



BALOO DRILLING UPDATE

Highlights

- Initial RC resource drilling at Baloo is now approximately 90% complete
- RC drilling is confirming previous aircore and diamond drilling results
- New RC results include intersections of up to 17m @ 4.14 g/t Au and 20m @ 2.91 g/t Au in the oxide zone
- Assays awaited for an additional 39 holes of those drilled to date

S2 Resources Ltd (“S2” or the “Company”) advises that ongoing resource definition drilling at its 100% owned Baloo gold deposit continues to deliver significant results.

Reverse circulation (RC) drilling at the Baloo gold deposit is approximately 90% complete and results have been received for an additional 30 (total of 70 holes to date) of the 109 holes drilled so far (see Figure 1 and Annexure 1).

Full results are shown in Table 1. Better results from the new RC drilling include:

- **9m @ 2.89 g/t Au** from 10m in SPBC0204
- **8m @ 2.28 g/t Au** from 22m and **7m @ 1.46 g/t Au** from 48m in SPBC0211
- **10m @ 2.28 g/t Au** from 6m in SPBC0212
- **12m @ 1.55 g/t Au** from 3m and **20m @ 2.91 g/t Au** from 22m in SPBC0213
- **17m @ 4.14 g/t Au** from 2m and **27m @ 1.44 g/t Au** from 29m in SPBC0214
- **13m @ 1.60 g/t Au** from 56m in SPBC0216
- **17m @ 1.49 g/t Au** from 76m in SPBC0226

Drilling to date has outlined a central zone within the oxide mineralisation averaging approximately 40m thick and extending for 80m along strike and 80m down dip, starting from just 2m below the salt lake surface. The central oxide zone forms a funnel shaped zone of mineralisation, an ideal shape for an open pit.



Narrower zones of oxide mineralisation extend for an additional further 220 metres along strike to the south and 80 metres along strike to the north of the central zone, where mineralisation is truncated to the north by a NNE trending fault. Limited RC drilling has been completed beyond this fault following up an earlier intersection of 9m @ 1.91 in SPBC0191 (as reported in S2R ASX announcement dated 30 November 2015), with results still pending. This may be the offset continuation of the Baloo lode.

The current RC drill program is currently expected to be completed in late January with a maiden resource expected in late March.

For further information, please contact:

Mark Bennett
Managing Director
+61 8 6166 0240

Anna Neuling
Executive Director
+61 8 6166 0240

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.

