



Exploration update – Nanook RC drilling

Highlights

- **Infill RC drilling confirms continuity of gold bearing gravel layer previously identified in wider spaced aircore drilling at Nanook palaeochannel**
- **In-situ gold mineralisation intersected in weathered bedrock along strike from previous high grade aircore intersections**
- **RC rig has now moved to Monsoon prospect, 6 kilometres north of Nanook**

S2 Resources Ltd (“S2” or the “Company”) advises that a broad spaced 27 hole reconnaissance RC drilling program was recently completed at the Nanook prospect with the aim of identifying various possible local bedrock sources for the extensive zone of gold hosted within gravels at the base of the Nanook palaeochannel. This drilling was co-funded by the Government of Western Australia under its Exploration Incentive Scheme (EIS). To date results have been received for 16 holes.

The RC drilling confirmed the continuity and thickness of gold mineralisation in gravels at the base of the Nanook palaeochannel, and extending into the weathered bedrock immediately beneath it (see Figures 1 and 2). Results from this zone include:

- **12m @ 1.95 g/t Au** from 57m in SPBC0290
- **5m @ 1.64 g/t Au** from 58m in SPBC0291
- **7m @ 2.06 g/t Au** from 55m in SPBC0292
- **5m @ 1.25 g/t Au** from 53m in SPBC0293
- **8m @ 1.43 g/t Au** from 53m in SPBC0296

A line of drill holes was also completed to the north of the palaeochannel to follow-up an in-situ high grade gold intersection from earlier aircore drilling (4m @ 50.7 g/t Au from 48m in SPBA3804). The RC hole drilled along strike from this previous aircore intersection intersected gold mineralisation associated with quartz veining in weathered bedrock as follows:

- **2m @ 6.42 g/t Au** from 55m in SPBC0289

An additional RC drill hole has been completed to test down dip of this intersection in the fresh rock with results yet to be received.

A number of other narrow zones of bedrock gold mineralisation were also intersected in other RC holes but the limited drilling completed to date has not yet identified an obvious source for the large palaeochannel gold resource at Nanook. Assays are still awaited for a further eleven holes.

This drilling was undertaken with the assistance of the Western Australian Government's Exploration Incentive Scheme, but further sole funded drilling is planned to continue to explore for the source of the palaeochannel gold. Prior to this, the RC rig will start follow-up drilling of the previously announced high grade gold intersection at the Monsoon prospect (eg, 12m @ 26.2 g/t Au from 40m to EOH in SPBA3740). The rig is currently moving up to the Monsoon prospect, which is located six kilometres to the north of Nanook.

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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 mineralization 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.

