

# WIDE AND HIGH-GRADE GOLD AND ANTIMONY MINERALISATION INTERSECTED AT SUNDAY CREEK, VICTORIA

23 May 2022

**Melbourne, Australia** — **Southern Cross Gold Ltd ("SXG" or the "Company") (ASX:SXG)** is pleased to announce high-grade (multiple >15g/t Au intersections up to 81.2 g/t Au and 3.4% Sb) and wide zones (broad zones over 30m) of gold and antimony mineralisation in assay results returned from six diamond drill holes (MDDSC027, SDDSC028-32) drilled during the recent IPO process at the Sunday Creek project in the Victorian Goldfields. The Sunday Creek epizonal-style gold project is located 60km north of Melbourne within 19,365 hectares of granted exploration tenements.

The Company considers Sunday Creek to be one of the better new exploration discoveries to come out of Victoria in recent times with twelve (12) >100 AuEq g/t x m holes now intersected (Figure 1). Mineralisation remains open at depth and along strike. A 10km mineralised trend that extends beyond the drill area is defined by historic workings and soil sampling at Sunday Creek that has yet to receive any exploration drilling which offers potential future upside.

#### **HIGHLIGHTS**

- 17.3m @ 3.9 g/t Au and 0.6% Sb (4.9 g/t AuEq) from 214.4m in hole SDDSC031 (0.3 g/t AuEq over 2m lower cut), including:
  - o 1.3m @ 23.4 g/t Au and 2.5% Sb (27.3 g/t AuEq) from 226.0m.
- 9.8m @ 3.9 g/t Au and 0.5% Sb (4.6 g/t AuEq) from 55.5m in hole SDDSC032 (0.3 g/t AuEq over 2m lower cut), including:
  - o 1.5m @ 23.1 g/t Au and 2.5% Sb (27.0 g/t AuEq) from 60.3m.
- With these new results, Sunday Creek now contains a total of twelve 100 g/t AuEq x m intersections.
- First gold drilled at a parallel trend defined by soil samples 250m north of the main mineralised area at Sunday Creek.
- With 6 holes now reported from 10 holes for 2,278m completed during the IPO process, drill core from 4 further holes has been forwarded to the assay laboratory and geochemical assay results are anticipated to be released in an orderly fashion as they are received. The drill rig continues to operate.

**Southern Cross Gold Managing Director, Michael Hudson says,** "Another great drill result for Southern Cross Gold, with an additional 100 g/t AuEq x m intersection at Sunday Creek, this time from drill hole SDDSC031 intersecting a broader intersection of 36.0m @ 2.9 g/t AuEq, and is another leap forward for the renaissance of the Victorian Goldfields.



"Our understanding on the controls on gold mineralisation at Sunday Creek continue to increase and this is reflected in the success of the latest batch of results from drilling undertaken during the IPO process which follow over 8,000m drilled at the project over the last 18 months. We have discovered both high grades and wide mineralised zones indicating an increasingly robust geological gold model. As we start laying the foundations towards a potential maiden resource at Sunday Creek our initial strategy is to extend and infill the multiple high-grade mineralised shoots.

"We have also found indications of a parallel zone of gold mineralisation located 250m north of the main mineralised area. This creates further opportunity to delineate undercover and parallel zones of mineralisation across the more than 10km of strike, outside of the current drill area, where historic mines, with no drill testing have been mapped across the Sunday Creek property."

#### **Drill Hole Discussion**

Drill holes MDDSC0027 and SDDSC031-32 were targeted to extend and infill mineralisation across specific multiple north-west striking mineralised shoots in the Apollo mine area. As is typical with the Sunday Creek property, wide mineralised zones with high grade central intersections were intersected.

SDDSC031 was drilled to target mineralised shoots to the west of the Apollo shaft in a 67m gap to infill between drill hole MDDSC015A (15.3m @ 2.2 g/t Au and 2.1% Sb (5.5 g/t AuEq) from 231.4m) and drill hole MDDSC0012 (10.4m @ 5.4 g/t Au and 1.1% Sb (7.0 g/t AuEq) from 203.0m)^. With a 0.3 g/t AuEq over 2m lower cut SDDSC031 intersected:

- 17.3m @ 3.9 g/t Au and 0.6% Sb (4.9 g/t AuEq) from 214.4m (0.3 g/t AuEq over 2m lower cut), including:
  - 1.3m @ 23.4 g/t Au and 2.5% Sb (27.3 g/t AuEq) from 226.0m.

With a 3m @ 0.1g/t AuEq lower cut, SDDSC031 intersected **36.0m** @ **2.3** g/t Au and **0.4%** Sb (**2.9** g/t AuEq) from **197.7m** (**109** g/t AuEq \* m) and included high grade mineralisation:

- 1.4m @ 10.9 g/t Au and 3.4% Sb (16.3 g/t AuEq) from 222.7m
- o 0.4m @ 18.0 g/t Au and 6.6% Sb (28.5 g/t AuEq) from 226.3m
- o 0.3m @ 66.8 g/t Au and 0.0% Sb (66.9 g/t AuEq) from 227.3m

SDDSC032 was drilled to test the Gladys mineralised shoots. The closest hole was historic RC hole VCRC011, located 20m in the plane of the shoot, intersected 21.0m @ 3.9 g/t Au from 37.0m^. With a 0.3 g/t AuEq over 2m lower cut SDDSC032 intersected:

- 9.8m @ 3.9 g/t Au and 0.5% Sb (4.6 g/t AuEq) from 55.5m (0.3 g/t AuEq over 2m lower cut), including:
  - 1.5m @ 23.1 g/t Au and 2.5% Sb (27.0 g/t AuEq) from 60.3m.