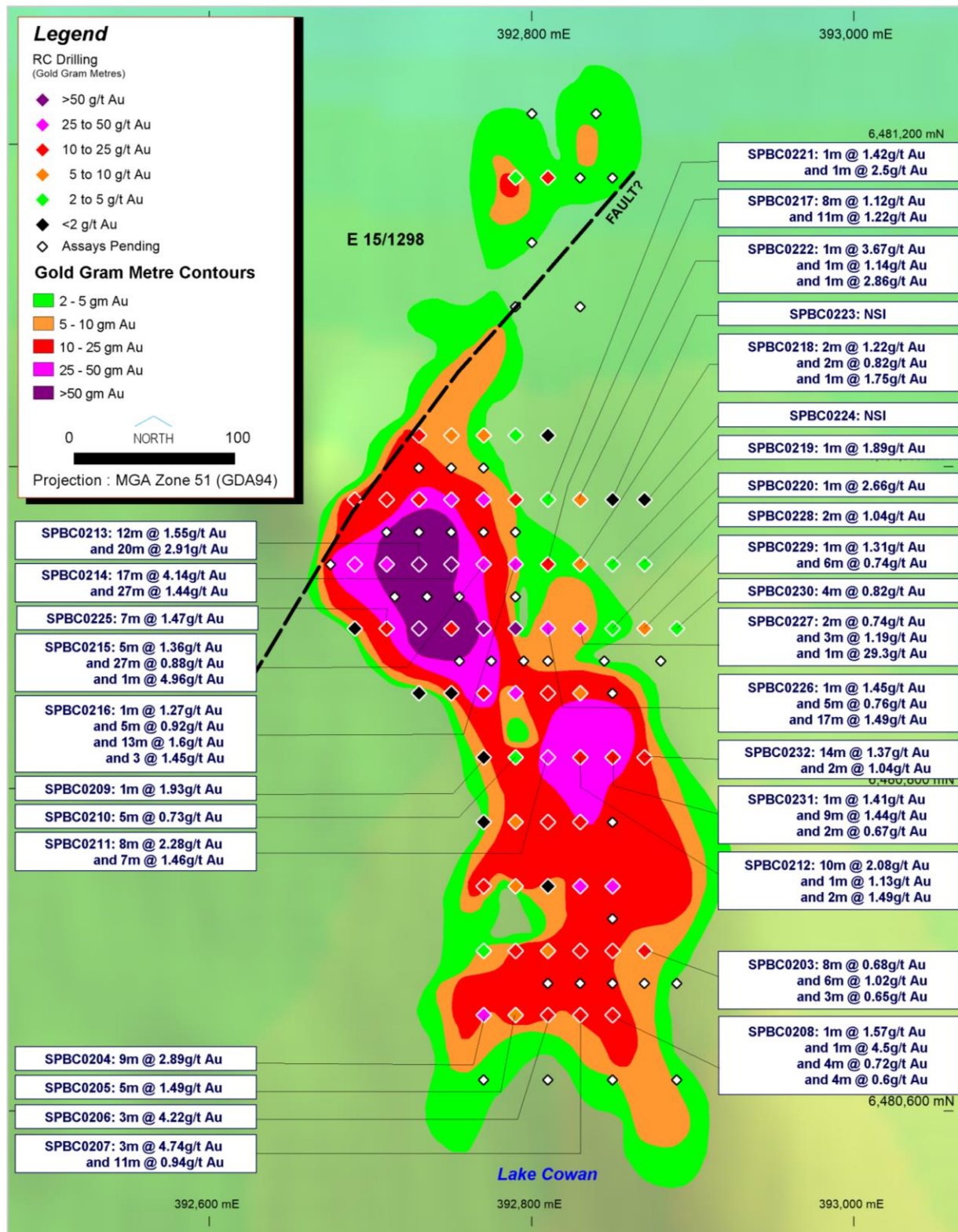


Figure 1. Plan projection of Baloo gold deposit showing grade-width (gram x metre) contours based on previous aircore and new RC drilling, and collar locations of new RC holes with specific intercepts (offset from contours due to holes being angled)

