



## HIGH GRADE GOLD ZONE AT MONSOON

### Highlights

- Significant zone of high grade gold mineralization in first RC drilling following up previous high grade aircore hits at Monsoon
- Results include 66 metres @ 11.4g/t gold (uncut) or 66 metres @ 4.2g/t gold (when high grades are cut to 30g/t), ending in mineralisation (true width unknown but may be approximately half of the downhole width)
- High grade gold now intersected in 4 drillholes that define a steeply dipping, north plunging zone, open along strike and down plunge to the north
- Additional high grade intercept of 2 metres @ 24.7g/t gold (uncut) approximately 800 metres along strike to northwest of main zone
- Drilling to resume in late August

S2 Resources Ltd (“S2” or the “Company”) advises that first RC (reverse circulation) drilling at the Monsoon prospect has intersected significant high grade gold mineralization to the north of and below high grade gold intercepts in previously reported aircore drilling. Ten RC holes were drilled and those that intersected significant gold mineralization together with the previous aircore drill intersections collectively define a zone of gold mineralization which is interpreted to be steeply dipping and north plunging. The Monsoon prospect is located within the Company’s 100% owned Polar Bear project in Western Australia and remains open along strike and down plunge to the north.

All RC drill intercepts are listed in Annexure 1. Some of the individual constituent samples within selected intersections are very high grade and indicate the presence of coarse (“nuggety”) gold, which is consistent with that seen in the previous aircore drilling at Monsoon and Nanook, and in recent gravity recovery metallurgical testwork at Baloo (see ASX announcement of 20<sup>th</sup> July 2016).

Therefore, where applicable, the gold intersections summarized below are quoted both as “uncut” (using the actual assayed grades for each sample within the selected interval) and “cut” (where

samples grading greater than 30g/t gold within the selected interval are arbitrarily capped at 30g/t gold) to demonstrate the potential impact of the presence of coarse gold. Note that the widths quoted are downhole widths because true widths cannot be reliably estimated at this time. However, on the basis of the current interpretation of the geometry of the mineralization and the angle of drilling it appears that the true width of the mineralization may be approximately half that of the downhole widths quoted, but this may be subject to change once further drilling provides more information.

Key intercepts comprise:

- Composite zone of 66 metres @ 11.4g/t gold from 74 metres to end of hole in SPBC0313 (uncut) or @ 4.2g/t gold (cut), drilled 20 metres north of the original high grade aircore intersections, including the following sub-zones:
  - 8 metres @ 70.5g/t gold from 77 metres (uncut) or 11.0g/t gold (cut), including 4 metres @ 139.0g/t gold from 77 metres (uncut) or 20.0g/t gold (cut)
  - 13 metres @ 8.0g/t gold from 90 metres, including 4 metres @ 14.4g/t gold from 95 metres
  - 13 metres @ 3.6g/t gold from 110 metres, including 2 metres @ 13.5g/t gold from 117 metres
  - 8 metres @ 3.3g/t gold from 130 metres
- Composite zone of 38 metres @ 6.41g/t gold from 75 metres in SPBC0320 (uncut) or 1.78g/t gold (cut), drilled 40 metres north of RC hole SPBC0313, including the following sub-zones:
  - 8 metres @ 26.7g/t gold from 75 metres (uncut) or 4.7g/t gold (cut)
  - 9 metres @ 2.1g/t gold from 90 metres
  - 3 metres @ 1.11g/t gold from 103 metres
  - 1 metre @ 4.93g/t gold from 112 metres

RC hole SPBC0313 terminated at a depth of 140 metres in mineralization due to the rig reaching its limit of effective penetration. The broad composite mineralized zone intersected in this hole is 20 metres to the north of and deeper than the mineralized zone defined by two previous aircore holes, which intersected 32 metres @ 2.47g/t gold in SPBA2833 (see previous ASX announcement made by Sirius Resources on 3<sup>rd</sup> August 2015) and 12 metres @ 26.5g/t gold in SPBA3740 (see previous ASX announcement of 14<sup>th</sup> April 2016), which ended in mineralization grading 12.8g/t gold. The intercept in RC hole SPBC0320 is a further 40 metres north of SPBC0313 and at approximately the same depth.

