



Sirius Resources NL

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Projects:

Fraser Range nickel-copper, gold

Polar Bear gold, nickel

GOLD DISCOVERY AT BALOO PROSPECT, POLAR BEAR

Key points

- First wide spaced reconnaissance drilling at Baloo prospect intersects thick, high grade, near surface gold zone in bedrock, including **33m @ 3.81 g/t Au** from 24 metres to the end of hole
- 500 metre strike length defined so far, open along strike both north and south
- Gold associated with thick zone of quartz veins, arsenopyrite alteration and tellurium anomalism
- Eight drillholes end in gold mineralisation, with three of these grading 4-8g/t gold
- Located approximately 10 kilometres from an operating gold mine (Higginsville) in a district which has had approximately 30 million ounces of gold discovered in relative proximity to the north, south and west
- Discovery is on unexplored ground on tenements recently granted to Sirius after a 15 year application period

Sirius Resources NL (ASX:SIR) ("Sirius" or the "Company") advises that it has discovered a significant zone of gold mineralisation at the Baloo prospect on its 100% owned Polar Bear project. Results received yesterday from reconnaissance aircore drilling undertaken in late 2014 have confirmed the best zone of gold mineralisation yet identified on the Polar Bear project.

Full results are summarised in Annexure 1 and key intersections are shown below (*note, EOH means to the end of the drillhole*):

- **49m @ 2.69 g/t Au** from 8 metres to EOH, including **33m @ 3.81 g/t Au** from 24 metres to EOH, including **4m @ 7.51 g/t Au** from 28 metres and **4m @ 8.48 g/t Au** from 48 metres in SPBA2121
- **68m @ 1.13 g/t Au** from 4 metres to EOH, including **4m @ 8.13 g/t Au** from 4 metres, and **4m @ 6.10 g/t Au** from 68 metres to EOH in SPBA2122



- **10m @ 1.29 g/t Au** from 16 metres to EOH, including **1m @ 8.8 g/t Au** from 25 metres to EOH in SPBA2114
- **38m @ 0.69 g/t Au** from 16 metres to EOH, including **4m @ 4.27 g/t Au** from 40 metres in SPBA2131
- **6m @ 3.59 g/t Au** from 68 metres to EOH in SPBA2157
- **12m @ 1.04 g/t Au** from 16 metres in SPBA2138

Wide spaced (100 x 40 metre) reconnaissance aircore drilling undertaken in December on a gold target at the northern end of the Polar Bear project has identified significant gold mineralisation at the Baloo prospect, 10 kilometres from the Higginsville gold mine, where past gold production and current gold resources total approximately 3 million ounces (*see Figure 1*).

The Baloo mineralisation occurs beneath a thin veneer of salt lake sediment, is up to 100 metres wide, and has so far been defined over a north-south trending strike length of at least 500 metres. It is open along strike to the north and south (*see Figure 2*).

Importantly, the gold at Baloo is in-situ, in fresh and variably weathered rock and not merely in transported sediments, suggesting that this is the top of an extensive mineralised bedrock system. The gold occurs in a thick (estimated 40 metre true width) westerly dipping zone of quartz veining with associated arsenopyrite alteration and elevated levels of tellurium (*see Figure 3*). Both arsenic and tellurium are often found in gold deposits and are considered important positive indicators.

Significantly, eight of these drillholes ended in bedrock mineralisation, with three of these grading 4-8g/t gold. The presence of high grade gold in such widely spaced holes over a broad area is very encouraging. A few holes were not able to penetrate strong silica alteration and finished prematurely but despite this ended in grade (eg, SPBA2141: 1m @ 2.31g/t Au from 4m to EOH).

This is the first drilling to test Sirius' gold targets in this area. It has never been drilled before due to being located beneath Lake Cowan salt lake on tenements that were until recently held up in a 15 year application process. Much of the surrounding known gold endowment has been discovered whilst this ground was quarantined in this application process.

Sirius' Managing Director Mark Bennett commented "This is by far the best gold zone yet found at Polar Bear. We have been looking forward to drilling this area for a long time given that it is one of our top targets, it was unexplored, it had been out of bounds during the modern era of gold exploration, and it is in a district with approximately 30 million ounces of gold discovered in relative proximity to the north, south and west of us".

Follow up drilling at the Baloo Prospect will resume shortly.

