

**30 NOVEMBER 2023** 

## SXG DRILLS 3.1 METRES @ 20.6 g/t GOLD

### **EXTENDS MINERALISATION 250 METRES WEST**

**Melbourne, Australia — Southern Cross Gold Ltd ("SXG" or the "Company") (ASX: SXG)** announces further high-grade mineralisation and two new vein sets from four drill holes (SDDSC083, 86, 89 and 90) between the historic Golden Dyke and Christina mining areas at the 100%-owned Sunday Creek Project in Victoria (Figure 5). High-grade mineralisation was discovered 250 m west of previous drilling, representing a 29% increase in the known strike length.

### HIGHLIGHTS

- High-grade mineralisation within two new vein sets have been drilled up to 250 m west and down to 240 m vertically below surface in a previously undrilled area between the historic Golden Dyke and Christina mining areas:
  - Drilled footprint of mineralisation now extends more than 1.1 km in core area.
  - Results demonstrate further vein sets and the potential for multiple repeats and extensions of vein sets at depth in undrilled areas from the western most drilling at Rising Sun (SDDSC082) to Christina within a 700 m undrilled area (Figure 3).
- Highlights include:
  - SDDSC086 (150 m west of previous drilling):
    - 2.8 m @ 7.4 g/t AuEq (4.4 g/t Au, 1.9% Sb) from 252.7 m, including:
      - 0.5 m @ 38.4 g/t AuEq (22.1 g/t Au, 10.3% Sb) from 252.7 m
    - **3.1 m @ 21.3 g/t AuEq** (20.6 g/t Au, 0.4% Sb) from 266.5 m, including:
      - 1.8 m @ 35.3 g/t AuEq (34.5 g/t Au, 0.5% Sb) from 266.5 m
  - SDDSC090 (250 m west of previous drilling):
    - **9.8 m @ 4.6 g/t AuEq** (4.0 g/t Au, 0.4% Sb) from 346.9 m, including:
      - 2.2 m @ 12.7 g/t AuEq (11.0 g/t Au, 1.1% Sb) from 347.6 m
- A further two holes are reported, SDDSC083 drilled between mineralised veins sets, hit a broad lowgrade "near miss". SDDSC089, drilled 100 m below and 30 m NW of SDDSC086 intersected a lower grade along strike halo from SDDSC086. Highlights included 1.5 m @ 2.3 g/t AuEq (2.3 g/t Au, 0.0% Sb) from 334.1 m. With only four holes drilled, most of the mineralised host in this area remains untested.
- Sixteen holes (SDDSC092-106, 109) are currently being processed and analysed, with four holes (SDDSC107, 108A, 110, 111) currently in progress (Figures 1 and 3).

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ABN: 70 652 166 795 ASX Code: SXG Issued Capital: 184.0M fully paid shares



**Southern Cross Gold's Managing Director, Michael Hudson, states,** "With three of four drill rigs operating within the main areas of Rising Sun and Apollo, these holes were drilled in the opposite direction to the west to see if mineralisation extended towards Christina. We have had immediate success, delivering on SXG's strategy to demonstrate grade, volume and scale at Sunday Creek.

*"Firstly, we have extended the drilled mineralised footprint of the main zone from 850 m to 1,100 m along strike.* 

"Secondly, we intersected two new veins sets hitting **3.1 m** @ **20.6 g/t Au** (SDDSC086) and **9.8 m** @ **4.0 g/t Au** (SDDSC090). With only four holes drilled, most of the mineralised host in this area remains untested.

"Thirdly, we intersected high grades including **1.8 m** @ **34.5 g/t Au** (SDDSC086) and **0.4 m** @ **42.6 g/t Au** (SDDSC090) within broader 3 m to 10 m wide vein sets.

" Finally, these results show the potential for multiple repeats and extensions of veins sets at depth in undrilled areas from the most westerly drilling at Rising Sun (SDDSC082) to Christina within 700 m of undrilled strike potential.

"Further drilling continues to highlight the significance of the Sunday Creek discovery, with extremely high grades observed across the project, within multiple veins sets (up to 25 defined to date) and more being continuously found. With the host extending 8km in length from the Christina to the regional Leviathan/Tonstal prospects (Figure 4) we are only scratching the surface of the opportunities that await at Sunday Creek."

#### **Drill Hole Discussion**

Four drill holes (SDDSC083, 86, 89 and 90) have been drilled for the first time between the historic Golden Dyke and Christina mining areas. The holes were drilled across the targeted mineralised host (determining the extent of the rails of "the ladder") and demonstrated high-grade mineralisation within veins sets ("rungs of the ladder") up to 250 m west of previous drilling.

