# **ASX Announcement**

14th December 2020





# **EXPLORATION UPDATE**

### **Key Points**

- Second diamond hole to test northern EM conductor in the Fraser Range completed
- Conductor source intersected where predicted, but interpreted to be predominantly iron sulphides with minor copper sulphide
- Jillewarra gold drilling to commence first quarter 2021

### Fraser Range diamond drilling

S2 Resources Ltd ("S2" or the "Company") advises that its second drill hole in the Fraser Range has been completed. Diamond hole SAFD002 was drilled into an electromagnetic (EM) conductor on the Company's northern licence E28/2791 (refer to S2 ASX announcement dated 7<sup>th</sup> December 2020).

The hole intercepted approximately 6.5 metres of semi-massive and net textured sulphides from 401 metres downhole, versus the modelled EM conductor depth of 370 to 390 metres downhole. Sulphides comprised predominantly pyrrhotite (iron sulphide) with minor chalcopyrite (copper sulphide) in a mafic host rock (Figure 1). Handheld XRF readings did not identify significant nickel sulphides.

The mineralised intervals from holes FAVD001 and FAVD002 will be assayed for base metals and platinum group elements (PGE's) and downhole EM (DHEM) undertaken to test for any off-hole anomalies. However, S2 believes the conductors in both holes have been explained by predominantly iron sulphides with no nickel and minor copper. In the coming months, field mapping and geophysics will assess the prospectivity of S2's third Exploration Licence in the Fraser Range (E28/2794).

### **Upcoming activities**

Drilling on the Jillewarra Joint Venture is due to commence early in 2021 (S2 earning up to 70% interest). Jillewarra is prospective for both gold and Volcanogenic Massive Sulphide (VMS) base metals. Drilling will initially test depth and strike extensions to the Dorothy and Margueritta prospects, which contain historic shallow drill intercepts, including 3 metres at 40.9 g/t gold from 29 metres, 9 metres at 21.0 g/t gold from 45 metres and 4 metres at 33.8 g/t gold from 33 metres (refer to previous S2 ASX announcements dated 5<sup>th</sup> October and 2<sup>nd</sup> December 2020).



The Company is also planning follow-up drilling to the high-grade gold intercept of 6.85 metres at 11.8g/t gold from 223.0 metres downhole at its 100% owned Aarnivalkea prospect in Finland. The timing of this drilling is subject to rig availability and planned works at the Ruopas nickel prospect, which is prospective for magmatic intrusive style nickel-copper-PGE mineralisation (refer to S2 ASX announcement dated 16<sup>th</sup> May 2019), also located in Finland.



Figure 1. FAVD002 diamond core showing semi-massive sulphides with dominant pyrrhotite and minor chalcopyrite

This announcement has been provided to the ASX under the authorisation of Mark Bennett, Executive Chairman.

### For further information, please contact:

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Past Exploration results reported in this announcement have been previously prepared and disclosed by S2 Resources Ltd in accordance with JORC 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in these market announcements. The Company confirms that the form and content in which the Competent Person's findings are presented here have not been materially modified from the original market announcement. Refer to www.s2resources.com.au for details on past exploration results.

### **Competent Persons statements**

The information in this report that relates to Exploration Results is based on information compiled by John Bartlett, who is an employee and shareholder of the Company. Mr Bartlett is a member of the Australian Institute of Mining and Metallurgy (MAusIMM) and 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 a Competent Person 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.

### **Annexure 1**

Hole	Easting	Northing	RL	Dip	Azi.	Depth	From	То	Width	Grade Ni_pct	Grade Cu_pct
SAFD0001	576,625	6,535,800	216	-60	090	345.6	AWR				
SAFD0002	583,696	6,544,300	226	-63	270	IP	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 - FRASER RANGE** 

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry	Drilling on the Fraser Range tenements has comprised two diamond drill holes, completed by Westcore Drilling, based out of Perth.
	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.	Sampling has been carried out by cutting and sampling half core through areas of visible mineralisation, with sample intervals to lithological contacts, to a maximum length of 1.2 metres.
		All are forwarded for analyses by Minanalytical Laboratories Services Australia Pty Ltd in Perth.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling and QAQC procedures are carried out using S2 protocols as per industry best practice.
	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	The diamond core is HQ and NQ2 size, sampled on geological intervals (0.2 m to 1.2 m), cut into half (NQ2) or quarter (HQ) core to give sample weights under 3 kg. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by four acid digest with an ICP/OES
Drilling techniques	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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Drilling is standard diamond coring, using either HQ triple tube or NQ2 core diameter. The core has been orientated using a an Ace orientation tool.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Diamond core recoveries are logged and recorded in the database. Overall recoveries are >>95%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.