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Mark Bennett, Managing Director and CEO

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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 and Jeffrey Foster who are employees of the company and fairly represents this information. Mr Bartlett and Mr Foster are members of the Australasian Institute of Mining and Metallurgy. Mr Bartlett and Mr Foster have sufficient experience of relevance to the styles 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 and Mr Foster consent to the inclusion in this report of the matters based on information in the form and context in which it appears. Exploration results are based on standard industry practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures. Reverse circulation (RC), aircore (AC) and rotary air blast (RAB) drilling samples are collected as composite samples of 4 or 2 metres and as 1 metre splits (stated in results). Mineralised intersections derived from composite samples are subsequently re-split to 1 metre samples to better define grade distribution. Core samples are taken as half NQ core or quarter HQ core and sampled to geological boundaries where appropriate. The quality of RC drilling samples is optimised by the use of riffle and/or cone splitters, dust collectors, logging of various criteria designed to record sample size, recovery and contamination, and use of field duplicates to measure sample representivity. For soil samples, PGM and gold assays are based on an aqua regia digest with Inductively Coupled Plasma (ICP) finish and base metal assays may be based on aqua regia or four acid digest with inductively coupled plasma optical emission spectrometry (ICPOES) or atomic absorption spectrometry (AAS) finish. In the case of reconnaissance RAB, AC, RC or rock chip samples, PGM and gold assays are based on lead or nickel sulphide collection fire assay digests with an ICP finish, base metal assays are based on a four acid digest and inductively coupled plasma optical emission spectrometry (ICPOES) and atomic absorption spectrometry (AAS) finish, and where appropriate, oxide metal elements such as Fe, Ti and Cr are based on a lithium borate fusion digest and X-ray fluorescence (XRF) finish. In the case of strongly mineralised samples, base metal assays are based on a special high precision four acid digest (a four acid digest using a larger volume of material) and an AAS finish using a dedicated calibration considered more accurate for higher concentrations. Sample preparation and analysis is undertaken at Minanalytical, Genalysis Intertek and Ultratrace laboratories in Perth, Western Australia. The quality of analytical results is monitored by the use of internal laboratory procedures and standards together with certified standards, duplicates and blanks and statistical analysis where appropriate to ensure that results are representative and within acceptable ranges of accuracy and precision. Where quoted, nickel-copper intersections are based on a minimum threshold grade of 0.5% Ni and/or Cu, and gold intersections are based on a minimum gold threshold grade of 0.1g/t Au unless otherwise stated. Intersections are length and density weighted where appropriate as per standard industry practice. All sample and drill hole co-ordinates are based on the GDA/MGA grid and datum unless otherwise stated. Exploration results obtained by other companies and quoted by Sirius have not necessarily been obtained using the same methods or subjected to the same QAQC protocols. These results may not have been independently verified because original samples and/or data may no longer be available.