SDDSC086, drilled 150 m west of previous drilling, intersected:

- o 2.8 m @ 7.4 g/t AuEq (4.4 g/t Au, 1.9% Sb) from 252.7 m, including:
  - 0.5 m @ 38.4 g/t AuEq (22.1 g/t Au, 10.3% Sb) from 252.7 m
- o 3.1 m @ 21.3 g/t AuEq (20.6 g/t Au, 0.4% Sb) from 266.5 m, including:
  - 1.8 m @ 35.3 g/t AuEq (34.5 g/t Au, 0.5% Sb) from 266.5 m

SDDSC090, drilled 250 m west of previous drilling, intersected:

- o 0.3 m @ 2.5 g/t AuEq (1.7 g/t Au, 0.5% Sb) from 342.9 m
- 9.8 m @ 4.6 g/t AuEq (4.0 g/t Au, 0.4% Sb) from 346.9 m, including:
  - 2.2 m @ 12.7 g/t AuEq (11.0 g/t Au, 1.1% Sb) from 347.6 m
  - 0.7 m @ 8.0 g/t AuEq (7.5 g/t Au, 0.3% Sb) from 352.6 m

Additionally, a further two holes (SDDSC083, SDDSC089) are reported (Figures 1 - 3). SDDSC083, drilled immediately on the western end of the Golden Dyke historic mine drilled between mineralised veins sets and hit a broad low grade "near miss" through the mineralised host. SDDSC089, drilled 100 m below and 30 m NW of SDDSC086 intersected a lower grade along strike halo from SDDSC086. Highlights included 1.5 m @ 2.3 g/t AuEq (2.3 g/t Au, 0.0% Sb) from 334.1 m. With only four holes drilled, the majority of the mineralised host in this area remains untested (Figure 2).



#### Pending Results and Update

With four diamond drill rigs operating at site, the Company has stated that it will drill an additional 19,000 m by April 2024.

Cumulatively, 182 drill holes for 48,492 m have been completed at Sunday Creek. Sixteen holes (SDDSC092-106, 109) of those holes are currently being processed and analysed, with four additional holes (SDDSC107, 108A, 110, 111) currently in progress (Figures 1 and 3).

#### About Sunday Creek

The Sunday Creek epizonal-style gold project is located 60 km north of Melbourne within 19,365 hectares of granted exploration tenements. SXG is also the freehold landholder of 133.29 hectares that form the key portion in and around the main drilled area at the Sunday Creek Project.

Gold and antimony form in a relay of vein sets that cut across a steeply dipping zone of intensely altered rocks (the "host"). When observed from above, the host resembles the side rails of a ladder, where the sub-vertical mineralised vein sets are the rungs that extend from surface to depth. At Apollo and Rising Sun these individual 'rungs' have been defined over 350 m depth extent from surface to 550 m below surface, are 10 m to 20 m wide, and 20 m to 100 m in strike.

Our systematic drill program is strategically targeting these significant vein formations, initially these have been defined over 1,100 m strike of the host from Christina to Apollo prospects, of which approximately 400 m has been more intensively drill tested (Rising Sun to Apollo). At least twenty-three 'rungs' have been discovered to date, defined by high-grade intercepts (20 g/t to >4,000 g/t Au) along with lower grade edges. Ongoing step-out drilling is aiming to uncover the potential extent of this mineralised system.

Geologically, the project is located within the Melbourne Structural Zone in the Lachlan Fold Belt. The regional host to the Sunday Creek mineralisation is an interbedded turbidite sequence of siltstones and minor sandstones metamorphosed to sub-greenschist facies and folded into a set of open north-west trending folds.

In epizonal deposits (for example Fosterville and Costerfield (Victoria), Reefton (NZ)), visible gold becomes increasingly significant with depth. In Victoria this depth is approximately 700 m to 800 m in known deposits. This represents the different temperatures and changes in structural regimes of formation of epizonal Au-Sb and Au dominant mineralisation.

#### **Further Information**

Further discussion and analysis of the Sunday Creek project is available through the interactive Vrify 3D animations, presentations and videos all available on the SXG website. These data, along with an interview on these results with Managing Director Michael Hudson, with a 3D Leapfrog presentation, can be viewed at <a href="https://www.southerncrossgold.com.au">www.southerncrossgold.com.au</a>

No upper gold grade cut is applied in the averaging and intervals are reported as drill thickness. During future Mineral Resource studies, the requirement for assay top cutting will be assessed.

Figures 1-5 show project location, plan, longitudinal and cross-sectional views of drill results reported here and Tables 1- 3 provide collar and assay data. The true thickness of the mineralised intervals reported are interpreted to be approximately 60% to 70% of the sampled thickness. Lower grades were cut at 1.0 g/t Au lower cutoff over a maximum width of 2 m with higher grades cut at 5.0 g/t Au lower cutoff over a maximum of 1 m width, unless otherwise stated.



