

## **ASX ANNOUNCEMENT**

12 June 2018

ASX Code: **SBR**

# **RESOURCE ESTIMATE UPDATE FOR THE SHERLOCK BAY NICKEL-COPPER-COBALT DEPOSIT**

## **HIGHLIGHTS**

- The Sherlock Bay nickel-copper-cobalt deposit resource estimate has been updated and restated in compliance with the JORC Code (2012)
- The deposit contains total Measured, Indicated and Inferred Resources (Table 1) of:  
**24.6 Mt grading 0.4% nickel, 0.09% copper and 0.02% cobalt**
- Review and update of existing feasibility study work into the development of the deposit is continuing

The Directors of Sabre Resources Limited (ASX: SBR) are delighted to announce that the Company has completed a resource estimate update for the Sherlock Bay nickel-copper-cobalt deposit located on its Sherlock Bay Project in the Pilbara region of Western Australia (Figure 1). The resource estimate is now stated in compliance with the JORC Code (2012).

**The updated total Mineral Resource (see Table 1) is 24.6 million tonnes grading 0.4% nickel, 0.09% copper and 0.02% cobalt. The deposit contains approximately 99,200 tonnes of nickel, 21,700 tonnes of copper and 5,400 tonnes of cobalt metal.**

## **SHERLOCK BAY PROJECT**

The Sherlock Bay Project is located in the Pilbara region of Western Australia, approximately 75 km to the east of the town of Karratha and 120 km southwest of Port Hedland (Figure 1). The Project comprises a mining lease and two exploration licenses that collectively cover a total of 189 km<sup>2</sup>. The project is located in a region with excellent mining-related infrastructure and can readily be accessed via sealed highway and upgraded pastoral station tracks.

## **MINERAL RESOURCE ESTIMATE**

An updated Mineral Resource estimate has been completed for the Sherlock Bay nickel-cobalt-copper deposit in the Pilbara Region of Western Australia.

The deposit is hosted within the Archaean West Pilbara Granite-Greenstone Belt. It comprises two main lenticular lodes (termed Discovery and Symond's Well) hosted within a sub-vertical to steep north dipping chert horizon with a combined strike length of 1,600 m. Mineralised widths are variable but in the higher grade portions of the main zones can be up to 30 m and are continuous down dip in excess of 500 m in places.

The Sherlock Bay deposit was initially discovered and defined by Texas Gulf in the 1970's. Additional drilling was carried out by Sherlock Bay Nickel Corporation ("SBNC") between 2003 and 2007. The resource is now defined by a total of 201 drill holes for 31,092 m.

