

E2 Metals Limited

ABN: 34 116 865 546 ASX Code: E2M

Level 4, 100 Albert Road South Melbourne VIC 3205 P: +61 3 9692 7222 F: +61 3 9077 9233 E: info@e2metals.com.au

#### **Directors / Secretary**

Melanie Leydin Chair & Company Secretary

Todd Williams Managing Director

Alastair Morrison Non-Executive Director

Michael Sapountzis Company Secretary

#### **Issued Capital**

75.7M fully paid ordinary shares

# Geophysics identifies multiple vein targets at the Conserrat Project

27th March 2019

#### **Highlights**

- Ground based gradient array electrical survey complete at Conserrat
- Known gold and silver mineralised veins and soil anomalies correspond to strike extensive resistivity and chargeability anomalies
- Multiple target trends identified under covered areas where surface exploration is ineffective
- Follow-up pole-dipole IP geophysical survey commenced

E2 Metals (**E2 or the Company**) is pleased to announce the completion of the gradient array induced polarisation (**GAIP**) survey at the Conserrat project. The project is located 20 kilometres west-northwest of AngloGold Ashanti's Cerro Vanguardia mine where up to 8.9 million ounces of gold and 137 million ounces of silver have been mined from the largest known epithermal vein field in the Santa Cruz province of Argentina (Figure 1).

This GAIP survey is the first electrical survey to be conducted at Conserrat and follows surface geochemical sampling results at the Veta Blanca, Emilia, Ro and Florencia prospects where the Company has identified high grade surface mineralisation<sup>1</sup> (up to 7.46 gpt gold and 7510 gpt silver at Veta Blanca) and multiple large-scale gold and silver soil anomalies<sup>2</sup>.

The program was completed by Geofisica Argentina SA and totalled 61 line-kilometres at a 200m line spacing. Final data (Figure 2 & 3) was processed and reviewed by consultant geophysicist and local specialist Miles Rideout who comments:

These initial geophysical results at Conserrat Central reveal multiple resistive and chargeable trends that are consistent with the expected response for mineralized veins. In the areas where rock chip sampling has been executed, the samples which are anomalous for precious metals values closely coincide with the locations of these resistive/chargeable trends.

<sup>&</sup>lt;sup>1</sup> E2 Metals ASX announcement, 7 February 2019 – Significant high-grade rock chip samples at the Veta Blanca prospect, Conserrat Project

<sup>&</sup>lt;sup>2</sup> E2 Metals ASX announcement, 27 February 2019 – Surface LAG geochemistry expands Veta Blanca gold-silver targets

Gradient-array electrical surveys have been applied very successfully in this mineral district and have demonstrated very high sensitivity to the sub-vertical veins most characteristic of low-sulphidation mineralization. These ground-based geophysical surveys produce multi-parameter results which greatly assist in the identification and discrimination of potential mineral targets. The measured parameters: electrical resistivity (apparent resistivity) and induced polarization chargeability are presented in plan-map form. Subsequent geophysical surveys with different field configurations can be applied to produce 2D sections of the earth and/or 3D volume models.

In most instances induced polarization (IP) chargeability denotes the presence of chargeable sulphides and is often associated with hydrothermal mineralization. In the region of the project, mineralized veins are often associated with the coincident occurrences of highly-resistive and moderately chargeablelineaments.

In addition to the geophysical trends defined in association with known prospects, multiple trends with similar parameters have also been detected in covered areas where sampling has not been possible. In the author's opinion, all the resistive and chargeable lineaments detected thus far are viable targets for additional investigation and drilling. In other projects within this geologic district, this geophysical exploration technique has been successfully employed to target economic mineralization below as much as 80+m thickness of basalt cover units.

A broad, strongly chargeable zone has been identified in the southern portion of the surveyed area, which exhibits IP chargeability values consistent with several percent sulphides. In the author's experience, it is likely that this area has been exposed to more pervasive hydrothermal alteration, and that conductive hydrothermal alteration products are abundant that can partially mask the resistive appearance of even well-developed silicified veins. Even though the resistive response is less pronounced, the strong chargeability values coincident with positive precious metal assays denote a prime exploration target.

#### Miles Rideout, B.Sc. - Geophysical Consultant

Managing Director Todd Williams states: "This gradient array IP data confirms our belief that the prospects identified to date are the tip of the iceberg at Conserrat. It demonstrates that the known epithermal veins are not isolated occurrences but are potentially part of a larger epithermal vein field largely concealed by shallow cover. The Company is very encouraged by these results and has commenced a 14-kilometre pole-dipole IP geophysical survey to refine and prioritise targets for the first drill program at Conserrat that is planned for the second half of the year"

For enquiries please contact:

**Todd Williams** Managing Director Ph: + 61 3 9692 7222

#### **Competent Person's Statement**

The information in this announcement that relates to the Santa Cruz Gold Projects, 80% owned and operated by E2 Metals, is based on information compiled and fairly represented by E2 Metals and Benjamin Nicolson. Benjamin visited the Santa Cruz Gold Project in April-May 2018. Benjamin Nicolson is a Member of the Australian Institute of Geoscientists (AIG) and is a consultant to the company. Benjamin Nicolson has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results. Benjamin Nicolson consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.



