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Please find following a revised ASX announcement dated 18 January 2019 with an updated JORC Code 2012 table.

For further information please contact

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# Drone Aeromagnetic Survey Defines New Targets at Plateado Cobalt Project in Chile

- 42.2 Line Km over 24 lines flown
- Interpretation has highlighted 3 new target areas for follow-up work
- Main target area identified has interpreted structural setting similar to nearby artisanal mine
- Coincident with chalcopyrite, pyrrhotite and pyrite mineralisation found during the geology mapping

Cougar Metals NL (ASX:CGM) ("CGM" or the "Company") is pleased to announce that a preliminary interpretation of data collected during the geophysical survey over part of the Plateado Project area (CGM earning 100%) has been completed.

The geophysical profiles were placed in an EW direction over the same area mapped for its geology earlier last year and spaced 100m apart (Fig. 1). Data was acquired using German technology that consist of a tri-axial fluxgates magnetometer (two horizontal sensor) mounted on an MD4-100 Micro drone resulting in a reading rate of 200 readings per second along the profiles and permitting the production of continuous magnetic lines.



Fig 1 : Location of lines flown over the interpreted geology

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Field data was subsequently sent to the geophysical contractor's (Maping Ltda) Santiago office for processing, interpretation, and mapping. Although the magnetic response was of a moderate character (a contrast of 400 gammas) ranging between a minimum of 23.600 gammas and a maximum of 24.000 gammas, it was possible to generate standard geophysical maps. Figures 2 and 3 show the resulting Total Magnetic Intensity map with a contour interval of 10 nT and the Reduction to the Pole map generated from the raw data.



Fig 2 : Total Magnetic Intensity



Fig 3 : Reduction to the Pole

Results of the interpretation have highlighted three new exploration targets with the most significant corresponding to a big structural complex north of the El Boldo artisanal mine, located on the property, with an azimuth that matches the azimuth of the structure hosting the mineralisation at that mine. The second target of interest is located up dip and only 150 metres from the artisanal workings.

Further to the production of the maps and by using Theta techniques, the geophysical contractor was able to interpret three clearly differentiated lithologies, a big structural complex with a NE15° direction crossed by magnetic lineaments of a NW45° direction and five target areas where to focus follow-on exploration efforts (Fig 4.).





Fig. 4: Preliminary interpretation



Fig. 5: Geophysical targets over geology

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Target A has been given priority because of its size, intensity of the magnetic response and similarities on the interpreted structural setting to the settings observed at the old artisanal mine (Fig. 6). Also, the superimposing of the geophysical targets on the geology map as presented in Fig. 5 highlights the presence of observed chalcopyrite, pyrite and pyrrhotite along an observed fault in the northern part of Target A adding further encouragement to the potential of this area.



Fig. 6: Cobalt soil sample results and structural interpretation at the artisanal pit. Geophysical Interpretation of Target A in the inset

Target B for its part has been given priority for its proximity to the old workings. The relationship between this geophysical anomaly and the mineralisation at the old mine needs to be further investigated.





Fig 7 : Location of Target B relative to the old workings

It is envisaged that a reinterpretation of the data by an Australian contractor will be relevant to gather further understanding of the project and the planning of follow-on exploration activities.

## **Plateado Project Overview**



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On 7<sup>th</sup> of February 2018 Cougar announced a farm-in agreement over the Plateado cobalt project in Chile with Antasitua Chile SPA, where Cougar can earn 100% of the project by meeting various exploration expenditures and payments.

The Plateado Project comprises 12 contiguous granted tenements, listed as Plateado 1 to 12 in the name of Antasitua Chile SPA, covering an area of 36km2 in the province of Petorca, Chile.

A 1941 report sourced from the Nacional Service of Geology and Mining (Sernageomin) describes the workings located near the top of El Boldo hill as having commenced in 1899 and periodically worked in the 1930's to produce high-grade Cobalt.

### Yours sincerely COUGAR METALS NL RANDAL SWICK Executive Chairman

#### Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Cougar Metals NL, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.

### **COMPETENT PERSONS STATEMENT**

Information in this announcement that relates to exploration results is based on and fairly represents information and supporting documentation compiled by Brian Thomas BSc MBA Grad Cert App Fin Inv, who is a Member of the Australasian Institute of Mining and Metallurgy.