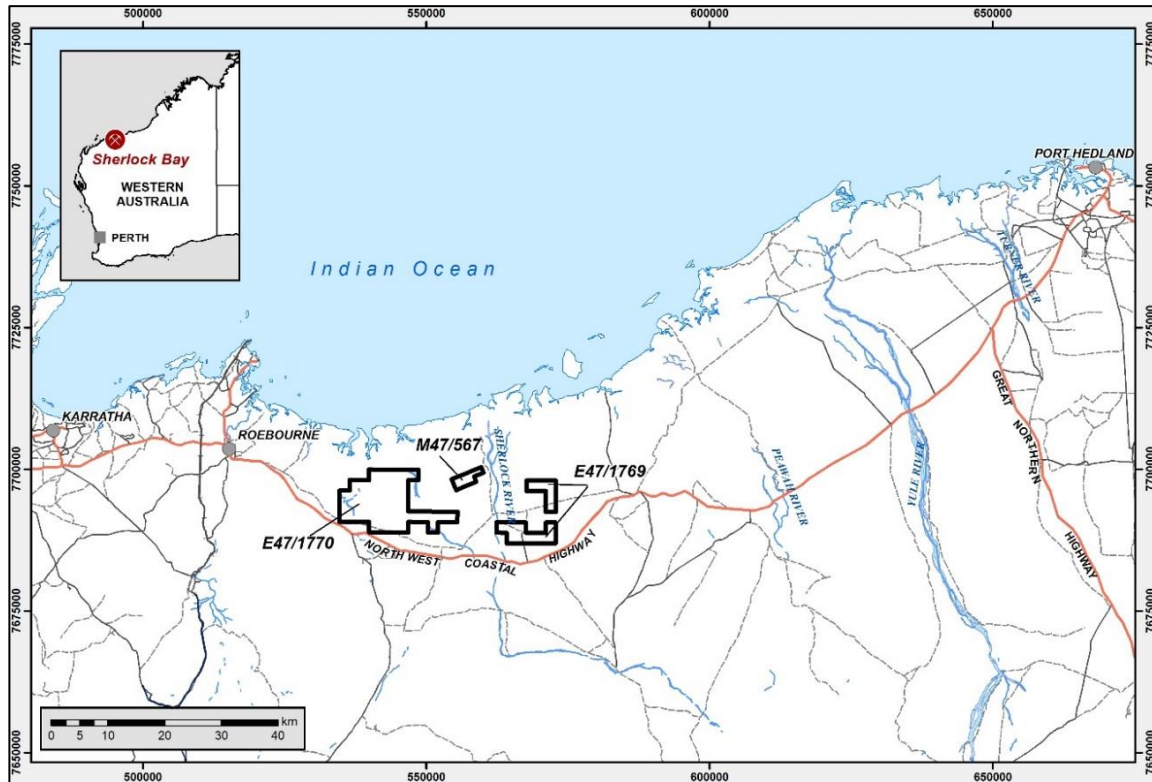


Figure 1: Location map of the Sherlock Bay Project in Western Australia

The Mineral Resources have been classified as Measured, Indicated and Inferred Mineral Resource in accordance with the JORC Code, 2012 Edition and are shown in Table 1.

Table 1: Sherlock Bay Ni Cu Co Deposit May 2018 Resource Estimate (0.15% Ni Cut-off)

Discovery Lode							
	Tonnes Mt	Ni%	Cu%	Co%	Ni t	Cu t	Co t
Measured	3.90	0.33	0.10	0.025	12,900	4,100	1,000
Indicated	6.3	0.39	0.11	0.025	24,200	6,700	1,600
Inferred	2.3	0.43	0.11	0.026	9,900	2,500	600
<b>Total</b>	<b>12.5</b>	<b>0.38</b>	<b>0.11</b>	<b>0.025</b>	<b>47,100</b>	<b>13,200</b>	<b>3,100</b>
Symond's High Grade Lode							
	Tonnes Mt	Ni%	Cu%	Co%	Ni t	Cu t	Co t
Indicated	2.80	0.56	0.08	0.022	15,600	2,300	600
Inferred	1.2	0.58	0.07	0.019	7,000	800	200
Total	2.1	0.63	0.08	0.024	13,200	1,600	500
<b>Indicated</b>	<b>6.1</b>	<b>0.59</b>	<b>0.08</b>	<b>0.022</b>	<b>35,700</b>	<b>4,700</b>	<b>1,300</b>
Symond's Low Grade Lode							
	Tonnes Mt	Ni%	Cu%	Co%	Ni t	Cu t	Co t
Measured	2.50	0.26	0.08	0.019	6,500	2,000	500
Indicated	1.7	0.26	0.05	0.013	4,400	800	200
Inferred	1.9	0.29	0.04	0.012	5,400	800	200
<b>Total</b>	<b>6.1</b>	<b>0.27</b>	<b>0.06</b>	<b>0.016</b>	<b>16,400</b>	<b>3,700</b>	<b>900</b>
Total Deposit							
	Tonnes Mt	Ni%	Cu%	Co%	Ni t	Cu t	Co t
Measured	12.48	0.38	0.11	0.025	47,100	13,200	3,100
Indicated	6.1	0.59	0.08	0.022	35,700	4,700	1,300
Inferred	6.1	0.27	0.06	0.016	16,400	3,700	900
<b>Total</b>	<b>24.6</b>	<b>0.40</b>	<b>0.09</b>	<b>0.022</b>	<b>99,200</b>	<b>21,700</b>	<b>5,400</b>

(Note that rounding discrepancies may occur in summary tables)

## RESOURCE SUMMARY

### Geology

The Sherlock Bay Ni-Cu-Co deposit is located on the Sholl Shear Zone, a major regional strike-slip fault that traverses the north-western margin of the Caines Well Granitoid Complex in the west Pilbara Craton. Much of the deposit is covered by a veneer of sheetwash sediments (average of 12 m thickness) and consists of remobilised base metal sulphides spatially associated with mafic to felsic volcanic rocks, metasedimentary rocks, and mafic-ultramafic intrusions.

The mineralised horizon is a steeply-dipping banded quartz-magnetite-amphibole schist (also referred to as a siliceous banded iron formation or amphibole-bearing chert). There is broad correlation of Ni, Cu and Co grade to sulphide content with the main species being pyrrhotite, pyrite and chalcopyrite.