#### **Gold Equivalent Calculation**

SXG 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 54 km to the northwest of the project, for processing during WW1. The Costerfield mine corridor, now owned by Mandalay Resources Ltd contains two 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.

SXG considers that it is appropriate to adopt the same gold equivalent variables as Mandalay Resources Ltd in its Mandalay Technical Report, 2022 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, SXG considers that a  $AuEq = Au (g/t) + 1.58 \times Sb$  (%) 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 announcement that relates to new exploration results contained in this report is based on information compiled by Mr. Michael Hudson, a Fellow of the Australasian Institute of Mining and Metallurgy. He is the Managing Director of 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.

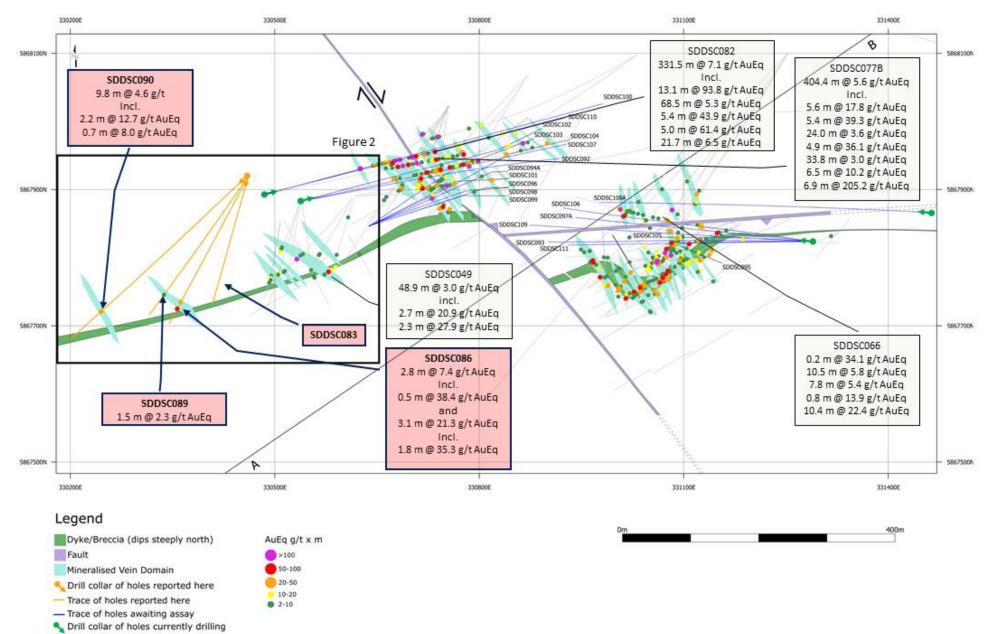
Certain information in this announcement also relates to prior drill hole exploration results, are extracted from the following announcements, which are available to view on <u>www.southerncrossgold.com.au</u>:

<u>20 October, 2022</u> SDDSC049, <u>1 June, 2023</u> SDDSC066, <u>5 September, 2023</u> SDDSC077B, <u>23 October, 2023</u> SDDSC082.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original document/announcement and the Company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement.

#### For further information, please contact:

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# Figure 1: Sunday Creek plan view showing SDDSC083, 86, 89 and 90 reported here (yellow traces), selected prior reported drill holes, pending holes and mineralised veins, host dyke-breccia and major faults. For location see Figure 4.

Figure 2: Sunday Creek level plan view at +85m RL (185 m vertically below the surface) with influence of 200 metres showing SDDSC083, 86, 89 and 90 reported here (yellow traces), mineralised veins and host dyke-breccia. With only four holes drilled, most of the mineralised host in this area remains untested (dotted rectangles).