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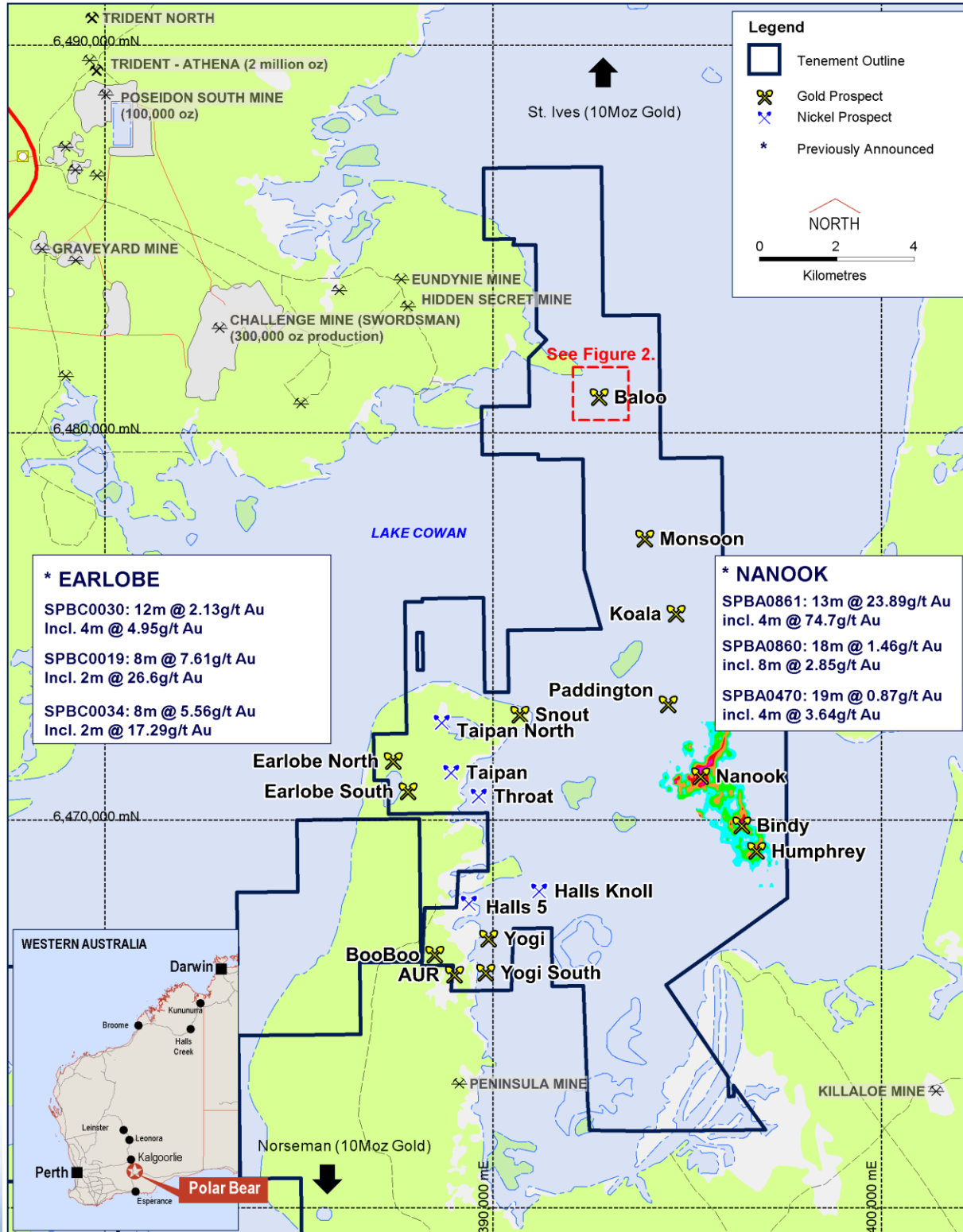


Figure 1. Location of Polar Bear project showing gold and nickel prospects, with the gold trend running through Lake Cowan.

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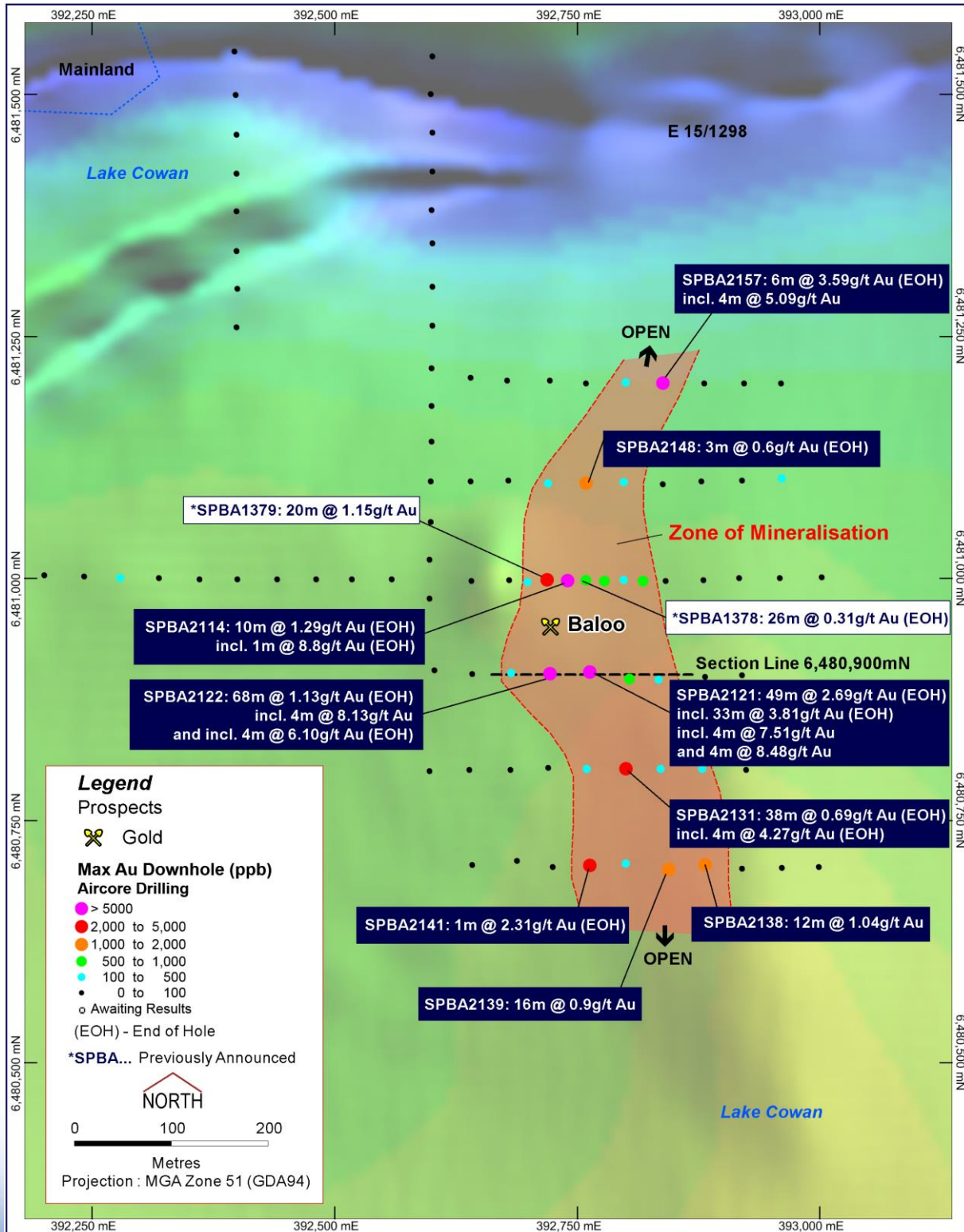


