

11 December 2018

ASX: GAL

## Corporate Directory

### Directors

**Non-Executive Chairman**  
Simon Jenkins

**Managing Director**  
Brad Underwood

**Technical Director**  
Noel O'Brien

### Fast Facts

Issued Capital 120.4m  
Share Price \$0.16  
Market Cap \$19.3m  
Cash (30/09/18) \$10.1m

### Projects

Norseman Cobalt Project  
Fraser Range Nickel Project



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# NEW 4,100 TONNE COBALT RESOURCE AT NORSEMAN

## Highlights

- Maiden JORC 2012 Inferred Resource for the Goblin Prospect records 4.9Mt at 0.08% Co for 4,100 tonnes of contained cobalt
- Norseman Cobalt Project now has a global resource of 26,600 tonnes of contained cobalt with 122,500 tonnes of contained nickel <sup>1</sup>
- Goblin represents an 18% increase in overall contained cobalt at the Norseman Cobalt Project (from 22,500 tonnes to 26,600 tonnes)
- Further drilling planned in 2019 to bring the existing Mission Sill resource to JORC Indicated Resource status and to test further exploration targets

**Galileo Mining** (ASX: GAL, "Galileo" or the "Company") is pleased to announce the maiden JORC 2012 compliant Inferred Resource for its Goblin Prospect located within the Norseman Cobalt Project in the Goldfields region of Western Australia.

With the addition of the Goblin prospect, the global resource base of the Norseman Cobalt Project now stands at 25.1Mt @ 0.11% cobalt (at a 0.06% cobalt cut-off) for 26,600t cobalt and 122,400t nickel <sup>1</sup>.

The Goblin Prospect is located 3 kilometres south of Galileo's main resource at Norseman (Figure 3) and has an identified strike of cobalt mineralisation of greater than two kilometres (Figure 1). The cobalt mineralisation occurs at shallow depths of between 12m and 60m and is consistent in style with the Company's existing JORC resources at Norseman. Independent consultants CSA Global completed the Mineral Resource Estimation on behalf of the Company.

Galileo Managing Director Brad Underwood said that the new JORC resource at the Goblin Prospect validated the Company's strategy of building up the project's resource base while undertaking metallurgical test work to understand the most efficient method of metal extraction from those resources.

*"The Goblin resource is a great result and confirms our belief that significant zones of cobalt mineralisation occur outside of our current JORC resources. We are confident that this continues to be the case and look forward to the opportunity of adding further resources with our exploration and resource extension drilling programs planned for 2019."*

**Table 1: Goblin Inferred Mineral Resource Estimate by Lithology Type at a 0.06% cobalt cut-off (see remainder of document for details)**

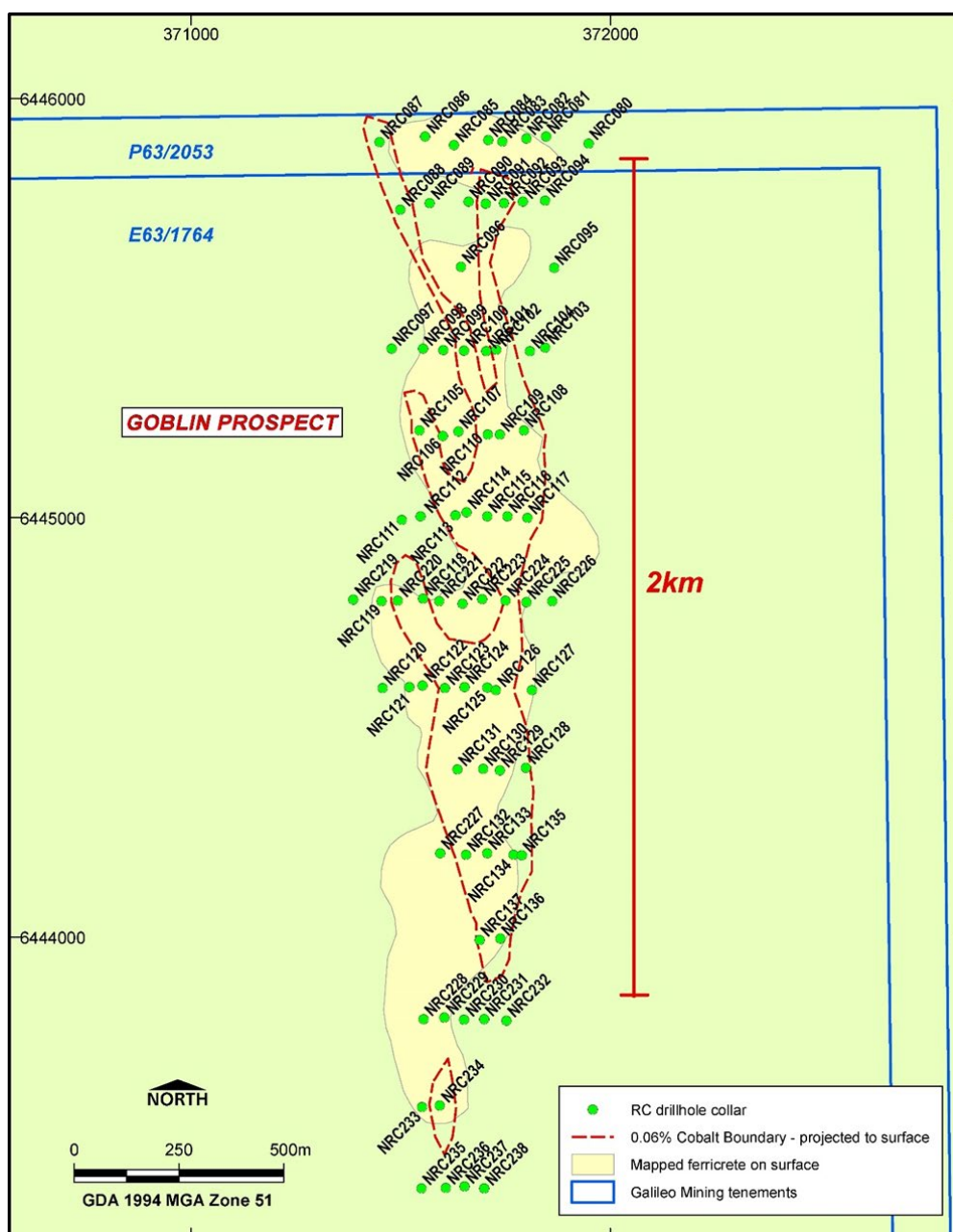
Domain	Tonnage (Mt)	Cobalt (%)	Cobalt (Tonnes)	Nickel (%)	Nickel (Tonnes)
Upper Saprolite	0.9	0.095	850	0.29	2,250
Lower Saprolite	3.8	0.081	3,050	0.35	13,250
Saprock	0.2	0.10	200	0.31	650
<b>Total</b>	<b>4.9</b>	<b>0.084</b>	<b>4,100</b>	<b>0.34</b>	<b>16,400</b>

<sup>(1)</sup> See Table 3 below for breakdown of the Norseman Cobalt Project Global Resource into component resource estimates.

Cobalt mineralisation was intersected at the Goblin Prospect at the boundary between the upper and lower saprolite typically found between 12 and up to 60 metres below surface. The location of the cobalt mineralisation fits with Galileo's exploration model for new deposits at Norseman which anticipates the development of a supergene cobalt enrichment in a manganese oxide accumulation layer above weathered ultramafic rocks. Surface indications may be limited to ferricrete and/or anomalous cobalt in soil results; however, in some instances few surface indications are present due to transported soil cover. Prospects have been developed using a combination of surface indicators and magnetic imagery representing the underlying formative geology.

The Goblin resource was estimated from 78 reverse circulation drill holes representing 3,914 metres of drilling completed as part of a wider program during the second half of 2018. Drilling utilised for the resource covered a strike length of 2.6km at 200m lines x 50m along east-west oriented lines. All holes were vertical.