Criteria	JORC Code explanation	Commentary
	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.	No relationship has been seen to exist
Logging	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.	Logging of diamond core and RC samples records lithology, mineralogy, mineralisation, structural (DDH only), weathering, colour and other features of the samples  logging uses a standard legend developed by S2 which is suitable for wireframing of the basement interface.  Exploration holes are not routinely geotechnically logged but resource holes are.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All core is photographed in both dry and wet form.
	The total length and percentage of the relevant intersections logged	All drillholes were logged in full to end of hole.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core was cut in half (NQ2) and quarter core (HQ) onsite using an automatic core saw. All samples were collected from the same side of the core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No non-core sampling was completed
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation follows industry best practice in sample preparation involving oven drying, coarse crush and pulverisation of entire sample to minimum of 85% passing - 75um.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Full QAQC system in place to determine accuracy and precision of assays
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field	Non-biased sampling using the orientation line as a guide for cutting with the same half used for all sampling.
	duplicate/second-half sampling.	No duplicate samples have been collected at this stage
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to correctly represent the sought after mineralisation style
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and	For core samples the analytical techniques used a four acid digest multi element suite with ICP/OES or ICP/MS finish (25 gram or 50 gram FA/AAS for precious metals).
	whether the technique is considered partial or total.	The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples.
		The method approaches total dissolution of most minerals.
	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.	No geophysical tools were used to determine any element concentrations.
	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.	Full QAQC system in place including Certified Standards and blanks of appropriate matrix and levels.



Criteria	JORC Code explanation	Commentary		
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The S2 Exploration Manager has personally inspected all sampled core and assay results.		
	The use of twinned holes.	No twinned holes were drilled within the main infilled anomaly.		
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary sampling data is collected in a set of standard Excel templates. The information is managed by S2's database manager for validation and compilation into S2's central database.		
	Discuss any adjustment to assay data.	No adjustments made		
Location of data points	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.	Drill hole collar locations were recorded using handheld Garmin GPS. Elevation values were in AHD RL and values recorded within the database. Expected accuracy is + or – 5 m for easting, northing and 10m for elevation coordinates.  Downhole surveys using an Axis north-seeking gyro with readings at surface and then every 30m downhole.		
	Specification of the grid system used.	The grid system is MGA_GDA94 (zone 51), local easting and northing are in MGA.		
	Quality and adequacy of topographic control.	Topographic surface uses handheld GPS elevation data, which is adequate at the current stage of the project.		
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drilling to date has been on individual drill holes into a specific target.		
	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.	Data spacing, sampling technique and distribution is not sufficient at this stage to allow the estimation of mineral resources.		
	Whether sample compositing has been applied.	No sample compositing has been applied.		
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Insufficient information to determine at this time.		
	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.	Drilling of diamond core is on a nominal 60 degrees, either grid west or east depending on the orientation of the modelled EM plate. The orientation of drilling is broadly orthogonal to the overall geology.		
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by S2 personnel. Drill samples and core is visually checked at the drill rig and then transported to S2's logging and cutting facilities on site at the S2 remote camp.  Bagged samples are transferred to Minanalytical Laboratory in		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	either Kalgoorlie or Perth by S2 personnel.  No audits or reviews have been conducted at this stage.		



SECTION 2: REPORTING OF EXPLORATION RESULTS - FRASER RANGE

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 Fraser Range Project tenements are EL and ELA's located South and South East of Zanthus in Western Australia. They are E28/2791 and E28/2792 (both granted) and E28/2794 (application).  The exploration licences are 100% owned by Southern Star Exploration Pty Ltd, a 100% owned subsidiary of S2 Resources.
	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.	All of the Exploration Licences are in good standing and no known impediments exist on the tenements being actively explored.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Tenements have had no published or open file exploration work for magmatic nickel/ copper type deposits. The only documented drilling on the tenements was by Homestake following up calcrete gold anomalism.
Geology	Deposit type, geological setting and style of mineralisation.	The underlying unweathered lithology is granulite facies metamorphosed and partially retrogressed sedimentary, mafic and ultramafic igneous rocks as determined by petrographic work on adjacent tenure.  The target geology is magmatic sulphide mineralisation hosted in or associated with mafic-ultramafic intrusions within the Fraser Complex of the Albany-Fraser Orogeny.
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 annexure 1
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.	No reporting of assays have been undertaken to date. Results of current drilling have not yet been received from the laboratory
_	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.	No reporting of assays have been undertaken to date. Results of current drilling have not yet been received from the laboratory
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	None used.
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').	No relationship between the drilling and target sulphide mineralisation has been determined to date, as such any reported intervals are "down hole" lengths