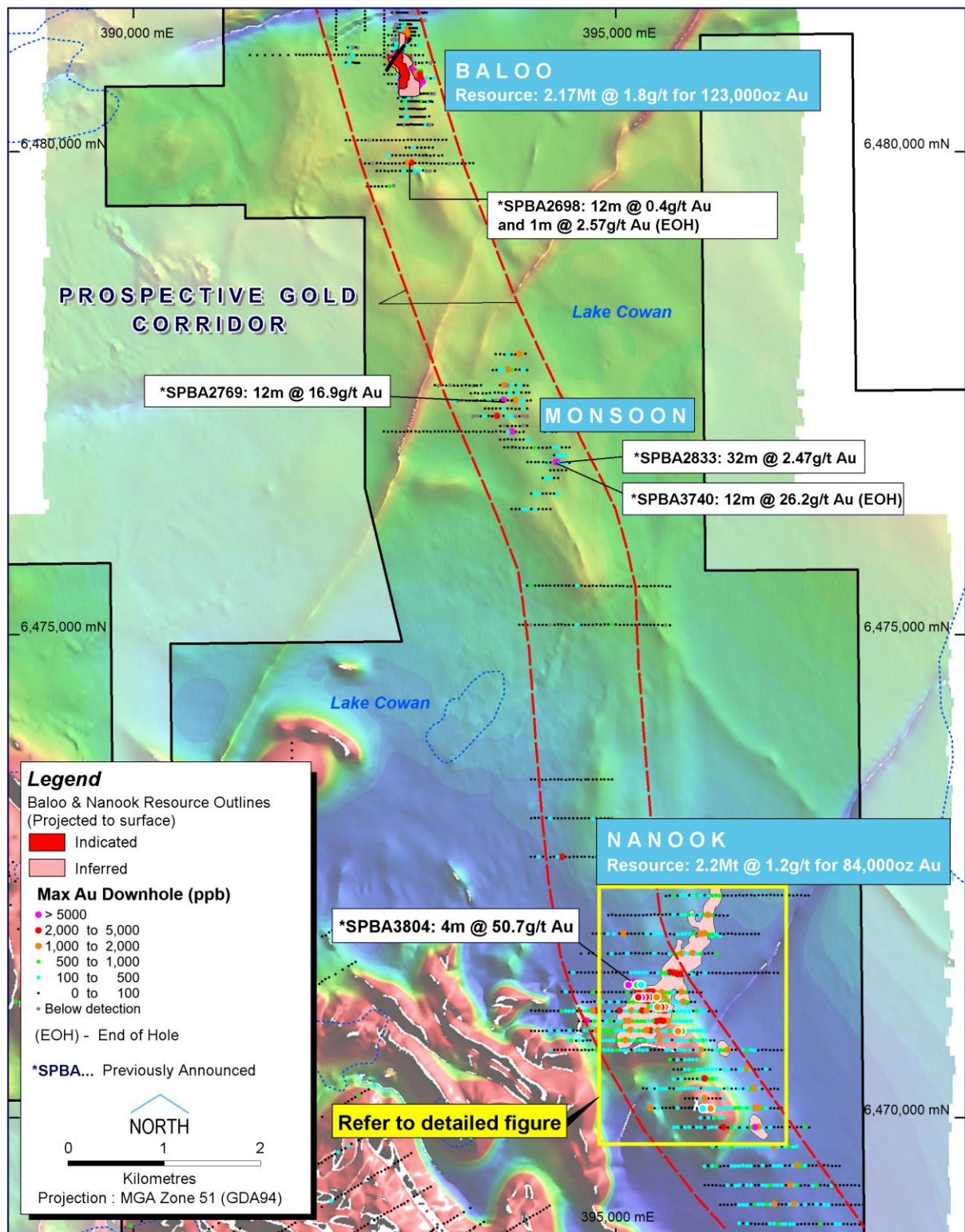


Figure 1. Plan of Baloo-Monsoon-Nanook trend showing area of recent RC drilling at Nanook (Figure 2).

