29 August 2017

# ASX ANNOUNCEMENT

AVALON MINERALS LTD

## Bramaderos Gold-Copper Project

## Early Work Delivering Encouraging Results at the Three Key Target Areas

**Highlights**

- **The Bramaderos Main area has been the focus of geological mapping and rock chip sampling during July and August**
- **Key results from surface rock chip samples includes**
  - **Multiple samples exceeding 0.5g/t Au and up to 1.82g/t**
  - **Multiple samples exceeding 0.1% Cu**
  - **Anomaly definition exceeding 500m strike length**
- **At the Limon area soil sampling is almost complete, with results received for 40% of the survey area showing the emergence of areas of metal anomalism in addition to the original target areas**
- **At the West Zone epithermal gold prospect, several trenches have been prepared and sampling is underway**
- **The drilling permit process is progressing on schedule and is expected to be complete towards the end of 2017**

Avalon Minerals Limited (**"Avalon" or "Company"**) **(ASX:AVI)** is pleased to provide an update on activity at the Bramaderos gold-copper project in southern Ecuador.

Exploration is advancing on three prospects – Bramaderos Main, greater Limon and West Zone (figure 1).

**At Bramaderos Main** detailed geological mapping and rock chip sampling is well advanced and assay results have been received for many rock chip samples (figure 2).

The copper rock chip results show the most coherent distribution and anomalous results and cluster in an area along the inside curve of an historical IP chargeability anomaly (figure 2), consistent with the expected distribution within a porphyry gold-copper system. Gold is >0.4 g/t over a strike length of greater than 500m at surface in the main recognised mineralised zone. Molybdenum broadly re-enforces the copper and gold patterns.

**At the greater Limon Prospect**, soil sampling is nearly complete and assays have only been received for the southern part of the soil survey area, south of the main Limon prospect. A coincident copper-gold-molybdenum anomaly is emerging from soil sample results (with some support locally in rock chip samples to the south) across a broad area from Limon back towards Bramaderos Main (figure 2).


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**At West Zone Prospect,** several historical trenches, and new trenches have been prepared and systematic sampling is underway. This work is following up on historical trenching results that delivered **41.7m @ 3.37 g/t gold** in trench WZTR-02 **and 22m at 4.74g/t gold** in trench WZTR-05.

