

# AZURE MINERALS LTD

*Australia's Leading Explorer in Mexico*

ASX: AZS

15 JANUARY 2014

## **PORPHYRY INTERSECTED AT CASCADA**

### **HIGHLIGHTS**

- *Hole APR-DD-109 intersects 240m of alteration, veining and copper sulphide mineralisation consistent with the margin of a porphyry copper body*
- *Sulphide mineralisation comprises quartz-pyrite-chalcocite veining with disseminated pyrite and chalcocite in the host porphyry*
- *Further testing of the porphyry target is currently being planned as part of the current drill program*
- *Drilling is continuing at the Cascada mineralised zone with hole APR-DD-110 in progress*

Mexican-focused **Azure Minerals Limited** ("Azure" or "the Company") is pleased to provide an update on drilling operations at the Company's flagship Promontorio Project, located in the state of Chihuahua Mexico.

APR-DD-109 is the first hole to test the porphyry copper target located beneath the Cascada and Promontorio high sulphidation copper-gold-silver deposits. The target comprises two overlapping Induced Polarisation (IP) features, represented by high chargeability and low resistivity anomalies. This vertical hole successfully reached the target depth of 500m, penetrating into the chargeability anomaly and passing through the western edge of the resistivity anomaly.

At a depth of 260m the hole entered, and for the next 240m, intersected porphyry with argillic (quartz-alunite) alteration, abundant disseminated pyrite, and moderate to abundant quartz veins forming a stockwork. These veins contain variable amounts of sulphide mineralisation, including pyrite (iron sulphide) and chalcocite (copper sulphide) (see photos on following pages). The hole was still in mineralisation when terminated at its planned depth of 500m, and has been cased for re-entry at a later date.

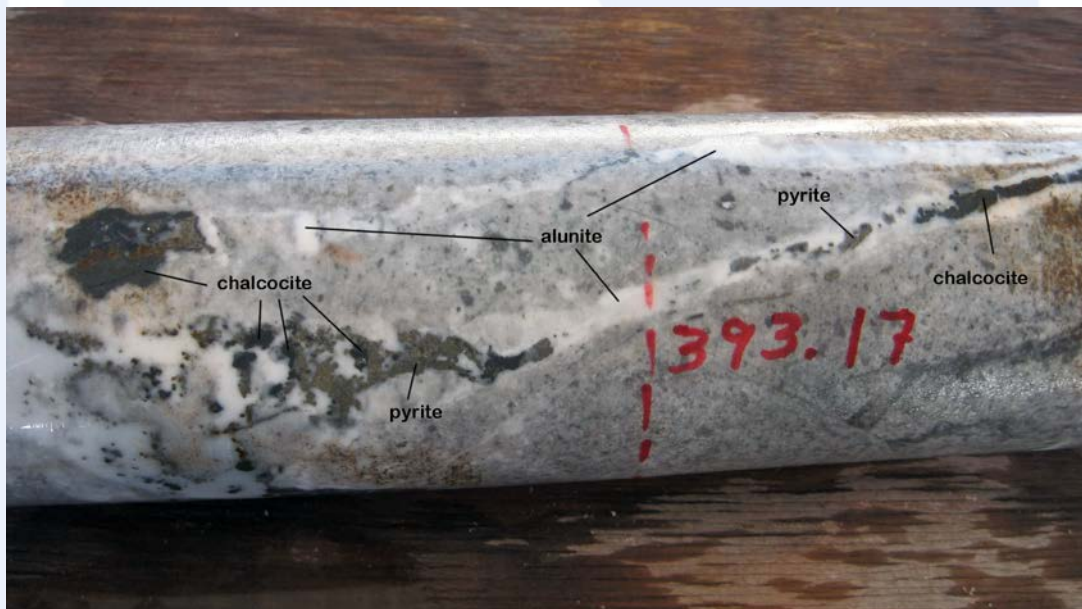
The host rock, type of alteration, veining style and sulphide content are all indicative of the hole drilling into the margin of a porphyry copper system. The Company expects that anomalous copper grades will be returned from within this interval.