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.	All results considered significant are reported.
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.	A Passive Seismic survey was conducted at EL28/2791 and ELA28/2794 to help ascertain potential depth of transported cover so as to determine the suitability for surface geochemical sampling.
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	DHEM of both drill holes is planned.  A full review fo the results to date will be undertaken (once all assay results have been received) prior to any future exploration programs being planned.

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	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	All results are historical in nature. No sampling by S2 has been conducted on the tenements



Criteria	JORC Code explanation	Commentary
Drilling techniques	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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling by S2 has been conducted on the tenements. Historical drilling (RAB, AC, RC & Diamond) has been conducted across the project area, the verification and validation of these data sets is ongoing.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Logging	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	The total length and percentage of the relevant intersections logged	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.



Criteria	JORC Code explanation	Commentary
	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.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No assaying of samples has been conducted on the tenements
	The use of twinned holes.	No drilling by S2 has been conducted on the tenements.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	Discuss any adjustment to assay data.	No adjustments to the assay data have been carried out by S2. drilling or sampling has been conducted by S2 on the tenements.
Location of data points	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.	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing. Only selected historical drill sites have been verified in the field by S2.
	Specification of the grid system used.	The grid system used by S2 is GDA94 (MGA), zone 50. Histgorical results have been reported in various grid formats and these have been converted to a standard grid system in QGIS.
	Quality and adequacy of topographic control.	Elevation data for all data is determined by a digital elevation model derived from public domain SRTM 10m Elevation grids
Data spacing and distribution	Data spacing for reporting of Exploration Results.	No drilling or sampling has been conducted by S2 on the tenements. Historical drilling and sampling have been carried out on various grid spacings as well as isolated.
	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.	No assaying of samples has been conducted by S2 on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	Whether sample compositing has been applied.	No sample compositing has been applied by S2
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	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.	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
Sample security	The measures taken to ensure sample security.	All drilling and sampling on the project is historical in nature and S2 is currently unable to verify what (if any measures) have been taken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted by S2 at this stage.



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

Criteria	JORC Code explanation		Со	mmentary
Mineral tenement and land tenure status		The Jillewarra Project is located approximately 50km West to North West of Meekatharra, and situated in the Meekatharra mineral field of the Murchison Province of Western Australia. The project is located on the Belele 250k sheet. The tenure schedule for the project is listed below:		
		TENID	TENSTATUS	HOLDER
		E 5101602	LIVE	TANZI PTY LTD
		E 5101603	LIVE	TANZI PTY LTD
		E 5101604	LIVE	TANZI PTY LTD
		E 5101617	LIVE	BLACK RAVEN MINING PTY LTD
		E 5101906	LIVE	BLACK RAVEN MINING PTY LTD
		E 5101915	LIVE	BLACK RAVEN MINING PTY LTD
		E 5101955	PENDING	BLACK RAVEN MINING PTY LTD
		E 5101956	PENDING	BLACK RAVEN MINING PTY LTD
		E 5101965	PENDING	BLACK RAVEN MINING PTY LTD
		E 5101966	PENDING	BLACK RAVEN MINING PTY LTD
		M 5100270	LIVE	TANZI PTY LTD
		M 5100353	LIVE	TANZI PTY LTD
		M 5100451	LIVE	TANZI PTY LTD
	Type, reference name/number, location and	P 5103082	LIVE	BLACK RAVEN MINING PTY LTD
	ownership including agreements or material issues with third parties such as joint ventures,	M 5100885	PENDING	WOOD, SANDRA
	partnerships, overriding royalties, native title	P 5102696	LIVE	WOOD, SANDRA
	interests, historical sites, wilderness or national park and environmental settings.	P 5102950	LIVE	KING, TRENT NATHAN
		Black Raven M  Issu A\$C  Mir  Cur a 5: Cor Mir met On to c ("FC In t red BRN rev In t with	ining Pty Ltd ur te of 5 million S 0.20, representi inimum expendi nulative expend 1% interest inpletion of a feateral Resources tal equivalent) of a completion of a contribute, dilui CI") to commen the event of Bluces to 25% an M repays its frenue the event of S inin 7 years, S2's	red into an earn-in joint venture wider the following terms: 2 shares to BRM at a nominal price of a shares to BRM at a nominal price of a shares to BRM at a nominal price of a shares to easibility study on minimum Inferit of 250,000 ounces of gold (or be within 7 years to earn a 70% interest of a shares to earn a 70% interest of a feesibility study by S2, BRM can elete, or revert to a free carried intercement of commercial production RM opting for a FCI, BRM's interest d S2's interest increases to 75%, a see carry from 100% of its share 2 not completing a feasibility study interest decreases to 49% us royalties that apply to spec
		-	y is a 1.5% NS E51/1604, as	area. SR royalty that applies to E51/16 well as a 49% interest in M51/2