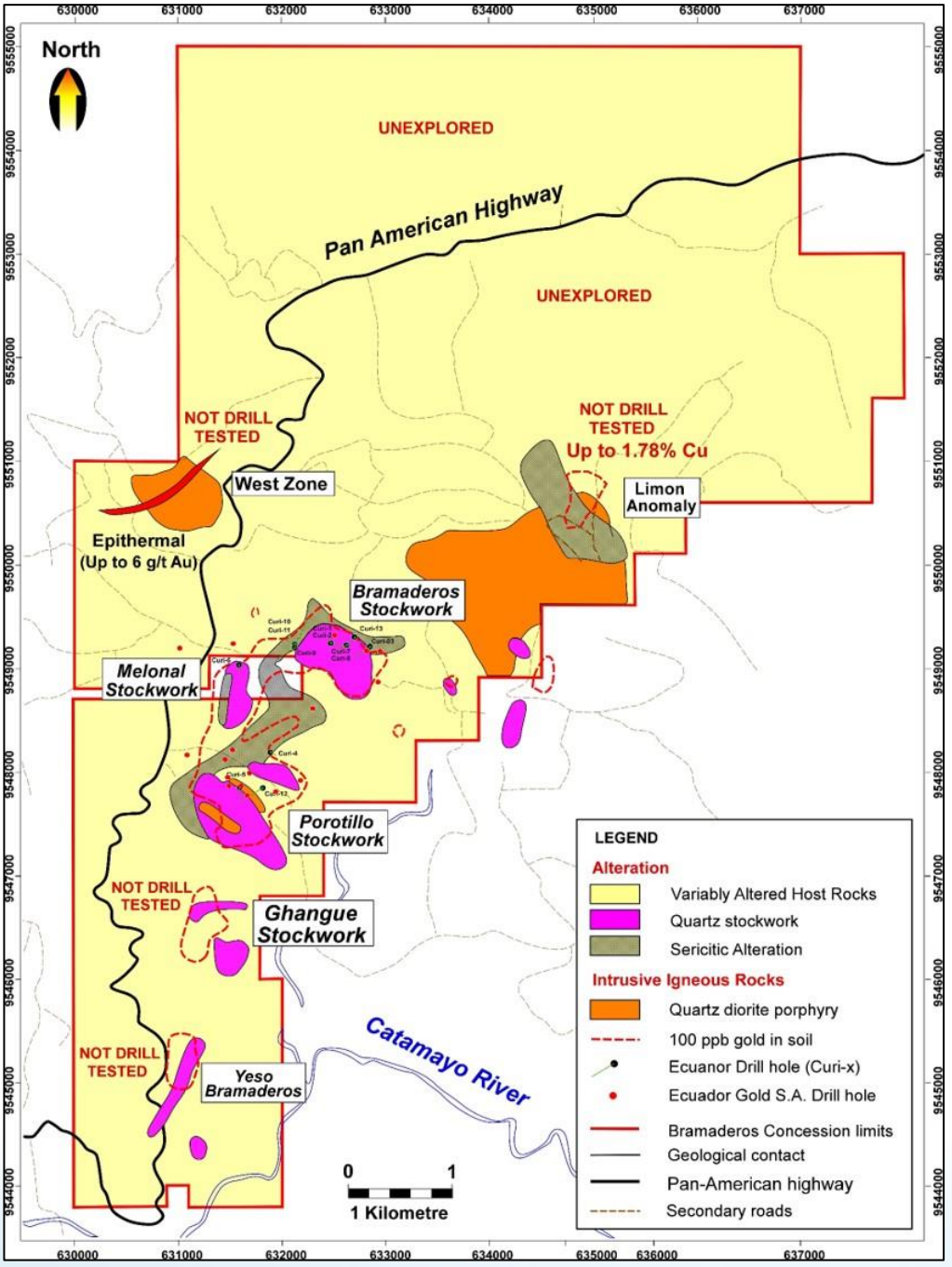

Figure 1: Showing the location of prospects and historical rock chip sampling.