*Figure 1- Goblin Prospect showing RC Drill hole locations and boundary of 0.06% Cobalt mineralisation projected to surface. Cobalt intercepts are recorded at shallow depths between 12 and 60 metres. The prospect extends over 2 kilometres in strike length.*



## Goblin Resource Estimation

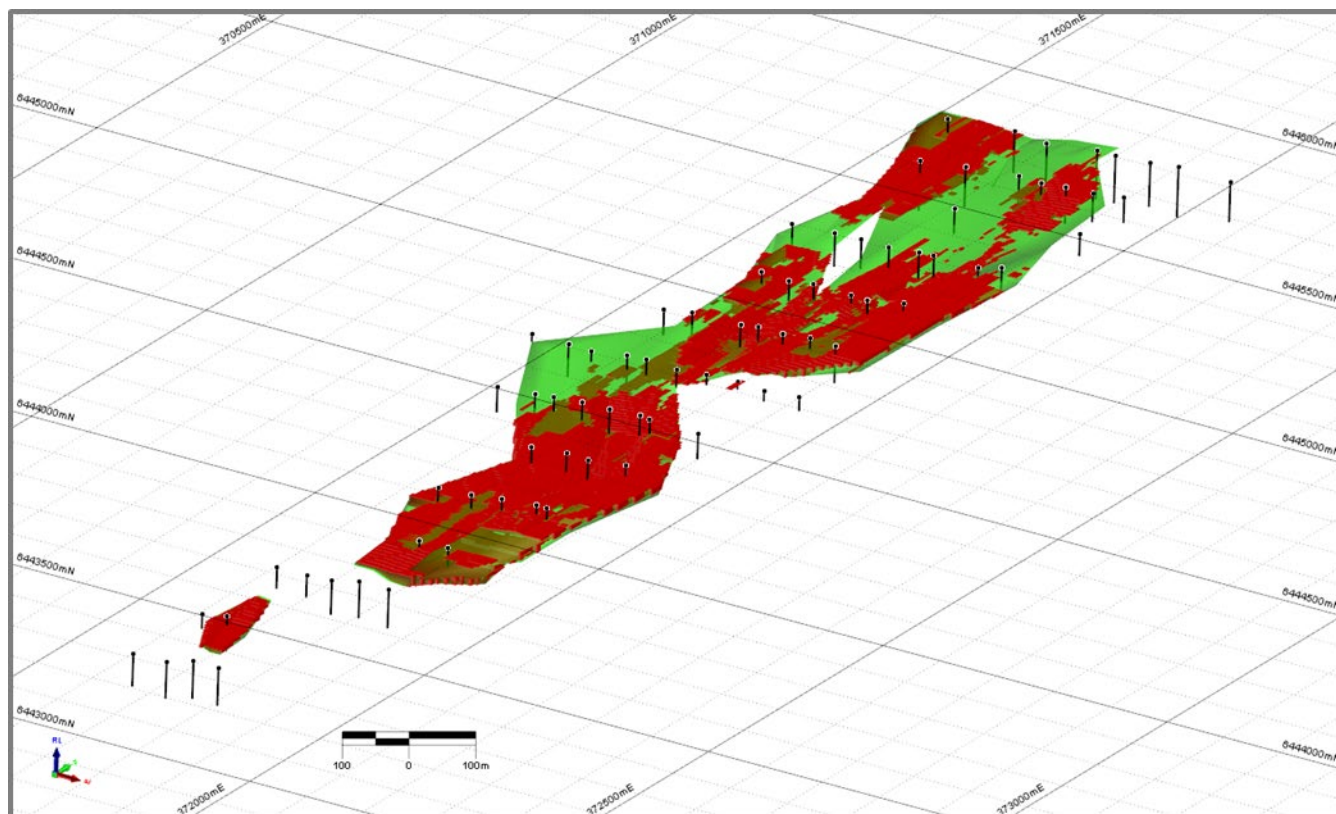
CSA Global completed the Mineral Resource Estimation on behalf of the Company. Background cobalt was wireframed at the 200ppm and 400ppm levels prior to the creation of a block model reported at cut-off grades including 0.06% and 0.08% cobalt. The Mineral Resource Estimate at these levels is shown in Table 2 below. Nickel grades are lower at the Goblin Prospect, relative to the Company's other resources, and demonstrates the preferential cobalt mineralogy of the Norseman region relative to other laterite projects.

Full details of resource estimation methodology, drilling techniques and sampling techniques are listed in Appendix 1: Summary of Information Required According to ASX Listing Rule 5.8.1 and in Appendix 2: JORC Code 2012 Edition – Table 1 Report.

**Table 2: Goblin Inferred Mineral Resource Estimate by at 0.06% and 0.08% cobalt cut-offs (see Appendix 1 and Appendix 2 for details)**

Resource cut-off (% cobalt)	Tonnage (Mt)	Cobalt (%)	Cobalt (Tonnes)	Nickel (%)	Nickel (Tonnes)
0.06	4.9	0.084	4,100	0.34	16,400
0.08	2.2	0.10	2,200	0.34	7,500

*Figure 2- Goblin Prospect Inferred Resource area. Oblique view looking NE. Green shell = 0.04% Cobalt interpreted mineralisation wireframe, Red blocks = >0.06% Cobalt Inferred resource blocks*



## Pit optimisation and mining potential

The mineralisation at Goblin is potentially mineable by open pit due to the close proximity to surface (12m-60m). Preliminary pit optimisation undertaken as a non-JORC conceptual study by CSA Global using Galileo's JORC resources at Mt Thirsty and Mission Sill (excluding the new Goblin resource estimate) suggested the bulk of the resources were amenable to extraction under a number of realistic assumptions. The concept level study will now be updated to a higher-level JORC compliant optimisation using the results of metallurgical



work completed by SGS Bateman (refer to ASX announcement dated 4<sup>th</sup> December 2018) and forecast economic data obtained from Roskill Information Service Pty Ltd. The updated optimisation will utilise Galileo's global resource base at the Norseman Cobalt Project, including the Goblin Resource, shown in Table 3.

Approximately 42% of Galileo's current resources fall within the Indicated category with the remainder being in the Inferred category. The results of the new optimisation will be used to complete the Norseman Cobalt Project Scoping Study with final CAPEX estimates for the proposed processing plant to be provided by SGS Bateman.

*Table 3: JORC Mineral Resource Estimates for the Norseman Cobalt Project ("Estimates") (refer to this announcement and to ASX "Prospectus" announcement dated May 25<sup>th</sup> 2018 and accessible at <http://www.galileomining.com.au/investors/asx-announcements/>). Galileo confirms that all material assumptions and technical parameters underpinning the Estimates continue to apply and have not materially changed).*

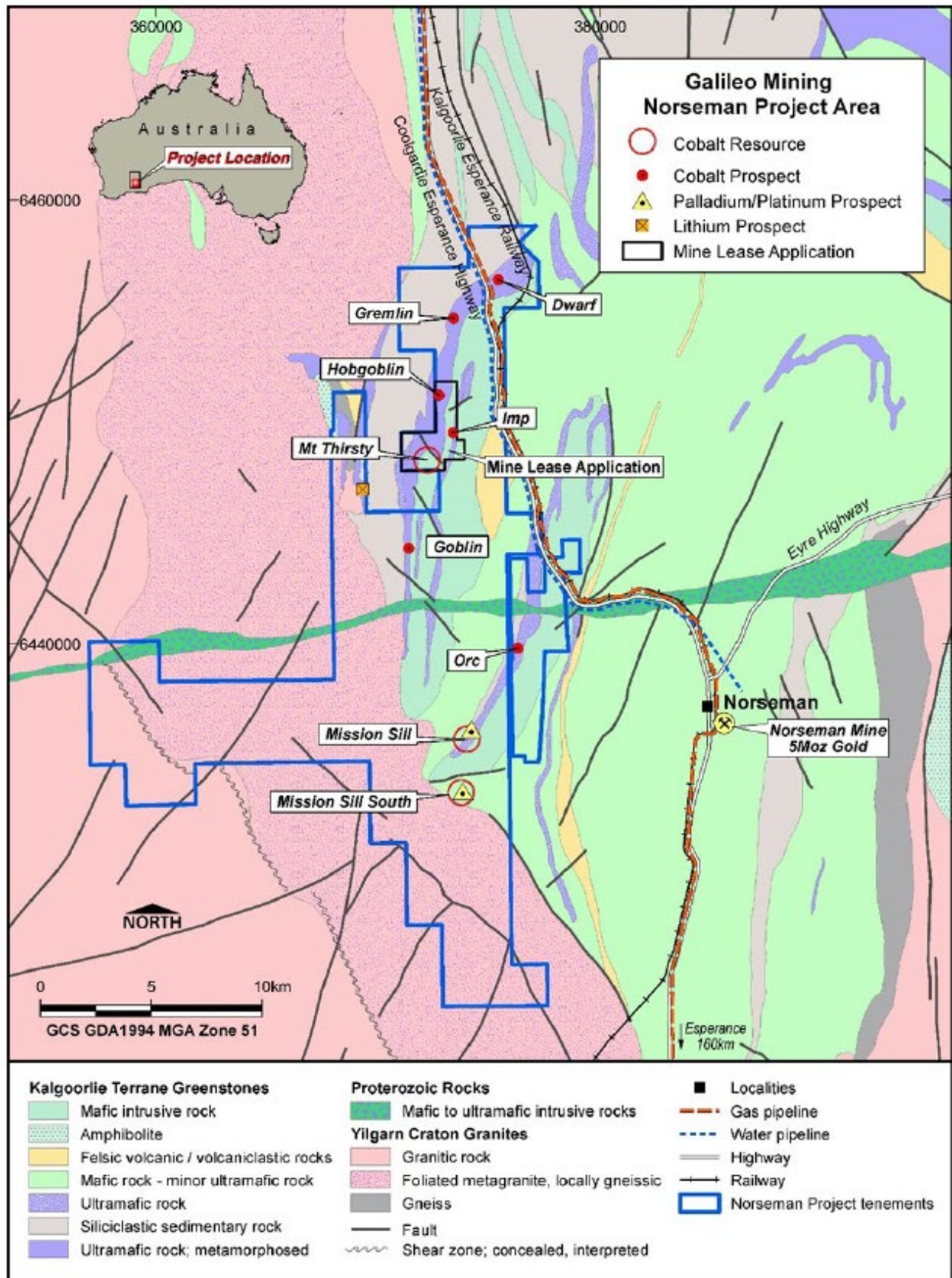
Cut-off Cobalt %	Class	Tonnes Mt	Co		Ni	
			%	Tonnes	%	Tonnes
MT THIRSTY SILL						
0.06 %	Indicated	10.5	0.12	12,100	0.58	60,800
	Inferred	2.0	0.11	2,200	0.51	10,200
	Total	12.5	0.11	14,300	0.57	71,100
MISSION SILL						
0.06 %	Inferred	7.7	0.11	8,200	0.45	35,000
GOBLIN						
0.06 %	Inferred	4.9	0.08	4,100	0.36	16,400
TOTAL JORC COMPLIANT RESOURCES						
0.06 %	Total	25.1	0.11	26,600	0.49	122,500