Criteria	JORC Code explanation	Commentary
		The SBM royalty comprises either a 0.5% gold royalty or a 1.0% NSR "Other Metals" (not gold) and applies to mining leases M51/270, M51/353 and M51/451.  The Zebina Royalty is a 0.5% NSR on gold and other metals, payable on tenements E51/1906 and P51/3082
	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.	All of the Exploration Licences are in good standing and no known impediments exist on the tenements being actively explored.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Gold was first discovered at Chesterfield in 1901, and was mined from the Dorothy deposit until 1909 to a depth of 30m, and at Margueritta also until 1909 to a depth of 38m (Watkins and Hickman, 1990). Production ceased due to heavy water inflows. Gold production from the Big Ben area is also listed for the period 1901-1911. The Margueritta mine was reopened from 1935 to 1936, and also from 1951 to 1960. However the majority of the recorded production (84%) for Margueritta is from the first period of production. Total historic production from the Chesterfield mining centre documented was 10,134 ounces, from 13,374t treated at a calculated grade of 22g/t. The high-grade mineralisation is associated with quartz veins, predominantly within the felsic volcanic sequence.  Numerous phases of exploration activity have occurred over various areas of the Jillewarra project since the mid 1960's, by a wide range of companies including:  • Mallina Mining & Exp NL (1968-1972) - Nickel • Esso Australia Ltd (1977) - Copper, Zinc • Australian Anglo American Ltd (1980-1981) - Gold • Academus Minerals NL (1969-1970) - Nickel • CSR Ltd (1983-1985) - Copper, Zinc, Gold • Academus Minerals NL (1984-1989) - Gold • Western Mining Corp Ltd (1987-1988) - Gold • Kingsgate Consolidated NL (1986-1989) - Gold • BHP Minerals (1986-1990) - Gold • Hillmin Gold Mines Pty Ltd (1983-1989) - Gold • BHP Minerals (1986-1990) - Gold • Hillmin Gold Mines Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1992-1997) - Gold • St Barbara Mines Ltd (1990's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	The Jillewarra Project is situated along the Archean Mingah Range greenstone belt. This belt is interpreted to have a strike length of 40km and 9.5km in width. At a regional scale a large south plunging antiform is evident, and a number of northwest to southeast trending faults cut through the area.  The Mingah Range is composed of a sequence of basalt and finegrained amphibolites, felsic and intermediate volcanics, shale and siltstones, and layered gabbroic sills. All rocks are metamorphosed to greenschist facies, and in many cases deformed, particularly adjacent to the major structures.  The geology can be characterised by three main lithological groups:  1. A basal sequence of mafic to ultramafic extrusive rocks (high-mg basalt, basalt and ultramafic units and minor intrusives)  2. An upper sequence of a mixed package of felsic volcanics, sediments, sedimentary iron formation and minor mafic volcanics.  3. Both sequences have been intruded by a series of differentiated mafic-ultramafic sills that appear to have preferentially intruded the upper volcano-sedimentary sequence. The intrusive sills are characterised by a peridotite-pyroxenite base overlain by a thicker unit of gabbro.  Known mineralisation within the project area includes numerous small high-grade epigenetic gold deposits within the historical gold mining centres of Chesterfield and Wardabie, Pb-Ba vein deposits and layered ultramafic and mafic sills containing anomalous Ni and Cu values.  Chesterfield  The Chesterfield Mining Centre lies towards the southern end of the drag folded sequence of the Mingah Range Greenstone Belt and is associated with differentiated gabbro, amphibolite and ultramafic rocks. It includes historical producers such as; Big Ben, tittle Ben and Cashman's Reward to the north and Dorothy and Margueritta Mines to the south. The gold mineralisation is hosted by narrow, high grade quartz-pyrite-pyrrhotite veins which are developed both parallel and discordant to enclosing rock units and are associated with peripheral stockwork
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.	All drilling is historical in nature verification and validation of these data sets are ongoing.