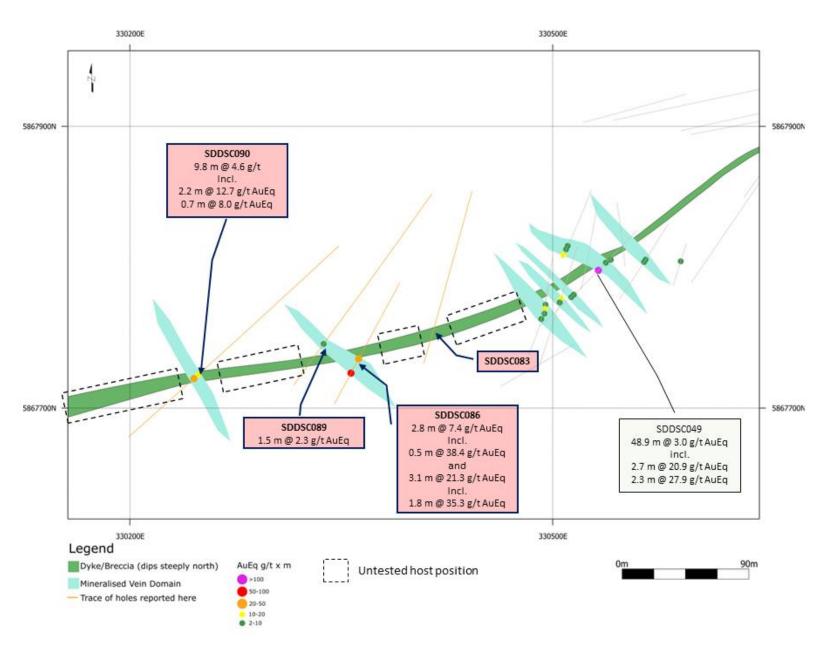


Figure 3: Sunday Creek longitudinal section across A-B within the plane of the dyke breccia/altered sediment host (see Figure 1) looking towards the north (striking 327 degrees) showing mineralised veins sets (cyan). Holes reported here (yellow), holes in the laboratory (blue) and prior reported drill holes (black) shown. Shows extension of the main zone 250 m west (from 850 m to 1,100 m along strike), two new high-grade veins sets intersected in SDDSC086 and SDSC090 and the potential for multiple repeats and extensions of veins sets at depth in undrilled areas from the most westerly drilling at Rising Sun (SDDSC082) to Christina within 700 m of undrilled strike potential.

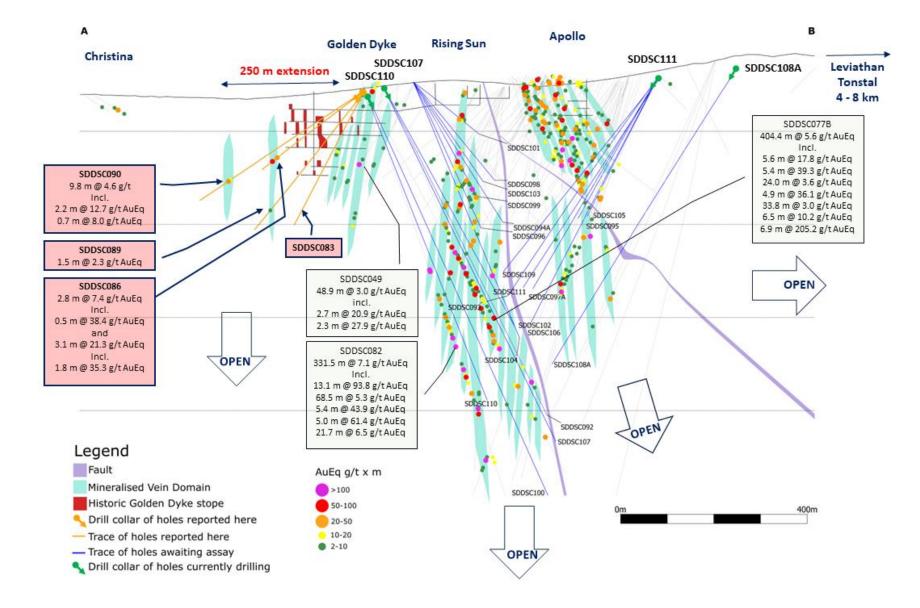


Figure 4: Sunday Creek regional plan view showing LiDAR, soil sampling, structural framework, regional historic epizonal gold mining areas and broad regional areas (Tonstal, Consols and Leviathan) tested by 12 holes for 2,383 m drill program. The regional drill areas are at Tonstal, Consols and Leviathan located 4,000-7,500 m along strike from the main drill area at Golden Dyke- Apollo.