Collectively, these intercepts appear to define a steeply dipping and north plunging mineralized zone that remains open along strike and down plunge to the north (see Figures 1 to 3).

The gold mineralization occurs on a sheared basalt-shale contact, similar to Baloo, and is associated with a large altered shear zone that contains sericite-carbonate alteration and quartz-carbonate-sulphide veining, primarily developed within the basalt.

A further two RC holes were drilled to follow up a previous aircore intersection comprising 12 metres @ 16.9g/t gold (see previous ASX announcement made by Sirius Resources on 30<sup>th</sup> March 2015) located approximately 800 metres to the northwest along strike of the drilling described above. The deeper of these two holes (SPBC0323) intersected:

- 2 metres @ 24.7g/t gold from 105 metres (uncut) or 15.5g/t gold (cut)

The Monsoon prospect is situated midway between the Baloo oxide gold deposit (4 kilometres to the north) and the Nanook palaeochannel gold deposit (6 kilometres to the south). The Baloo-Monsoon-Nanook trend is shaping up as a prospective gold corridor.

Follow-up RC drilling will resume at Monsoon as soon as the RC rig can be remobilised to site, most likely in late August.

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**Competent Persons statement**

The information in this report that relates to Exploration Results is based on information compiled by John Bartlett who is an employee of the company. Mr Bartlett is a member of the Australasian Institute of Mining and Metallurgy. Mr Bartlett has sufficient experience of relevance to the style of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bartlett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