Criteria	JORC Code explanation	Commentary
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 results reported are historical in nature and cannot been verified. Where intervals have been reported (including gram x metre results), a cut-off grade of 1.0 g/t Au has been used with no top-cut applied. Intervals have been calculated by length weighting individual assays and using a nominal maximum internal dilution of 2 metres
	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.	Where aggregate intercepts include individual zones of higher grade these are reported, using the same methodology as for the larger intervals. The lower cut-off grade for the including intervals is reported in the relevant tables
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent results have been reported
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').	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing. S2 is unable to determine any relationship at this stage and all results reported are downhole lengths only and true widths are unknown.
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.	All historical results considered significant are reported.
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.	Various historical moving loop electromagnetic surveys have been carried out within the project. Interpretations of these surveys have been reviewed by S2 and are reported where meaningful. S2 has not undertaken a full detailed evaluation of the geophysical results to date.
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	S2 intends to aggressively explore the Jilewarra project, including testing the extensions to known gold mineralisation at Dorothy and Margueritta as well as drill testing regional gold and base metal targets

Past Exploration results reported in this announcement have been previously prepared and disclosed by S2 Resources Ltd in accordance with JORC 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in these market announcements. The Company confirms that the form and content in which the Competent Person's findings are presented here have not been materially modified from the original market announcement. Refer to www.s2resources.com.au for details on past exploration results.



#### **Competent Persons statements**

The information in this report that relates to Exploration Results is based on information compiled by John Bartlett, who is an employee and shareholder of the Company. Mr Bartlett is a member of the Australian Institute of Mining and Metallurgy (MAusIMM) and 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 a Competent Person 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.

#### Annexure 1

Hole	Easting	Northing	RL	Dip	Azi.	Depth	From	То	Width	Grade Ni_pct	Grade Cu_pct
SAFD0001	576,625	6,535,800	216	-60	090	345.6	AWR				
SAFD0002	583,696	6,544,300	226	-63	270	IP	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 – FRASER RANGE

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	Drilling on the Fraser Range tenements has comprised two diamond drill holes, completed by Westcore Drilling, based out of Perth.  Sampling has been carried out by cutting and sampling half core through areas of visible mineralisation, with sample intervals to lithological contacts, to a maximum length of 1.2 metres.  All are forwarded for analyses by Minanalytical Laboratories Services Australia Pty Ltd in Perth.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling and QAQC procedures are carried out using S2 protocols as per industry best practice.
	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	The diamond core is HQ and NQ2 size, sampled on geological intervals (0.2 m to 1.2 m), cut into half (NQ2) or quarter (HQ) core to give sample weights under 3 kg. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by four acid digest with an ICP/OES
Drilling techniques	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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Drilling is standard diamond coring, using either HQ triple tube or NQ2 core diameter. The core has been orientated using a an Ace orientation tool.



Criteria	JORC Code explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Diamond core recoveries are logged and recorded in the database. Overall recoveries are >>95%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.
	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.	No relationship has been seen to exist
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource	Logging of diamond core and RC samples records lithology, mineralogy, mineralisation, structural (DDH only), weathering, colour and other features of the samples  logging uses a standard legend developed by S2 which is
	estimation, mining studies and metallurgical studies.	suitable for wireframing of the basement interface.  Exploration holes are not routinely geotechnically logged but resource holes are.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All core is photographed in both dry and wet form.
	The total length and percentage of the relevant intersections logged	All drillholes were logged in full to end of hole.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core was cut in half (NQ2) and quarter core (HQ) onsite using an automatic core saw. All samples were collected from the same side of the core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No non-core sampling was completed
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation follows industry best practice in sample preparation involving oven drying, coarse crush and pulverisation of entire sample to minimum of 85% passing - 75um.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Full QAQC system in place to determine accuracy and precision of assays
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field	Non-biased sampling using the orientation line as a guide for cutting with the same half used for all sampling.
	duplicate/second-half sampling.	No duplicate samples have been collected at this stage
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to correctly represent the sought after mineralisation style
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and	For core samples the analytical techniques used a four acid digest multi element suite with ICP/OES or ICP/MS finish (25 gram or 50 gram FA/AAS for precious metals).
	whether the technique is considered partial or total.	The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples.
		The method approaches total dissolution of most minerals.
	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.	No geophysical tools were used to determine any element concentrations.