With no lower cut applied, SDDSC032 intersected multiple structures yielding 97m @ 0.7 g/t Au and 0.1% Sb (0.8 g/t AuEq) from surface, and included high grade mineralisation:

- o 0.4m @ 15.7 g/t Au and 6.7% Sb (26.4 g/t AuEq) from 60.3m
- o 0.3m @ 81.2 g/t Au and 3.4% Sb (86.6 g/t AuEq) from 61.5m

<sup>&</sup>lt;sup>^</sup> Refer to the Independent Geologist's Report in the Company's prospectus dated 17 March 2022 which was released to ASX as an announcement on 12 May 2022. See further under the heading "Competent Person Statement" on page 4.



Drillhole MDDSC027, targeted at depth below the Apollo mine, intersected a significant cataclastic fault zone which disrupted the mineralised target. The hole hit a broad low-grade interval including 2.5m @ 0.5 g/t Au from 285.5m, 1.9m @ 0.5 g/t Au from 302.9m and 4.0m @ 0.3 g/t Au from 315.0m and is considered a near-miss hole for further drill follow-up.

Drill holes SDDSC028-29 tested a coincident gold in soil anomaly, with low grade boulders on a topographic high and a coincident 3D array IP chargeability anomaly (with higher chargeability than the main mineralised zone at Apollo). Low-grade and geologically significant gold was discovered in SDDSC029 including **0.6m @ 0.4 g/t Au from 16.0m**, **1.0m @ 0.4 g/t Au from 26.0m and 1.2m @ 0.3 g/t Au from 29.8m**. The source of soil anomalies above SDDSC029 could be explained in part by the presence of gold in drilling. SDDSC028, drilled 300m north-east of SDDSC029 did not intersect significant results and the source for the 3D IP chargeable anomalies remains unexplained. These indications of a parallel zone of gold mineralisation located 250m north of the main mineralised area opens further opportunities for undercover parallel zones across the property that will require drill testing.

Drill hole SDDSC030 was a short hole (104.1m) to test earlier trench results located 200m east of any prior drilling (Trench 1: 14.0m at 11.5 g/t gold and 0.3% antimony including 8.0m @ 19.6 g/t gold and 0.4% antimony and Trench 2: 2m @ 4.9 g/t gold and 0.2% antimony)^. The single hole failed to intersect the mineralised structure and further drilling is warranted. The mineralised trend remains open and undrilled for 10km to the NE from these trenches.

The Company has continued to drill at Sunday Creek over the last three months during the IPO process, with drilling of 10 holes for 2,278m completed and one hole in progress. With six holes assayed and reported here (MDDSC027, SDDSC028-32), drill core from four further holes (SDD033-36) has been forwarded to the assay laboratory and geochemical assay results will be released as announcements to ASX following being received from the laboratory.

Figures 1 and 2 show plan and longitudinal section views of drill results report here and Tables 1–3 provide collar and assay data. The true thickness of the mineralized interval is interpreted to be approximately 60% of the sampled thickness. All drill results quoted have a lower cut of 0.3 g/t Au cut over a 2.0m width, with higher grades reported with a 5 g/t Au cut over 1.0m applied unless otherwise stated.

#### **Critical Metal Epizonal Gold-Antimony Deposits**

Sunday Creek is an epizonal gold-antimony deposit formed in the late Devonian (similar to Fosterville, Costerfield, Redcastle and Whroo), 60 million years later than mesozonal gold systems formed in Victoria (ie Ballarat and Bendigo). Epizonal deposits are a form of orogenic gold deposits classified according to their depth of formation: epizonal (<6km), mesozonal (6-12km) and hypozonal (>12km). Geoscience Australia reported that as at 2019 antimony is a critical metal, where China and Russia combined produce approximately 82% of the antimony raw material supply. Antimony features highly on the critical minerals lists of many countries including Australia, the United States of America, Canada, Japan and the European Union. Australia ranks seventh for antimony production despite all production coming from a single mine at Costerfield in Victoria, located nearby all Southern Cross Gold projects. Antimony alloys with lead and tin which results in improved properties for solders, bullets, bearings and batteries. Antimony is a prominent additive for halogen-containing flame retardants. Adequate supplies of antimony are critical to the world's energy transition, and to the high tech. especially the semi-conductor industry and defence sectors. For example, antimony is a critical element in the manufacture of lithium-ion batteries and to the next generation of liquid metal batteries that lead to scalable energy storage for wind and solar power.

<sup>^</sup> Refer to the Independent Geologist's Report in the Company's prospectus dated 17 March 2022 which was released to ASX as an announcement on 12 May 2022. See further under the heading "Competent Person Statement" on page 4.



#### **Gold Equivalent Calculation**

Southern Cross Gold considers that both gold and antimony that are included in the gold equivalent calculation ("AuEq") have reasonable potential to be recovered at Sunday Creek, given current geochemical understanding, historic production statistics and geologically analogous mining operations. Historically, ore from Sunday Creek was treated onsite or shipped to the Costerfield mine, located 54km to the northwest of the project, for processing during WW1. The Costerfield mine corridor, now owned by Mandalay Resources Ltd contains 2 million ounces of equivalent gold (Mandalay Q3 2021 Results), and in 2020 was the sixth highest-grade global underground mine and a top 5 global producer of antimony.