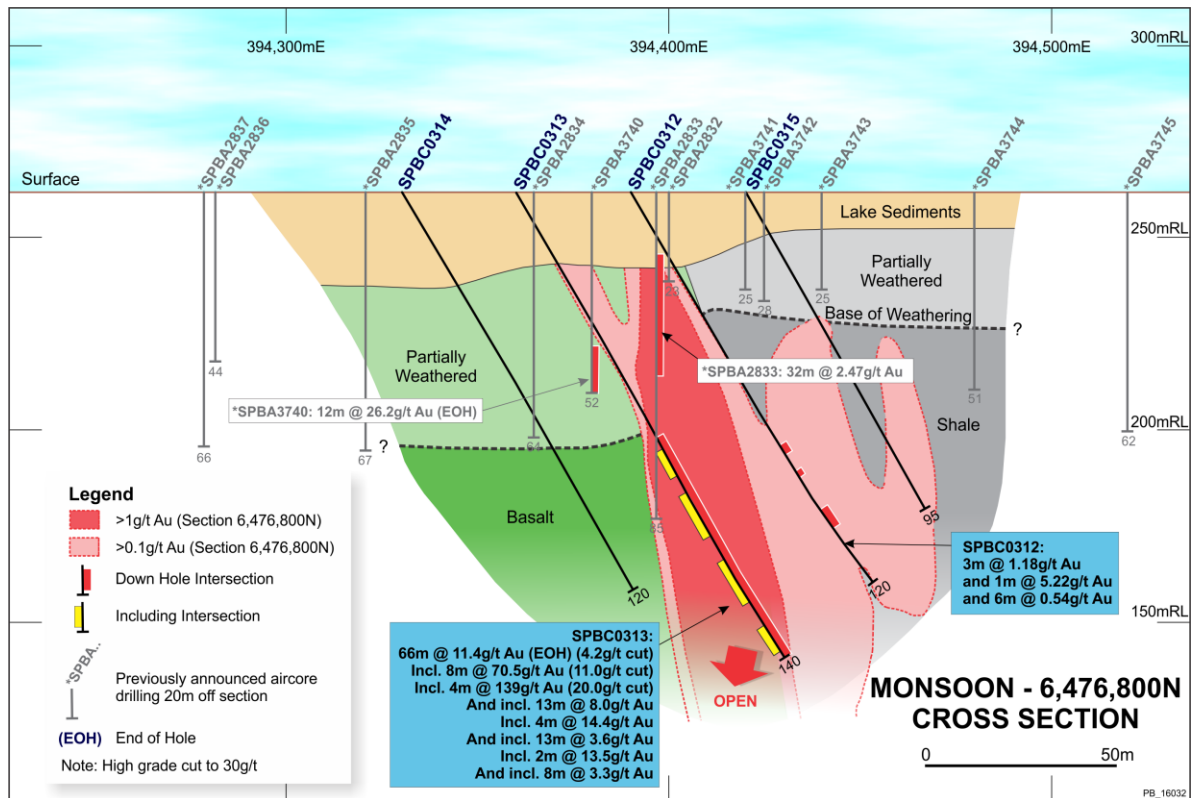


Figure 1. Cross section showing prior aircore holes (projected onto section) and new RC holes.

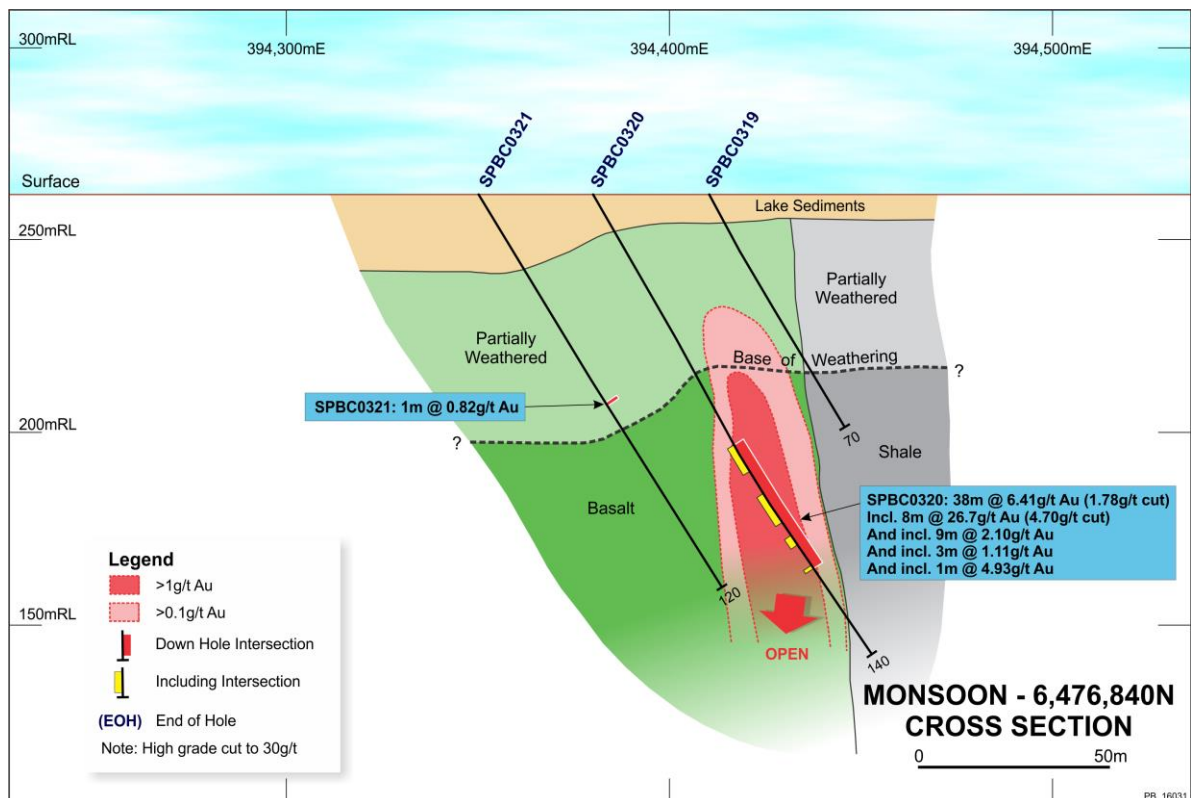


Figure 2. Cross section 40 metres north of Figure 1, showing apparent plunge to north of mineralised zone.