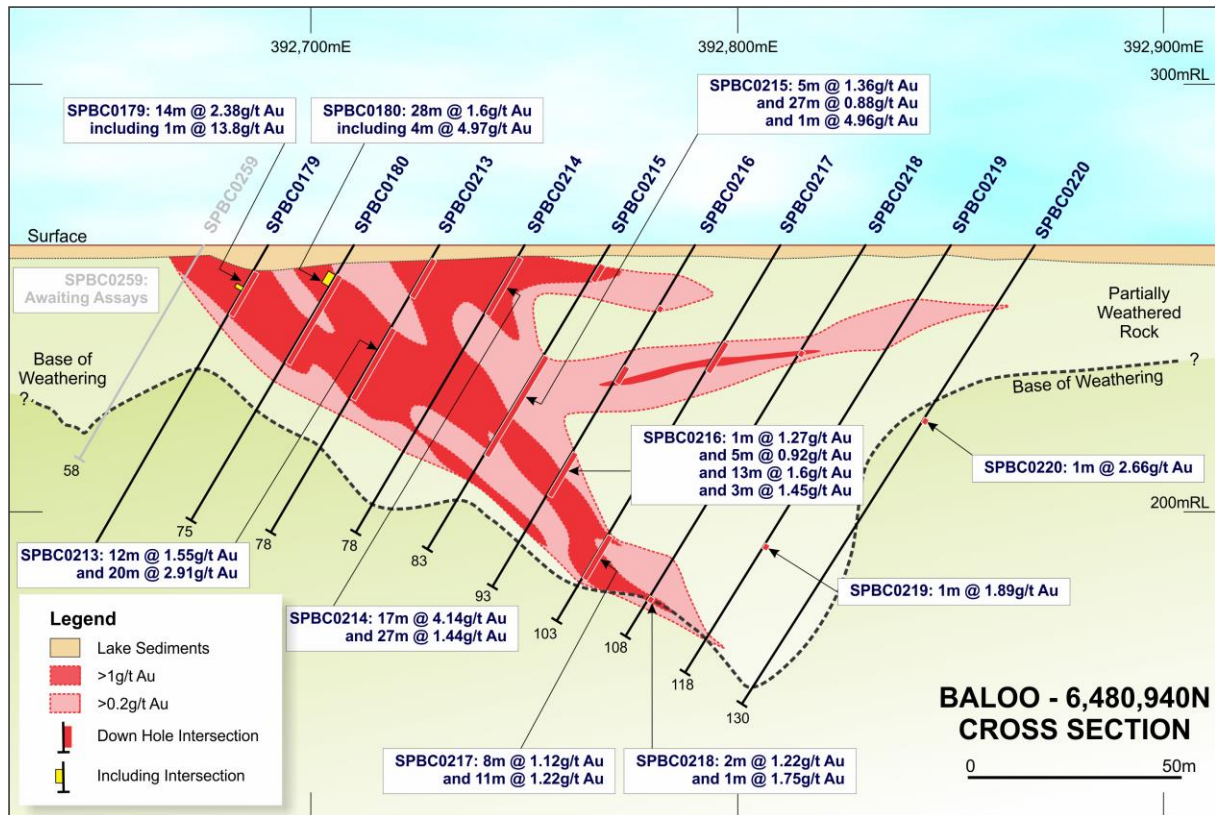


Figure 2. Cross section 6480940N showing new RC drill intersections at Baloo

Annexure 1

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

Table 1: Baloo RC Drilling

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
SPBC0163	Baloo	45	6480740	392770	262	-60	270	9	13	4	4.2
including								9	10	1	13.6
SPBC0164	Baloo	75	6480740	392790	262	-60	270	30	36	6	1.37
SPBC0165	Baloo	100	6480740	392810	262	-60	270			NSI	
SPBC0166	Baloo	120	6480740	392830	262	-60	270	20	30	10	2.16
including								20	22	2	7.37
and								48	56	8	0.81
and								67	68	1	1.01
SPBC0167	Baloo	133	6480740	392850	262	-60	270	20	60	40	1.04
including								46	50	4	4.06
SPBC0168	Baloo	60	6480860	392730	262	-60	270	11	12	1	1.26

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
SPBC0169	Baloo	60	6480860	392750	262	-60	270	26	29	3	0.53
SPBC0170	Baloo	115	6480860	392770	262	-60	270	5	27	22	1.04
and								86	87	1	1.04
and								100	102	2	1.25
SPBC0171	Baloo	110	6480860	392790	262	-60	270	23	43	20	1.30
and								52	55	3	0.65
and								70	73	3	0.99
SPBC0172	Baloo	115	6480860	392810	262	-60	270	55	71	16	1.41
and								81	86	5	0.83
and								96	98	2	1.47
SPBC0173	Baloo	115	6480860	392830	262	-60	270	77	79	2	1.80
and								86	88	2	1.93
and								103	105	2	8.12
SPBC0174	Baloo	120	6480900	392690	262	-60	270	7	7	2	0.70
SPBC0175	Baloo	100	6480900	392730	262	-60	270	2	58	56	1.31
including								2	14	12	3.16
SPBC0176	Baloo	102	6480900	392750	262	-60	270	10	24	14	1.34
and								51	54	3	0.90
and								64	65	1	1.56
and								69	70	1	1.12
SPBC0177	Baloo	95	6480900	392770	262	-60	270	10	15	5	3.14
and								28	90	62	3.52*
including								77	85	8	15.4
SPBC0178	Baloo	93	6480900	392790	262	-60	270	27	86	59	1.99*
including								49	54	5	8.43
SPBC0179	Baloo	85	6480940	392690	262	-60	270	7	21	14	2.38
including								12	13	1	13.8
SPBC0180	Baloo	75	6480940	392710	262	-60	270	9	37	28	1.6
including								9	13	4	4.97
SPBC0181	Baloo	40	6480780	392770	262	-60	270			NSI	
SPBC0182	Baloo	75	6480780	392790	262	-60	270	14	17	3	1.9
and								26	27	1	1.19
SPBC0183	Baloo	100	6480780	392810	262	-60	270	30	42	12	1.66
including								31	33	2	5.71
and								46	47	1	2.22
SPBC0184	Baloo	124	6480780	392830	262	-60	270	24	27	3	1.04
and								48	68	20	1.04
SPBC0185	Baloo	55	6481180	392790	262	-60	270	11	12	1	3.71
SPBC0186	Baloo	73	6481180	392810	262	-60	270	32	33	1	4.07
and								38	47	9	1.91
SPBC0187	Baloo	40	6481020	392730	262	-60	270	5	14	9	1.75