### Norseman Cobalt Project 2019 Planned Activities

Galileo will be undertaking additional exploration and resource drilling during 2019. Resource drilling will include infill drilling at the current Mission Sill resource as well as further investigation of extensional zones to the existing Mission Sill resource (see ASX Announcements dated 27<sup>th</sup> September 2018 and 9<sup>th</sup> October 2018). Infill drilling of the Mission Sill resource has been planned on a 50m by 80m grid pattern with the intention of converting the resource from an Inferred JORC category to an Indicated JORC category. Approximately 95 drill holes will be required at this spacing for an estimated total of 5,700 metres of drilling.

A detailed 50 metre line spaced airborne magnetic survey has been planned over the bulk of the Norseman Cobalt Project area to refine new exploration targets prior to drilling. As cobalt mineralisation in the area typically starts at around 12 metres below ground level, surface indicators are not always a reliable guide to mineralisation at depth. Galileo has found that magnetic interpretation can be used to target regolith cobalt mineralisation through understanding the source rocks beneath the weathered near-surface material. It is these magnetic source rocks that can be used to guide exploration drilling and are the focus of the proposed survey. Field acquisition of magnetic data is scheduled for January 2019 with full survey results expected to be available in February 2019.

Figure 3 – Location plan for the Norseman Cobalt Project showing existing resources and prospects.



## Compliance Statement (JORC 2012)

A Competent Person's statement for the purposes of ASX Listing Rule 5.22 has previously been announced by the Company for the Mt Thirsty and Mission Sill JORC Resources (see ASX "Prospectus" announcement dated May 25<sup>th</sup> 2018 and accessible at <http://www.galileomining.com.au/investors/asx-announcements/>). Galileo confirms that all material assumptions and technical parameters underpinning the Estimates continue to apply and have not materially changed.

The information in this report that relates to the Goblin Prospect Exploration Results and Mineral Resource Estimate is based on information compiled and reviewed by Mr Brad Underwood, a Member of the Australasian Institute of Mining and Metallurgy, and a full time employee of Galileo Mining Ltd. Mr Underwood has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity being undertaken, 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" (JORC Code). Mr Underwood 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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### About Galileo Mining:

Galileo Mining Ltd (ASX: GAL) is focussed on the exploration and development of cobalt and nickel resources in Western Australia. GAL holds tenements near Norseman with over 22,000 tonnes of contained cobalt, and 106,000 tonnes of contained nickel, in JORC compliant resources (see Table 2 below). GAL also has Joint Ventures with the Creasy Group over tenements in the Fraser Range which are prospective for nickel-copper-cobalt deposits.

*Table 4: JORC Mineral Resource Estimates for the Norseman Cobalt Project ("Estimates") (refer to ASX "Prospectus" announcement dated May 25<sup>th</sup> 2018 and accessible at <http://www.galileomining.com.au/investors/asx-announcements/>). Galileo confirms that all material assumptions and technical parameters underpinning the Estimates continue to apply and have not materially changed.*

Cut-off Cobalt %	Class	Tonnes Mt	Co		Ni	
			%	Tonnes	%	Tonnes
MT THIRSTY SILL						
0.06 %	Indicated	10.5	0.12	12,100	0.58	60,800
	Inferred	2.0	0.11	2,200	0.51	10,200
	Total	12.5	0.11	14,300	0.57	71,100
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0.06 %	Inferred	4.9	0.08	4,100	0.36	16,400
TOTAL JORC COMPLIANT RESOURCES						
0.06 %	Total	25.1	0.11	26,600	0.49	122,500



## Appendix 1:

### Mining Ltd – Norseman Cobalt Project

#### Summary of Information Required According to ASX Listing Rule 5.8.1

##### Geology and Geological Interpretation

The host geology to mineralization is highly weathered regolith material and mineralization is supergene cobalt-nickel. The underlying lithology is dominated by ultramafic to mafic intrusive and volcanic, typically ortho-cumulate to meso-cumulate peridotite and pyroxenite rock. Variable serpentinization has been recorded where fresh rock has been encountered.

Nickel, cobalt and manganese oxide style mineralization overlying the Mount Thirsty Sill at the Goblin Prospect has formed a blanket-style deposit from in-situ lateritic weathering of olivine-rich peridotite rocks. Typically, the regolith comprises a thin layer of colluvium above variable developed nodular/pisolitic lateritic ironstone. This is underlain by a strongly weathered, powdery iron-rich zone grading into the upper, visually distinct, mineralized horizon. This strongly oxidized mineralized zone is often dark brown in colour, rich in iron oxides particularly goethite, powdery in character and variably manganiferous. The goethite zone grades down into a lower, visually distinct mineralized horizon, that is commonly green and clayey (predominantly nontronite) before becoming increasingly cherty, magnesite-rich and saprolitic toward the bedrock ultramafic.

Elevated levels of nickel are seen throughout the profile, related to goethite and nontronite mineralogy. Elevated cobalt is closely related to the occurrence of manganese oxides which have precipitated within the profile due to redox reaction, mostly in the lower saprolite zone.

The mineralization developed within the regolith due to weathering processes and as such the distribution of lithologies and grades is broadly horizontal. The controls on the development of laterite profiles are complex and inter-related and rapid variation in detailed geology and grade on a small scale can result, for example, the interface of the regolith with the underlying bedrock can be highly irregular.

There is a strong correlation between the geology of adjacent drill holes in all of the resource. There is also a strong global correlation between weathering profile, lithology and mineralisation intensity.

There is good confidence overall in the geological model. This is supported by the estimation of higher confidence indicated resources where increased drilling data densities support the geological model at the nearby Mt Thirsty Mineral Resource estimate (see ASX “Prospectus” announcement dated 25 May 2018).

Interpretation was carried out interactively over 14 vertical cross sections oriented east-west from the south to the north through the laterite profile of the deposit. The geological concept of laterite profiles formed the basis for the interpretation. The laterite profile was divided into three horizons based on magnesium content as determined by assay. The magnesium content reflects the intensity of weathering as it relates to depletion of magnesium with increased weathering intensity. The magnesium assay criteria used to divide the regolith profile are noted below;

- Upper Saprolite: magnesium  $\leq 3\%$
- Lower Saprolite: magnesium  $>3\%$  &  $\leq 8\%$
- Saprock: magnesium  $>8\%$

Geological logging of drill holes included lithology, regolith unit, grain size, mineralogy, colour and weathering on a qualitative basis based on the presentation of the 1m samples in the chip trays. Comparison between regolith/geological logging and the magnesium assay derived horizons correlated well.

The primary method for geological interpretation utilised the modelling of the boundaries between horizons as Digital Terrain Models (DTMs). These boundaries reflect the geology of the deposit with each interpreted section

comprising:

- The surface line passing through each drill collar.
- The line representing the boundary between upper saprolite and lower saprolite.
- The line representing the boundary between the lower saprolite and saprock.
- The overall continuity of mineralisation is strongly controlled by bed rock composition, and palaeo-water flow within the ultramafic host units. The presence of underlying structure and the degree of regolith profile preservation appear to exert controls on the intensity, thickness and continuity of mineralisation.
- Maximum grade of final composite: 200ppm Co; 400ppm Co.
- Maximum total length of waste: Not limited.
- Maximum consecutive length of waste: 10m.
- Maximum gap between samples: 10m.
- Minimum grade\*length for short intervals: 400ppm\*m Co; 800ppm\*m Co.