Criteria	JORC Code explanation	Commentary
	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.	Full QAQC system in place including Certified Standards and blanks of appropriate matrix and levels.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The S2 Exploration Manager has personally inspected all sampled core and assay results.
	The use of twinned holes.	No twinned holes were drilled within the main infilled anomaly.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary sampling data is collected in a set of standard Excel templates. The information is managed by S2's database manager for validation and compilation into S2's central database.
	Discuss any adjustment to assay data.	No adjustments made
Location of data points	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.	Drill hole collar locations were recorded using handheld Garmin GPS. Elevation values were in AHD RL and values recorded within the database. Expected accuracy is + or – 5 m for easting, northing and 10m for elevation coordinates.
		Downhole surveys using an Axis north-seeking gyro with readings at surface and then every 30m downhole.
	Specification of the grid system used.	The grid system is MGA_GDA94 (zone 51), local easting and northing are in MGA.
	Quality and adequacy of topographic control.	Topographic surface uses handheld GPS elevation data, which is adequate at the current stage of the project.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drilling to date has been on individual drill holes into a specific target.
	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.	Data spacing, sampling technique and distribution is not sufficient at this stage to allow the estimation of mineral resources.
	Whether sample compositing has been applied.	No sample compositing has been applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Insufficient information to determine at this time.
	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.	Drilling of diamond core is on a nominal 60 degrees, either grid west or east depending on the orientation of the modelled EM plate. The orientation of drilling is broadly orthogonal to the overall geology.
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by S2 personnel. Drill samples and core is visually checked at the drill rig and then transported to S2's logging and cutting facilities on site at the S2 remote camp.
		Bagged samples are transferred to Minanalytical Laboratory in either Kalgoorlie or Perth by S2 personnel.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted at this stage.



### SECTION 2: REPORTING OF EXPLORATION RESULTS - FRASER RANGE

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 Fraser Range Project tenements are EL and ELA's located South and South East of Zanthus in Western Australia. They are E28/2791 and E28/2792 (both granted) and E28/2794 (application).  The exploration licences are 100% owned by Southern Star Exploration Pty Ltd, a 100% owned subsidiary of S2 Resources.
	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.	All of the Exploration Licences are in good standing and no known impediments exist on the tenements being actively explored.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Tenements have had no published or open file exploration work for magmatic nickel/ copper type deposits. The only documented drilling on the tenements was by Homestake following up calcrete gold anomalism.
Geology	Deposit type, geological setting and style of mineralisation.	The underlying unweathered lithology is granulite facies metamorphosed and partially retrogressed sedimentary, mafic and ultramafic igneous rocks as determined by petrographic work on adjacent tenure.  The target geology is magmatic sulphide mineralisation hosted in or associated with mafic-ultramafic intrusions within the Fraser Complex of the Albany-Fraser Orogeny.
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 annexure 1
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.	No reporting of assays have been undertaken to date. Results of current drilling have not yet been received from the laboratory
	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.	No reporting of assays have been undertaken to date. Results of current drilling have not yet been received from the laboratory
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	None used.
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').	No relationship between the drilling and target sulphide mineralisation has been determined to date, as such any reported intervals are "down hole" lengths



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.	All results considered significant are reported.
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.	A Passive Seismic survey was conducted at EL28/2791 and ELA28/2794 to help ascertain potential depth of transported cover so as to determine the suitability for surface geochemical sampling.
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	DHEM of both drill holes is planned.  A full review fo the results to date will be undertaken (once all assay results have been received) prior to any future exploration programs being planned.

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	All results are historical in nature. No sampling by S2 has been conducted on the tenements
	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	All results are historical in nature. No sampling by S2 has been conducted on the tenements



Criteria	JORC Code explanation	Commentary
Drilling techniques	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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling by S2 has been conducted on the tenements. Historical drilling (RAB, AC, RC & Diamond) has been conducted across the project area, the verification and validation of these data sets is ongoing.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Logging	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	The total length and percentage of the relevant intersections logged	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	No drilling or sampling by S2 has been conducted on the tenements. All drilling on the project is historical in nature and verification and validation of these data sets are ongoing.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
	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.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.