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
SPBC0188	Baloo	40	6481020	392750	262	-60	270	20	29	9	0.83
SPBC0189	Baloo	48	6481020	392770	262	-60	270	19	20	1	1.24
and								24	29	5	0.97
SPBC0190	Baloo	68	6481020	392790	262	-60	270	62	63	1	3.65
SPBC0191	Baloo	80	6481020	392810	262	-60	270			NSI	
SPBC0192	Baloo	53	6480980	392690	262	-60	270	4	11	7	3.22
including								4	5	1	19.9
SPBC0193	Baloo	55	6480980	392710	262	-60	270	7	15	8	1.72
SPBC0194	Baloo	55	6480980	392730	262	-60	270	3	15	12	0.61
and								24	29	5	1.94
SPBC0195	Baloo	73	6480980	392750	262	-60	270	5	31	26	1.39
SPBC0196	Baloo	73	6480980	392770	262	-60	270	5	13	8	1.52
and								36	51	15	1.64
SPBC0197	Baloo	83	6480980	392790	262	-60	270	49	65	16	1.48
including								60	61	1	10.3
and								81	82	1	52.6
SPBC0198	Baloo	40	6480700	392770	262	-60	270	13	16	3	1.47
SPBC0199	Baloo	75	6480700	392790	262	-60	270	30	37	7	2.95
including								35	37	2	8.92
SPBC0200	Baloo	78	6480700	392810	262	-60	270	25	27	2	1.75
and								31	33	2	0.85
and								52	55	3	1.59
SPBC0201	Baloo	93	6480700	392830	262	-60	270	31	38	7	1.62
and								47	52	5	2.55
including								49	50	1	10.6
SPBC0202	Baloo	113	6480700	392850	262	-60	270	41	68	27	0.57
SPBC0203	Baloo	128	6480700	392870	262	-60	270	21	29	8	0.68
and								65	71	6	1.02
and								100	103	3	0.65
SPBC0204	Baloo	30	6480660	392770	262	-60	270	10	19	9	2.89
SPBC0205	Baloo	60	6480660	392790	262	-60	270	28	33	5	1.49
SPBC0206	Baloo	78	6480660	392810	262	-60	270	50	53	3	4.22
SPBC0207	Baloo	93	6480660	392830	262	-60	270	18	21	3	4.74
and								61	72	11	0.94
SPBC0208	Baloo	113	6480660	392850	262	-60	270	39	40	1	1.57
and								45	46	1	4.5
and								64	68	4	0.72
and								89	93	4	0.6
SPBC0209	Baloo	133	6480820	392770	262	-60	270	11	12	1	1.93
SPBC0210	Baloo	63	6480820	392790	262	-60	270	27	32	5	0.73
SPBC0211	Baloo	88	6480820	392810	262	-60	270	22	30	8	2.28