Figure 2. Baloo gold prospect showing gold mineralization in wide spaced reconnaissance drilling, with key intersections.

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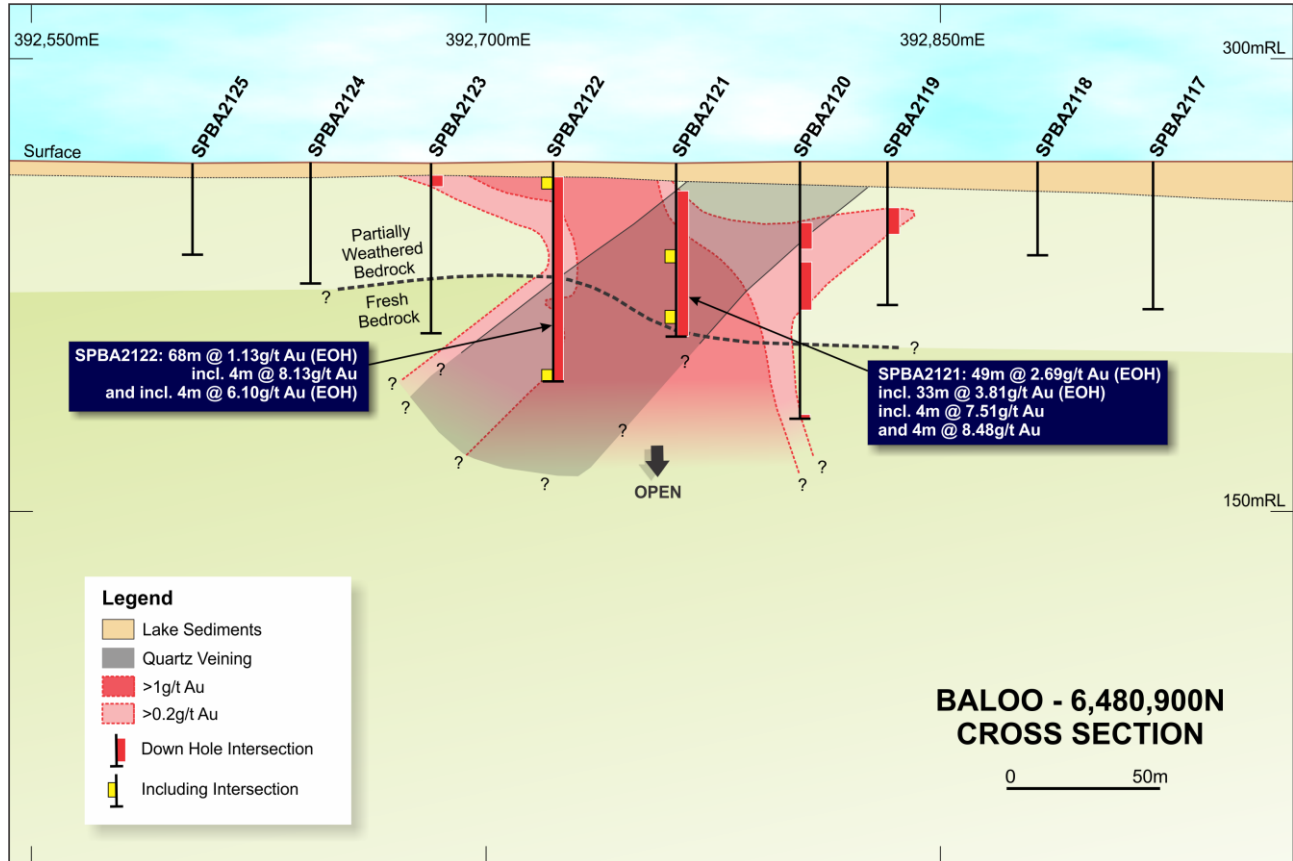