### Drilling

The Sherlock Bay deposit was initially discovered and defined by Texas Gulf in the 1970's. Additional drilling was carried out by Sherlock Bay Nickel Corporation ("SBNC") between 2003 and 2007. The resource is now defined by a total of 201 drill holes for 31,092 m of which 174 holes were drilled by SBNC. The typical drill hole spacing varies from 20m by 60m spaced (RC percussion drilling) in the upper part of the deposit to 120 m by 120 m spaced diamond holes at depth. The majority of holes were drilled at 60° to grid south (Figure 2).

Drill collar locations were surveyed in local grid by licenced surveyors using total station equipment. The collars were later transformed adjusted to a regional topographic DTM. All diamond holes and most RC percussion drill holes have been down-hole surveyed using a single-shot Eastman camera.

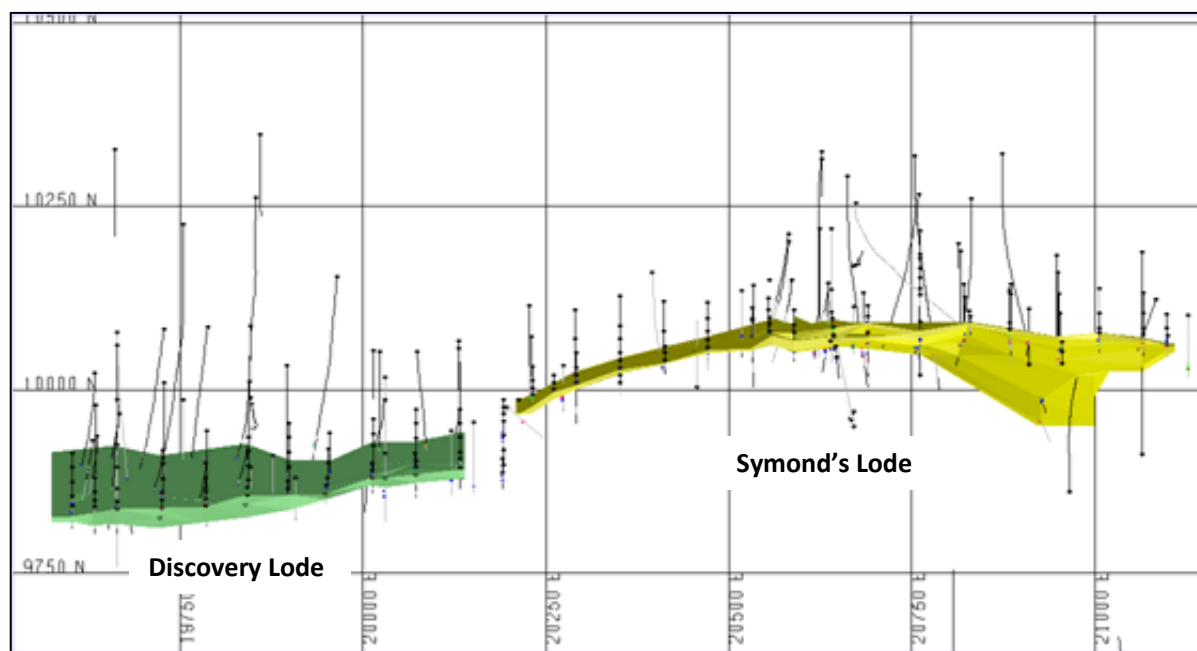


Figure 2: Plan view of the Discovery and Symond's Well Lode wireframes and drill hole traces

### Sampling and Sub-Sampling Techniques

In the RC percussion drilling, prospective intervals were sampled at 1m intervals with the remainder of the holes unsampled. The 1m samples were collected through a riffle splitter and were 2-5 kg in weight.

In SNBC diamond holes, only visually mineralised intervals were sampled to geological boundaries or 1m intervals with quarter core samples collected for analysis. Texas Gulf core holes were sampled at 1.52 m (5 feet) intervals.

### **Sample Analysis Method**

SNBC drilling samples were analysed at Aminya Laboratories using a four-acid leach and AAS analysis. AAS analysis for Ni, Cu and Co was used routinely for all phases of drilling at the project. Limited assay quality control data was available for the resource but overall, the assay data was considered to be satisfactory.