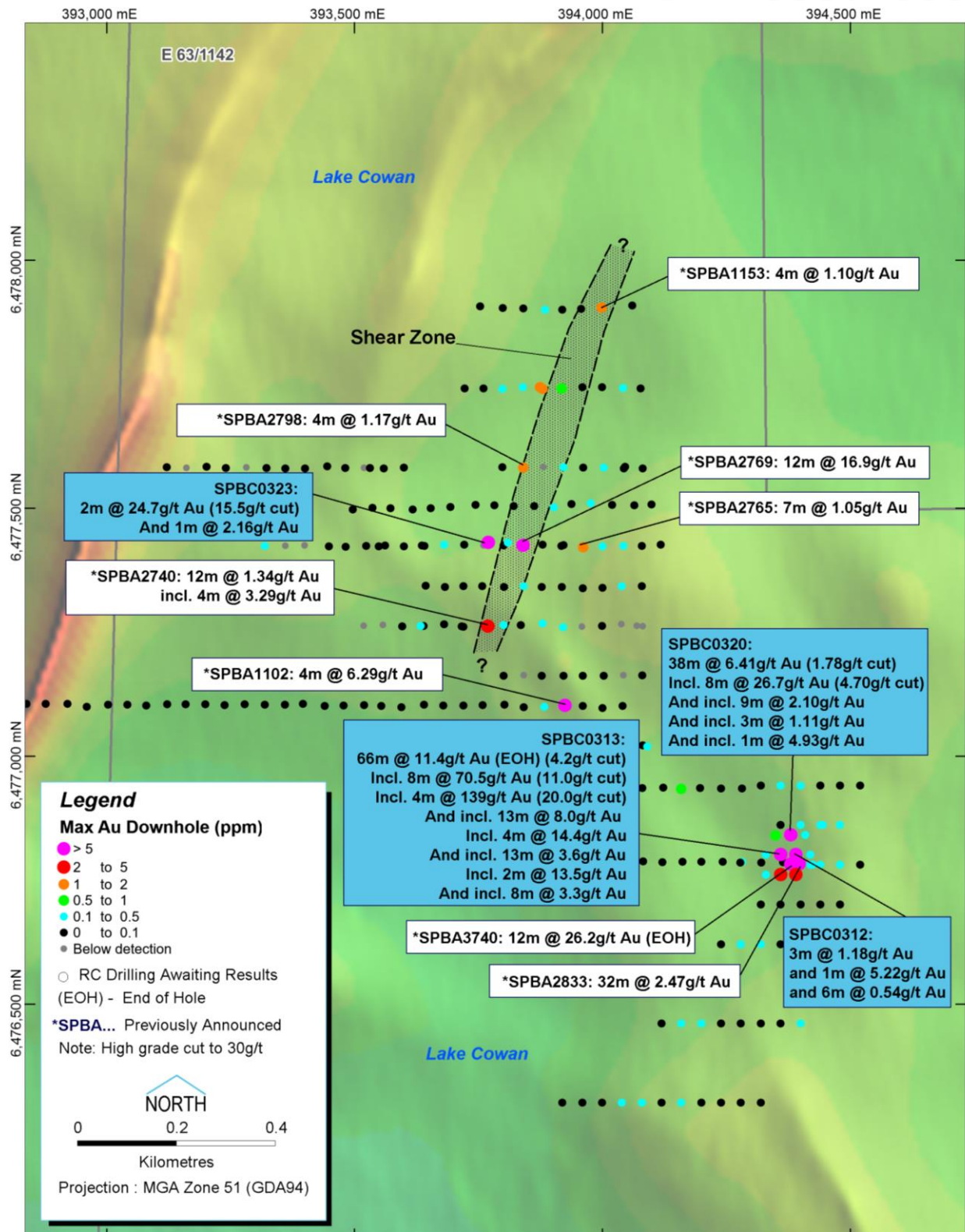


Figure 3. Plan projection showing new RC drilling relative to previous aircore intercepts, with main Monsoon zone in the southeast and additional zone 800 metres to the northwest of this.