# AZURE MINERALS LTD

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Azure's Managing Director, Tony Rovira, commented: "I'm very encouraged by the geology we are seeing in hole 109. The alteration, veining and sulphide content indicate that a mineralised porphyry copper system is present at Promontorio and we have intersected the margin of this body. We will continue drill testing the porphyry copper target and the wider Cascada mineralised zone and report results as we progress."

Photographs of drill core from hole APR-DD-109 showing strongly argillic altered porphyry containing pyrite-chalcocite (copper-sulphide) mineralisation. (Downhole depths marked in red).



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## **BACKGROUND**

The current drill program is designed to test:

- around and beneath the Cascada deposit with the aim of expanding the mineralised zone and enabling a Mineral Resource to be estimated;
- the porphyry copper target beneath Cascada and Promontorio;
- interpreted feeder zones connecting the buried porphyry body and the near-surface Cascada and Promontorio deposits.

The Promontorio and Cascada copper-gold-silver deposits form separate parts of a high-sulphidation, epithermal system comprising massive, semi-massive and disseminated copper sulphides hosted in vuggy silica and silicified host rocks.

High sulphidation epithermal deposits form above porphyry copper bodies with feeder zones connecting the porphyry and the overlying epithermal system. These types of deposits are common in northern Mexico and south-western US.

Azure believes that beneath Cascada and Promontorio is a porphyry copper body which was the source of the copper, gold and silver mineralisation and is likely to be mineralised in its own right. This makes the Promontorio Project an exciting porphyry copper exploration target in addition to the high grade epithermal mineralisation already identified.

**-ENDS-**

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## Australia's Leading Explorer in Mexico

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### APPENDIX

**TABLE 2: Drill Hole Information**

HOLE No.	NORTH (mN)	EAST (mE)	ELEVATION (mASL)	AZIMUTH	DIP	TOTAL DEPTH	COMMENTS
APR-DD-106	3,146,227	782,375	2,023	000	-90	251.3	Step out hole to the south.
APR-DD-107	3,146,283	782,335	2,028	180	-70	200.8	Step out hole to the west.
APR-DD-108	3,146,337	782,373	1,964	000	-90	300.6	Step out hole to the north.
APR-DD-109	3,146,216	782,433	1,985	000	-90	500.6	Step out hole to the southeast.
APR-DD-110	3,146,283	782,335	2,028	180	-58		In progress

#### **Copper Equivalency Statement:**

- Copper Equivalent (CuEq) was based on the following assumed metal prices that were guided by the three year averages at the data cut-off date: US\$3.25/lb for Cu, US\$1,450/oz for Au and US\$27.50/oz for Ag.
- The CuEq grade accounts for the following metal recoveries, which were based on metallurgical testwork completed by independent metallurgical laboratories AMDEL and Ammtec, under the supervision of Coffey Mining Pty Ltd: 97.9% for Cu, 93.4% for Au, and 97% for Ag.
- The following formula was used to calculate the equivalent grade:  $CuEq (\%) = (Cu\% \times 0.979) + (Au (g/t) \times 0.6077) + (Ag (g/t) \times 0.0120)$ .
- It is Azure's belief that all elements included in the metal equivalent calculation have a reasonable potential to be recovered.

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

Information in this report that relates to Exploration Results for the Promontorio Project is based on information compiled by Mr Tony Rovira, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Rovira 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 Rovira is a full-time employee and Managing Director of Azure Minerals Limited and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# AZURE MINERALS LTD