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
and								48	55	7	1.46
SPBC0212	Baloo	118	6480820	392830	262	-60	270	6	16	10	2.08
and								31	32	1	1.13
and								51	53	2	1.49
SPBC0213	Baloo	78	6480940	392730	262	-60	270	3	15	12	1.55
and								22	42	20	2.91
SPBC0214	Baloo	78	6480940	392750	262	-60	270	2	19	17	4.14
and								29	56	27	1.44
SPBC0215	Baloo	83	6480940	392770	262	-60	270	6	11	5	1.36
and								31	58	27	0.88
and								63	64	1	4.96
SPBC0216	Baloo	93	6480940	392790	262	-60	270	17	18	1	1.27
and								33	38	5	0.92
and								56	69	13	1.6
and								75	78	3	1.45
SPBC0217	Baloo	103	6480940	392810	262	-60	270	26	34	8	1.12
and								79	90	11	1.22
SPBC0218	Baloo	108	6480940	392830	262	-60	270	29	31	2	1.22
and								87	89	2	0.82
and								96	97	1	1.75
SPBC0219	Baloo	118	6480940	392850	262	-60	270	83	84	1	1.89
SPBC0220	Baloo	130	6480940	392870	262	-60	270	49	50	1	2.66
SPBC0221	Baloo	98	6480980	392810	262	-60	270	28	29	1	1.42
and								77	79	1	2.5
SPBC0222	Baloo	108	6480980	392830	262	-60	270	88	89	1	3.67
and								91	92	1	1.14
and								105	106	1	2.86
SPBC0223	Baloo	120	6480980	392850	262	-60	270			NSI	
SPBC0224	Baloo	128	6480980	392870	262	-60	270			NSI	
SPBC0225	Baloo	105	6480900	392710	262	-60	270	3	10	7	1.47
SPBC0226	Baloo	108	6480900	392810	262	-60	270	46	47	1	1.45
and								68	73	5	0.76
and								76	93	17	1.49
SPBC0227	Baloo	108	6480900	392830	262	-60	270	30	32	2	0.74
and								40	43	3	1.19
and								72	73	1	29.3
SPBC0228	Baloo	128	6480900	392850	262	-60	270	95	97	2	1.04
SPBC0229	Baloo	128	6480900	392870	262	-60	270	62	63	1	1.31
and								106	112	6	0.74
SPBC0230	Baloo	138	6480900	392890	262	-60	270	121	125	4	0.82
SPBC0231	Baloo	137	6480820	392850	262	-60	270	75	76	1	1.41