## Annexure 1

The following Tables are provided to ensure compliance with the JORC code (2012) edition requirements for the reporting of exploration results.

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au, ppm	Comment
SPBC0312	Monsoon	120	6476800	394390	262	-60	90	75	78	3	1.18	
AND								85	86	1	5.22	
AND								96	102	6	0.54	
SPBC0313	Monsoon	140	6476800	394360	262	-60	90	74	140	66	11.4	EOH (4.2 g/t cut)
INCLUDING								77	85	8	70.5	(11.0 g/t cut)
INCLUDING								77	81	4	139	(20.0 g/t cut)
AND, INCLUDING								90	103	13	8	
INCLUDING								95	99	4	14.4	
AND, INCLUDING								110	123	13	3.6	
INCLUDING								117	119	2	13.5	
AND, INCLUDING								130	138	8	3.3	
SPBC0314	Monsoon	120	6476800	394330	262	-60	90			NSI		
SPBC0315	Monsoon	95	6476800	394420	262	-60	90			NSI		
SPBC0316	Monsoon	115	6476760	394390	262	-60	90	59	60	1	1.10	
AND								82	83	1	0.59	
AND								95	98	1	1.09	
SPBC0317	Monsoon	110	6476760	394360	262	-60	90	38	39	1	2.22	
AND								75	76	1	0.53	
SPBC0318	Monsoon	130	6476760	394330	262	-60	90			NSI		
SPBC0319	Monsoon	70	6476840	394410	262	-60	90			NSI		
SPBC0320	Monsoon	140	6476840	394380	262	-60	90	75	113	38	6.41	(1.78 g/t cut)
INCLUDING								75	83	8	26.7	(4.70 g/t cut)
AND, INCLUDING								90	99	9	2.10	
AND, INCLUDING								103	106	3	1.11	
AND, INCLUDING								112	113	1	4.93	
SPBC0321	Monsoon	120	6476840	394350	262	-60	90	64	65	1	0.82	
SPBC0322	Monsoon	120	6477430	393810	262	-60	90			NSI		
SPBC0323	Monsoon	140	6477430	393770	262	-60	90	105	107	2	24.7	(15.5 g/t cut)
AND								110	111	1	2.16	

**Table 1:**

The following Tables are provided to ensure compliance with the JORC code (2012) edition requirements for the reporting of exploration results.

### **SECTION 1 SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	The mineralised trend at Monsoon is sampled by aircore and RC drilling with 30 to 40 m hole spacing and on nominal 40 to 80 m lines. Aircore holes were drilled to refusal. For RC sampling, a 1 metre split is taken directly from a cone splitter mounted beneath the rigs cyclone. The cyclone and splitter are cleaned regularly to minimise any contamination. A second reference split is also taken from each metre and stored on site. Aircore holes are sampled using an aluminium scoop to produce a four metre composite sample.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	Sampling and QAQC procedures is carried out using S2 protocols as per industry best practice.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</i>	Reconnaissance aircore samples are composited at 4 m to produce a bulk 3 kg sample. Samples were dried, pulverised (total prep), and split to produce a 25 g sub sample which is analysed using aqua-regia digestion with ICP-MS finish with a 1 ppb detection limit. A 1m end of hole sample was collected for all aircore holes. Sample preparation was the same as above and were analysed using a four acid digest with an ICP/OES and fire assay. The following elements are included in the assay suite: Ag, Al, As, Au, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W, Zn. RC drilling is sampled a 1m "cone" split sample, to produce a bulk 3 kg sample. Sample preparation was the same as for the aircore drilling. A nominal 50gram sub-sample was collected and analysed by Samples were to produce a sub sample for analysed by fire assay with an AA finish.
<b>Drilling techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	RC drilling is carried out using a face sampling hammer with a nominal diameter of 140mm. Aircore drilling is carried out using a 3 ½ inch blade bit. Where necessary a 3 ½ inch face sampling hammer is employed to penetrate through hard zones.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	RC and aircore sample recoveries are visually estimated qualitatively on a metre basis and are recorded in the database.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	Sample quality is qualitatively logged on a metre basis, recording sample condition and contamination. Various drilling additives (including muds and foams) have been used to condition RC and aircore drill holes to maximise recoveries and sample quality. Drill cyclone and sample buckets are cleaned between rod-changes and after each hole to minimise down hole and/or cross-hole contamination.