Criteria	JORC Code explanation	Commentary
	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.	No assaying of samples has been conducted by S2 on the tenements. All sampling on the project is historical in nature and verification and validation of these data sets are ongoing.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No assaying of samples has been conducted on the tenements
	The use of twinned holes.	No drilling by S2 has been conducted on the tenements.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	Discuss any adjustment to assay data.	No adjustments to the assay data have been carried out by S2. drilling or sampling has been conducted by S2 on the tenements.
Location of data points	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.	No drilling or sampling has been conducted on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing. Only selected historical drill sites have been verified in the field by S2.
	Specification of the grid system used.	The grid system used by S2 is GDA94 (MGA), zone 50. Histgorical results have been reported in various grid formats and these have been converted to a standard grid system in QGIS.
	Quality and adequacy of topographic control.	Elevation data for all data is determined by a digital elevation model derived from public domain SRTM 10m Elevation grids
Data spacing and distribution	Data spacing for reporting of Exploration Results.	No drilling or sampling has been conducted by S2 on the tenements. Historical drilling and sampling have been carried out on various grid spacings as well as isolated.
	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.	No assaying of samples has been conducted by S2 on the tenements. All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	Whether sample compositing has been applied.	No sample compositing has been applied by S2
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
	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.	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing.
Sample security	The measures taken to ensure sample security.	All drilling and sampling on the project is historical in nature and S2 is currently unable to verify what (if any measures) have been taken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted by S2 at this stage.



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

Criteria	JORC Code explanation		Со	mmentary	
Mineral tenement and land tenure status		The Jillewarra Project is located approximately 50km West to North West of Meekatharra, and situated in the Meekatharra mineral field of the Murchison Province of Western Australia. The project is located on the Belele 250k sheet. The tenure schedule for the project is listed below:			
		TENID	TENSTATUS	HOLDER	
		E 5101602	LIVE	TANZI PTY LTD	
		E 5101603	LIVE	TANZI PTY LTD	
		E 5101604	LIVE	TANZI PTY LTD	
		E 5101617	LIVE	BLACK RAVEN MINING PTY LTD	
		E 5101906	LIVE	BLACK RAVEN MINING PTY LTD	
		E 5101915	LIVE	BLACK RAVEN MINING PTY LTD	
		E 5101955	PENDING	BLACK RAVEN MINING PTY LTD	
		E 5101956	PENDING	BLACK RAVEN MINING PTY LTD	
		E 5101965	PENDING	BLACK RAVEN MINING PTY LTD	
		E 5101966	PENDING	BLACK RAVEN MINING PTY LTD	
		M 5100270	LIVE	TANZI PTY LTD	
		M 5100353	LIVE	TANZI PTY LTD	
		M 5100451	LIVE	TANZI PTY LTD	
	Type, reference name/number, location and	P 5103082	LIVE	BLACK RAVEN MINING PTY LTD	
	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.	M 5100885	PENDING	WOOD, SANDRA	
		P 5102696	LIVE	WOOD, SANDRA	
		P 5102950	LIVE	KING, TRENT NATHAN	
	Black Raven M  Issu A\$C  Mir  Cur a 5: Cor Mir met On to c ("FC In t red BRN rev In t with	ining Pty Ltd ur te of 5 million S 0.20, representi inimum expendi nulative expend 1% interest inpletion of a feateral Resources tal equivalent) of a completion of a contribute, dilui CI") to commen the event of Bluces to 25% an M repays its frenue the event of S inin 7 years, S2's	red into an earn-in joint venture wider the following terms: 2 shares to BRM at a nominal price of a shares to BRM at a nominal price of a shares to BRM at a nominal price of a shares to easibility study on minimum Inferit of 250,000 ounces of gold (or be within 7 years to earn a 70% interest of a shares to earn a 70% interest of a feesibility study by S2, BRM can elete, or revert to a free carried intercement of commercial production RM opting for a FCI, BRM's interest d S2's interest increases to 75%, a see carry from 100% of its share 2 not completing a feasibility study interest decreases to 49% us royalties that apply to spec		
		-	y is a 1.5% NS E51/1604, as	area. SR royalty that applies to E51/16 well as a 49% interest in M51/2	