Figure 3. Cross section of Baloo gold prospect showing extensive mineralization/anomalism and zone of quartz veining.

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Annexure 1

Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t	Comment
SPBA1350	BALOO	12	6481819	392600	265	-90	360				NSI	
SPBA1351	BALOO	9	6481779	392600	265	-90	360				NSI	
SPBA1352	BALOO	15	6481739	392598	265	-90	360				NSI	
SPBA1353	BALOO	12	6481697	392599	265	-90	360				NSI	
SPBA1354	BALOO	7	6481660	392599	265	-90	360				NSI	
SPBA1355	BALOO	4	6481621	392599	265	-90	360				NSI	
SPBA1356	BALOO	4	6481580	392600	265	-90	360				NSI	
SPBA1357	BALOO	4	6481539	392601	265	-90	360				NSI	
SPBA1358	BALOO	5	6481500	392599	265	-90	360				NSI	
SPBA1359	BALOO	10	6481460	392601	265	-90	360				NSI	
SPBA1360	BALOO	5	6481420	392601	265	-90	360				NSI	
SPBA1361	BALOO	4	6481380	392600	265	-90	360				NSI	
SPBA1362	BALOO	5	6481346	392601	265	-90	360				NSI	
SPBA1363	BALOO	5	6481301	392601	265	-90	360				NSI	
SPBA1364	BALOO	5	6481261	392601	265	-90	360				NSI	
SPBA1365	BALOO	4	6481217	392600	265	-90	360				NSI	
SPBA1366	BALOO	5	6481178	392600	265	-90	360				NSI	
SPBA1367	BALOO	4	6481141	392600	265	-90	360				NSI	
SPBA1368	BALOO	4	6481100	392599	265	-90	360				NSI	
SPBA1369	BALOO	4	6481058	392599	265	-90	360				NSI	
SPBA1370	BALOO	9	6481019	392598	265	-90	360				NSI	
SPBA1371	BALOO	28	6480979	392598	265	-90	360				NSI	
SPBA1372	BALOO	14	6481001	393002	265	-90	360				NSI	
SPBA1373	BALOO	13	6481000	392959	265	-90	360				NSI	
SPBA1374	BALOO	5	6481000	392917	265	-90	360				NSI	
SPBA1375	BALOO	43	6480998	392880	265	-90	360				NSI	
SPBA1376	BALOO	60	6480997	392841	265	-90	360				NSI	
SPBA1377	BALOO	91	6480998	392798	265	-90	360	90	91	1	0.4	
SPBA1378	BALOO	46	6480998	392759	265	-90	360	20	46	26	0.31	EOH
SPBA1379	BALOO	36	6480998	392719	265	-90	360	4	24	20	1.15	
SPBA1380	BALOO	36	6480998	392680	265	-90	360				NSI	
SPBA1381	BALOO	27	6480997	392641	265	-90	360				NSI	
SPBA1382	BALOO	5	6480999	392559	265	-90	360				NSI	
SPBA1383	BALOO	9	6480999	392518	265	-90	360				NSI	
SPBA1384	BALOO	5	6480999	392481	265	-90	360				NSI	
SPBA1385	BALOO	15	6480999	392441	265	-90	360				NSI	
SPBA1386	BALOO	12	6480999	392400	265	-90	360				NSI	