Southern Cross Gold considers that it is appropriate to adopt the same gold equivalent variables as Mandalay Resources Ltd in its <u>Mandalay Technical Report, 2022</u> dated 25 March 2022. The gold equivalence formula used by Mandalay Resources was calculated using recoveries achieved at the Costerfield Property Brunswick Processing Plant during 2020, using a gold price of US\$1,700 per ounce, an antimony price of US\$8,500 per tonne and 2021 total year metal recoveries of 93% for gold and 95% for antimony, and is as follows:  $AuEq = Au (g/t) + 1.58 \times Sb (\%)$ .

Based on the latest Costerfield calculation and given the similar geological styles and historic toll treatment of Sunday Creek mineralisation at Costerfield, Southern Cross Gold considers that a  $AuEq = Au (glt) + 1.58 \times Sb$  (%) is appropriate to use for the initial exploration targeting of gold-antimony mineralisation at Sunday Creek.

- Ends -

This announcement has been approved for release by the Board of Southern Cross Gold Ltd.

#### **Competent Person Statement**

Information in this report that relates to new exploration results contained in this report is based on information compiled by Michael Hudson, a Fellow of the Australasian Institute of Mining and Metallurgy. He is MD for Southern Cross Gold Ltd. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity being undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Michael Hudson has consented to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Certain information in this announcement that relates to prior exploration results is extracted from the Independent Geologist's Report dated 16 March 2022 which was issued with the consent of the Competent Person, Mr Terry C. Lees. The report is included the Company's prospectus dated 17 March 2022 which was released as an announcement to ASX on 12 May 2022 and is available at www2.asx.com.au under code "SXG". The Company confirms that it is not aware of any new information or data that materially affects the information related to exploration results included in the original market announcement. The Company confirms that the form and context of the Competent Persons' findings in relation to the report have not been materially modified from the original market announcement.

#### **About Southern Cross Gold Ltd**



The Southern Cross corporate branding embodies important characteristics of the new entity. The blue lettering acknowledges the state colour of Victoria, and the gold colour recognises the Victorian goldfields. The Southern Cross is a constellation also represented on the Australian flag which provides a strong cultural significance to all Australians. The main 7-pointed star represents the unity of the six states and the territories of the Commonwealth of Australia and the

addition of a miner's pickaxe within the body of the star reflects the central place that mineral exploration has in Australia and, of course, to Southern Cross Gold.



## For further information, please contact:

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Figure 1: Sunday Creek plan view showing locations of drillholes for results reported in this announcement.

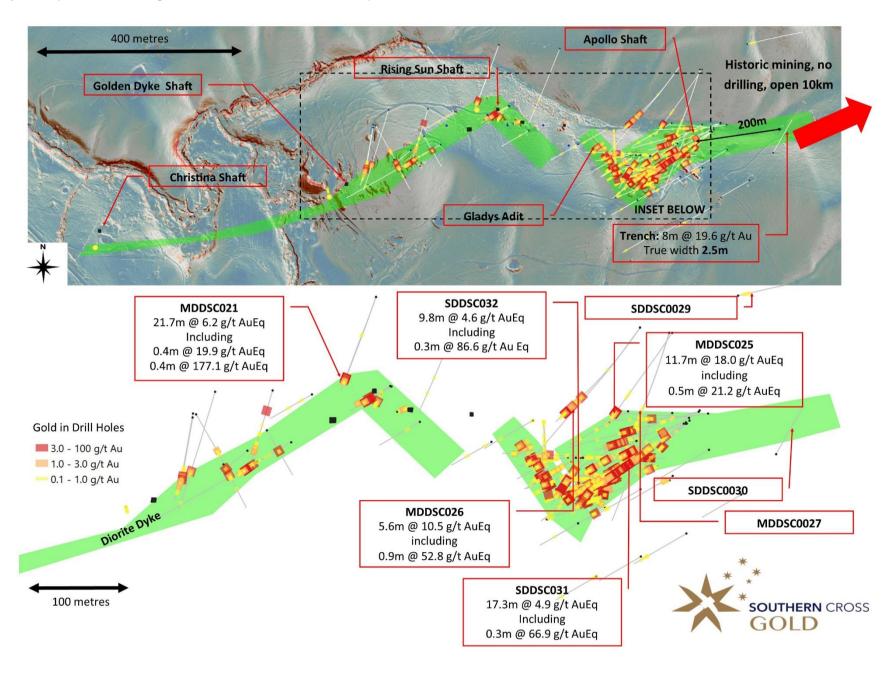


Figure 2: Sunday Creek longitudinal section showing individual shoots defined to date and grad x width pierce points of drillholes. Broad arrows show indicative mineralised shoots. Greater than 100g/t AuEg \* m intersections shown by red circles.