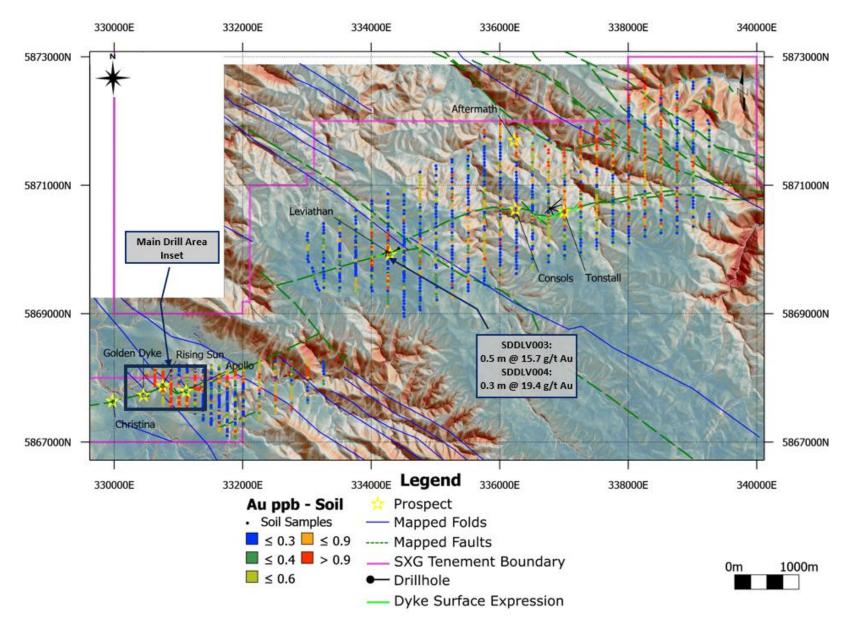
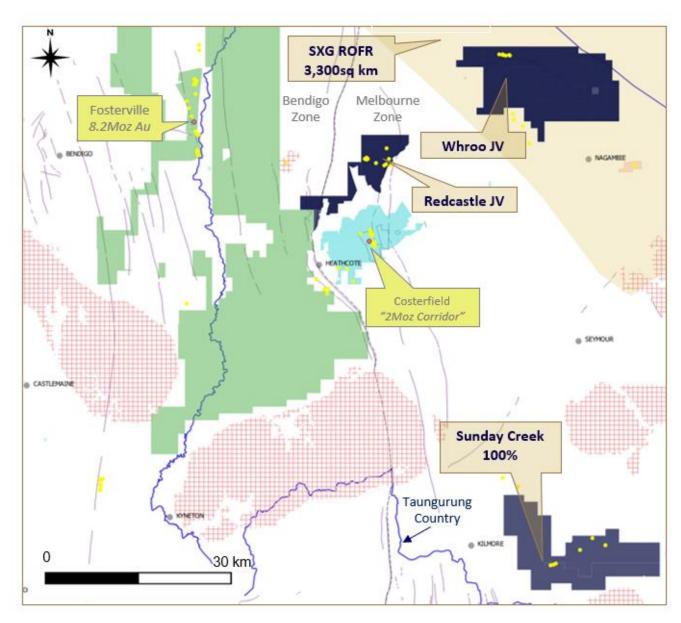


Figure 5: Location of the Sunday Creek project, along with SXG's other Victoria projects and simplified geology.







Hole_ID	Depth (m)	Prospect	East GDA94_Z55	North GDA94_Z55	Elevation	Azimuth	Plunge
SDDSC079	700.7	Rising Sun	331254	5868098	353.7	210.0	-65.0
SDDSC083	347.5	Christina	330461	5867922	285.4	196.0	-54.0
SDDSC085	827.4	Apollo	331254	5868099	353.8	222.0	-64.0
SDDSC086	298.8	Christina	330461	5867922	285.4	208.0	-33.0
SDDSC089	390.0	Christina	330461	5867922	285.4	214.0	-48.0
SDDSC090	427.2	Christina	330461	5867922	285.4	226.0	-31.0
SDDSC091	530.4	Gentle Annie	330871	5868064	305.6	210.0	-69.0
SDDSC092	803.8	Rising Sun	330537	5867882	295.5	79.0	-60
SDDSC093	610.9	Rising Sun	331291	5867823	316.8	271	-47.5
SDDSC094	23.3	Rising Sun	330639	5867846	306.2	68.5	-56
SDDSC094A	359.6	Rising Sun	330639	5867846	306.1	68.5	-56
SDDSC095	368.3	Apollo	331291	5867823	316.8	271	-53
SDDSC096	347.9	Rising Sun	330639	5867846	306.1	68	-63.5
SDDSC097	62.3	Apollo	331291	5867823	316.8	276	-50.5
SDDSC097A	575	Apollo	331291	5867823	316.8	277	-50
SDDSC098	278.5	Rising Sun	330639	5867846	306.1	72	-48.5
SDDSC099	284.7	Rising Sun	330639	5867846	306.1	71.5	-58.5
SDDSC100	1042	Rising Sun	330482	5867891	289.5	74.5	-64
SDDSC101	181.5	Rising Sun	330639	5867846	306.1	63	-37
SDDSC102	596.8	Rising Sun	330537	5867883	295.5	75	-59
SDDSC103	260.6	Rising Sun	330639	5867847	306.1	53	-53
SDDSC104	595.2	Rising Sun	330639	5867847	306.1	64.5	-65.7
SDDSC105	353.6	Apollo	331291	5867823	316.8	275.3	-55.2
SDDSC106	653.5	Apolo	331291	5867823	316.8	279.5	-53
SDDSC107	In progress plan 860 m	Rising Sun	330537	5867883	295.5	77.5	-62
SDDSC108A	In progress plan 800 m	Apollo	331464	5867865	333	272.5	-50
SDDSC109	590	Apollo	331291	5867823	316.8	273.5	-44.5
SDDSC110	In progress plan 700 m	Rising Sun	330482	5867892	289.5	78	-66
SDDSC111	In progress plan 510 m	Apollo	331291	5867823	316.8	270	-38

### Table 1: Drill collar summary table for recent drill holes in progress.

**Table 2:** Tables of mineralised drill hole intersections reported from SDDSC083, 86, 89 and 90 using two cut-off criteria. Lower grades cut at 1 g/t Au lower cutoff over a maximum of 2 m with higher grades cut at 5.0 g/t Au cutoff over a maximum of 1 m.