Figure 1: Location of the Conserrat Project in relation to AngloGold Ashanti's Cerro Vanguardia mine, Santa Cruz Province of Argentina



Figure 2: Chargeability image and known prospects, Conserrat Project



Figure 3: Resistivity image and known prospects, Conserrat Project

## Table 1: JORC Code Reporting CriteriaSection 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	IAMGOLD Corporation conducted reconnaissance rock chip sampling at what is now the Conserrat (n=131) during the early 2000s. The samples were analyzed for both base metals and gold, but the analytical suite and sample methodology is unknown. During the period between October 2017 and February 2018 Circum Pacific collected 34 confirmatory rock samples over all prospects explored previously to validated historic rock chip values. Samples were anlaysed by ALS, Mendoza, Argentina. Samples were crushed to less than 2mm, split and
		pulverized to <75µm. Multi-element (48) data was by four acid digest and ICP- MS including trace mercury by ICP-MS. Au was by fire assay using a 50g sample with AA finish. The rock chip samples reported on 7 February 2019 were collected by E2 Metals during December 2018. A total of 74 samples were collected from vein
		outcrop and representative float trains. Samples were analysed by ALS, Mendoza, Argentina. Samples were crushed to less than 2mm, split and pulverized to <75µm. Multi-element (48) data was by four acid digest and ICP- MS including trace mercury by ICP-MS. Au was by fire assay using a 50g sample with AA finish.
		The coarse fraction soil samples reported in this announcement were taken from the surface and first few cm in a cross pattern, each arm with a length of about a meter and sieved to take the fraction between 2 and 5mm. About 200g of sieved material were taken at each sample site. Samples were taken at 50m intervals along lines with a 200m separation, in some areas closed up to 100m separation. Previous orientation surveys have found that this fraction is the best fraction to represent the underlying bed rock in windy environments, where traditionally collected fractions such as -80 mesh can be diluted by

Criteria	JORC Code Explanation	Commentary
		<ul> <li>windblown material and volcanic ash. Sample positions were recorded on a Trimble Nomad handheld computer in a MapInfo table using Discover Mobile software. Duplicate samples were taken every 50 samples for quality control purposes.</li> <li>Sample preparation carried out by ALS laboratories was the following: <ul> <li>Fine crush 70% to less than 2mm</li> <li>Riffle split 1kg and pulverise to 85% &lt; 75µ</li> </ul> </li> <li>During March 2019 E2 Metals Limited complete a 61-line kilometer gradient array and Induced Polarisation (GAIP) geophysical survey at Conserrat. Data was acquired by Geofisica Argentina S.A. using pole-dipole (P-DP) surveys</li> </ul>
		with short 50m dipoles and n-10 or n-20 dipole separations, and 1500m bipole gradient arrays, which is suited to the detection of low-sulphidation vein targets. The data acquisition employed a 0.125 Hz time-domain 'box car' transmitter waveform. The receiver set-up employed 20 arithmetically spaced channels of 80 ms which follow 240 ms delay.
Drilling Techniques	• Drill type (e.g. 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).	NA
Drill Sample Recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	NA

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.	NA
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	NA
	• The total length and percentage of the relevant intersections logged.	NA
Sub- Sampling Techniques and Sample Preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	NA
	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	NA
Quality of Assay Data and Laboratory Tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	Rock samples submitted by Circum Pacific and E2 Metals were analysed by four acid digest and ICP-MS which is the most robust analytical method for full digestion and qualitative analyses of multi-element concentrations. No blanks or standards were submitted into each batch, but duplicate samples were collected.

Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Circum Pacific conducted confirmatory sampling at the Conserrat Projects to validate historic sampling by IAMGOLD. The highest single historic rock chip sample at the Veta Blanca prospect was 1.7 gpt Au and 663 gpt Ag compared to 1.91 gpt Au and 590 gpt Ag for a sample collected by Circum Pacific at the same outcrop. No duplicate samples were submitted by E2 Metals.
Location of Data Points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Sample locations by IAMGOLD, Circum Pacific and E2 Metals are referred in Datum WGS84 UTM Zone 19S.
Data Spacing and Distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	A ground magnetics surveys was conducted by Circum Pacific on line spacings that varied from 50 to 100m depending on the scale of the survey. In all instances the data was effective in geophysical breaks and de-magnetized zones interpreted as structures or breaks in lithology.
Orientation of Data in Relation to Geological Structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	NA
Sample Security	• The measures taken to ensure sample security.	All samples were prepared in the field and shipped directly from the field to the laboratory for analyses
Audits or Reviews	• The results of any audits or reviews of sampling techniques and data.	Laboratory QA/QC was reviewed

### Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	<ul> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	The Conserrat title is owned 100% by Minera Los Domos S.A., a private company incorporated in Argentina, a wholly owned subsidiary of RN Gold Pty Ltd, a private company incorporated in Australia. Conserrat Project title • 437.471/BVG/17
Exploration Done by Other Parties	• Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Early 2000s: IAMGOLD conducted reconnaissance surface at the Conserrat Project</li> <li>2017 to 2018: Circum Pacific conducted surface mapping and sampling at the Conserrat Project</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	
Drill Hole Information	<ul> <li>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: <ul> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul> </li> <li>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.</li> </ul>	NA
Data Aggregation Methods	<ul> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high</li> </ul>	NA

Criteria	JORC Code Explanation	Commentary
	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.	
	• The assumptions used for any reporting of metal equivalent	
	values should be clearly stated.	
Relationship Between Mineralisation Widths and	• These relationships are particularly important in the reporting of	NA
intercept lengths.	<ul><li>Exploration Results.</li><li>If the geometry of the mineralisation with respect to the drill hole angle</li></ul>	
intercept lengths.	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 (eg "down hole length, true	
	width not known").	
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.	
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.	NA
Other Substantive Exploration Data	<ul> <li>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.</li> </ul>	NA
Further Work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	NA