Each section was displayed in Micromine Vizex display environment with drill hole traces colour coded according to the sample grade values. All drill hole traces were colour coded as hatches for grade composites on one side and lithological units on the other side. The interpretation was carried out in 3D (ie the string points were snapped to the corresponding drill hole intervals).

The following approach was applied during interpretation:

- Each cross-section view was displayed on screen with a clipping window equal to half the distance from the adjacent sections.
- All interpreted strings were snapped to the corresponding drill hole intervals (ie the interpretation was constrained in the third dimension).
- Internal waste was accepted within the mineralized envelope, rather than being interpreted and modelled separately. It was included in the interpreted envelopes, providing that the internal waste was part of the grade composites.
- The interpretation was extended perpendicular to the first and the last interpreted section equal to half the distance (100m) between the adjacent sections for the southern part of the deposit. For the northern part of the deposit the interpretation was extended to the edge of the Galileo Prospecting license (~65m). Consideration was given to the general direction of the structure.
- If the mineralized envelope did not extend to the adjacent section, it was projected halfway to the next section and then terminated. The general shape of the envelope was maintained.
- When intermediate sections were interpreted, the wireframe was initially created between the main cross sections and then sliced at the intermediate section. The wireframe slice was then used to interpret the middle sections.
- The interpretation was used to generate 3D models with each wireframe named corresponding to its mineralization zone. Two set of wireframes were created for the deposit: namely, 200ppm cobalt and 400ppm cobalt mineralization.
- Each wireframe model was assigned with a unique name to enable the subsequent grade interpolation to be conducted individually for each mineralized body

A topographic surface DTM was provided for the area derived from Worldview2/Worldview 3 satellite imagery with an initial resolution of +/-1m. All works were conducted using MGA94 Datum Zone 51.

## Drilling Techniques

The Goblin Prospect deposit was explored using RC drilling with a 5.5inch (140mm) diameter bit. A combination of face sampling blade and hammer bits were used as required by ground conditions and drill ground penetration requirements during the drilling of each hole. All drilling was completed during 2018. The RC drilling completed comprised 78 holes for a total of 3,914m with an average hole depth of 50.2m.

Drill hole collars are surveyed with a handheld GPS (Garmin GPS78s) with an accuracy of +/-5m which is



considered enough for drill hole location accuracy. Co-ordinates are recorded in MGA94 Datum, Zone 51. Topographic control has an accuracy of 2.5 metres based on detailed satellite imagery derived DTM. Drill hole spacing for the individual drill holes was based on a 200m by 50m grid pattern.

## Sampling and Sub-Sampling

All RC drill assay samples were collected at the drill site using a 50-millimetre diameter PVC spear to derive 3m composites of 2-3kg target weight from the 1m bagged samples. In the case of wet clay samples, grab samples were taken from the sample return bag. Other composites of 2m and individual 1m samples were collected where required, for example, at the bottom of hole. QAQC standards (certified pulp blank & pulp reference) and field duplicate samples were included routinely at a frequency of 1 per 20 samples.

Sample preparation was completed at Intertek-Genalysis Laboratory (Kalgoorlie). All assay sample preparation comprised oven drying, jaw crushing, splitting to less than/equal to 3 kilograms of sample for pulverising and splitting to derive a representative assay charge pulp.

## Sample Analysis Method

Samples were sent to an independent commercial assay laboratory – Intertek-Genalysis Kalgoorlie for preparation and Intertek-Genalysis Perth for sample digest and assay.

RC drill assay samples were analysed for a multi-element suite (33 or 48 element suites) by ICP-MS or ICP-OES following a four-acid ( $\text{HNO}_3$ ,  $\text{HClO}_4$ , HF) digest. The multi-element analysis suite included Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W, Zn by ICP-MS or ICP-OES for all samples (4A/OE33 and 4A/MS48). The assay methods used are considered appropriate however cannot be considered a “complete” digest”, as such  $\text{SiO}_2$  assay data is not available and requires additional sampling and assaying.

QAQC standards and duplicates were routinely included at a rate of 1 per 20 samples. Further internal laboratory QAQC procedures included internal batch standards and blanks.

## Estimation Methodology

Block modelling was undertaken using Micromine 2018 software (version 18.0.846.3 x64).

Two sets of empty block models were initially created for each domain (200 ppm cobalt and 400 ppm cobalt). All models were flagged according to their type and wireframe name. This flagging was subsequently used to interpolate grades separately for each domain and to exclude “contamination” with grades from adjacent bodies. After coding, the models were combined by superimposing the model of the 200ppm cobalt mineralisation onto the model of 400 ppm cobalt mineralisation. After this, the model was consecutively coded by digital terrain models of the zones in the same order as the deposit samples. Sequential use of digital wireframe surface models resulted in a block model bound by wireframe models and coded by occurrence within one of the three zones of the laterite profile, that is, upper saprolite, lower saprolite or saprock.

Block model parameters are tabulated below.

Axis	Dimension (m) Min	Dimension (m) Max	Block Size (m)	Max sub-celling (m)
Easting	371,300	372,000	25	5
Northing	6,443,200	6,446,100	50	10
Elevation	300	400	3	1

The sub-block dimensions were chosen to maintain resolution of the mineralised zones. Wherever possible, the sub-blocks were then optimised and combined to create larger blocks. Sub-cells were created at the boundaries of the mineralisation wireframe models.

Co, Ni, Mg, Fe, Mn, Al, Cr, Ti and Zn grades were interpolated into the empty block model in several stages. Firstly, the interpolation was conducted for the blocks that fell within the boundaries of the cobalt 400ppm mineralisation envelope and then for the blocks that fell within the boundaries of the cobalt 200ppm mineralisation envelope but outside of the cobalt 400ppm mineralisation. Models and assay data flattened onto a horizontal plane were used for interpolation. Each lithological horizon and grade domain were estimated separately.

The OK process was carried out for various search radii before completing grade interpolation for all model cells. The search radii were specified with due regard for the geological characteristics of the deposit, grade variability along the laterite profile and the density of the exploration grid (the maximum drilling density was a 200m x 50m grid).

Given the geological features of the deposit and high variability of grade in the vertical direction, a base search ellipse of 25m x 12.5m x 1.5m was used. The first search ellipse employed the base search parameters. The second and the subsequent interpolation runs up to the fourth run used a multiplier to the search axes, which was started from 2 and incremented by 1. The search ellipse was relatively flat in order to model the high vertical variability of the grades in the deposit's laterite profile. The model cells that did not receive grades from the first four runs were then estimated using radii incremented by 5 and 10 for the last two runs. When model cells were estimated using radii not exceeding three dimensions of the base search, a restriction of at least three samples from at least two drill holes was applied to increase the reliability of the estimates.

#### Interpolation parameters:

Interpolation method	Ordinary Kriging		
Search radii	Equal to block size dimension (25 x 12.5 x 1.5 m)	Search radii not exceeding (150 x 75 x 9 m)	Greater than (150 x 75 x 9 m)
Minimum number of samples	1	2	1
Maximum number of samples	1	12	12
Minimum number of drillholes	1	2	1

The blocks were interpolated using only assay composites restricted by the wireframe models and which belonged to a corresponding wireframe, i.e. each wireframe was estimated individually with hard boundaries.

The IDW2 algorithm was used to compare with the kriged grades and provide support to the estimate. Both IDW2 and OK processes used the same search ellipse parameters.

De-clustering was performed during the interpolation process by using four sectors within the search neighborhood. Each sector was restricted to a maximum of three points. The maximum combined number of samples allowable for the interpolation was therefore 12. Change of support was honoured by discretizing to 5-points x 5-points x 5-point kriged estimates. The point estimates are simple averages of the block estimates.

All tonnages reported are on a dry tonnes basis. A dry bulk density of 1.50t/m<sup>3</sup> was used at Goblin Prospect. In-situ bulk density and moisture content were determined by an eight-hole drilling program carried out in June 2017 using a sonic drill rig. Six holes were drilled at Mt Thirsty and two at Mission Sill. Mineralisation at Goblin is similar in geology, mineralogy and cobalt grade to that at Mt Thirsty and Mission Sill, and it is considered appropriate to use the same values.

Dry density values only from samples with greater than 400 ppm cobalt as this was the cut-off grade used to define the mineralised wireframe for cobalt.