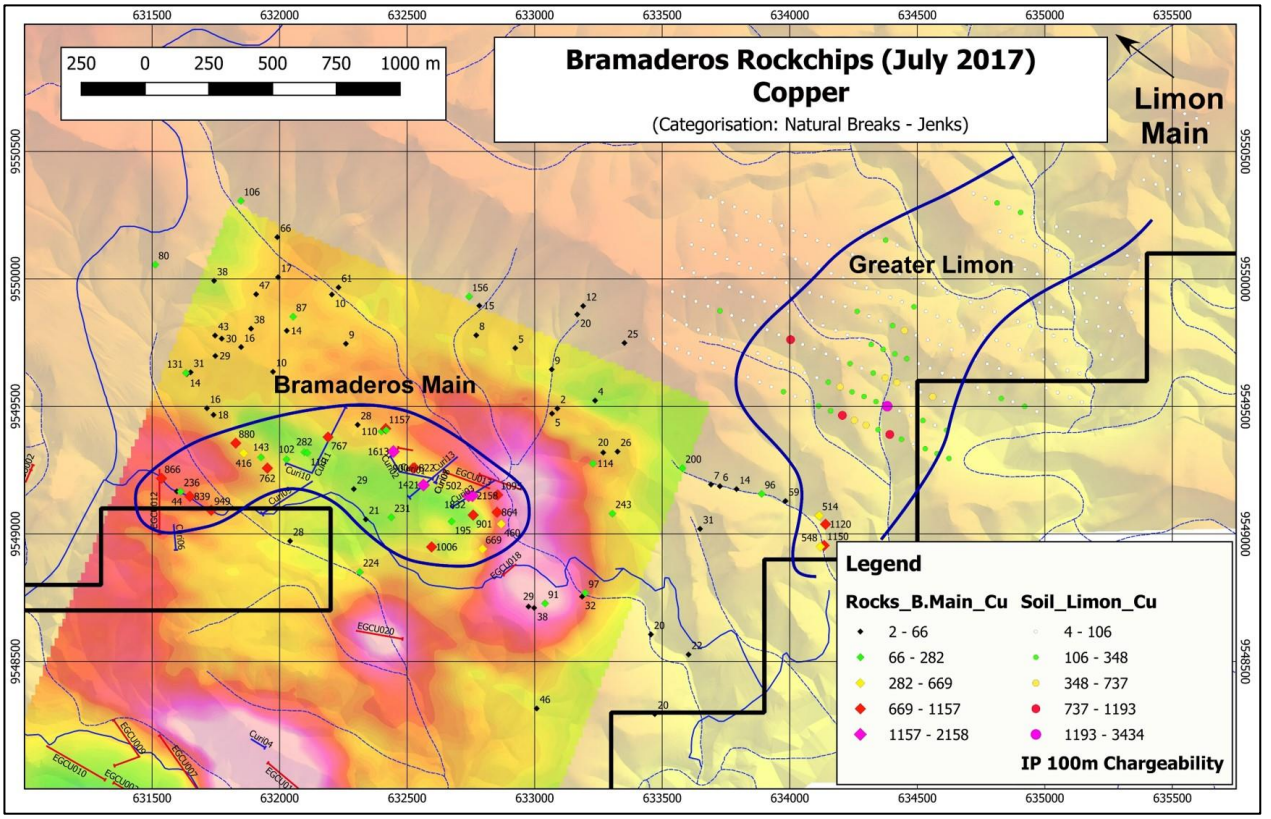


Figure 2: Showing the detailed copper rock chip and soil results to date. Sampling at the Main Limon prospect is underway and is expected to be completed during September.