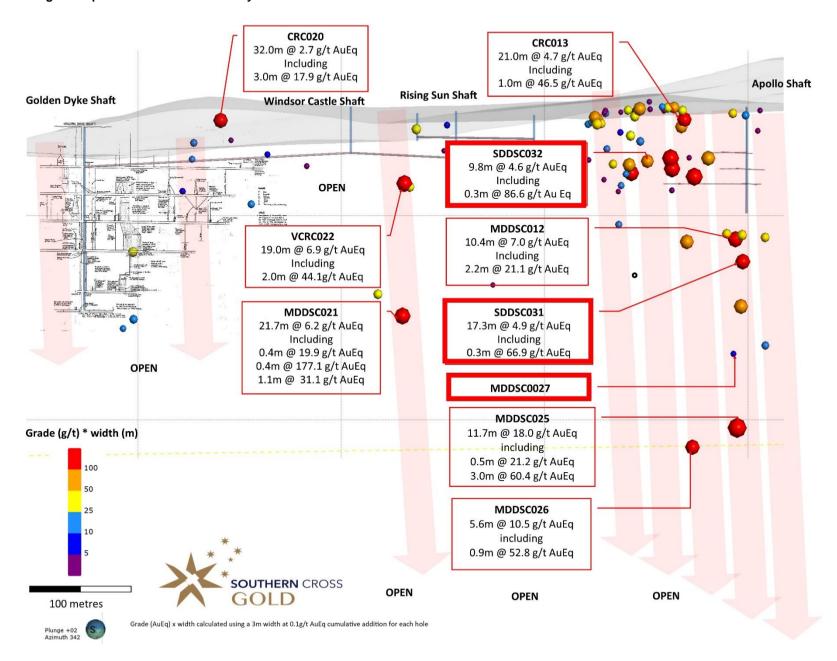


Table 1: Drill collar summary table for drillholes reported in this announcement.

Hele ID	Uolo Cizo	Donth (m)	Droopeet	East	North	Florestion	A wine, with	Dhungo
Hole_ID	Hole Size	Depth (m)	Prospect	GDA94_Z55	GDA94_Z55	Elevation	Azimuth	Plunge
MDDSC027	HQ/NQ	400.0	Apollo	331150	5867964	323.0	205	-65.0
SDDSC028	HQ	150.0	north IP	331550	5868090	362.5	288	-30.0
SDDSC029	HQ	220.6	north IP	331243	5868014	343.7	90	-60.0
SDDSC030	HQ	104.1	Eastern trench	331294	5867801	320.0	42	-45.0
SDDSC031	HQ	282.0	Apollo	331191	5867860	307.4	250	-60.0
SDDSC032	HQ	140.0	Apollo	331056	5867767	319.0	228	-65.0

Table 2: Tables of mineralised drill hole intersections reported in this announcement using two intersection criteria

5.0 g/t AuEq cutoff over a maximum of 1m

Drill Hole	From (m)	To (m)	Width (m)	Au g/t	Sb %	AuEq g/t
SDDSC031	115.6	115.7	0.1	8.1	4.0	14.5
SDDSC031	222.7	224.1	1.4	10.9	3.4	16.3
SDDSC031	226.3	226.7	0.4	18.0	6.6	28.5
SDDSC031	227.3	227.6	0.3	66.8	0.1	66.9
SDDSC032	60.3	60.7	0.4	15.7	6.7	26.3
SDDSC032	61.5	61.8	0.3	81.2	3.4	86.6

0.3 g/t lower cutoff over a maximum of 2m

Drill Hole	From (m)	To (m)	Width (m)	Au g/t	Sb %	AuEq g/t
MDDSC027	285.5	288.0	2.5	0.5	0.0	0.5
MDDSC027	302.9	304.8	1.9	0.5	0.1	0.6
MDDSC027	315.0	319.0	4.0	0.3	0.0	0.4
SDDSC029	16.0	16.7	0.6	0.4	0.0	0.4
SDDSC029	26.0	27.0	1.0	0.4	0.0	0.4
SDDSC029	29.8	31.0	1.2	0.3	0.0	0.3
SDDSC031	109.5	110.6	1.1	0.4	0.0	0.5
SDDSC031	115.3	115.8	0.5	2.1	1.0	3.7
SDDSC031	163.7	164.0	0.3	0.5	0.0	0.5
SDDSC031	196.1	200.0	3.9	0.6	0.1	0.8
SDDSC031	202.4	212.1	9.7	1.3	0.2	1.6
SDDSC031	214.4	231.7	17.3	3.9	0.6	4.9
SDDSC031	236.3	240.7	4.4	0.7	0.0	0.7
SDDSC032	0.0	2.2	2.2	1.0	0.0	1.0
SDDSC032	7.0	8.0	1.0	0.3	0.0	0.3
SDDSC032	24.3	25.3	1.0	0.3	0.0	0.3
SDDSC032	38.4	40.2	1.8	0.9	0.0	0.9
SDDSC032	55.5	65.3	9.8	3.9	0.5	4.6
SDDSC032	68.0	68.8	0.8	0.4	0.0	0.5
SDDSC032	74.0	78.4	4.4	0.4	0.2	0.7
SDDSC032	84.0	85.0	1.0	0.3	0.0	0.3
SDDSC032	88.0	92.7	4.7	1.2	0.0	1.3
SDDSC032	96.0	97.0	1.0	7.6	0.5	8.4
SDDSC032	101.0	102.0	1.0	0.3	0.0	0.3
SDDSC032	109.7	111.6	1.9	1.1	0.0	1.1

Table 3: Individual assays (>0.1 g/t Au) reported in this announcement.