The two Mission Sill holes provided (n=54) an average dry bulk density value of 1.48 t/m<sup>3</sup> and moisture content of 32.5%. Results for Mt Thirsty were an average dry bulk density value of 1.50 t/m<sup>3</sup> and moisture content of 26.1% (n=150).

## **Resource Classification**

The Mineral Resource has been classified as Inferred in accordance with guidelines contained in the JORC Code (2012 Edition). Existing data is believed to be sufficient to imply but not verify geological and grade continuity. Key criteria that have been considered when classifying the Mineral Resource are detailed in JORC Table 1 which is contained in Appendix 2.

## **Cut-Off Grade**

Statistical analysis was completed for cobalt grades in order to determine the natural cut-off grade for all mineralised zones combined. Classical statistical analysis of cobalt grades demonstrated several populations. Based on the results of the classical statistical analysis, interpretation of cobalt mineralisation using 200 ppm and 400 ppm cobalt cut-off grades that indicate the presence of a lower grade domain at 200 ppm cobalt and higher-grade domains at 400 ppm cobalt.

All composited drill hole data within the interpreted cobalt mineralisation envelope was selected to determine if top-cuts were required. Histograms, log probability plots and coefficient of variation (COV) values were reviewed with the aim of determining if there were any very high-grade sample results that had the potential to bias block model estimates. The review indicated that no top-cuts were required (COV 200ppm Co = 0.76, COV 400ppm Co = 0.56).

## **Mining and Metallurgical Methods and Parameters and Other Modifying Factors**

Any potential future mining will be by open pit methods. It has been assumed that the full strike length, width and depth of the modelled mineralization can be economically mined because the maximum depth of modelled mineralization zone is not likely to exceed 100m.

Metallurgical test work on samples from the Norseman Project of similar mineralogy and Co grade have shown that the Co can potentially be economically extracted.

The current focus of studies is on the beneficiation potential of the mineralisation. Work to date supports up to three times cobalt upgrade from 0.1% to 0.28% with 73% of material rejected as low-grade waste (ASX Announcement - 10<sup>th</sup> August, 2018). Additional beneficiation results are listed in ASX announcement dated 16<sup>th</sup> October 2018.

Concept level studies carried out in 2013 on bulk samples from Mount Thirsty by the consulting and professional services provider, RMDSTEM Limited, showed that Co extractions up to 80% could be obtained by a process of agitated vat leaching using SO<sub>2</sub> as a reagent. SO<sub>2</sub> selectively disassociates the Mn oxides in the ore, freeing the contained Co into solution. Iron oxides and saprolitic silicates are not dissolved, thus their contained Ni does not report to solution. Updated metallurgical results showing cobalt extractions from concentrate samples over 90% and nickel extractions over 60% are available in ASX announcement dated 4<sup>th</sup> December 2018.



## Appendix 2:

### Galileo Mining Ltd – Norseman Cobalt Project

#### JORC Code, 2012 Edition – Table 1 Report

##### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation (RC) drilling, was used to obtain 1 metre interval individually bagged chip samples for all resource holes. 1m samples were bagged directly from the rig mounted cyclone-cone splitter chute.</li> <li>Representative samples for laboratory analysis were collected as 3-metre composites. Each RC bag for the 1 metre drill interval sample was sampled into a series of 3-metre composite samples using a 50-millimetre diameter PVC spear to derive a representative 3-metre composite sample of 2-3kg weight for laboratory analyses. In the case of wet clay samples, grab samples were taken from the sample return bag.</li> <li>QAQC standards (certified pulp blank &amp; pulp reference) and field duplicate samples were included routinely at a rate of 1 per 20 samples.</li> <li>Samples were sent to an independent commercial assay laboratory – Intertek-Genalysis Kalgoorlie for preparation and Intertek-Genalysis Perth for sample digest and assay.</li> <li>All assay sample preparation comprised oven drying, jaw crushing, splitting to less than/equal to 3 kilogram of sample for pulverising and splitting to derive a representative assay charge pulp.</li> <li>A 4-acid digest (HNO<sub>3</sub>, HClO<sub>4</sub>, HF) was used for a multi-element analysis suite including Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W, Zn by ICP-MS or ICP-OES for all samples.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>RC drilling was undertaken using a 5 ½ inch (140mm) drill bit.</li> <li>A combination of face sampling blade and hammer bits were used as required by ground conditions and drill ground penetration requirements during the drilling of each hole.</li> <li>Drilling services were provided by Red</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> <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>	<p>Rock Drilling Pty Ltd.</p> <ul style="list-style-type: none"> <li>RC chip sample recoveries are visually estimated for each metre with poor recovery or wet samples recorded in drill and sample log sheets.</li> <li>The sample cyclone was routinely cleaned at the end of each 6m rod, between each drill hole and when deemed necessary by the driller or geologist supervising the drilling operations.</li> <li>Galileo employee geologists supervised all drilling.</li> <li>No relationship has been determined between sample recoveries and grade and there is insufficient data to determine if there is a sample bias.</li> </ul>
Logging	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Geological logging of drill holes included lithology, regolith unit, grainsize, mineralogy, colour and weathering.</li> <li>Logging of drill chips is qualitative and based on the presentation of the 1m samples in the chip trays.</li> <li>A selection of drill material representative of each metre drilled was collected into chip-trays for logging and retained for future reference.</li> <li>All drill holes were logged in their entirety.</li> <li>Magnesium content of the assay samples was utilised for regolith/geological domaining between upper saprolite, lower saprolite and saprock/fresh rock domains in the resource model.</li> <li>Comparison between regolith/geological logging and magnesium assay derived domains correlated well.</li> <li>The magnesium content utilised to determine the regolith/geological domains was; <ul style="list-style-type: none"> <li><b>Upper Saprolite:</b> magnesium <math>\leq 3\%</math></li> <li><b>Lower Saprolite:</b> magnesium <math>&gt;3\%</math> &amp; <math>\leq 8\%</math></li> <li><b>Saprock:</b> magnesium <math>&gt;8\%</math></li> </ul> </li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>All RC drill assay samples were collected using a 50-millimetre diameter PVC spear to derive 3m composites of 2-3kg target weight from the 1m bagged samples. Other composites of 2m and individual 1m samples were collected</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>appropriateness of the sample preparation technique.</i></p> <ul style="list-style-type: none"> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>where required ie, at the bottom of hole.</p> <ul style="list-style-type: none"> <li>• The samples were dried and pulverised before analysis.</li> <li>• QAQC reference samples and duplicates were routinely submitted with each batch at a frequency of 1 per 20 samples.</li> <li>• The sample size is considered appropriate for the mineralisation style, application and analytical techniques used.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC drill assay samples were analysed for a multi-element suite (33 or 44 element suites) by ICP-MS or ICP-OES following a four-acid (HNO<sub>3</sub>, HClO<sub>4</sub>, HF) digest was used for a multi-element analysis suite including Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W, Zn by ICP-MS or ICP-OES for all samples (4A/OE33 and 4A/MS48).</li> <li>• Samples were sent to an independent commercial assay laboratory – Intertek-Genalysis Kalgoorlie for preparation and Intertek-Genalysis Perth for sample digest and assay.</li> <li>• All assay sample preparation comprised oven drying, jaw crushing, splitting to less than/equal to 3 kilogram of sample for pulverising and splitting to derive a representative assay charge pulp.</li> <li>• The assay methods used are considered appropriate however cannot be considered a “complete digest”, as such SiO<sub>2</sub> assay data is not available and requires additional sampling and assaying.</li> <li>• QAQC standards and duplicates were routinely included at a rate of 1 per 20 samples.</li> <li>• Further internal laboratory QAQC procedures included internal batch standards and blanks.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Field data was collected on site using a standard set of logging templates entered directly into a laptop. Data was then sent to the Galileo database manager for validation and upload into the database.</li> <li>• Assays reported from the laboratory and stored in the Company database have not been adjusted in any way.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Location of data points</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Drill hole collars are surveyed with a handheld GPS with an accuracy of +/- 5m which is considered enough for drill hole location accuracy.</li> <li>• Co-ordinates are recorded in MGA94 Datum, Zone 51.</li> <li>• Topographic control has a resolution of 1m derived from a DTM developed and supplied by Geoimage Pty Ltd from the processing of Worldview-2 and Worldview-3 satellite imagery.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Drill hole spacing for the individual drill holes was based on a 200m by 50m grid pattern.</li> <li>• Drilling on a 200m by 50m grid pattern is considered adequate to establish an inferred resource based on the style of mineralisation intercepted.</li> <li>• Drill holes were sampled on a 3m composite basis or as 1m or 2m samples at the end of the hole as required. Where anomalous values are returned 1m samples may be submitted for assay.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• It is unknown whether the orientation of sampling achieves unbiased sampling of possible structures as the mineralisation is hosted in soft regolith material with no measurable structures recorded.</li> <li>• The mineralisation occurs in highly weathered regolith material and no structures have been recorded from drilling.</li> <li>• Given the nature of mineralisation it is thought that the geometry is best described as horizontal or sub-horizontal however no quantitative measurements exist and all drill intercepts are reported as down hole length, true width unknown.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Each sample was put into a tied off calico bag and then several placed in a large plastic "polyweave" bag which was zip tied closed. For transport, samples were placed on wooden pallets inside plastic "polyweave" "Bulk Bags" ensuring no loss of material.</li> <li>• Samples were delivered directly to the laboratory in Kalgoorlie by Galileo's freight contractor (P&amp;L Hogan transport).</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Internal continuous improvement reviews of sampling techniques and procedures are ongoing. Galileo has</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>conducted internal review of sampling techniques relating to resultant exploration datasets.</p> <ul style="list-style-type: none"> <li>External review of the exploration data has been conducted as part of the independent Resource Estimate process, the subject of this release. The dataset was determined by the Competent Person for this review as acceptable for resource estimation at an Inferred classification.</li> <li>No laboratory audit has been performed of the Intertek-Genalysis Laboratory sites at Kalgoorlie and Perth.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The Norseman Cobalt Project comprises two granted exploration licenses and twelve granted prospecting licenses covering 270km<sup>2</sup>, and 9 prospecting license applications covering 11 km<sup>2</sup>.</li> <li>The Goblin Prospect is located on E63/1764 and P63/2053.</li> <li>All tenements within the Norseman Cobalt Project are 100% owned by Galileo.</li> <li>The Norseman Cobalt Project is centred around a location approximately 10km west of Norseman on vacant crown land.</li> <li>All tenements in the Norseman Cobalt Project are 100% covered by the Ngadju Native Title Determined Claim.</li> <li>The tenements are in good standing and there are no known impediments.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>NA</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The target geology and mineralisation style are supergene cobalt-nickel mineralisation occurring within highly weathered regolith material.</li> <li>The underlying unweathered lithology is dominated by ultramafic to mafic intrusive and volcanic, typically orthocumulate to mesocumulate peridotite and pyroxenite rocks. Variable serpentinization has been recorded where fresh rock has been encountered.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Cobalt mineralisation is most consistently developed in the lower saprolite, at, and immediately beneath, the upper to lower saprolite boundary. This position represents the position of a palaeo-water table. Cobalt mineralisation has an association with the development of manganese oxide accumulations.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><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> <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> </li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Refer to drill hole collar table included in this report as Table 5 for the location of drill holes completed at the Goblin Prospect as used for the Mineral Resource Estimate.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Weighted averaging has been used, based on the sample interval, for the reporting of drilling results.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation occurs in highly weathered regolith material and no structures have been recorded from drill core.</li> <li>Given the nature of mineralisation it is thought that the geometry is best described as horizontal or sub-horizontal however no quantitative measurements exist and all drill intercepts are reported as down hole length, true width unknown.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Project location map and plan map of the resource with respect to the metallurgical holes drilled has been included along with accurate hand-held GPS drill hole collar location (Garmin GPS 78s) +/- 5m in X/Y/Z dimensions.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Not applicable to this report. All figures previously reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All meaningful and material results have previously been reported.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg 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 style="list-style-type: none"> <li>Intervals of anomalous cobalt composite sample assay results may be sent for analysis on a 1m sample interval basis.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Galileo employed a robust procedure for the collection and storage of sample data. This included auto-validation of sample data on entry, cross checking of sample batches between laboratory and the database and regular auditing of samples during the exploration phase.</li> <li>Sample numbers were recorded both manually and entered automatically. Discrepancy within batches were field checked at the time of data entry (daily) and resolved following field inspection.</li> <li>Logging information was originally recorded in Geobank Mobile software in the field then exported into Microsoft Excel or CSV format and sent to CSA Global's Database Specialist once the log was complete.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Laboratory results and drill hole data were supplied electronically to CSA Global's Database Specialist whom loaded the data straight into the Datashed Database and validated using the in-built validation procedures.</li> <li>CSA Global reviewed the set of data of the drilling information compiled for the Goblin Prospect. The data was stored in a Datashed database hosted with CSA Global and exported in Microsoft Excel format. The database supplied was dated 30th October 2018. This is the most recent version of the database available at the time of this Mineral Resource estimate.</li> <li>Data validation procedures included digital validation checks for errors using in-built routines to highlight the following errors: Duplicate drill hole names, one or more drill hole collar coordinate missing in the collar file, FROM or TO data missing or absent in the assay file, FROM &gt; TO in the assay file, Sample intervals not contiguous in the assay file (gaps exist between assays), Sample intervals overlap in the assay file, First sample is not equal to 0m in the assay file, First depth is not equal to 0m in the survey file, Several downhole survey records exist for the same depth, Azimuth not between 0° and 360° in the survey file, Dip is not between 0° and 90° in the survey file, Azimuth or dip is missing in the survey file, Total depth of the holes is less than the depth of the last sample.</li> <li>At the time of resource modelling all data was visually checked on screen and manually validated and reconciled against field notes. All changes to the database have been verified by field checks, including drill hole collar validation, prior to completion of the Mineral Resource estimate.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li><i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person, Brad Underwood, is a current employee of Galileo Resources Ltd and has visited all of the Norseman Project's prospect areas.</li> <li>A CSA Global representative visited the Norseman Cobalt Project in July 2017. Drilling and sampling operations were observed on the Project site and the site access road from Norseman. The work</li> </ul>

