral Resource are not present in the estimate being reported.</li> </ul>
	• The MRE Competent Person considers all relevant factors have been considered and the estimate reflects the MRE Competent Person's view regarding controls and confidence in the MRE.
Audits and reviews	• The MRE that is the subject of the Public Report has been reviewed internally by Amec Foster Wheeler's independent internal reviewer and by Azure's senior geological staff.
Discussion of relative confidence	• No specific geostatistical studies have been completed to estimate the local accuracy or degree of grade smoothing in the MRE.
	No production data is available to reconcile the MRE.
	• The MRE Competent Person considers the MRE has good global accuracy and a level of local accuracy that is sufficient to support mine planning studies aimed at preparing Probable Ore Reserve Estimates from the Indicated Mineral Resources.
	• Infill drilling, further metallurgical testing, collection of additional density data, and an update to the MRE will be required to support estimation of Ore Reserves.