Hole-ID	From (m)	To (m)	Length (m)	Au g/t	Sb%	AuEq g/t
SDDSC086	252.70	255.50	2.8	4.4	1.9	7.4
including	252.70	253.20	0.5	22.1	10.3	38.4
SDDSC086	266.50	269.60	3.1	20.6	0.4	21.3
including	266.50	268.30	1.8	34.5	0.5	35.3
SDDSC089	334.05	335.58	1.5	2.3	0.0	2.3
SDDSC090	342.90	343.20	0.3	1.7	0.5	2.5
SDDSC090	346.90	356.70	9.8	4.0	0.4	4.6
including	347.60	349.80	2.2	11.0	1.1	12.7
including	352.60	353.30	0.7	7.5	0.3	8.0

Hole-ID	From (m)	To (m)	Length (m)	Au g/t	Sb%	AuEq g/t
SDDSC083	274.30	275.00	0.7	0.1	0.0	0.1
SDDSC083	279.00	280.00	1.0	0.1	0.0	0.1
SDDSC083	281.00	282.00	1.0	0.0	0.0	0.1
SDDSC083	285.50	286.50	1.0	0.0	0.0	0.1
SDDSC083	286.50	287.50	1.0	0.2	0.0	0.2
SDDSC083	289.50	290.45	1.0	0.3	0.0	0.3
SDDSC083	290.45	291.10	0.7	0.0	0.0	0.1
SDDSC083	297.50	297.80	0.3	0.1	0.0	0.1
SDDSC083	299.80	300.37	0.6	0.1	0.0	0.1
SDDSC083	300.37	300.72	0.4	0.1	0.0	0.1
SDDSC083	300.72	301.55	0.8	0.1	0.0	0.1
SDDSC083	301.55	302.16	0.6	0.1	0.0	0.1
SDDSC083	302.16	302.86	0.7	0.3	0.0	0.3
SDDSC083	303.14	303.70	0.6	0.1	0.0	0.1
SDDSC083	309.47	310.10	0.6	0.0	0.0	0.1
SDDSC083	310.10	310.50	0.4	0.0	0.0	0.1
SDDSC083	313.15	313.45	0.3	0.0	0.0	0.1
SDDSC086	247.90	248.80	0.9	0.1	0.0	0.1
SDDSC086	250.90	251.30	0.4	0.0	0.1	0.1
SDDSC086	251.30	252.10	0.8	0.0	0.0	0.1
SDDSC086	252.10	252.70	0.6	0.2	0.0	0.2
SDDSC086	252.70	253.20	0.5	22.1	10.3	38.4
SDDSC086	253.20	253.80	0.6	0.8	0.1	0.9
SDDSC086	253.80	254.80	1.0	0.2	0.0	0.2
SDDSC086	254.80	255.50	0.7	1.1	0.2	1.3
SDDSC086	255.50	256.10	0.6	0.1	0.0	0.2
SDDSC086	256.10	256.80	0.7	0.1	0.0	0.1
SDDSC086	256.80	257.20	0.4	0.5	0.1	0.5
SDDSC086	258.22	258.79	0.6	0.1	0.0	0.1
SDDSC086	258.79	259.45	0.7	0.5	0.1	0.6
SDDSC086	259.45	260.30	0.9	0.1	0.1	0.1
SDDSC086	262.50	263.30	0.8	0.1	0.0	0.2
SDDSC086	263.30	264.06	0.8	0.3	0.1	0.4
SDDSC086	264.06	264.93	0.9	0.1	0.0	0.2
SDDSC086	265.80	266.50	0.7	0.4	0.0	0.4
SDDSC086	266.50	267.43	0.9	46.0	0.9	47.5
SDDSC086	267.43	268.30	0.9	22.3	0.0	22.3
SDDSC086	268.30	269.00	0.7	1.0	0.0	1.0
SDDSC086	269.00	269.60	0.6	1.4	0.8	2.7
SDDSC086	269.60	270.46	0.9	0.5	0.0	0.5
SDDSC086	270.46	271.20	0.7	0.1	0.1	0.2

Table 3: All individual assays reported from SDDSC083, 86, 89 and 90 reported here >0.1g/t AuEq.