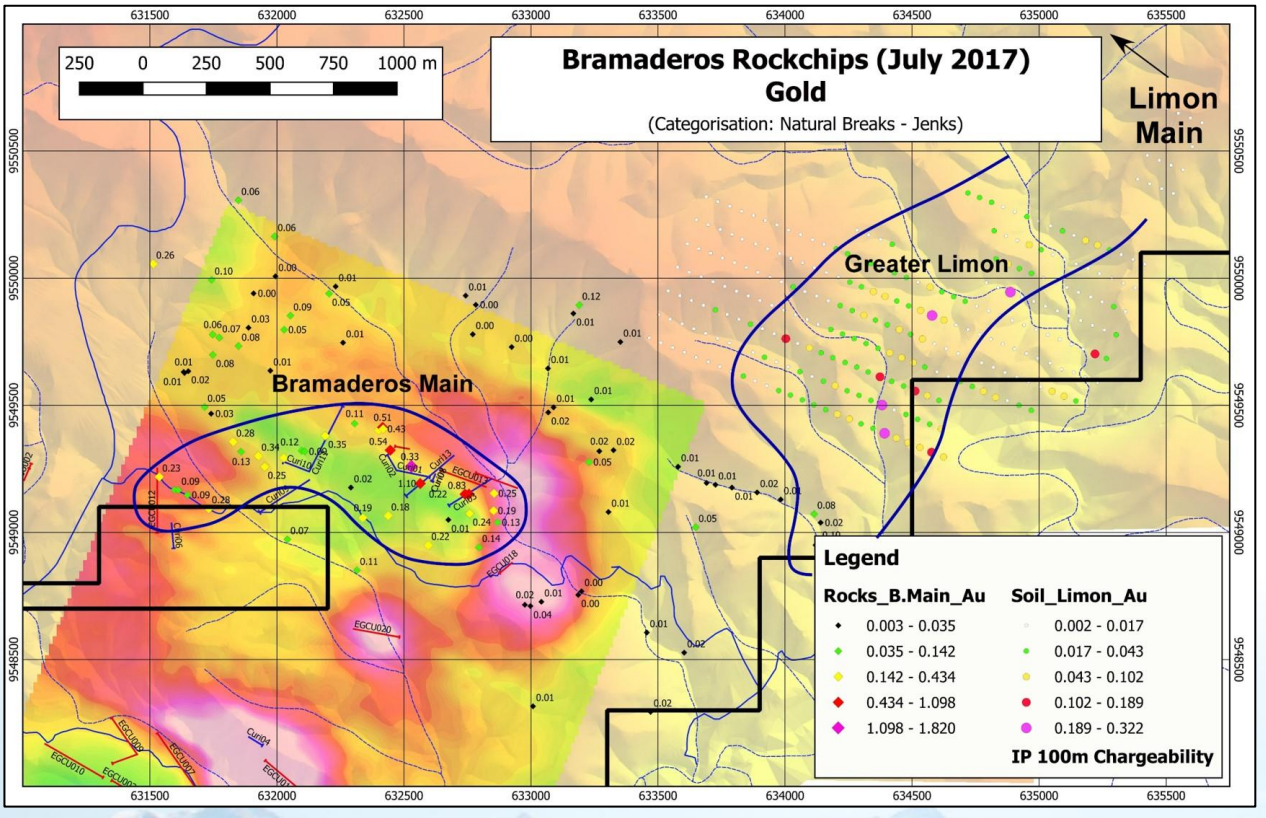


Figure 3: Showing the detailed gold rock chip and soil results to date.

**Work Program**

Soil sampling at Limon is in progress and is expected to be completed during September.

Trenching and sampling at West Zone is in progress and is expected to be completed during October.

Trenching at Bramaderos Main is expected to commence after completion of the West Zone trenching.

A detailed helimagnetic survey is being scoped to cover the entire exploration concession area and is expected to be completed during September-October.

Drill targeting is expected to be undertaken in November.

**Drill Permitting**

The process for drill permitting is progressing in line with expectations. The Company continues to expect to receive a drill permit in late 2017.

**About Avalon**

Avalon has an advanced portfolio of exploration and development projects in Scandinavia and Ecuador. The portfolio comprises:

1. **The Bramaderos Gold-Copper Project** where Avalon has signed an earn-in agreement with TSXV listed Cornerstone Capital Resources (see ASX announcement dated 10th April 2017). The Bramaderos gold-copper project is located in Loja province, southern Ecuador, and is considered to be highly prospective for the discovery of large copper-gold systems. Historical results from drilling at Bramaderos include wide intervals such as 260m at 0.6g/t Au and 0.14% Cu. Trenching results at the West Zone breccia include intersections at surface of up to 42m at 3.7g/t Au. These results, together with the distribution of alteration, and large coincident gold-copper-molybdenum surface anomalies indicate a fertile mineralised system with significant discovery potential.
2. **The Viscaria Copper Project** in northern Sweden has a completed Scoping Study (see ASX announcements dated 16th December 2015 and 5th April 2016) and is moving towards PFS and permitting to allow for mine development. The project has a mineral resource estimate of 52.4 Mt at 1.2% Cu (see Table 1 below). Considerable exploration upside exists and low technical risk drill targets continue to be tested.
3. **The Southern Finland Gold Project**, includes the Satulinmäki gold prospect. Shallow diamond drilling was completed by the Geological Survey of Finland (GTK) during the period 2000-2005 and this was followed by a 7-hole diamond drilling program by Avalon Minerals in 2016. Intersections from GTK include 18m @ 4.1g/t Au from 50m downhole, including 3m @ 9.3g/t Au, and 4m @ 10.3g/t Au in drill hole R391. Intersections by Avalon include 23.5m at 3.3g/t in SMDD007 and 2m at 10.5g/t in SMDD005. The Satulinmäki gold prospect is part of an earn-in JV with Canadian company Nortec Minerals, where Avalon can earn up to an 80% interest (see ASX announcement dated 19th May 2016). Avalon has already earned a 51% interest, and has also acquired a significant land position, in its own right, in the district.