## Australia's Leading Explorer in Mexico

### JORC Code, 2012 Edition – Table 1

#### Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</p>	<p>Cascada was sampled by diamond core drilling. Drill core was sampled at 0.15m to 1.0m intervals guided by changes in geology.</p> <p>Drill hole collar locations were determined by hand-held GPS.</p> <p>All drill holes were surveyed for down-hole deviation, with surveys undertaken at 30m intervals and at bottom of hole.</p> <p>Drill core was saw cut longitudinally and ½ core samples were collected and sent for assay.</p> <p>Samples were prepared at ALS-Chemex in Hermosillo, Mexico. Samples were weighed, assigned a unique bar code and logged into the ALS-Chemex tracking system. The sample was dried and the entire sample was fine crushed to &gt;70% passing a 2 mm screen. A 250g split was pulverised using a ring and puck system to &gt;85% passing 75 micron screen.</p> <p>Envelopes containing the 250g sample pulps were sent via courier to the ALS-Chemex laboratory in Vancouver for analysis. Samples were dissolved by four-acid digest and analytical methods used were ICP61 and OG62 (for silver and base metals) and Fire Assay methods AA-23 and GRA-21 for gold.</p>
Drilling techniques	<p>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</p>	<p>Drilling technique for all holes was diamond drilling with HQ-size (63.5mm diameter) core.</p> <p>Drill core was not orientated.</p>
Drill sample recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p>Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</p>	<p>All samples came from diamond core drilling. Core was reconstructed into continuous runs. Depths were measured from the core barrel and checked against marked depths on the core blocks. Core recoveries were logged and recorded in the database.</p> <p>Sample recoveries were high with &gt;85% of the drill core having recoveries of &gt;90%.</p> <p>There is no discernable relationship between recovery and grade, and therefore no sample bias.</p>

# AZURE MINERALS LTD

## Australia's Leading Explorer in Mexico

<p>Logging</p>	<p>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	<p>Detailed core logging was carried out with recording of weathering, lithology, alteration, veining, mineralisation, structure, mineralogy, RQD and core recovery.</p> <p>Drill core was photographed, wet and without flash, in core trays prior to sampling. Each photograph includes an annotated board detailing hole number and depth interval.</p> <p>All holes were logged in full.</p>
<p>Sub-sampling techniques and sample preparation</p>	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>Drill core was sawn in half using a core saw. All samples were half core and were collected from the same side of the core. No non-core samples were collected.</p> <p>The sample preparation followed industry best practice. Samples were prepared at ALS-Chemex in Hermosillo, Mexico. Samples were weighed, assigned a unique bar code and logged into the ALS-Chemex tracking system. The sample was dried and the entire sample was fine crushed to &gt;70% passing a 2 mm screen. A 250g split was pulverised using a ring and puck system to &gt;85% passing 75 micron screen. Envelopes containing the 250g pulps were sent via courier to the ALS-Chemex laboratory in Vancouver.</p> <p>Certified Reference Standards and blank check samples were routinely inserted at 20m intervals and also immediately following visually identified mineralised intercepts to provide assay quality checks. Review of the standards and blanks are within acceptable limits.</p> <p>Pulp duplicate samples are randomly selected and submitted for analysis.</p> <p>The sample sizes are considered appropriate to the grain size of the material being sampled.</p>
<p>Quality of assay data and laboratory tests</p>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>The analytical techniques for all elements (other than gold) involved a four-acid digest followed by multi-element ICP-MS analysis. This technique is considered a total digest for all relevant minerals.</p> <p>No geophysical or portable analysis tools were used to determine assay values.</p> <p>Internal laboratory control procedures comprised duplicate sampling of randomly selected assay pulps, as well as internal laboratory standards and blanks.</p>

# AZURE MINERALS LTD

## Australia's Leading Explorer in Mexico

<p>Verification of sampling and assaying</p>	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Senior technical personnel from the Company (Project Geologist, Exploration Manager &amp; Managing Director) have all inspected the drill core.</p> <p>No drill holes were twinned as this was deemed unnecessary at this stage of exploration.</p> <p>Primary data was collected by employees of the Company at the project site. All measurements and observations were recorded onto hard copy templates and later transcribed into the Company's digital database. Digital data storage, verification and validation are managed by an independent data management company.</p> <p>No adjustments or calibrations have been made to any assay data.</p>
<p>Location of data points</p>	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Drill hole collar locations were determined by hand-held GPS.</p> <p>All drill holes were surveyed for down-hole deviation. Surveys were undertaken at 30m intervals and at bottom of hole.</p> <p>The grid system used is NAD27 Mexico UTM Zone 12 for easting, northing and RL.</p> <p>A photogrammetric company collected high resolution stereo aerial photos over the project area in June 2011 to create a 2m interval contour map and a colour orthophoto with 20 cm pixels. Both the contour map and orthophoto provided a base for geologic mapping that was completed at 1:2000 over the project. The geology of selected areas was later mapped at a scale of 1:1000.</p>
<p>Data spacing and distribution</p>	<p>Data spacing for reporting of Exploration Results.</p> <p>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <p>Whether sample compositing has been applied.</p>	<p>Overall intersection density of mineralisation by the diamond drilling was approximately 20-30m spacing.</p> <p>Mineralisation and geology showed good continuity from hole to hole.</p> <p>No sample compositing has been applied.</p>
<p>Orientation of data in relation to geological structure</p>	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</p>	<p>Geological controls and orientations of the mineralised zone are unknown at this time and therefore all mineralised intersections are reported as "intercept length" and may not reflect true width.</p> <p>No sampling bias is believed to have been introduced.</p>