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Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t	Comment
SPBA1387	BALOO	34	6480999	392361	265	-90	360				NSI	
SPBA1388	BALOO	18	6481000	392319	265	-90	360				NSI	
SPBA1389	BALOO	24	6481000	392279	265	-90	360	16	24	8	0.24	
SPBA1390	BALOO	26	6481002	392242	265	-90	360				NSI	
SPBA1391	BALOO	33	6481003	392201	265	-90	360				NSI	
SPBA1392	BALOO	22	6481003	392161	265	-90	360				NSI	
SPBA1393	BALOO	30	6481005	392125	265	-90	360				NSI	
SPBA1394	BALOO	23	6481005	392079	265	-90	360				NSI	
SPBA1395	BALOO	41	6481004	392039	265	-90	360				NSI	
SPBA1396	BALOO	45	6481003	392000	265	-90	360				NSI	
SPBA1397	BALOO	24	6481004	391962	265	-90	360				NSI	
SPBA1398	BALOO	42	6481001	391919	265	-90	360				NSI	
SPBA1399	BALOO	54	6481003	391881	265	-90	360				NSI	
SPBA1400	BALOO	36	6481003	391840	265	-90	360				NSI	
SPBA1401	BALOO	39	6481003	391798	265	-90	360				NSI	
SPBA1402	BALOO	45	6481000	391761	265	-90	360				NSI	
SPBA1403	BALOO	24	6481002	391723	265	-90	360				NSI	
SPBA1404	BALOO	27	6481002	391682	265	-90	360				NSI	
SPBA1405	BALOO	42	6481001	391601	265	-90	360				NSI	
SPBA1406	BALOO	12	6480999	391520	265	-90	360				NSI	
SPBA1407	BALOO	8	6480999	391440	265	-90	360				NSI	
SPBA1408	BALOO	5	6480999	391360	265	-90	360				NSI	
SPBA1409	BALOO	6	6481000	391280	265	-90	360				NSI	
SPBA1410	BALOO	11	6481000	391203	265	-90	360				NSI	
SPBA1411	BALOO	2	6481459	392101	265	-90	360				NSI	
SPBA1412	BALOO	5	6481422	392101	265	-90	360				NSI	
SPBA1413	BALOO	3	6481380	392100	265	-90	360				NSI	
SPBA1414	BALOO	4	6481343	392101	265	-90	360				NSI	
SPBA1415	BALOO	4	6481300	392099	265	-90	360				NSI	
SPBA1416	BALOO	5	6481260	392099	265	-90	360				NSI	
SPBA1417	BALOO	6	6481219	392099	265	-90	360				NSI	
SPBA1418	BALOO	11	6481180	392100	265	-90	360				NSI	
SPBA1419	BALOO	9	6481141	392100	265	-90	360				NSI	
SPBA1420	BALOO	11	6481100	392104	265	-90	360				NSI	
SPBA1421	BALOO	24	6481057	392101	265	-90	360				NSI	
SPBA1422	BALOO	4	6481259	392399	265	-90	360				NSI	
SPBA1423	BALOO	4	6481299	392400	265	-90	360				NSI	
SPBA1424	BALOO	4	6481338	392399	265	-90	360				NSI	

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Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t	Comment
SPBA1425	BALOO	4	6481379	392399	265	-90	360				NSI	
SPBA1426	BALOO	6	6481418	392399	265	-90	360				NSI	
SPBA1427	BALOO	5	6481458	392399	265	-90	360				NSI	
SPBA1428	BALOO	3	6481499	392398	265	-90	360				NSI	
SPBA1429	BALOO	3	6481544	392397	265	-90	360				NSI	
SPBA1430	BALOO	3	6481581	392398	265	-90	360				NSI	
SPBA1431	BALOO	4	6481618	392398	265	-90	360				NSI	
SPBA1432	BALOO	8	6481659	392397	265	-90	360				NSI	
SPBA1433	BALOO	5	6481697	392396	265	-90	360				NSI	
SPBA2113	BALOO	42	392699	6480996	265	-90	360	4	8	4	0.25	
SPBA2114	BALOO	26	392740	6480997	265	-90	360	16	26	10	1.29	EOH
including								25	26	1	8.8	EOH
SPBA2115	BALOO	82	392778	6480997	265	-90	360	8	12	4	0.14	
and								52	64	12	0.43	
and								68	72	4	0.26	
and								81	82	1	0.23	EOH
SPBA2116	BALOO	70	392818	6480997	265	-90	360	28	36	8	0.52	
including								28	32	4	0.89	
								52	56	4	0.18	
								69	70	1	0.21	EOH
SPBA2117	BALOO	48	392920	6480900	265	-90	360				NSI	
SPBA2118	BALOO	30	392882	6480898	265	-90	360				NSI	
SPBA2119	BALOO	48	392834	6480895	265	-90	360	16	24	8	0.28	
SPBA2120	BALOO	84	392804	6480896	265	-90	360	20	28	8	0.45	
including								20	24	4	0.54	
and								32	48	16	0.21	
and								83	84	1	0.2	
SPBA2121	BALOO	57	392763	6480903	265	-90	360	8	57	49	2.69	EOH
including								24	57	33	3.81	EOH
including								28	32	4	7.51	
and including								48	52	4	8.48	
SPBA2122	BALOO	72	392722	6480901	265	-90	360	4	72	68	1.13	EOH
including								4	8	4	8.13	
and including								68	72	4	6.1	EOH
SPBA2123	BALOO	56	392682	6480902	265	-90	360	4	8	4	0.41	
SPBA2124	BALOO	39	392642	6480901	265	-90	360				NSI	
SPBA2125	BALOO	30	392603	6480905	265	-90	360				NSI	
SPBA2126	BALOO	24	392598	6480801	265	-90	360				NSI	