Criteria	JORC Code explanation	Commentary
		The SBM royalty comprises either a 0.5% gold royalty or a 1.0% NSR "Other Metals" (not gold) and applies to mining leases M51/270, M51/353 and M51/451.  The Zebina Royalty is a 0.5% NSR on gold and other metals, payable on tenements E51/1906 and P51/3082
	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.	All of the Exploration Licences are in good standing and no known impediments exist on the tenements being actively explored.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Gold was first discovered at Chesterfield in 1901, and was mined from the Dorothy deposit until 1909 to a depth of 30m, and at Margueritta also until 1909 to a depth of 38m (Watkins and Hickman, 1990). Production ceased due to heavy water inflows. Gold production from the Big Ben area is also listed for the period 1901-1911. The Margueritta mine was reopened from 1935 to 1936, and also from 1951 to 1960. However the majority of the recorded production (84%) for Margueritta is from the first period of production. Total historic production from the Chesterfield mining centre documented was 10,134 ounces, from 13,374t treated at a calculated grade of 22g/t. The high-grade mineralisation is associated with quartz veins, predominantly within the felsic volcanic sequence.  Numerous phases of exploration activity have occurred over various areas of the Jillewarra project since the mid 1960's, by a wide range of companies including:  • Mallina Mining & Exp NL (1968-1972) - Nickel • Esso Australia Ltd (1977) - Copper, Zinc • Australian Anglo American Ltd (1980-1981) - Gold • Academus Minerals NL (1969-1970) - Nickel • CSR Ltd (1983-1985) - Copper, Zinc, Gold • Academus Minerals NL (1984-1989) - Gold • Western Mining Corp Ltd (1987-1988) - Gold • Kingsgate Consolidated NL (1986-1989) - Gold • BHP Minerals (1986-1990) - Gold • Hillmin Gold Mines Pty Ltd (1983-1989) - Gold • BHP Minerals (1986-1990) - Gold • Hillmin Gold Mines Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1991-1992) - Gold • CRA Exploration Pty Ltd (1992-1997) - Gold • St Barbara Mines Ltd (1990's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals • Independence Group NL (2000's) - Gold & Base Metals



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	The Jillewarra Project is situated along the Archean Mingah Range greenstone belt. This belt is interpreted to have a strike length of 40km and 9.5km in width. At a regional scale a large south plunging antiform is evident, and a number of northwest to southeast trending faults cut through the area.  The Mingah Range is composed of a sequence of basalt and finegrained amphibolites, felsic and intermediate volcanics, shale and siltstones, and layered gabbroic sills. All rocks are metamorphosed to greenschist facies, and in many cases deformed, particularly adjacent to the major structures.  The geology can be characterised by three main lithological groups:  1. A basal sequence of mafic to ultramafic extrusive rocks (high-mg basalt, basalt and ultramafic units and minor intrusives)  2. An upper sequence of a mixed package of felsic volcanics, sediments, sedimentary iron formation and minor mafic volcanics.  3. Both sequences have been intruded by a series of differentiated mafic-ultramafic sills that appear to have preferentially intruded the upper volcano-sedimentary sequence. The intrusive sills are characterised by a peridotite-pyroxenite base overlain by a thicker unit of gabbro.  Known mineralisation within the project area includes numerous small high-grade epigenetic gold deposits within the historical gold mining centres of Chesterfield and Wardabie, Pb-Ba vein deposits and layered ultramafic and mafic sills containing anomalous Ni and Cu values.  Chesterfield  The Chesterfield Mining Centre lies towards the southern end of the drag folded sequence of the Mingah Range Greenstone Belt and is associated with differentiated gabbro, amphibolite and ultramafic rocks. It includes historical producers such as; Big Ben, Little Ben and Cashman's Reward to the north and Dorothy and Margueritta Mines to the south. The gold mineralisation is hosted by narrow, high grade quartz-pyrite-pyrrhotite veins which are developed both parallel and discordant to enclosing rock units and are associated with peripheral stockwork
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.	All drilling is historical in nature verification and validation of these data sets are ongoing.



Criteria	JORC Code explanation	Commentary
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 results reported are historical in nature and cannot been verified. Where intervals have been reported (including gram x metre results), a cut-off grade of 1.0 g/t Au has been used with no top-cut applied. Intervals have been calculated by length weighting individual assays and using a nominal maximum internal dilution of 2 metres
	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.	Where aggregate intercepts include individual zones of higher grade these are reported, using the same methodology as for the larger intervals. The lower cut-off grade for the including intervals is reported in the relevant tables
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent results have been reported
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').	All drilling and sampling on the project are historical in nature and verification and validation of these data sets are ongoing. S2 is unable to determine any relationship at this stage and all results reported are downhole lengths only and true widths are unknown.
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.	All historical results considered significant are reported.
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.	Various historical moving loop electromagnetic surveys have been carried out within the project. Interpretations of these surveys have been reviewed by S2 and are reported where meaningful. S2 has not undertaken a full detailed evaluation of the geophysical results to date.
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	S2 intends to aggressively explore the Jilewarra project, including testing the extensions to known gold mineralisation at Dorothy and Margueritta as well as drill testing regional gold and base metal targets