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	Insufficient drilling and geochemical data is available at the present stage to evaluate potential sample bias. Drill samples are occasionally wet which may have resulted in sample bias due to preferential loss/gain of fine/coarse material.
<b>Logging</b>	<i>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.</i>	Lithology, alteration and veining is recorded directly to a digital format and imported into S2 Resources central database. The logging is considered of sufficient standard to support a geological resource.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of aircore and RC records lithology, mineralogy, mineralisation, weathering, colour and other features of the samples, and is qualitative in nature.
	<i>The total length and percentage of the relevant intersections logged</i>	All drillholes were logged in full.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core drilling completed.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Aircore samples consist of a 4 metre composite samples. RC was sampled by collecting 1 metre samples are collected via an on-board cone splitter. Samples were collected both wet and dry.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The sample preparation follows industry best practice in sample preparation All samples are pulverised utilising Essa LM1, LM2 or LM5 grinding mills determined by the size of the sample. Samples are dried, crushed as required and pulverized to produce a homogenous representative sub-sample for analysis. A grind quality target of 85% passing 75µm has been established and is relative to sample size, type and hardness.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Quality control procedures include submission of Certified Reference Materials (CRM's), blanks and duplicate samples with each batch of samples. Selected samples are also re-analysed to confirm anomalous results. Grind size checks are routinely completed to ensure samples meet the industry standard of 85% passing through a 75µm mesh.
	<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>	Field duplicates are taken at regular intervals. Samples are selected to weigh less than 3kg to ensure total preparation at the pulverisation stage.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for gold mineralisation.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	RC and diamond core samples are analysed for Au only using a 40g or 50g Lead Collection fire Assay with either an ICP/MS or AAS finish.  4m composite samples from AC drilling are analysed for Au only using a 25g aqua-regia digestion with an ICP/MS finish. The method gives a near total digestion of the regolith intercepted in aircore drilling and is suitable for the reconnaissance style sampling undertaken.  All aircore holes have a 1m end-of-hole sample is collected for all AC holes. An extensive multi-element suite (including Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W, Zn) is analysed using a four acid digest with an ICP/OES and ICP/MS finish. Au, Pt And Pd is analysed for using 25g or 50g Lead Collection fire assay with an ICP/MS finish.