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Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t	Comment
SPBA2127	BALOO	15	392639	6480802	265	-90	360				NSI	
SPBA2128	BALOO	18	392681	6480802	265	-90	360				NSI	
SPBA2129	BALOO	21	392720	6480804	265	-90	360				NSI	
SPBA2130	BALOO	30	392760	6480803	265	-90	360	8	12	4	0.34	
SPBA2131	BALOO	54	392800	6480803	265	-90	360	16	54	38	0.69	EOH
including								40	44	4	4.27	
SPBA2132	BALOO	22	392836	6480803	265	-90	360	12	16	4	0.17	
and								20	22	2	0.23	
SPBA2133	BALOO	23	392879	6480803	265	-90	360	21	23	2	0.19	
SPBA2134	BALOO	7	392924	6480802	265	-90	360				NSI	
SPBA2135	BALOO	23	392920	6480700	265	-90	360				NSI	
SPBA2136	BALOO	32	392961	6480701	265	-90	360				NSI	
SPBA2137	BALOO	34	392999	6480702	265	-90	360				NSI	
SPBA2138	BALOO	35	392882	6480704	265	-90	360	16	28	12	1.04	
SPBA2139	BALOO	51	392844	6480699	265	-90	360	28	44	16	0.9	
SPBA2140	BALOO	16	392800	6480705	265	-90	360	15	16	1	0.1	
SPBA2141	BALOO	5	392763	6480703	265	-90	360	4	5	1	2.31	EOH
SPBA2142	BALOO	18	392725	6480702	265	-90	360				NSI	
SPBA2143	BALOO	15	392688	6480708	265	-90	360				NSI	
SPBA2144	BALOO	12	392642	6480704	265	-90	360				NSI	
SPBA2145	BALOO	4	392640	6481100	265	-90	360				NSI	
SPBA2146	BALOO	11	392679	6481101	265	-90	360				NSI	
SPBA2147	BALOO	14	392720	6481098	265	-90	360	8	14	6	0.14	
SPBA2148	BALOO	31	392759	6481098	265	-90	360	4	8	4	0.21	
and								28	31	3	0.60	EOH
SPBA2149	BALOO	65	392798	6481099	265	-90	360	8	12	4	0.16	
SPBA2150	BALOO	4	392838	6481097	265	-90	360					
SPBA2151	BALOO	36	392878	6481100	265	-90	360				NSI	
SPBA2152	BALOO	18	392920	6481101	265	-90	360				NSI	
SPBA2153	BALOO	21	392961	6481103	265	-90	360	8	12	4	0.24	
SPBA2154	BALOO	32	392960	6481201	265	-90	360					
SPBA2155	BALOO	23	392922	6481201	265	-90	360					
SPBA2156	BALOO	36	392881	6481201	265	-90	360					
SPBA2157	BALOO	74	392838	6481201	265	-90	360	68	74	6	3.59	EOH
including								68	72	4	5.09	
SPBA2158	BALOO	57	392800	6481202	265	-90	360	48	57	9	0.16	
SPBA2159	BALOO	15	392759	6481201	265	-90	360				NSI	
SPBA2160	BALOO	6	392722	6481204	265	-90	360				NSI	

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Hole No.	Zone	Total Depth	North	East	RL	Dip	Azim	From, m	To, m	Width, m	Au g/t	Comment
SPBA2161	BALOO	4	392678	6481204	265	-90	360				NSI	
SPBA2162	BALOO	5	392640	6481207	265	-90	360				NSI	