Drill Hole	From (m)	To (m)	Width (m)	Au g/t	Sb %
SDDSC032	0.0	0.8	0.8	1.3	0.1
SDDSC032	0.8	1.8	1.0	0.7	0.0
SDDSC032	1.8	2.2	0.4	1.3	0.0
SDDSC032	2.2	3.0	0.8	0.2	0.0
SDDSC032	6.0	7.0	1.0	0.2	0.0
SDDSC032	7.0	8.0	1.0	0.3	0.0
SDDSC032	23.4	23.7	0.3	0.1	0.0
SDDSC032	23.7	24.3	0.6	0.2	0.0
SDDSC032	24.3	25.3	1.0	0.3	0.0
SDDSC032	32.0	33.0	1.0	0.1	0.0
SDDSC032	33.0	34.0	1.0	0.1	0.0
SDDSC032	34.0	35.1	1.1	0.2	0.0
SDDSC032	35.1	36.0	0.9	0.2	0.0
SDDSC032	36.0	37.0	1.0	0.1	0.0
SDDSC032	37.0	37.5	0.5	0.1	0.0
SDDSC032	37.5	38.0	0.5	0.2	0.0
SDDSC032	38.4	38.7	0.3	0.5	0.0
SDDSC032	38.7	39.1	0.4	0.5	0.0
SDDSC032	39.1	39.5	0.4	0.8	0.0
SDDSC032	39.5	40.2	0.6	1.4	0.0
SDDSC032	40.2	41.0	0.9	0.1	0.0
SDDSC032	41.0	42.0	1.0	0.2	0.0
SDDSC032	46.0	47.0	1.0	0.2	0.0
SDDSC032	47.0	48.0	1.0	0.1	0.0
SDDSC032	48.0	49.0	1.0	0.1	0.0
SDDSC032	50.0	50.3	0.3	0.3	0.0
SDDSC032	50.3	51.0	0.7	0.3	0.0
SDDSC032	55.5	56.0	0.5	0.7	0.0
SDDSC032	56.0	56.4	0.4	1.3	0.0
SDDSC032	56.4	57.0	0.6	0.3	0.0
SDDSC032	57.0	58.0	1.0	0.3	0.0
SDDSC032	58.0	59.0	1.0	0.2	0.0
SDDSC032	59.0	59.7	0.7	0.1	0.0
SDDSC032	59.7	60.3	0.6	0.7	0.0
SDDSC032	60.3	60.7	0.4	15.7	6.7
SDDSC032	60.7	61.5	0.8	4.5	0.3
SDDSC032	61.5	61.8	0.3	81.2	3.4
SDDSC032	61.8	62.5	0.8	0.3	0.1
SDDSC032	62.5	63.5	1.0	0.9	0.1
SDDSC032	63.5	64.5	1.0	1.5	0.1
SDDSC032	65.0	65.3	0.3	0.5	2.0

SDDSC032	68.0	68.8	0.8	0.4	0.0
SDDSC032	68.8	69.4	0.6	0.2	0.0
SDDSC032	71.7	72.2	0.5	0.3	0.0
SDDSC032	72.2	72.8	0.6	0.1	0.0
SDDSC032	72.8	73.3	0.5	0.2	0.0
SDDSC032	74.0	75.4	1.4	0.3	0.1
SDDSC032	75.4	75.7	0.3	1.0	1.9
SDDSC032	75.7	76.3	0.6	1.3	0.1
SDDSC032	76.3	77.0	0.7	0.1	0.0
SDDSC032	77.0	77.5	0.5	0.2	0.0
SDDSC032	77.5	78.1	0.6	0.2	0.0
SDDSC032	78.1	78.4	0.3	0.3	0.0
SDDSC032	78.4	79.4	1.0	0.2	0.0
SDDSC032	81.0	82.0	1.0	0.3	0.0
SDDSC032	82.0	82.9	0.9	0.2	0.0
SDDSC032	82.9	83.4	0.5	0.2	0.0
SDDSC032	83.4	84.0	0.6	0.2	0.0
SDDSC032	84.0	85.0	1.0	0.3	0.0
SDDSC032	85.0	86.0	1.0	0.2	0.0
SDDSC032	86.0	87.0	1.0	0.2	0.0
SDDSC032	87.0	88.0	1.0	0.2	0.0
SDDSC032	88.0	89.0	1.0	3.3	0.1
SDDSC032	89.0	90.0	1.0	0.5	0.0
SDDSC032	90.0	91.0	1.0	0.6	0.0
SDDSC032	91.0	92.0	1.0	0.9	0.0
SDDSC032	92.0	92.7	0.7	0.7	0.0
SDDSC032	92.7	94.0	1.3	0.3	0.0
SDDSC032	96.0	97.0	1.0	7.6	0.5
SDDSC032	101.0	102.0	1.0	0.3	0.0
SDDSC032	109.7	110.7	1.0	1.6	0.0
SDDSC032	110.7	111.6	0.9	0.4	0.0
SDDSC032	111.6	112.6	1.0	0.2	0.0
SDDSC032	115.0	116.0	1.0	0.1	0.0
SDDSC032	135.2	136.0	0.8	0.3	0.0
SDDSC031	109.5	110.1	0.6	0.5	0.0
SDDSC031	110.1	110.6	0.5	0.4	0.0
SDDSC031	110.6	111.2	0.6	0.1	0.0
SDDSC031	113.0	114.0	1.0	0.1	0.0
SDDSC031	115.3	115.6	0.3	0.2	0.1
SDDSC031	115.6	115.7	0.1	8.1	4.0
SDDSC031	115.7	115.8	0.1	2.0	0.6
SDDSC031	163.7	164.0	0.3	0.5	0.0
SDDSC031	195.7	196.1	0.4	0.2	0.0
SDDSC031	196.1	196.5	0.4	0.3	0.0