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
and								88	97	9	1.44
and								129	131	2	0.67
SPBC0232	Baloo	123	6480820	392870	262	-60	270	95	109	14	1.37
and								113	115	2	1.04
SPBC0233	Baloo	111	6480880	392755	262	-60	270			AWR	
SPBC0234	Baloo	108	6480880	392775	262	-60	270			AWR	
SPBC0235	Baloo	108	6480880	392795	262	-60	270			AWR	
SPBC0236	Baloo	98	6480920	392715	262	-60	270			AWR	
SPBC0237	Baloo	80	6481180	392830	262	-60	270			AWR	
SPBC0238	Baloo	93	6481180	392850	262	-60	270			AWR	
SPBC0239	Baloo	58	6481220	392800	262	-60	270			AWR	
SPBC0240	Baloo	93	6481220	392840	262	-60	270			AWR	
SPBC0241	Baloo	58	6481140	392800	262	-60	270			AWR	
SPBC0242	Baloo	83	6480960	392710	262	-60	270			AWR	
SPBC0243	Baloo	108	6480960	392730	262	-60	270			AWR	
SPBC0244	Baloo	118	6480960	392750	262	-60	270			AWR	
SPBC0245	Baloo	93	6480960	392770	262	-60	270			AWR	
SPBC0246	Baloo	73	6481000	392730	262	-60	270			AWR	
SPBC0247	Baloo	73	6481000	392750	262	-60	270			AWR	
SPBC0248	Baloo	73	6481000	392770	262	-60	270			AWR	
SPBC0249	Baloo	73	6481100	392790	262	-60	270			AWR	
SPBC0250	Baloo	75	6481100	392830	262	-60	270			AWR	
SPBC0251	Baloo	88	6480920	392735	262	-60	270			AWR	
SPBC0252	Baloo	88	6480920	392755	262	-60	270			AWR	
SPBC0253	Baloo	98	6480920	392790	262	-60	270			AWR	
SPBC0254	Baloo	108	6480880	392810	262	-60	270			AWR	
SPBC0255	Baloo	123	6480880	392845	262	-60	270			AWR	
SPBC0256	Baloo	63	6480880	392880	262	-60	270			AWR	
SPBC0257	Baloo	128	6480860	392850	262	-60	270			AWR	
SPBC0259	Baloo	58	6480940	392675	262	-60	270			AWR	
SPBC0260	Baloo	93	6480960	392790	262	-60	270			AWR	
SPBC0261	Baloo	68	6480680	392810	262	-60	270			AWR	
SPBC0262	Baloo	83	6480680	392830	262	-60	270			AWR	
SPBC0263	Baloo	103	6480680	392850	262	-60	270			AWR	
SPBC0264	Baloo	128	6480680	392870	262	-60	270			AWR	
SPBC0265	Baloo	143	6480680	392890	262	-60	270			AWR	
SPBC0266	Baloo	38	6480620	392770	262	-60	270			AWR	
SPBC0267	Baloo	68	6480620	392810	262	-60	270			AWR	
SPBC0268	Baloo	108	6480620	392850	262	-60	270			AWR	
SPBC0269	Baloo	153	6480620	392890	262	-60	270			AWR	
SPBC0270	Baloo	113	6480720	392850	262	-60	270			AWR	

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t
SPBC0271	Baloo	100	6480780	392850	262	-60	270			AWR	

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>	<p>In zones of weakly weathered or fresh rock the HQ or NQ2 core is cut using a diamond core saw with half core sampled for assay. The ore is cut along the orientation line, with the same side sampled to ensure sample is representative.</p> <p>In zones of highly weathered core where the sample is either highly broken or highly friable and a representative split cannot be achieved then whole core sample of either the PQ3 or HQ3 core is taken.</p> <p>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.</p> <p>Aircore holes are sampled using an aluminium scoop to produce a four metre composite sample similar to the RC sampling methodology.</p>