Criteria	JORC Code explanation	Commentary
	<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>	No geophysical tools were used to determine any element concentrations used in this resource estimate.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Sample preparation checks for fineness were carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	The Exploration Manager of S2 has visually verified significant intersections.
	<i>The use of twinned holes.</i>	No twin holes have been drilled on the project to date.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data was collected using a set of standard Excel templates using lookup codes. The information was sent to an external database consultant for validation and compilation into a Perth based SQL database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations were made to any assay data reported.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Drillhole collars were located GPS with an accuracy is +/- 5m.
	<i>Specification of the grid system used.</i>	The grid system used at Polar Bear is GDA94 (MGA), zone 51.
	<i>Quality and adequacy of topographic control.</i>	A topographic surface has been created from aerial geophysical data, This has been calibrated with DGPS survey data. All reconnaissance drill holes have been corrected to this surface where DGPS pickup is not available.  All resource drilling will be picked up by DGPS to within a +/- 50mm accuracy.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Data spacing is currently defined by the geological criteria regarded appropriate to determine the extents of mineralisation. Reconnaissance AC drilling is on a nominal spacing of between 80m x 40m and 160m x 40m drill pattern.
	<i>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.</i>	Drilling is currently preliminary in nature had the mineralised domains have not yet demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource and Reserves, and the classifications applied under the 2012 JORC Code.
	<i>Whether sample compositing has been applied.</i>	No compositing has been applied to the exploration results.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The drilling is not necessarily drilled perpendicular to the orientation of the intersected mineralisation. All reported intervals are downhole intervals and not calculated true width. This will be established with further drilling.
	<i>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.</i>	No orientation biased sampling bias has been identified in the data at this point.

Criteria	JORC Code explanation	Commentary
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by S2 Resources. Samples are stored on site and either delivered by S2 personnel to Perth and then to the assay laboratory, or collected from site by Centurion Transport and delivered direct to the assay laboratory. Whilst in storage, they are kept on a locked yard. Tracking sheets have been set up to track the progress of batches of samples.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been conducted at this stage.

## **SECTION 2 REPORTING OF EXPLORATION RESULTS**

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Monsoon prospect is located within Exploraiton License E63/1142, which is located within the Polar Bear Project, 100% owned by Polar Metals Pty Ltd, a wholly owned subsidiary of S2 Resources Ltd.  All projects are situated within the Ngadju Native Title Claim (WC99/002).
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is in good standing and no known impediments exist on tenement actively explored.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	<u>Gold Exploration</u> Plutonic Operations Limited and Homestake Gold of Australia Limited conducted reconnaissance AC drilling (PBAC prefix) over Lake Cowan on predominantly 100 m drillhole spacing and 800 m line spacing from 1997-1999. Location of these drillholes cannot be verified as the collars are now mostly obscured.  AC sampling was done by 4 m composites with 1 m re-splits on samples greater than 0.1 g/t. Samples were assayed by aqua-regia digest with AAS finish although this cannot be verified as the original laboratory.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The Polar Bear project is situated within the Archaean Norseman-Wiluna Belt which locally includes basalts, komatiites, metasediments, and felsic volcanoclastics.  The primary gold mineralisation is related to hydrothermal activity during multiple deformation events. Indications are that gold mineralisation is focused on or near to the stratigraphic boundary between the Killaloe and Buldania Formation.
<b>Drill hole Information</b>	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>	Refer to Annexure1 in body of text.

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	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.	All reported assays have been length weighted. A nominal 0.2 g/t Au lower cut-off is used to report AC intersections. A nominal 0.5 g/t Au lower cut-off has been used to report RC results. High grade results have been cut to 30 g/t Au for reporting the board intercepts, with both the top cut and uncut intercepts reported.
	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.	High grade gold intervals internal to broader zones of mineralisation are reported as included intervals.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used for reporting exploration results.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The trend of mineralisation at <b>Monsoon</b> is not known at present due to the lack of deeper drilling and the early stage of exploration.  Refer to Annexure 1 and Figures in body of text.
<b>Diagram</b>	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.	Refer to Figures in body of text.
<b>Balanced reporting</b>	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.	The accompanying document is conserved to represent a balanced report with grades and/or widths reported in a consistent manner.
<b>Other substantive exploration data</b>	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.	No other exploration data collected to date is considered material or meaningful at this stage.
<b>Further work</b>	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	Additional RC follow-up of high grade intercepts to establish the controls and geometry of mineralization is proposed. Diamond drilling to test the down-dip extensions of the mineralisation, beneath the limits of the RC rig