SDDSC031	196.5	197.0	0.5	1.8	0.0
SDDSC031	197.0	197.7	0.7	0.8	0.3
SDDSC031	197.7	198.6	0.9	0.5	0.2
SDDSC031	198.6	199.0	0.4	0.4	0.1
SDDSC031	199.0	200.0	1.0	0.3	0.0
SDDSC031	200.0	200.4	0.4	0.1	0.0
SDDSC031	201.1	201.4	0.3	0.3	0.0
SDDSC031	201.4	202.4	1.0	0.1	0.0
SDDSC031	202.4	203.4	1.0	0.7	0.1
SDDSC031	203.4	203.8	0.4	0.8	0.0
SDDSC031	203.8	204.7	0.9	0.4	0.0
SDDSC031	204.7	205.1	0.4	1.2	0.0
SDDSC031	205.1	205.5	0.4	4.5	0.1
SDDSC031	205.5	206.2	0.7	6.7	1.7
SDDSC031	206.2	206.5	0.3	0.3	0.1
SDDSC031	206.5	207.0	0.5	0.2	0.0
SDDSC031	207.0	207.8	0.8	0.6	0.0
SDDSC031	207.8	208.3	0.5	0.5	0.0
SDDSC031	208.3	208.7	0.4	1.8	0.3
SDDSC031	208.7	209.1	0.4	2.2	0.0
SDDSC031	209.1	210.0	0.9	0.9	0.0
SDDSC031	210.0	211.0	1.0	0.5	0.0
SDDSC031	211.0	211.6	0.6	0.6	0.0
SDDSC031	211.6	212.1	0.5	1.4	0.0
SDDSC031	213.0	213.7	0.7	0.2	0.0
SDDSC031	213.7	214.4	0.7	0.1	0.0
SDDSC031	214.4	215.0	0.6	0.5	0.0
SDDSC031	215.0	215.6	0.6	0.7	0.0
SDDSC031	215.6	216.2	0.6	2.3	0.2
SDDSC031	216.2	216.8	0.6	1.0	0.0
SDDSC031	216.8	217.6	0.8	2.0	0.0
SDDSC031	217.6	218.0	0.4	0.3	0.0
SDDSC031	218.0	219.0	1.0	0.6	0.1
SDDSC031	219.0	220.0	1.0	0.4	0.0
SDDSC031	220.0	220.4	0.4	1.2	0.0
SDDSC031	220.4	221.2	0.8	0.3	0.0
SDDSC031	221.2	221.5	0.3	3.9	0.0
SDDSC031	221.5	222.2	0.7	1.3	0.0
SDDSC031	222.2	222.5	0.3	3.0	0.9
SDDSC031	222.5	222.7	0.2	4.7	0.0
SDDSC031	222.7	223.2	0.5	15.5	0.1
SDDSC031	223.2	224.1	0.9	8.4	5.2
SDDSC031	224.1	224.4	0.3	5.2	0.5
SDDSC031	224.4	224.8	0.5	6.7	0.5

SDDSC031	224.8	225.3	0.5	4.2	0.1
SDDSC031	225.3	225.6	0.3	4.4	0.1
SDDSC031	225.6	226.3	0.7	3.3	0.1
SDDSC031	226.3	226.7	0.4	18.0	6.6
SDDSC031	226.7	227.3	0.6	5.3	1.0
SDDSC031	227.3	227.6	0.3	66.8	0.1
SDDSC031	227.6	228.1	0.5	0.1	0.0
SDDSC031	228.1	228.5	0.4	0.1	0.0
SDDSC031	228.5	228.9	0.4	2.5	3.2
SDDSC031	229.6	229.9	0.3	0.2	0.0
SDDSC031	229.9	230.6	0.7	0.1	0.0
SDDSC031	230.6	231.7	1.1	0.4	0.1
SDDSC031	236.3	237.0	0.7	0.4	0.1
SDDSC031	237.0	237.7	0.7	0.6	0.0
SDDSC031	237.7	238.3	0.6	1.3	0.1
SDDSC031	238.3	239.0	0.7	0.1	0.0
SDDSC031	239.0	239.8	0.8	0.7	0.0
SDDSC031	239.8	240.1	0.3	0.9	0.2
SDDSC031	240.1	240.7	0.6	0.8	0.0
SDDSC029	16.0	16.7	0.6	0.4	0.0
SDDSC029	19.0	20.0	1.0	0.2	0.0
SDDSC029	20.0	21.0	1.0	0.2	0.0
SDDSC029	26.0	27.0	1.0	0.4	0.0
SDDSC029	29.8	31.0	1.2	0.3	0.0
MDDSC027	248.8	250.0	1.2	0.1	0.0
MDDSC027	255.6	256.4	0.8	0.2	0.0
MDDSC027	268.0	269.0	1.0	0.2	0.0
MDDSC027	285.5	286.7	1.2	0.5	0.0
MDDSC027	286.7	288.0	1.3	0.5	0.0
MDDSC027	302.9	303.9	1.0	0.6	0.1
MDDSC027	303.9	304.8	0.9	0.4	0.0
MDDSC027	304.8	305.6	0.8	0.1	0.0
MDDSC027	305.6	306.5	0.9	0.1	0.0
MDDSC027	306.5	307.4	0.9	0.2	0.0
MDDSC027	310.0	311.0	1.0	0.2	0.0
MDDSC027	315.0	316.1	1.1	0.4	0.1
MDDSC027	316.1	317.0	0.9	0.1	0.0
MDDSC027	318.0	319.0	1.0	0.7	0.1