SDDSC086	271.20	272.00	0.8	0.0	0.0	0.1
SDDSC086	274.00	274.90	0.9	0.1	0.0	0.1
SDDSC086	274.90	275.50	0.6	0.0	0.0	0.1
SDDSC089	324.75	325.40	0.7	0.1	0.1	0.2
SDDSC089	325.40	326.41	1.0	0.2	0.0	0.2
SDDSC089	327.31	327.67	0.4	0.5	0.0	0.6
SDDSC089	328.15	329.29	1.1	0.1	0.0	0.2
SDDSC089	329.29	330.39	1.1	0.2	0.0	0.3
SDDSC089	331.20	332.07	0.9	0.0	0.0	0.1
SDDSC089	333.57	334.05	0.5	0.8	0.0	0.8
SDDSC089	334.05	334.22	0.2	2.7	0.0	2.7
SDDSC089	334.22	334.80	0.6	2.3	0.0	2.3
SDDSC089	334.80	335.58	0.8	2.2	0.0	2.2
SDDSC089	338.26	339.15	0.9	0.1	0.0	0.1
SDDSC089	343.60	344.50	0.9	0.0	0.1	0.1
SDDSC090	327.11	327.70	0.6	0.1	0.0	0.1
SDDSC090	341.40	342.30	0.9	0.0	0.0	0.1
SDDSC090	342.30	342.70	0.4	0.4	0.0	0.4
SDDSC090	342.70	342.90	0.2	0.2	0.0	0.2
SDDSC090	342.90	343.20	0.3	1.7	0.5	2.5
SDDSC090	343.20	343.70	0.5	0.2	0.2	0.6
SDDSC090	346.20	346.90	0.7	0.1	0.1	0.2
SDDSC090	346.90	347.60	0.7	1.2	0.1	1.2
SDDSC090	347.60	348.00	0.4	42.6	0.1	42.7
SDDSC090	348.60	349.80	1.2	6.0	2.0	9.1
SDDSC090	349.80	350.70	0.9	3.4	0.8	4.6
SDDSC090	350.70	351.60	0.9	1.4	0.7	2.4
SDDSC090	351.60	352.20	0.6	1.6	0.1	1.7
SDDSC090	352.60	353.30	0.7	7.5	0.3	8.0
SDDSC090	353.30	354.20	0.9	1.1	0.0	1.2
SDDSC090	354.20	354.90	0.7	0.2	0.0	0.3
SDDSC090	354.90	355.90	1.0	1.9	0.1	2.0
SDDSC090	355.90	356.50	0.6	0.1	0.0	0.1
SDDSC090	356.50	356.70	0.2	0.6	0.3	1.1
SDDSC090	356.70	357.70	1.0	0.3	0.0	0.3
SDDSC090	357.70	358.30	0.6	0.3	0.1	0.4
SDDSC090	358.30	359.00	0.7	0.4	0.0	0.4
SDDSC090	359.00	360.20	1.2	0.8	0.1	1.0
SDDSC090	360.20	361.00	0.8	0.1	0.0	0.1
SDDSC090	399.00	400.00	1.0	0.1	0.0	0.1
SDDSC090	400.00	401.00	1.0	0.7	0.0	0.7
SDDSC090	401.00	402.00	1.0	0.5	0.1	0.6
SDDSC090	402.00	403.00	1.0	0.5	0.3	0.9

SDDSC090	404.00	405.00	1.0	0.1	0.0	0.1
SDDSC090	405.00	406.00	1.0	0.0	0.0	0.1
SDDSC090	406.00	407.00	1.0	0.0	0.0	0.1

### **JORC Table 1**

# Section 1 Sampling Techniques and Data

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 and cut using an automated diamond saw used by Company staff in Kilmore.</li> <li>Samples are bagged at the core saw and transported to the Bendigo 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 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>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <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>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)</li> <li>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> </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> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>future studies.</li> <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> <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> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <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>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 20<sup>th</sup> 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         <i>¼ duplicates</i> – 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.         <i>Blanks</i> – 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 LMS swing mill surfaces. Results are excellent, generally below detection limit and a single sample at 0.03 g/t Au.         <i>Certified Reference Materials</i> – 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 data import into the MX database to fall</li></ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>duplicates as quality control and reports all data. In particular, high Au samples have the most repeats.</li> <li><i>Laboratory CRMs</i> – OnSite regularly inserts their own CRM materials into the process flow and reports all data</li> <li><i>Laboratory precision</i> – 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.</li> <li><i>Accuracy and precision</i> 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.</li> <li><i>Soil sample</i> company duplicates and laboratory certified reference materials all fall within expected ranges.</li> </ul>
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 Kilmore 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 include all primary data, from hole SDDSC077B onwards after discussion with SRK Consulting. Prior to this gold was averaged across primary, field and lab duplicates.</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	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<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> <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> <li>Topographic control is excellent owing to sub 10 cm accuracy from Lidar data.</li> </ul>