### **Estimation Methodology**

The estimate was completed using Ordinary Kriging (OK) interpolation inside a wireframe largely defined by geology and elevated Ni grades. In addition, internal high grade domain wireframes based on a 0.4% Ni outline were created within the Symonds Lode and used as hard boundaries in the interpolation process.

Interpolation parameters were based on the geometry of each zone and geostatistical parameters were determined by variography. No high-grade cuts were applied to the estimate due to the uniformly low coefficient of variation ("CV") of the Ni, Cu and Co data.

The block dimensions used in the model were based on deposit geometry and drill hole spacing. Parent block sizes used were 5m NS by 30 m EW by 10 m Z with sub-celling to 2.5 m by 15 m by 2.5 m.

Sample data was composited into 2 m intervals then block model grades estimated using ordinary kriging (OK) grade interpolation. A first pass search range of 100 m was used and oriented to match the dip and strike of the mineralisation. A minimum of 10 samples and a maximum of 24 samples were used to estimate each block. The majority of the resource (73%) was estimated in the first pass with expanded search radii of 200 m used for the blocks not estimated in the first pass.

Bulk determinations were derived using a combination of pycnometer analysis on pulverised chips, and the immersion method on drill core using volumetric flask measurements. A total of 465 data points from 21 drill holes were available for analysis. This demonstrated a bulk density for fresh mineralisation of 3.05 t/m<sup>3</sup> above 500 m depth. The very small amount of transitional mineralisation used an assumed density of 2.70 t/m<sup>3</sup>.

### **Mineral Resource Classification**

The Mineral Resources was classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012).

The portion of the deposit defined by 20 m spaced drill holes on 60 m spaced cross sections displays excellent continuity of geology and grade and has been classified as Measured Mineral Resource. This extends to a vertical depth of 150 m (4,850 mRL) at Discovery and 200 m (4,800 mRL) at Symond's Well.

The Indicated Mineral Resource is largely defined by 120 m spaced drilling and extends to a depth of 450 m (4,550 mRL) at Discovery and 350 m (4,650 mRL) at Symond's. The Inferred portion of the resource has been extended to 600m depth (4,400 mRL) and is projected to a maximum of 120 m past the limit of effective drilling.

## **Cut-off Grades**

The shallow, sub-cropping nature of both lodes suggests good potential for open pit mining and low-cost underground mining if sufficient resources can be delineated to consider a mining operation. The likely processing route identified by previous studies is low cost, bacterial heap leach of crushed ore. As such, the Mineral Resource has been reported at a 0.15% Ni lower cut-off grade to reflect assumed low operating costs and good metallurgical characteristics determined in previous studies.

## **Metallurgy**

Metallurgical test work has been conducted by previous operators and confirmed that good recoveries can be achieved via bacterial leaching.

## **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during any future mining evaluation of the project.

## **FEASIBILITY STUDIES**

The Company is continuing to review and update the feasibility studies that were previously completed on the development of the Sherlock Bay deposit. The extensive information already available on the mining, metallurgy, processing and infrastructure requirements for the project will allow the Company to rapidly advance the evaluation of the project.

## **ENDS**

### **For more information, please contact:**

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Exploration Manager

**Graham Baldisseri**  
Company Secretary

**Phone: (08) 9481 7833**

**Or consult our website:**

**[www.sabresources.com](http://www.sabresources.com)**

### **Competent Person Declaration**

The Information in this report that relates to Mineral Resources is based on information compiled by Mr Paul Payne, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Payne is a full-time employee of Payne Geological Services Pty Ltd. Mr Payne has sufficient experience that is relevant to the style of mineralisation and type 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". Mr Payne consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Sabre Resources Ltd's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Sabre believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.