## **JORC Table 1**

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections).

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Sampling has been conducted on drill core (half core for &gt;90 % and quarter core for check samples), grab samples (field samples of in-situ bedrock and boulders; including duplicate samples), trench samples (rock chips, including duplicates) and soil samples (including duplicate samples). Locations of field samples were obtained by using a GPS, generally to an accuracy of within 5 metres. Drill hole and trench locations have been confirmed to &lt;1 metre using a differential GPS.</li> <li>Samples locations have also been verified by plotting locations on the high-resolution Lidar maps</li> <li>Drill core is marked for cutting at the Nagambie core shed and sent by commercial transport to an automated diamond saw used by Company staff in Bendigo.</li> <li>Samples are bagged at the core saw and transported to the nearby OnSite Laboratory for assay.</li> <li>At OnSite samples are crushed using a jaw crusher combined with a rotary splitter and a 1 kg split is separated for pulverizing (LM5) and assay.</li> <li>Standard fire assay techniques are used for gold assay on a 30 g charge by experienced staff (used to dealing with high sulphide and stibnite-rich charges). OnSite gold method by fire assay code PE01S.</li> <li>Screen fire assay is used to understand gold grain-size distribution where coarse gold is evident.</li> <li>ICP-OES is used to analyse the aqua regia digested pulp for an additional 12 elements (method BM011) and over-range antimony is measured using flame AAS (method known as B050).</li> <li>Soil samples were sieved in the field and an 80 mesh sample bagged and transported to ALS Global laboratories in Brisbane for super-low level gold analysis on a 50 g samples by method ST44 (using aqua regia and ICP-MS).</li> <li>Grab and rock chip samples are generally submitted to OnSite Laboratories for standard fire assay and 12 element ICP-OES as described above.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul> <li>HQ diameter diamond drill core, oriented using Boart Longyear TruCore orientation tool with the orientation line marked on the base of the drill core by the driller/offsider.</li> <li>A standard 3 metre core barrel has been found to be most effective in both the hard and soft rocks in the project.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Core recoveries were maximised using HQ diamond drill core with careful control over water pressure to maintain soft-rock integrity and prevent loss of fines from soft drill core. Recoveries are determined on a metre-by-metre basis in the core shed using a tape measure against marked up drill core checking against driller's core blocks.</li> <li>Plots of grade versus recovery and RQD (described below) show no trends relating to loss of drill core, or fines.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geotechnical logging of the drill core takes place on racks in the the company core shed.</li> <li>Core orientations marked at the drill rig are checked for consistency, and base of core orientation lines are marked on core where two or more orientations match within 10 degrees.</li> <li>Core recoveries are measured for each metre RQD measurements (cumulative quantity of core sticks &gt; 10 cm in a metre) are made on a metre by metre basis.</li> <li>Each tray of drill core is photographed (wet and dry) after it is fully marked up for sampling and cutting.</li> <li>The ½ core cutting line is placed approximately 10 degrees above the orientation line so the orientation line is retained in the core tray for future work.</li> <li>Geological logging of drill core includes the following parameters: Rock types, lithology Alteration Structural information (orientations of veins, bedding, fractures using standard alpha-beta measurements from orientation line; or, in the case of un-oriented parts of the core, the alpha angles are measured) Veining (quartz, carbonate, stibnite) Key minerals (visible under hand lens, e.g. gold, stibnite)</li> <li>100 % of drill core is logged for all components described above into the company MX logging database.</li> <li>Logging is fully quantitative, although the description of lithology and alteration relies on visible observations by trained geologists.</li> <li>Each tray of drill core is photographed (wet and dry) after it is fully marked up for sampling and cutting.</li> <li>Logging is considered to be at an appropriate quantitative standard to use in future studies.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>Drill core is typically sampled using half of the HD diameter. The drill core orientation line is retained.</li> <li>Quarter core is used when taking sampling duplicates (termed FDUP in the database).</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Sampling representivity is maximised by always taking the same side of the drill core (whenever oriented), and consistently drawing a cut line on the core where orientation is not possible. The field technician draws these lines.</li> <li>Sample sizes are maximised for coarse gold by using half core, and using quarter core and half core splits (laboratory duplicates) allows an estimation of nugget effect.</li> <li>In mineralised rock the company uses approximately 10% of ¼ core duplicates, certified reference materials (suitable OREAS materials), laboratory sample duplicates and instrument repeats.</li> <li>In the soil sampling program duplicates were obtained every 20th sample and the laboratory inserted low-level gold standards regularly into the sample flow.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The fire assay technique for gold used by OnSite is a globally recognised method, and over-range follow-ups including gravimetric finish and screen fire assay are standard. Of significance at the OnSite laboratory is the presence of fire assay personnel who are experienced in dealing with high sulphide charges (especially those with high stibnite contents) – this substantially reduces the risk of in accurate reporting in complex sulphide-gold charges.</li> <li>The ICP-OES technique is a standard analytical technique for assessing elemental concentrations. The digest used (aqua regia) is excellent for the dissolution of sulphides (in this case generally stibnite, pyrite and trace arsenopyrite), but other silicate-hosted elements, in particular vanadium (V), may only be partially dissolved. These silicate-hosted elements are not important in the determination of the quantity of gold, antimony, arsenic or sulphur.</li> <li>A portable XRF has been used in a qualitative manner on drill core to ensure appropriate core samples have been taken (no pXRF data are reported or included in the MX database).</li> <li>Acceptable levels of accuracy and precision have been established using the following methods         <ul> <li>Aduplicates – half core is split into quarters and given separate sample numbers (commonly in mineralised core) – low to medium gold grades indicate strong correlation, dropping as the gold grade increases over 40 g/t Au.</li> <li>Blanks – blanks are inserted after visible gold and in strongly mineralised rocks to confirm that the crushing and pulping are not affected by gold smearing onto the crusher and LM5 swing mill surfaces. Results are excellent, generally below detection limit and a single sample at 0.03 g/t Au. Certified Reference Materials – OREAS CRMs have been used throughout the project including blanks, low (&lt;1 g/t Au), medium (up to 5 g/t Au) and high-grade gold samples (&gt; 5 g/t Au). Results are automatically checked on</li> </ul></li></ul>