**Table 1** Total combined resource figure for A Zone, B Zone and D Zone at Viscaria

| Resource Area | Classification | Tonnes (Mt) | Cu Grade (%) | Contained Cu (kt) |
|---|---|---|---|---|
| A Zone | Measured | 14.44 | 1.7 | 240.0 |
| | Indicated | 4.69 | 1.2 | 57.2 |
| | Inferred | 2.48 | 1.0 | 25.5 |
| | **Subtotal** | **21.61** | **1.5** | **322.7** |
| B Zone | Measured | 0.12 | 1.3 | 1.6 |
| | Indicated | 4.12 | 0.7 | 29.7 |
| | Inferred | 15.41 | 0.8 | 118.7 |
| | **Subtotal** | **19.65** | **0.8** | **149.0** |
| D Zone | Indicated | 3.11 | 0.81 | 25.2 |
| | Inferred | 0.01 | 0.32 | 0.02 |
| | **Subtotal (open pit)** | **3.11** | **0.81** | **25.2** |
| | Indicated | 7.26 | 1.37 | 99.8 |
| | Inferred | 0.78 | 1.57 | 12.2 |
| | **Subtotal (underground)** | **8.03** | **1.39** | **111.9** |
| **Overall Cu** | **Total** | **52.4** | **1.2** | **608.9** |

*Note: D Zone subtotals represent open pit at an average grade of 0.81% copper, and underground at an average grade of 1.39% copper.*

*Refer to Annual Report released 16 August 2016 for the Competent Persons Statement in relation to the estimates of mineral resources. The Company confirms that it is not aware of any new information or data that materially affects the information and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.*

**Competent Persons Statement**

The information in this report that relates to exploration results is based upon information reviewed by Dr Bruce Rohrlach who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Rohrlach is a full-time employee of Avalon Minerals Ltd and 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". Dr Rohrlach consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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***APPENDIX 1***
***The following Table and Sections are provided to ensure compliance with the JORC Code (2012 Edition)***

## TABLE 1 – Section 1: Sampling Techniques and Data

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | • *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* | • The results announced here are from rock chip and soil samples. The sampling was carried out using composite chip samples from various rock outcrops, and systematic soil samples from the 'C Horizon' (equates to uppermost weathered rock and soil associated with in situ weathered rock). |
| | • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | • Rock chip samples were taken as chip composites across outcrops to get a representative sample.<br>• Soil samples were collected using a hand held auger and the 'C horizon' sampled where possible. |
| | • *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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.* | • Rock chip sampling of outcrops, and soil sampling. |
| ***Drilling techniques*** | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| | • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| | • *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.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV.. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Logging*** | • *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.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV.<br>• Surface-derived rock chip samples and soil samples were logged into an Excel database that recorded lithology, alteration and mineralisation style and sampling details. |
| | • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| | • *The total length and percentage of the relevant intersections logged.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV. |
| | • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* | • Rock chip and soil samples collected (dry) and typically weighed approximately 1kg. These were then sent to the sample preparation laboratory for processing as described below. |
| | • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | • Avalon samples were sent to the LAC y Asociados Cia. Ltda. Sample Preparation Facility in Cuenca, Ecuador for sample preparation. The standard sample preparation for rock chip samples (Code PRP-910) is: Drying the sample, crushing to size fraction 70% <2mm and splitting the sample to a 250g portion by riffle or Boyd rotary splitter. The 250g sample is then pulverised to >85% passing 75 microns and then split into two 50g pulp samples. Then one of the pulp samples was sent to the MS Analytical Laboratory in Vancouver (Unit 1, 20120 102nd Avenue, Langley, BC V1M 4B4, Canada) for gold and base metal analysis.<br>• The sample preparation is carried out according to industry standard practices using highly appropriate sample preparation techniques. |
| | • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | • Avalon used an industry standard QAQC programme involving Certified Reference Materials "standards" and blank samples, which were introduced in the assay batches.<br>• Standards (Certified Reference Materials) ) for rocks and soils were inserted at a frequency of 1 in 31 and 1 in 40 respectively. Analytical blanks for rocks and soils were inserted at a frequency of 1 in 46 and 1 in 47 respectively. Analytical duplicate (or check) assays were conducted by the laboratory on some samples.<br>• The check or duplicate assay results are reported along with the sample assay values in the final analysis report. |
| | • *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.* | • Samples were collected in a manner that provided a representative sample of individual rock outcrops, and zones of different rock types or alteration within those outcrops. Soil sampling is representative of weathered bedrock.<br>• Once assay results are received the results from duplicate samples are |