**JORC Table 1 - Section 1 Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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. 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 style="list-style-type: none"> <li>RC drilling was conducted using a 5 ¼" face sampling bit on a nominal 20m by 60 m spacing.</li> <li>RC samples were collected in large plastic bags from riffle splitter and a 2-5 kg representative sample taken for analysis.</li> <li>Diamond drilling was sampled to geological contacts then at 1 m or 1.52 m intervals with quarter core samples taken for analysis.</li> <li>Collar surveys were carried using total station electronic equipment.</li> <li>Down hole surveys for each hole were completed using single shot cameras.</li> <li>Sampling was limited to the visually mineralised zones with additional sampling of several metres either side of the mineralisation.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The majority of RC drilling was completed in 2004 and 2005 using face sampling equipment.</li> <li>Core drilling included historic holes completed in the 1970's as well as a substantial number of holes completed in 2005.</li> </ul>
<b>Drill sample recovery</b>	<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>	<ul style="list-style-type: none"> <li>Drill core recovery was measured and was generally excellent.</li> <li>No record of RC sample quality was located, however drilling conditions were good and samples generally from fresh rock and no problems were anticipated.</li> <li>No obvious relationships between sample recovery and grade.</li> </ul>
<b>Logging</b>	<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>All holes were logged in the field at the time of drilling.</li> <li>No core photographs were located.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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 appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-</li> </ul>	<ul style="list-style-type: none"> <li>1 m RC samples were split by the riffle splitter on the drill rig and sampled dry.</li> <li>The sampling was conducted using industry standard techniques and were considered appropriate.</li> <li>No formal quality control measures were in place for the programs.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<p>sampling stages to maximise representivity of samples.</p> <ul style="list-style-type: none"> <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>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Historic drill samples were assayed using four acid digest and AAS analysis at accredited laboratories.</li> <li>Samples from the 2004 and 2005 programs were assayed using four acid digest and AAS analysis at the Aminya and ALS laboratories.</li> <li>QAQC data was limited to assay repeats and interlaboratory checks which showed acceptable results.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Field data was loaded into excel spreadsheets at site.</li> <li>Original laboratory assay records have been located and loaded into an electronic database.</li> <li>Hard copies of logs, survey and sampling data are stored in the SBR office.</li> <li>No adjustment to assay data.</li> </ul>
<b>Location of data points</b>	<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>SBCN drill hole collars were accurately surveyed using electronic total station equipment.</li> <li>A local grid system was used with data converted to WGS84.</li> <li>Topography is very flat with control from drill hole collars and field traverses.</li> </ul>
<b>Data spacing and distribution</b>	<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>Drilling was on a nominal 20 m by 60 m spacing in the upper 200 m of the deposit.</li> <li>Deeper mineralisation was tested at approximately 120 m spacing.</li> <li>Drill data is at sufficient spacing to define Measured, Indicated and Inferred Mineral Resource.</li> <li>Samples were composited to 2 m intervals for estimation.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>Shallow holes were drilled at -60° into a vertical trending zone and orientated perpendicular to the known strike of the deposit.</li> <li>Deeper diamond holes flattened to be approximately orthogonal to the dip of mineralisation.</li> <li>No orientation based sampling bias has been identified in the data.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were organised by company staff then transported by courier to the laboratory.</li> </ul>
<b>Audits or reviews</b>	<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>Procedures were reviewed by independent consultants during the exploration programs in 2005.</li> </ul>

**JORC Table 1 - Section 2 Reporting of Exploration Results**

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Mineral tenement and land tenure status</b>	<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 license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit is located on granted mining lease M47/567 with an expiry date of 22/9/2025.</li> <li>SBR has a 70% beneficial interest in the project.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Discovery and initial exploration was completed by Texas Gulf in the 1970's.</li> <li>Majority of exploration was completed by SBNC in 2004 and 2005.</li> </ul>
<b>Geology</b>	<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 project is hosted within the Archaean West Pilbara Granite-Greenstone Belt. It comprises two main lenticular lodes (termed Discovery and Symond's Well) hosted within a sub-vertical to steep north dipping chert horizon.</li> <li>Mineralisation is associated with strong foliation and/or banding of a silica-chlorite-carbonate-amphibole-magnetite chert. There is broad correlation of Ni, Cu and Co grade to sulphide content with the main species being pyrrhotite, pyrite and chalcopyrite.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Results are reported in local grid coordinates.</li> <li>No material data has been excluded from the release.</li> <li>Drill hole intersections used in the resource have been previously reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Length weighted average grades have been reported.</li> <li>No high-grade cuts have been applied.</li> <li>Metal equivalent values are not being reported.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The majority of holes have been drilled at angles to intersect the mineralisation approximately perpendicular to the orientation of the mineralised trend.</li> <li>Some steeper holes will have intersection length greater than the true thickness.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any</li> </ul>	<ul style="list-style-type: none"> <li>A relevant plan showing the drilling is included within</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	this release.
<b>Balanced Reporting</b>	<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>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>All relevant results available have been previously reported.</li> </ul>
<b>Other substantive exploration data</b>	<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>Geological mapping, geophysical surveys and rock chip sampling has been conducted over the project area.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Preliminary economic analysis of the project is planned.</li> </ul>