Criteria	JORC Code explanation	Commentary
		data import into the MX database to fall within 2 standard deviations of the expected value.  Laboratory splits – OnSite conducts splits of both coarse crush and pulp duplicates as quality control and reports all data. In particular, high Au samples have the most repeats.  Laboratory CRMs – OnSite regularly inserts their own CRM materials into the process flow and reports all data  Laboratory precision – duplicate measurements of solutions (both Au from fire assay and other elements from the aqua regia digests) are made regularly by the laboratory and reported.  • Accuracy and precision have been determined carefully by using the sampling and measurement techniques described above during the sampling (accuracy) and laboratory (accuracy and precision) stages of the analysis.  • Soil sample company duplicates and laboratory certified reference materials all fall within expected ranges.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The Independent Geologist has visited Sunday Creek drill sites and inspected drill core held at the Nagambie core shed.</li> <li>Visual inspection of drill intersections matches the both the geological descriptions in the database and the expected assay data (for example, gold and stibnite visible in drill core is matched by high Au and Sb results in assays).</li> <li>In addition, on receipt of results Company geologists assess the gold, antimony and arsenic results to verify that the intersections returned expected data.</li> <li>The electronic data storage in the MX database is of a high standard. Primary logging data are entered directly by the geologists and field technicians and the assay data are electronically matched against sample number on return from the laboratory.</li> <li>Certified reference materials, ¼ core field duplicates (FDUP), laboratory splits and duplicates and instrument repeats are all recorded in the database.</li> <li>Exports of data have the option of including all primary data, or a subset with average field duplicates for some reporting.</li> <li>Adjustments to assay data are recorded by MX, and none are present (or required).</li> <li>Twinned drill holes are not available at this stage of the project.</li> </ul>
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	<ul> <li>Differential GPS used to locate drill collars, trenches and some workings</li> <li>Standard GPS for some field locations (grab and soils samples), verified against Lidar data.</li> </ul>
	<ul><li>Specification of the grid system used.</li><li>Quality and adequacy of topographic control.</li></ul>	<ul> <li>The grid system used throughout is Geocentric datum of Australia 1994; Map Grid Zone 55 (GDA94_Z55), also referred to as ELSG 28355.</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<ul> <li>Topographic control is excellent owing to sub 10 cm accuracy from Lidar data.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The data spacing is suitable for reporting of exploration results – evidence for this is based on the improving predictability of high grade gold-antimony intersections.</li> <li>At this time the data spacing and distribution are not sufficient for the reporting of Mineral Resource Estimates. This however may change as knowledge of grade controls increase with future drill programs.</li> <li>Sample compositing has not been applied to the reporting of any drill results.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The true thickness of the mineralized interval reported is interpreted to be approximately 60% of the sampled thickness.</li> <li>Drilling is oriented in an optimum direction when considering the combination of host rock orientation and apparent vein control on gold and antimony grade.  The steep nature of some of the veins may give increases in apparent thickness of some intersections, but more drilling is required to quantify.</li> <li>A sampling bias is not evident from the data collected to date (drill holes cut across mineralised structures at a moderate angle).</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Drill core is delivered to the Nagambie core logging shed by either the drill contractor or company field staff. Samples are marked up by company staff at the Nagambie core shed, loaded onto strapped secured pallets and trucked by commercial transport to Bendigo where they are cut by company staff in an automated diamond saw and bagged before submission to the laboratory. There is no evidence in any stage of the process, or in the data for any sample security issues.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Continuous monitoring of CRM results, blanks and duplicates is undertaken by geologists and the company data geologist. Dr Nick Cook, Technical Advisor for SXG has the orientation, logging and assay data.</li> </ul>

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