Criteria	JORC Code explanation	Commentary
Geological Interpretation	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternate interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity\ both of grade and geology.</i></li> </ul>	<p>completed was considered to be acceptable for the purpose of Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>• There is a strong correlation between the geology of adjacent drill holes in all of the resource. There is also a strong global correlation between weathering profile, lithology and mineralisation intensity.</li> <li>• There is good confidence overall in the geological model, this is supported by the estimation of higher confidence resources where increased drilling data densities which support the geological model, at the nearby Mt Thirsty and Mission Sill and Mission Sill South Mineral Resource estimates (ASX release 25 May 2018).</li> <li>• Interpretation was carried out interactively over 14 vertical cross sections oriented east-west from the south to the north through the laterite profile of the deposit. The geological concept of laterite profiles formed the basis for the interpretation. The laterite profile was divided into three horizons based on magnesium content as determined by assay. The magnesium content reflects the intensity of weathering as it relates to depletion of magnesium with increased weathering intensity. The magnesium assay criteria used to divide the regolith profile are noted below; <ul style="list-style-type: none"> <li>• Upper Saprolite: magnesium <math>\leq 3\%</math></li> <li>• Lower Saprolite: magnesium <math>&gt;3\%</math> &amp; <math>\leq 8\%</math></li> <li>• Saprock: magnesium <math>&gt;8\%</math></li> </ul> </li> <li>• Geological logging of drill holes included lithology, regolith unit, grain size, mineralogy, colour and weathering on a qualitative basis based on the presentation of the 1m samples in the chip trays. Comparison between regolith/geological logging and magnesium assay derived horizons correlated well.</li> <li>• The primary method for geological interpretation utilised the modelling of the boundaries between horizons as Digital Terrain Models (DTMs). These boundaries reflect the geology of the deposit with each interpreted section</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>comprising;</p> <ul style="list-style-type: none"> <li>• The surface line passing through each drill collar.</li> <li>• The line representing the boundary between upper saprolite and lower saprolite.</li> <li>• The line representing the boundary between the lower saprolite and saprock.</li> <li>• The overall continuity of mineralisation is strongly controlled by bed rock composition, and palaeo-water flow within the ultramafic host units. The presence of underlying structure and the degree of regolith profile preservation appear to exert controls on the intensity, thickness and continuity of mineralisation.</li> <li>• The mineralised envelopes for the Goblin Prospect were based on drill intercepts of 200ppm Co cut-off grade for the low-grade Co mineralised bodies and interpretation of the high-grade Co mineralised bodies was based on 400ppm.</li> </ul> <p>Grade composites were generated using the following parameters;</p> <ul style="list-style-type: none"> <li>• Cut-off grade: 200ppm Co; 400ppm Co</li> <li>• Minimum composite length: 3m</li> <li>• Maximum grade of final composite: 200ppm Co; 400ppm Co</li> <li>• Maximum total length of waste: Not limited</li> <li>• Maximum consecutive length of waste: 10m</li> <li>• Maximum gap between samples: 10m</li> <li>• Minimum grade length for short intervals: 400ppm*m cobalt; 800ppm*m cobalt.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<p>The total length of the Goblin Prospect cobalt mineralisation domains is 2,650 metres and widths ranging between 100 metres and 500 metres.</p> <p>Mineralisation zones observed are of variable thicknesses typically in the range of 1 to 36 metres thick and an average of 15.5 meters thick.</p>