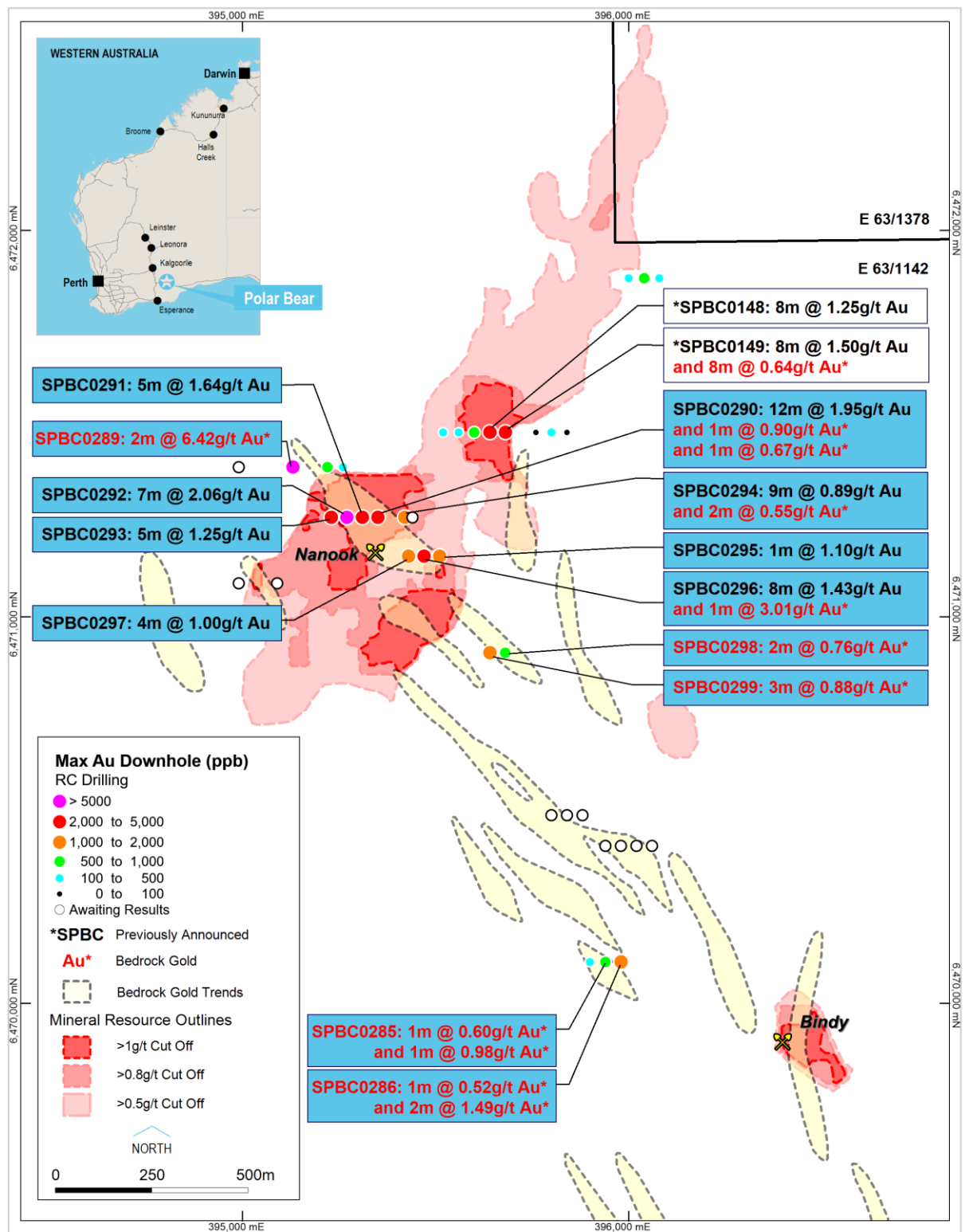


Figure 2. Plan of recent RC drilling at Nanook. Intersections in red are located in bedrock. Other intersections are at the base of the palaeochannel.

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
SPBC0142	Nanook	110	6471880	396000	262	-60	270			NSI		
SPBC0143	Nanook	120	6471880	396040	262	-60	270			NSI		
SPBC0144	Nanook	110	6471880	396080	262	-60	270			NSI		
SPBC0145	Nanook	95	6471480	395520	262	-60	270			NSI		
SPBC0146	Nanook	60	6471480	395560	262	-60	270			NSI		
SPBC0147	Nanook	100	6471480	395600	262	-60	270			NSI		
SPBC0148	Nanook	115	6471480	395640	262	-60	270	60	68	8	1.25	palaeochannel
SPBC0149	Nanook	130	6471480	395680	262	-60	270	60	68	8	1.50	palaeochannel
AND								80	88	8	0.64	bedrock
SPBC0150	Nanook	7	6471480	395720	262	-60	270			NSI		
SPBC0151	Nanook	120	6471480	395760	262	-60	270			NSI		
SPBC0152	Nanook	135	6471480	395800	262	-60	270			NSI		
SPBC0153	Nanook	70	6471480	395840	262	-60	270			NSI		
SPBC0285	Nanook	120	6470110	395940	262	-60	270	88	89	1	0.60	bedrock
AND								111	112	1	0.98	bedrock
SPBC0286	Nanook	120	6470110	395980	262	-60	270	36	37	1	0.52	bedrock
AND								48	50	2	1.49	bedrock
SPBC0287	Nanook	125	6471390	395220	262	-60	270	51	52	1	0.52	Interface
SPBC0288	Nanook	120	6471390	395260	262	-60	270			NSI		
SPBC0289	Nanook	120	6471390	395130	262	-60	90	55	57	2	6.42	bedrock
SPBC0290	Nanook	135	6471260	395350	262	-60	90	57	69	12	1.95	Interface
AND								82	83	1	0.90	bedrock
AND								125	126	1	0.67	bedrock
SPBC0291	Nanook	100	6471260	395310	262	-60	90	58	63	5	1.64	Interface
SPBC0292	Nanook	135	6471260	395270	262	-60	90	55	62	7	2.06	Interface
SPBC0293	Nanook	120	6471260	395230	262	-60	90	53	58	5	1.25	Interface
SPBC0294	Nanook	120	6471260	395420	262	-60	270	55	64	9	0.89	Interface
AND								66	68	2	0.55	bedrock
SPBC0295	Nanook	99	6471160	395510	262	-60	90	54	55	1	1.10	Interface
SPBC0296	Nanook	130	6471160	395470	262	-60	90	53	61	8	1.43	Interface
AND								87	88	1	3.01	bedrock
SPBC0297	Nanook	120	6471160	395430	262	-60	90	54	58	4	1.00	Interface
SPBC0298	Nanook	100	6470910	395680	262	-60	90	39	41	2	0.76	bedrock
SPBC0299	Nanook	100	6470910	395640	262	-60	90	31	34	3	0.88	bedrock
SPBC0300	Nanook	80	6470110	395900	262	-60	270			NSI		
SPBC0301	Nanook	85	6470410	395940	262	-60	270			AWR		
SPBC0302	Nanook	125	6470410	395980	262	-60	270			AWR		
SPBC0303	Nanook	120	6470410	396020	262	-60	270			AWR		
SPBC0304	Nanook	120	6470410	396060	262	-60	270			AWR		
SPBC0305	Nanook	120	6470490	395800	262	-60	270			AWR		
SPBC0306	Nanook	120	6470490	395840	262	-60	270			AWR		
SPBC0307	Nanook	120	6470490	395880	262	-60	270			AWR		
SPBC0308	Nanook	100	6471260	395440	262	-60	270			AWR		
SPBC0309	Nanook	125	6471090	394990	262	-60	90			AWR		
SPBC0310	Nanook	120	6471090	395090	262	-60	270			AWR		
SPBC0311	Nanook	120	6471390	394990	262	-60	90			AWR		