BOLD – signifies new assay results

NSI – No significant Intersection

EOH – End of hole

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 is sampled by aircore drilling on a nominal 40 m hole spacing and 100 m line. A total of 134 aircore holes have been drilled to an average depth of 22 m for a total of 2,984m. Aircore holes are drilled vertically to refusal.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	The drillhole locations are picked up by handheld GPS. Sampling was carried out under Sirius protocols and QAQC procedures 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 crushed, 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.
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>	Aircore drilling accounts for 100% of Sirius' current drilling at the Baloo prospect.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	Aircore recoveries are logged visually as a percentage.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	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>	Aircore drilling samples were frequently wet which may have resulted in sample bias due to preferential loss/gain of fine/coarse material. Further diamond drilling will need to be undertaken to evaluate these effects.

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Criteria	JORC Code explanation	Commentary
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>	Aircore sampling is not appropriate for mineral resource estimation and is considered a qualitative sampling technique.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of aircore records lithology, mineralogy, mineralisation, weathering, colour and other features of the samples.
	<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>	N/A
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Aircore chips are sampled by scoop. 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 of aircore 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>	Aircore samples are collected at 1 m intervals and composited into 4 m samples using a scoop to sample individual metre samples. Certified Reference Materials (CRM's) and/or in house controls, blanks, splits and replicates are analysed with each batch of samples. These quality control results are reported along with the sample values in the final report. Selected samples are also re-analysed to confirm anomalous results.
	<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 to give an accurate indication of mineralisation given the qualitative nature of the technique.
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>	The analytical technique used a 25g aqua-regia digestion with ICP-MS finish for gold only. The method gives a near total digestion of the regolith intercepted in aircore drilling. This method is appropriate to detect anomalous gold mineralisation. 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 high-level samples.
	<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.

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	<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>	Both the Managing and the Exploration Manager of Sirius has visually verified significant intersections in aircore drilling.
	<i>The use of twinned holes.</i>	No twin holes have been drilled at Baloo 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 an onsite 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 by GPS. Elevation values were in AHD. Expected accuracy is +/- 5 m for easting, northing and 1m for elevation coordinates.
	<i>Specification of the grid system used.</i>	The grid system is GDA94 (MGA), zone 51.
	<i>Quality and adequacy of topographic control.</i>	As the lake surface is flat an average (265m RL) is taken which is assigned to all drillholes.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	The nominal drillhole spacing is 40 m (easting) by 100 m (northing).
	<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>	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 orientation of mineralised structures has not been ascertained. To avoid bias drilling to date has been vertical. Drilling is mainly restricted to the overlying regolith and seldom penetrates fresh rock by more than a couple of metres.
	<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 Sirius. Samples are stored on site and either delivered by Sirius personnel to Perth and then to the assay laboratory, or collected from site by Esperance Freightlines 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 drilling is located wholly within Exploration Licence E15/1298. The tenement is 100% owned by Polar Metals Pty Ltd, a wholly owned subsidiary of Sirius Resources NL. The tenement sits 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Plutonic Operations Limited and Homestake Gold of Australia Limited conducted reconnaissance aircore drilling (PBAC prefix) over Lake Cowan on predominantly 100 m drillhole spacing and 800 m line spacing from 1997-1999. There was only limited follow-up with three diamond drillholes (PBDD prefix) completed in the vicinity of Bindy prospect. This drilling produced anomalous results which were considered worthy of follow up drilling by Sirius. Location of these drillholes cannot be verified as the collars are now mostly obscured. Aircore sampling was done by 4 m composites with 1 m resplits 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 certificates are not available.
Geology	Deposit type, geological setting and style of mineralisation.	Baloo 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 mineralisation is focused on or near to the stratigraphic boundary between the Killaloe and Buldania Formation. The mineralisation appears hosted in weathered basement with strong correlation to sericite / biotite alteration and sulphidic silica alteration.
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. No top-cuts have been applied. A nominal 0.1 g/t Au lower cut-off is reported as been significant in the context of the geological setting.
	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 gold mineralisation are reported as included intervals.

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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 geometry of the primary mineralisation is not known at present due to the lack of deeper drilling and the early stage of exploration. The trend of mineralisation appears broadly north south and is coincident with an elevated arsenic trend.
Diagrams	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.	All significant results are reported, with a 0.1 g/t lower cut-off.
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.	Refer to figures in body of text.
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 this stage, mineralisation is only indicative and requires further infill to test for coherency. Drilling in the bedrock beneath anomalous zones will need to be undertaken to establish the true nature of the mineralisation.