Criteria	JORC Code explanation	Commentary
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 mineralised intervals reported are interpreted to be approximately 60-70% 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.</li> <li>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 Kilmore core logging shed by either the drill contractor or company field staff. Samples are marked up and cut by company staff at the Kilmore core shed, in an automated diamond saw and bagged before loaded onto strapped secured pallets and trucked by commercial transport to Bendigo for 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. Mr Michael Hudson for SXG has the orientation, logging and assay data.</li> </ul>

# Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Sunday Creek Goldfield, containing the Clonbinane Project, is covered by the Retention Licence RL 6040 and is surrounded by Exploration Licence EL6163 and Exploration Licence EL7232. All the licences are 100% held by Clonbinane Goldfield Pty Ltd, a wholly owned subsidiary company of Southern Cross Gold Ltd.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The main historical prospect within the Sunday Creek project is the Clonbinane prospect, a high level orogenic (or epizonal) Fosterville-style deposit. Small scale mining has been undertaken in the project area since the 1880s continuing through to the early 1900s. Historical production occurred with multiple small shafts and alluvial workings across the Clonbinane Goldfield permits. Production of note occurred at the Clonbinane area with total production being reported as 41,000 oz gold at a grade of 33 g/t gold (Leggo and Holdsworth, 2013)</li> <li>Work in and nearby to the Sunday Creek Project area by previous explorers typically focused on finding bulk, shallow deposits. Beadell Resources were the first to drill deeper targets and Southern Cross have continued their work in the Sunday Creek Project area.</li> <li>EL54 - Eastern Prospectors Pty Ltd</li> <li>Rock chip sampling around Christina, Apollo and Golden Dyke mines. Rock chip sampling down the Christina mine shaft. Resistivity survey over the Golden Dyke. Five diamond drill holes around Christina, two of which have assays.</li> <li>ELs 872 &amp; 975 - CRA Exploration Pty Ltd</li> <li>Exploration focused on finding low grade, high tonnage deposits. The tenements were relinquished after the area was found to be prospective but not economic.</li> <li>Stream sediment samples around the Golden Dyke and Reedy Creek areas. Results were better around the Golden Dyke. 45 dump samples around Golden Dyke of dworkings showed good correlation between gold, arsenic and antimony.</li> <li>Soil samples over the Golden Dyke to define boundaries of dyke and mineralization. Two costeans parallel to the Golden Dyke targeting soil anomalies. Costeans since rehabilitated by SXG.</li> <li>ELs 827 &amp; 1520 - BHP Minerals Ltd Exploration targeting open cut gold mineralization peripheral to SXG tenements.</li> <li>ELs 1534, 1603 &amp; 3129 - Ausminde Holdings Pty Ltd</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Targeting shallow, low grade gold. Trenching around the Golden Dyke prospect and results interpreted along with CRAs costeans. 29 RC/Aircore holes totalling 959 m sunk into the Apollo, Rising Sun and Golden Dyke target areas.</li> <li>ELs 4460 &amp; 4987 - Beadell Resources Ltd</li> <li>ELs 4460 and 4497 were granted to Beadell Resources in November 2007. Beadell successfully drilled 30 RC holes, including second diamond tail holes in the Golden Dyke/Apollo target areas.</li> <li>Both tenements were 100% acquired by Auminco Goldfields Pty Ltd in late 2012 and combined into one tenement EL4987.</li> <li>Nagambie Resources Ltd purchased Auminco Goldfields in July 2014. EL4987 expired late 2015, during which time Nagambie Resources applied for a retention licence (RL6040) covering three square kilometres over the Sunday Creek Goldfield. RL6040 was granted July 2017.</li> <li>Clonbinane Gold Field Pty Ltd was purchased by Mawson Gold Ltd in February 2020. Mawson drilled 30 holes for 6,928 m and made the first discoveries to depth.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of</li> <li>mineralisation.</li> </ul>	Refer to the description in the main body of the release.
Drillhole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following</li> <li>information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Refer to appendices
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for</li> </ul>	<ul> <li>See "Further Information" and "Metal Equivalent Calculation" in main text of press release.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg. 'down hole</li> <li>length, true width not known').</li> </ul>	<ul> <li>See reporting of true widths in the body of the press release.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>The results of the diamond drilling are displayed in the figures in the announcement.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>All results above 0.1g/t Au have been tabulated in this announcement. The results are considered representative with no intended bias.</li> <li>Core loss, where material, is disclosed in tabulated drill intersections.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>Previously reported diamond drill drill results are displayed in plans, cross sections and long sections and discussed in the text and in the Competent Person's statement.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The Company has 4 diamond drill rigs in operation and plans to drill 30,000 m in 2023. The company remains in an exploration stage to expand the mineralisation along strike and to depth.</li> <li>See diagrams in presentation which highlight current and future drill plans.</li> </ul>