Criteria	JORC Code explanation	Commentary
	<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>	<p>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.</p> <p>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.</p> <p>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.</p> <p>Diamond core (HQ and NQ2) is half core sampled to geological boundaries of no more than 1m and no less than 30cm. Samples were crushed, dried and pulverised (total prep). Analysis is same as for RC.</p> <p>Oxide PQ3 core is whole core sampled and then dried, crushed to -2mm and then rotary split to a 3kg sample for pulverisation and 50g fire assay.</p>
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>	<p>Diamond drilling is completed using either NQ2, HQ, or PQ3 (through the oxide zone) sized coring equipment. All core is orientated (where possible) using a Reflex ACT II RD orientation tool.</p> <p>RC drilling is carried out using a face sampling hammer with a nominal diameter of 140mm.</p> <p>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.</p>
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	<p>Diamond core recoveries is logged and captured in the database. The core length recovered is measured for each run and recorded which is used to calculate the core recovery as a percentage core recovered.</p> <p>RC and aircore sample recoveries are visually estimated qualitatively on a metre basis and are recorded in the database.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i></p>	<p>Measures taken to maximise the core recoveries includes using appropriate core diameter and, where necessary, restricting drill penetration and/or reducing core runs.</p> <p>Triple tube diamond core through the weathered zone is too broken to allow core cutting and therefore the core is sampled whole to ensure no bias is introduced.</p> <p>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.</p>
	<p><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></p>	<p>Core drilling has resulted in narrow zones of poor to no core recoveries through the oxide zone in areas of very soft clays and fault gouge within the weathered zones. These are recorded as poor or zero recovery and not assigned grade.</p> <p>Aircore drilling samples are occasionally wet which may have resulted in sample bias due to preferential loss/gain of fine/coarse material.</p> <p>No sample recovery issues have impacted on potential sample bias within coring of fresh rock or within RC drilling.</p>
Logging	<p><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></p>	<p>Geological logging is completed for all holes to a level of detail that would, where sufficient drill density is completed, support an appropriate Mineral Resource and mining study.</p> <p>Lithology, alteration, veining, structural and geotechnical (diamond core) characteristics is recorded directly to a digital format and imported into S2 Resources central database.</p>
	<p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p>	<p>Logging is both qualitative and quantitative in nature depending on the field being captured.</p> <p>All core is photographed</p>
	<p><i>The total length and percentage of the relevant intersections logged</i></p>	<p>All drillholes were logged in full.</p>
Sub-sampling techniques and sample preparation	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p>	<p>In zones of highly weathered core where the sample is either highly broken or highly friable the PQ3 or HQ3 core is sampled whole core. Oxide whole core is submitted to the lab in samples not exceeding 6kg and then coarse crushed to <2mm. Samples are then rotary split to provide a 3kg sub sample for pulverisation.</p> <p>In zones of weakly weathered or fresh rock the HQ or NQ2 core is cut using a diamond core saw with half core sampled for assay.</p>
	<p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p>	<p>RC and aircore samples consist of a 4 metre composite RC spoils are sampled by scoop. All RC holes are sampled 1 metre samples are collected via an on-board cone splitter. Samples were collected both wet and dry.</p>
	<p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p>	<p>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.</p>

Criteria	JORC Code explanation	Commentary
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<p>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.</p> <p>Grind size checks are routinely completed to ensure samples meet the industry standard of 85% passing through a 75µm mesh.</p>
	<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 nickel sulphide and gold mineralisation.
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>	<p>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.</p> <p>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. Infill 1m samples and samples greater than 1 g/t are re-assayed using 50 g fire-assay with AAS finish which gives total digestion and is more appropriate for samples with high levels of gold.</p> <p>All aircore holes (both gold and nickel exploration) 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.</p>
	<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 Sirius 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.

Criteria	JORC Code explanation	Commentary
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>	At Baloo all aircore and diamond drilling is picked up by an external surveyor using an RTK GPS system with an expected accuracy is +/- 0.05m for easting, northing and elevation. RC drill sites were laid out by an external surveyor using an RTK GPS system or tape and compass off surveyed collars. All holes will be picked up by the external surveyor prior to any resource calculations.
	<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.
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 240m x 40m and 400m x 40m drill pattern, with infill of resource areas closing down to a nominal 40m x 20m drill pattern for AC, RC and diamond.
	<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.
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. At Baloo the main mineralised structure appears to be dipping moderately to the east and hence 270 azimuth diamond drilling give approximately true width intersections. Supergene dispersion appears relatively flat lying and hence the vertical AC holes also approximate to true thickness.
	<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 based 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

AUSTRALIA

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 Baloo prospect is located within Exploraiton License <i>E15/1298</i> , 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<u><i>Gold Exploration</i></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.
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 Buldania Formation.
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: <ul style="list-style-type: none"> • 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 top-cut of 30 g/t Au has been applied to individual assays when reported intervals are greater than one metre. A nominal 0.5 g/t Au lower cut-off is used for RC and diamond intersections (unless otherwise stated). A nominal 0.1 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.

Criteria	JORC Code explanation	Commentary
	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 trend of mineralisation at <i>Baloo</i> appears broadly north south and dipping moderately to the east with the intervals reported near true width. All other prospects, the geometry of the primary mineralisation 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.
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	At Baloo, RC resource drilling within the mineralised zone on 40m x 20m and 20m x 20m drill spacing will continue to provide sufficient confidence to report a maiden JORC compliant mineral resource. RC and/or diamond drilling of the down-dip extensions will follow.