# AZURE MINERALS LTD

## Australia's Leading Explorer in Mexico

Sample security	The measures taken to ensure sample security.	Assay samples were placed in poly sample bags, each with a uniquely numbered ticket stub from a sample ticket book. Sample bags were marked with the same sample number and sealed with a plastic cable tie. Samples were placed in woven poly bags and a numbered tamper-proof plastic cable tie was used to close each bag. The bags were delivered by company personnel directly to the ALS-Chemex laboratory for sample preparation. The numbers on the seals were recorded for each shipment. ALS-Chemex audited the arriving samples and reported any discrepancies back to the Company. No such discrepancies occurred.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	All digital data is subject to audit by the independent data manager.

### Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<p><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <p><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></p>	<p>The Promontorio Mineral Concession is titled T-235269. Azure Minerals has an Option to Purchase this tenement for US\$750000, which is held by a local Mexican syndicate. Upon exercise of the Option, Azure will have 100% ownership of the tenement with no residual royalties payable to the vendors.</p> <p>The tenement is in good standing. There are no known impediments to obtaining a licence to operate in the area.</p>
Exploration done by other parties	<p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<p>The project area has a history of artisanal mining dating back to the 19th century. Between 1993 and 2008 the property was explored by several companies.</p> <p>1993 to 1994 - Empresa Minera CanMex conducted exploration and RC drilling.</p> <p>1995 to 1997 - Sierra Nevada Gold drilled 63 diamond core holes, mapped and sampled old underground mine workings, carried out metallurgical test work and produced a Mineral Resource estimate.</p> <p>2004 to 2005 - Dia Bras Exploration undertook geological mapping, diamond drilling, geophysics, and prepared a NI43-101 compliant technical report.</p> <p>Azure Minerals acquired the rights to the project in April 2008 through its fully owned Mexican subsidiary company Minera Piedra Azul SA de CV.</p>



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Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Cascada is a high-sulphidation, epithermal deposit. Mineralisation comprises massive, semi-massive and disseminated copper sulphides hosted in vuggy silica and silicified host rocks.
Drill hole information	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> </ul> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	Refer to tables in the report and notes attached thereto which provide all relevant details.
Data aggregation methods	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>All reported mineralised intervals have been length-weighted. No top cuts have been applied.</p> <p>High grade intervals internal to broader mineralised zones, if existing, are reported as included zones.</p> <p>Reported copper mineralised intersections are based on intercepts using a nominal 0.2% copper grade cut-off and a 0.5% Copper Equivalent cut-off.</p> <p>Reported gold mineralised intersections are based on intercepts using a nominal 0.2g/t gold cut-off.</p> <p>Copper Equivalent values have been used in this report - refer to Copper Equivalency Statement for relevant details.</p>
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	Geological controls and orientations of the mineralised zone are unknown at this time and therefore all mineralised intersections are reported as "intercept length" and may not reflect true width.
Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	No maps or sections are included in this report
Balanced	<i>Where comprehensive reporting of all</i>	The Company believes that the ASX

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reporting	<i>Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	announcement is a balanced report with all material results reported.
Other substantive exploration data	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	This announcement refers to previous exploration results including geophysics, geochemistry and geology.
Further work	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</i>	Further work to better understand the mineralisation systems in the project area will be determined upon a full analysis and interpretation of results

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