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	<ul style="list-style-type: none"> <li><i>The nature and appropriateness of the estimation technique(s) applied and any key assumptions including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding the recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions made behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>Block modelling was undertaken using Micromine 2018 software (version 18.0.846.3 x64).</li> <li>Two sets of empty block models were initially created for each domain (200 ppm cobalt and 400 ppm cobalt). All models were flagged according to their type and wireframe name. This flagging was subsequently used to interpolate grades separately for each domain and to exclude “contamination” with grades from adjacent bodies.</li> <li>After coding, the models were combined by superimposing the model of the 200ppm cobalt mineralisation onto the model of 400 ppm cobalt mineralisation. After this, the model was consecutively coded by digital terrain models of the zones in the same order as the deposit samples. Sequential use of digital wireframe surface models resulted in a block model bound by wireframe models and coded by occurrence within one of the three zones of the laterite profile, that is, upper saprolite, lower saprolite or saprock.</li> <li>Co, Ni, Mg, Fe, Mn, Al, Cr, Ti and Zn grades were interpolated into the empty block model using Ordinary Kriging (OK). The Inverse Distance Weighted (IDW) method with the power of two (IDW2) was used to support and validate the kriged estimates.</li> <li>Element grades were interpolated into the empty block model in several stages. Firstly, the interpolation was conducted for the blocks that fell within the boundaries of the cobalt 400ppm mineralisation envelope and then for blocks falling within the bounds of the cobalt 200ppm mineralisation envelope and outside of the cobalt 400ppm mineralisation. Models and assay data unfolded onto a horizontal plane were used for interpolation. Each lithological horizon and grade were estimated separately.</li> <li>The Ordinary Kriging process was carried out for various search radii before completing grade interpolation for all model cells. The search radii were specified with due regard for the geological characteristics of the deposit,</li> </ul>

Criteria	JORC Code explanation	Commentary																				
		<p>grade variability along the laterite profile and the density of the exploration grid (the maximum drilling density was a 200m × 50m grid).</p> <ul style="list-style-type: none"><li>Given the geological features of the deposit and high variability of grade in the vertical direction, a base search ellipse of 25m × 12.5m × 1.5m was used. The first search ellipse employed the base search parameters. The second and the subsequent interpolation runs up to the fourth run used a multiplier to the search axes, which was started from 2 and incremented by 1. The search ellipse was relatively flat in order to model the high vertical variability of the grades in the deposit's laterite profile. The model cells that did not receive grades from the first four runs were then estimated using radii incremented by 5 and 10 for the last two runs. When model cells were estimated using radii not exceeding three dimensions of the base search, a restriction of at least three samples from at least two drill holes was applied to increase the reliability of the estimates.</li></ul> <p>Interpolation parameters:</p> <table><tr><th>Interpolation method</th><td colspan="3">Ordinary Kriging</td></tr><tr><th>Search radii</th><td>Equal to block size dimension (25 x 12.5 x 1.5 m)</td><td>Search radii not exceeding (150 x 75 x 9 m)</td><td>Greater than (150 x 75 x 9 m)</td></tr><tr><th>Minimum number of samples</th><td>1</td><td>2</td><td>1</td></tr><tr><th>Maximum number of samples</th><td>1</td><td>12</td><td>12</td></tr><tr><th>Minimum number of drillholes</th><td>1</td><td>2</td><td>1</td></tr></table> <ul style="list-style-type: none"><li>The blocks were interpolated using only assay composites restricted by the wireframe models, and which belonged to a corresponding wireframe, i.e. each</li></ul>	Interpolation method	Ordinary Kriging			Search radii	Equal to block size dimension (25 x 12.5 x 1.5 m)	Search radii not exceeding (150 x 75 x 9 m)	Greater than (150 x 75 x 9 m)	Minimum number of samples	1	2	1	Maximum number of samples	1	12	12	Minimum number of drillholes	1	2	1
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Criteria	JORC Code explanation	Commentary
		<p>wireframe was estimated individually with hard boundaries.</p> <ul style="list-style-type: none"> <li>The IDW<sup>2</sup> algorithm was used to compare with the kriged grades and provide support to the estimate. Both IDW<sup>2</sup> and OK processes used the same search ellipse parameters.</li> <li>De-clustering was performed during the interpolation process using four sectors within the search neighbourhood. Each sector was restricted to a maximum of three points. The maximum combined number of samples allowable for the interpolation was therefore 12. Change of support was honoured by discretising to 5-point x 5-point x 5-point kriged estimates. These point estimates are simple averages of the block estimates.</li> </ul> <p>Validation of the Goblin grade estimate was completed by:</p> <ul style="list-style-type: none"> <li>Visual checks on-screen in sectional view to ensure that block model grades honour the general grade tenor of downhole composites</li> <li>Generation of swath plots to compare input and output grades in a semi-local sense, by easting, northing and elevation.</li> <li>Comparison of the block model volume with the combined wireframe volume.</li> <li>Visual validation of block grades against input grades in each area confirming that the block model reflects the grade tenor of the input composites.</li> <li>Statistical validation histograms and probability plots generated for composites and block model grades as a validation exercise showed similar distributions.</li> <li>Swath plots were reviewed and showed that the distribution of block grades honours the distribution of input</li> </ul>

Criteria	JORC Code explanation	Commentary
		composite grades. A degree of smoothing evident was evident but was expected due to the change in support between a sample volume and a block volume. Smoothing is particularly evident in areas of wide-spaced sampling where the number of composites is relatively low. The general trend in the composites is reflected in the block model.
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>All tonnages reported are on a dry tonne's basis.</li> <li>In-situ bulk density and moisture content were determined by an eight-hole drilling program carried out in June 2017 using a sonic drill rig. Six holes were drilled at Mt Thirsty and two at Mission Sill. Mineralisation at Goblin is similar in geology, mineralogy and Co grade to that at Mt Thirsty and Mission Sill, and it is considered appropriate to use the same values.</li> <li>Dry density values only from samples with greater than 400 ppm cobalt as this was the cut-off grade used to define the mineralised wireframe for cobalt.</li> <li>The two Mission Sill holes provided (n=54) an average dry bulk density value of 1.48 t/m<sup>3</sup> and moisture content of 32.5%.</li> <li>Results for Mt Thirsty were an average dry bulk density value of 1.50 t/m<sup>3</sup> and moisture content of 26.1% (n=150).</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or the quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Statistical analysis was completed for cobalt grades in order to determine the natural cut-off grade for all mineralised zones combined.</li> <li>Classical statistical analysis of cobalt grades demonstrated several populations. Based on the results of the classical statistical analysis, interpretation of cobalt mineralisation using 200 ppm and 400 ppm cobalt cut-off grades that indicate the presence of a lower grade domain at 200 ppm cobalt and higher-grade domains at 400 ppm cobalt.</li> <li>All composited drill hole data within the interpreted cobalt mineralisation envelope was selected to determine if top-cuts were required. Histograms, log probability plots and coefficient of variation (COV) values were reviewed</li> </ul>