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>compared with the corresponding routine sample to ascertain whether the sampling is representative.</td></tr>
<tr><td></td><td>• Whether sample sizes are appropriate to the grain size of the material being sampled.</td><td>• Sample sizes are considered to be appropriate for the style of sampling undertaken and the grainsize of the material, and correctly represent the style and type of mineralisation at the exploration stage.</td></tr>
<tr><td rowspan="3">Quality of assay data and laboratory tests</td><td>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</td><td>• Avalon used assay method FAS-111 for gold and IMS-136-15g for a suite of 37 elements (including gold). FAS-111 involves Au by Fire Assay on a 30-gram aliquot, fusion and atomic absorption spectroscopy (AAS) at trace levels. IMS-136-15g involves Aqua regia digestion of a 15g aliquot followed by multi-element analysis by ICP-AES/MS at ultra-trace levels. .<br>• This analysis technique is considered suitable for this style of mineralisation.</td></tr>
<tr><td>• 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.</td><td>• No other measurement tools/instruments were used.</td></tr>
<tr><td>• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</td><td>• The values of the standards range from low to high grade and are considered appropriate to monitor performance of values near cut-off and near the mean grade of the deposit.<br>• The check sampling results are monitored and performance issues are communicated to the laboratory if necessary.</td></tr>
<tr><td rowspan="4">Verification of sampling and assaying</td><td>• The verification of significant intersections by either independent or alternative company personnel.</td><td>• Photographs of sampled areas and samples are taken and the Competent Person for exploration results for this announcement has assessed the sampling protocols.</td></tr>
<tr><td>• The use of twinned holes.</td><td>• Drilling has not yet been undertaken by the Avalon-Cornerstone JV.</td></tr>
<tr><td>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</td><td>• Avalon sampling data were imported and validated using Excel.</td></tr>
<tr><td>• Discuss any adjustment to assay data.</td><td>• Assay data were not adjusted.</td></tr>
<tr><td rowspan="2">Location of data points</td><td>• 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.</td><td>• Surface sample co-ordinates are located by GPS.</td></tr>
<tr><td>• Specification of the grid system used.</td><td>• Southern Ecuador projection parameters:
<table>
<tr><th>Parameter</th><th>Value</th></tr>
<tr><td>Reference Ellipsoid</td><td>International 1924</td></tr>
<tr><td>Semi Major Axis</td><td></td></tr>
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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>Inverse Flattening (1/f)</td><td></td></tr>
<tr><td>Type of Projection</td><td>UTM Zone -17S (Datum PSAD56)</td></tr>
<tr><td>Central Meridian:</td><td>-81.0000</td></tr>
<tr><td>Latitude of Origin</td><td>0.0000</td></tr>
<tr><td>Scale on Central Meridian</td><td>0.9996</td></tr>
<tr><td>False Northing</td><td>10000000</td></tr>
<tr><td>False Easting</td><td>500000</td></tr>
</table></td></tr>
<tr><td></td><td>• Quality and adequacy of topographic control.</td><td>• The topographic control was compared against published maps and satellite imagery and found to be good quality.</td></tr>
<tr><td rowspan="3">Data spacing and distribution</td><td>• Data spacing for reporting of Exploration Results.</td><td>• The rock chip samples were collected over various intervals and spacing.<br>• The soil samples have been collected on a 100m x 50m grid with lines oriented to the NW.</td></tr>
<tr><td>• 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.</td><td>• The data from these samples does not contribute to any resource estimate nor implies any grade continuity.</td></tr>
<tr><td>• Whether sample compositing has been applied.</td><td>• No sample compositing was done.</td></tr>
<tr><td rowspan="2">Orientation of data in relation to geological structure</td><td>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</td><td>• Samples were collected to get a representative sample of outcrops, but not sampled in any way to be independent and unbiased of structures.<br>• Soil samples were collected on a grid which should enable assessment of possible structures of various orientations.</td></tr>
<tr><td>• 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.</td><td>• Drilling has not yet been undertaken by the Avalon-Cornerstone JV.</td></tr>
<tr><td>Sample security</td><td>• The measures taken to ensure sample security.</td><td>• Avalon sampling procedures indicate individual samples were given due attention.<br>• Sample security was managed through sealed individual samples and sealed bags of multiple samples for secure delivery to the laboratory by permanent staff of the joint-venture.<br>• MS Analytical is an internationally accredited laboratory that has all its internal procedures heavily scrutinised in order to maintain their accreditation. MS Analytical is accredited to ISO/IEC 17025 2005 Accredited Methods.</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • Avalon's and Cornerstone's sampling techniques and data have been audited multiple times by independent mining consultants during various project assessments. These audits have concluded that the sampling techniques and data management are to industry standards.<br>• All historical data has been validated to the best degree possible and migrated into a database. |