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
Sampling techniques	<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 Nanook is sampled by RC and aircore drilling on a nominal 40 m hole spacing and 100 m lines, with local infill to 100m x 20m and 50m x 20m spacing. All holes 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>	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. High grades were repeated using 25g or 50g Lead Collection fire assay with an ICP/MS finish. 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. 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.
Drilling techniques	<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.
Drill sample recovery	<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.

Criteria	JORC Code explanation	Commentary
	<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.
	<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. Aircore drilling samples are occasionally wet which may have resulted in sample bias due to preferential loss/gain of fine/coarse material. The limited RC drilling with 1m sampling through the mineralized gravels shows a good correlation with the AC results
Logging	<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.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable.
	<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 plus 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.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<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 estimation of palaeochannel gold deposits. High grades were repeated using 25g or 50g Lead Collection fire assay with an ICP/MS finish. 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.
	<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.
Verification of sampling and assaying	<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.
Location of data points	<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.
Data spacing and distribution	<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 100m x 40m and 50m x 40m drill pattern. RC drilling is on individual lines of varying intervals, with holes spaced on a nominal 40m separation along the line.

Criteria	JORC Code explanation	Commentary
	<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 considered to be of sufficient spacing to allow an inferred mineral resource to be estimated.
	<i>Whether sample compositing has been applied.</i>	No compositing has been applied to the exploration results.
Orientation of data in relation to geological structure	<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.
Sample security	<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.
Audits or reviews	<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
Mineral tenement and land tenure status	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 Nanook prospect is located within Exploration 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. A very minor portion of the reported Mineral Resource is situated in E63/1738, which is 80% owned by Polar Metals. The balance is held by Shumwari Pty Ltd as part of the Eundynie Joint Venture. All projects are situated within the Ngadjju 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.
Exploration done by other parties	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.

Criteria	JORC Code explanation	Commentary
Geology	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 Buldanina Formation. The mineralisation modelled at Nanook is situated at or close to the Tertiary / Archaean unconformity, primarily within unconsolidated quartz rich sands and gravel. The mineralisation is interpreted to be either elluvial or alluvial in nature, although a supergene overprint is present. It may be derived from a nearby basement source. Recent drilling has defined a number of potential gold trends to the Northwest associated with sheared mafic and mafic-shale contact as well as to the southwest in and adjacent to the Nanook granodiorite body.
Drill hole Information	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: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length.	Refer to Annexure1 in body of text.
Data aggregation methods	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.
	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.
Relationship between mineralisation widths and intercept lengths	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 bedrock trend of mineralisation at Nanook is not known at present due to the lack of deeper drilling and the early stage of exploration. Alluvial/elluvial gold has been defined within two discrete palaeochannel systems trending roughly N-S and NNE. Downhole thicknesses can be regarded as true thickness due to the flat orientation of the palaeochannel deposit. Refer to Annexure 1 and Figures in body of text.

Criteria	JORC Code explanation	Commentary
Diagram	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.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The accompanying document is conserved to represent a balanced report with grades and/or widths reported in a consistent manner.
Other substantive exploration data	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.
Further work	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	RC follow-up of high grade intercepts to establish the controls and geometry of mineralization is proposed.