Criteria	JORC Code explanation	Commentary
		with the aim of determining if there were any very high-grade sample results that had the potential to bias block model estimates. The review indicated that no top-cuts were required (COV 200ppm Co = 0.76, COV 400ppm Co = 0.56).
Mining factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution.</li> <li>It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person deems that there are reasonable prospects for eventual economic extraction on the following basis:</li> <li>The mineralisation contains high Co grades over a considerable strike length.</li> <li>The mineralisation is close to surface and much of the model is amenable to open-pit mining.</li> <li>There is a potential to increase the Mineral Resource with additional drilling.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects of eventual economic extraction to consider the potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resource may not always be rigorous. Where this is the case this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person deems that there are reasonable prospects for eventual economic extraction with respect to the following metallurgical basis:</li> <li>Metallurgical test work on samples from the Norseman Project of similar mineralogy and Co grade have shown that the Co can potentially be economically extracted.</li> <li>The current focus of studies is on the beneficiation potential of the mineralisation. Work to date supports up to three times cobalt upgrade from 0.1% to 0.28% with 73% of material rejected as low-grade waste (ASX Announcement - 10<sup>th</sup> August, 2018).</li> <li>Concept level studies carried out in 2013 on bulk samples from Mount Thirsty by the consulting and professional services provider, RMDSTEM Limited, showed that Co extractions up to 80% could be obtained by a process of agitated vat leaching</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>using SO<sub>2</sub> as a reagent. SO<sub>2</sub> selectively disassociates the Mn oxides in the ore, freeing the contained Co into solution. Iron oxides and saprolitic silicates are not dissolved, thus their contained Ni does not report to solution. Consequently, Ni recoveries are low, at about 25%.</p> <ul style="list-style-type: none"> <li>The results of work done to date are sufficiently encouraging to warrant continuing process development to confirm reasonable prospects for eventual economic extraction in respect of mineralisation of the type developed at the Goblin Prospect.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li><i>Assumption made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects of eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for greenfields projects may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>Given the early stage of this project, no environmental assumptions have been made.</li> </ul>
Bulk Density	<ul style="list-style-type: none"> <li><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the of the measurements, the nature size and representativeness of the samples.</i></li> <li><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differenced between rocks and alteration zones within the deposit.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>Density values in the block models was applied by direct assignment of the bulk density value of 1.50t/m<sup>3</sup> values to all model blocks.</li> <li>The <i>in-situ</i> bulk density and moisture content used for the Goblin Resource was determined from data derived from an eight-hole drilling program carried out in June 2017 using a sonic drill rig. This program comprised six holes at the Mt Thirsty Prospect and two at the Mission Sill Prospect. Mineralisation at Goblin is similar in geology, mineralogy and Co grade to that at Mt Thirsty and Mission Sill, it is therefore considered appropriate to use the same values. It was decided to use dry density values only from samples with greater than 400 ppm Co, as this was the cut-off grade used to define the mineralised wireframe for Co.</li> <li>The two Mission Sill holes provided 54 density determinations under this</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>criterion, with an average dry bulk density value of 1.48 t/m<sup>3</sup> and moisture content of 32.5%. Comparative results for 150 samples at Mt Thirsty provided an average dry bulk density value of 1.50 t/m<sup>3</sup> and moisture content of 26.1%. The combined dataset derived the value of 1.50 t/m<sup>3</sup> for both areas and this value was then applied at the Goblin Prospect.</p>
Classification	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource has been classified as Inferred in accordance with guidelines contained in the JORC Code (2012 Edition). Existing data is believed to be sufficient to imply but not verify geological and grade continuity.</li> <li>• With respect to tonnage estimations, although density determinations appeared to be relatively closely clustered around the mean (about 70% of samples were between 1.3t/m<sup>3</sup> and 1.65t/m<sup>3</sup>) for mineralised Co material (&gt;400ppm Co), CSA Global has recommended that all lithology types at the deposit be sampled for bulk density determination to increase the reliability of estimation of the deposit's tonnage and to, in part, enable upgrade of the resource classification.</li> <li>• The model and sample composite files were unfolded before geostatistical analysis and grade interpolation and the main axes of semi variograms were made horizontal.</li> <li>• All variograms were calculated and modelled for the composited sample file constrained by the corresponding mineralised envelopes. The geostatistical analysis was carried out cobalt only. Cobalt was analysed only for samples that fell into the boundaries of 200 ppm Co mineralisation envelope.</li> <li>• Relative semi-variograms were created based on initial 3 metre intervals.</li> <li>• It is considered that the results appropriately reflects the Competent Persons view of the deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
Audit or reviews	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate. No external audit of the CSA Global MRE has been undertaken.</li> </ul>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relative tonnages, which should be relevant to the technical and economic evaluation.</i></li> <li><i>Documentation should include assumptions made and procedures used.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been classified as Inferred in accordance with guidelines contained in the JORC Code (2012 Edition). Existing data is believed to be sufficient to imply but not verify geological and grade continuity.</li> <li>The resource as reported for the Goblin block model provides reasonable global estimates of the available cobalt and nickel resources.</li> </ul>

**Table 5: Drill Collars used in the Goblin Mineral Resource Estimate**

Hole_ID	Easting (MGA94Z51)	Northing (MGA94Z51)	RL	Dip	Azimuth	End Depth	Diameter (mm)
NRC080	371948	6445893	395	-90	Vertical	66	140
NRC081	371847	6445909	389	-90	Vertical	83	140
NRC082	371800	6445905	385	-90	Vertical	72	140
NRC083	371743	6445898	385	-90	Vertical	78	140
NRC084	371709	6445901	383	-90	Vertical	79	140
NRC085	371628	6445889	379	-90	Vertical	66	140
NRC086	371559	6445909	375	-90	Vertical	68	140
NRC087	371450	6445896	372	-90	Vertical	63	140
NRC088	371500	6445735	372	-90	Vertical	81	140
NRC089	371570	6445751	375	-90	Vertical	66	140
NRC090	371662	6445754	382	-90	Vertical	76	140
NRC091	371704	6445749	382	-90	Vertical	66	140
NRC092	371747	6445750	386	-90	Vertical	60	140
NRC093	371792	6445754	386	-90	Vertical	48	140
NRC094	371845	6445757	391	-90	Vertical	42	140

NRC095	371866	6445596	392	-90	Vertical	36	140
NRC096	371644	6445599	378	-90	Vertical	42	140
NRC097	371479	6445403	379	-90	Vertical	48	140
NRC098	371554	6445403	382	-90	Vertical	54	140
NRC099	371602	6445400	385	-90	Vertical	48	140
NRC100	371652	6445398	385	-90	Vertical	36	140
NRC101	371705	6445397	390	-90	Vertical	42	140
NRC102	371729	6445401	390	-90	Vertical	42	140
NRC103	371845	6445406	398	-90	Vertical	36	140
NRC104	371809	6445397	392	-90	Vertical	42	140
NRC105	371545	6445208	385	-90	Vertical	48	140
NRC106	371601	6445195	389	-90	Vertical	60	140
NRC107	371638	6445205	389	-90	Vertical	48	140
NRC108	371794	6445208	395	-90	Vertical	60	140
NRC109	371737	6445198	390	-90	Vertical	48	140
NRC110	371708	6445198	390	-90	Vertical	48	140
NRC111	371503	6444996	386	-90	Vertical	42	140
NRC112	371548	6445004	389	-90	Vertical	48	140
NRC113	371631	6445007	390	-90	Vertical	72	140
NRC114	371658	6445014	390	-90	Vertical	60	140
NRC115	371707	6445004	395	-90	Vertical	60	140
NRC116	371755	6445004	399	-90	Vertical	60	140
NRC117	371802	6445000	399	-90	Vertical	60	140
NRC118	371554	6444808	389	-90	Vertical	54	140
NRC119	371455	6444801	386	-90	Vertical	54	140
NRC120	371457	6444594	388	-90	Vertical	42	140
NRC121	371522	6444596	392	-90	Vertical	31	140
NRC122	371553	6444600	392	-90	Vertical	30	140
NRC123	371606	6444594	399	-90	Vertical	36	140
NRC124	371653	6444596	399	-90	Vertical	66	140
NRC125	371707	6444595	403	-90	Vertical	67	140
NRC126	371728	6444589	403	-90	Vertical	47	140
NRC127	371813	6444589	402	-90	Vertical	42	140
NRC128	371799	6444404	411	-90	Vertical	56	140
NRC129	371737	6444397	406	-90	Vertical	66	140
NRC130	371697	6444401	406	-90	Vertical	60	140
NRC131	371636	6444400	402	-90	Vertical	66	140
NRC132	371656	6444196	399	-90	Vertical	60	140
NRC133	371707	6444200	404	-90	Vertical	54	140
NRC134	371770	6444196	411	-90	Vertical	36	140
NRC135	371789	6444195	411	-90	Vertical	47	140
NRC136	371738	6443996	402	-90	Vertical	48	140
NRC137	371689	6443993	402	-90	Vertical	48	140
NRC219	371388	6444805	383	-90	Vertical	12	140
NRC220	371494	6444803	383	-90	Vertical	18	140
NRC221	371592	6444801	394	-90	Vertical	26	140
NRC222	371648	6444796	393	-90	Vertical	30	140



NRC223	371695	6444806	394	-90	Vertical	18	140
NRC224	371751	6444803	396	-90	Vertical	12	140
NRC225	371800	6444799	396	-90	Vertical	18	140
NRC226	371861	6444801	400	-90	Vertical	23	140
NRC227	371595	6444200	393	-90	Vertical	24	140
NRC228	371555	6443804	329	-90	Vertical	36	140
NRC229	371605	6443808	389	-90	Vertical	36	140
NRC230	371652	6443803	394	-90	Vertical	56	140
NRC231	371700	6443804	404	-90	Vertical	60	140
NRC232	371753	6443801	405	-90	Vertical	63	140
NRC233	371552	6443595	386	-90	Vertical	24	140
NRC234	371594	6443598	392	-90	Vertical	57	140
NRC235	371550	6443401	389	-90	Vertical	54	140
NRC236	371608	6443402	389	-90	Vertical	60	140
NRC237	371653	6443405	401	-90	Vertical	62	140
NRC238	371700	6443400	402	-90	Vertical	61	140