**JORC Table 1 - Section 3 Estimation and Reporting of Mineral Resources**

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>SBR located original assay records which has now been captured electronically to prevent transcription errors.</li> <li>Validation included visual review of results.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>A site visit by Paul Payne was undertaken in May 2018 to confirm geological interpretations and drill core, locate drill hole collars and review general site layout.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The geology is straightforward with visually recognisable mineralisation which has been used to control the Mineral Resource boundaries.</li> <li>Information between different drilling programs is consistent and the interpretations are considered to have a high degree of confidence.</li> <li>There is no real possibility of alternative interpretations.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Sherlock Bay deposit has a drilled strike extent of 1.7 km EW and a maximum vertical depth of 600 m. The true thickness of the mineralisation ranges from 10 m to 30 m.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and 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</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary kriging grade interpolation was used to estimate block grades within the resource.</li> <li>Surpac software was used for the estimation.</li> <li>Samples were composited to 2m intervals. Due to the extremely low CV of the data no high grade cuts were applied to the estimate.</li> <li>The parent block dimensions were 30 m EW by 5 m NS</li> </ul>

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	<p>used.</p> <ul style="list-style-type: none"> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>by 5 m vertical with sub-cells of 15 m by 2.5 m by 2.5 m. Cell size was based on 50% of the average drill hole spacing in the well drilled part of the deposit.</li> <li>The previous resource estimate for Sherlock Bay was reported in 2005.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>An orientated ellipsoid search was used to select data and was based on drill hole spacing and the geometry of the mineralisation.</li> <li>A search of 100 m was used with a minimum of 10 samples and a maximum of 24 samples which resulted in 73% of blocks being estimated. The remaining blocks were estimated with search radii of 200 m and 300 m.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and deposit geometry.</li> <li>Mineralisation was constrained by wireframes prepared using a 0.2% Ni grade envelope. In addition, high grade domains were wireframed within the Symonds lode using a 0.4% Ni cut-off grade.</li> <li>For validation, quantitative spatial comparison of block grades to assay grades was carried out using swath plots.</li> <li>Global comparisons of drill hole and block model grades were also carried out.</li> </ul>
<b>Moisture</b>	<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>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The shallow, sub-cropping nature of both lodes suggests good potential for open pit mining and low cost underground mining if sufficient resources can be delineated to consider a mining operation. As such, the Mineral Resource has been reported at a 0.15% Ni lower cut-off grade to reflect assumed exploitation by low cost mining methods and good metallurgical characteristics determined in previous studies.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. 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>Based on comparison with other similar deposits, the Mineral Resource is considered to have sufficient grade and metallurgical characteristics for economic treatment if an operation is established at the site.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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 for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources 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>Metallurgical test work has been conducted by previous operators and confirmed that good recoveries can be achieved via bacterial leaching.</li> <li>Additional metallurgical test work is underway.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that proposals for development including the dumping of waste would</li> </ul>

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	<p><i>reasonable prospects for 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 a greenfields project, 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></p>	<p>not be approved if planning and permitting guidelines are followed.</p>
<b>Bulk density</b>	<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 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 differences between rock 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>• Bulk density determinations (pycnometer or archimedes) were carried out on 465 samples. Bulk density values applied to the estimates were 2.7 t/m<sup>3</sup> for transitional lithologies, 3.05 t/m<sup>3</sup> for unoxidised mineralisation above 500m depth and 2.94 t/m<sup>3</sup> below 500 m depth.</li> </ul>
<b>Classification</b>	<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 (ie 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 was classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012).</li> <li>• The upper 200 m of the deposit defined by 20 m by 60 m and displaying excellent continuity of mineralisation has been reported as Measured Mineral Resource.</li> <li>• The portion of the deposit defined by 80 m to 120 m spaced holes and tested over the full strike extent has been reported as Indicated Mineral Resource.</li> <li>• The Inferred portion of the resource has been extended to 600 m depth (4,400 mRL) and is projected to a maximum of 120 m past the limit of effective drilling.</li> <li>• The results reflect the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>• The Mineral Resource estimate has been checked by an internal audit procedure.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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 relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the 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 estimate utilised good estimation practices, high quality drilling, sampling and assay data. The extent and dimensions of the mineralisation are sufficiently defined by the detailed drilling. The deposit is considered to have been estimated with a high level of accuracy.</li> <li>• The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>• There is no historic production data to compare with the Mineral Resource.</li> </ul>