Mr Thomas is a Non-Executive Director of Cougar Metals NL. Mr Thomas 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 Exploration Results, Mineral Resources and Ore Reserves. Mr Thomas consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

## APPENDIX 1 JORC Code, 2012 Edition Table 1

## Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>The magnetic survey was flown along 100m-spaced lines, at an altitude of ~30m above ground level. 42.2km were flown in total</li> <li>Total Magnetic Intensity, Reduction to the Pole, First Vertical Derivative and Analytical Signal maps were produced from the data acquired.</li> <li>An interpretation of the maps produced was completed by Mapping Ltd in Santiago de Chile</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>Not relevant as no drilling carried out.</li> </ul>
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>	<ul> <li>Not relevant as no drilling carried out.</li> </ul>

Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Not relevant as no drilling carried out.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <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>	<ul> <li>Not relevant as no sampling carried out.</li> </ul>
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The Airborne Magnetometer system consists of a data logger and two FGM3D/75 Fluxgate magnetometers. The magnetometers are tri-axial fluxgates measuring all three components of the Earth' magnetic field.</li> <li>The sensors have a measurement range of 75,000nT. The sensors are laying horizontal and are aligned to each other. The distance between the sensors centre points is 1,000mm.</li> <li>The airborne magnetometer sensors were mounted on an UAV drone, model MD4-1000. The relatively high sensor height was necessary to maximize the distance between the sensor and drone mass. The heading error with this system is on the order of 1 to 2 nT.</li> <li>The airborne magnetometer was set up to record three components field, at rate of 200 reading per second, resulting a continue magnetic line.</li> <li>A U Blox PAM-7Q GPS receiver is also fitted to the drone.</li> </ul>

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>	<ul> <li>After downloading the magnetic data from the magnetometers onto a notebook PC, diurnal corrections were applied.</li> <li>Geosoft compatible XYZ files were then generated with WGS-84 geographic coordinates for each magnetic measurement.</li> <li>After importing the XYZ files into a Geosoft Oasis montaj database, PSAD</li> <li>UTM coordinates were generated, and additional editing data was performed as necessary. The editing mostly consisted of deleting readings affected by cultural noise and deleting dropouts which are large amplitude negative spikes that occur when the magnetometer sensor is tilted too far from a vertical orientation.</li> <li>Magnetic data was gridded, mapped and contoured on a daily basis in the field to ensure high quality data was being collected. The final XYZ file was sent to the Maping Ltda Santiago office for further processing, interpretation, and mapping.</li> </ul>
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>	<ul> <li>The size of the geophysical surveyed area is 410 ha.</li> <li>The study consisted of the measurement of 24 magnetic lines, of EW direction, each 100 meters spacing, totalizing 42.2 km of prospecting lines.</li> </ul>
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>	<ul> <li>Aeromagnetic line spacing is 100m spacing as this is believed appropriate for the level of precision required to interpret geological features in the area.</li> </ul>
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>	• Not appropriate for this data.

Section	2	Reporting	of	Exp	loration	<b>Results</b>
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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 licence to operate in the area.</li> </ul>	<ul> <li>The Plateado Project comprises 12 contiguous granted tenements, listed as Plateado 1 to 12, in the name of Antasitua Chile SPA, covering an area of 36km<sup>2</sup> in the province of Petorca, Chile.</li> <li>The company has entered into a LOI to acquire 100% of the project portfolio on terms outlined in the ASX release dated 7<sup>th</sup> of February 2018</li> <li>Tenements are in good standing and no know impediments exist</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>The project contains an area of historical cobalt workings. A 1941 report sourced from the Chilean department of mines describes the workings located near the top of the El Boldo Hill as having started in 1899 and periodically worked in the 1930s to produce high grade cobalt .The workings are indicative of artisanal scale mining, however there are no indications that the area has been systematically explored with modern exploration techniques</li> <li>Some exploration work, including rock and soil sampling was carried out by consultants on behalf of Uranium Equities Ltd in 2017</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The geological setting comprises metamorphic rocks of the hornfel type which are being affected from the west by granodioritic, dioritic, quarzitic intrusive rocks of the middle Jurassic Mincha unit.</li> <li>The cobalt mineralisation identified in the historical workings is interpreted to lie within a 4-5m wide sedimentary unit which strikes north-south and dips at about 30 degrees west. Antasitua and the report sourced from the Chilean department of mines has also indicated that the local geological setting may contain primary feeder-type veins within the underlying andesite volcanic sequence.</li> </ul>
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 –</li> </ul> </li> </ul>	No drilling undertaken

	<ul> <li>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> <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>	
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 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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No drilling or sampling reported
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Not applicable as no drill hole results reported</li> </ul>
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.	<ul> <li>Maps and geophysical images are included in the ASX announcement</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>The ASX announcement is considered to be a balanced report with a suitable cautionary note.</li> </ul>
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;</li> </ul>	<ul> <li>Geological sampling carried out by Company personnel was reported in ASX Release dated 3 April 2018</li> </ul>

	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.	
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>	<ul> <li>Reinterpretation of the raw data by an Australian contractor is being considered before further exploration work is planned</li> </ul>

Section 3: Estimation and Reporting of Mineral Resources – Not relevant for this announcement.

Section 4: Estimation and Reporting of Ore Reserves – Not relevant for this announcement.

Section 5: Estimation and Reporting of Diamonds and Other Gemstones – Not relevant for this announcement.