## TABLE 1 – Section 2: Exploration Results

| *Criteria* | JORC Code explanation | Commentary |
|---|---|---|
| ***Mineral tenement and land tenure status*** | • *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.* | • The Bramaderos Exploration Concession is located in the Loja Province of southern Ecuador. The concession was granted to La Plata Minerales S.A. ("PLAMIN") in January 2017. PLAMIN is a subsidiary of Cornerstone Capital Resources Inc ("Cornerstone"). The concession is subject to a Joint Venture between Cornerstone Capital Resources Inc. and Avalon Minerals Ltd. There are no wilderness areas or national parks or areas of environmental significance within or adjoining the concession area. There are no native title interests. |
| | • *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.* | • The Bramaderos Exploration Concession was granted to La Plata Minerales S.A. ("PLAMIN") in January 2017. PLAMIN is a subsidiary of Cornerstone Capital Resources Inc ("Cornerstone"). The Bramaderos Concession is subject to a Joint Venture between Avalon Minerals and Cornerstone. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • The historic exploration was completed by various groups over the period 1970-1984, 2001-2002 and 2004-2007. Most of the readily available historic data has been acquired and compiled into databases and a GIS project. Exploration by other parties has included stream sediment surveys, geological mapping, rock chip sampling (888 samples) and grid-based soil sampling (1324 samples), trenching and channel sampling (17 trenches), ground magnetic surveys (31 line kilometres), electrical IP surveys and diamond drilling (10426m). |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The deposit style being explored for includes intrusion-related and stockwork hosted porphyry Au-Cu systems plus low sulphidation epithermal veins and bulk-tonnage breccia-hosted epithermal gold mineralisation. The setting is a volcanic arc setting of Cretaceous age overprinted by Miocene age intrusions. |

| *Criteria* | JORC Code explanation | Commentary |
|---|---|---|
| ***Drill hole Information*** | • *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:*<br>*a. easting and northing of the drill hole collar*<br>*b. elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>*c. dip and azimuth of the hole*<br>*d. down hole length and interception depth*<br>*e. hole length.* | • Details of the samples discussed in this announcement are in the body of the text. |
| | • *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.* | • Information included in announcement. |
| ***Data aggregation methods*** | • *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* | • No weighting averaging techniques were used. All assay data shown is for individual samples. |
| | • *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.* | • No data aggregation was applied. |
| | • *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Metal equivalents have not been applied. |
| ***Relationship between mineralisation widths and intercept lengths*** | • *If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV |
| | • *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').* | • Drilling has not yet been undertaken by the Avalon-Cornerstone JV |
| ***Diagrams*** | • *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.* | • See Figures for maps showing distribution of samples. |

| *Criteria* | JORC Code explanation | Commentary |
|---|---|---|
| ***Balanced reporting*** | • *Where comprehensive reporting of all 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.* | • Figures 2 & 3 above show all results from this current phase of sampling. |
| ***Other substantive exploration data*** | • *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.* | • Figures 2 & 3 above show all results from this current phase of sampling. |
| ***Further work*** | • *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* | • The planned exploration program is outlined in the announcement. |
| | • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • See Figure 1 which shows areas for further exploration. |