

29 AUGUST 2023

# HIGH GRADE DRILL RESULTS EXTEND MINERALISATION 500 METRES DOWN-DIP AT SUNDAY CREEK

INCLUDES 0.5 m @ 23.8 g/t GOLD DEEPEST INTERSECTION TO DATE

Melbourne, Australia — Southern Cross Gold Ltd ("SXG" or the "Company") (ASX:SXG) is excited to announce results from two holes SDDSC068/73 which demonstrates the scale of the Sunday Creek system with a 500 m down-dip extension and the deepest intersection on the project to date from the Apollo area at the 100%-owned Sunday Creek Project in Victoria (Figure 1).

#### **HIGHLIGHTS**

- **Demonstrating Grade**: SDDSC068 intersected **up to 23.8 g/t Au** with visible gold noted.
- **Demonstrating Volume**: SDDSC068 confirmed continuity of the known high-grade zones to great depth at Apollo by drilling 500 m down-dip from hole SDDSC066 (10.4 m @ 22.4 g/t AuEq) (Figures 4 and 5) adding to the volume of the mineralised endowment.
- · Highlights include:
  - 0.3 m @ 1.3 q/t Au from 987.7 m
  - 13.3 m @ 1.6 g/t Au from 1,009.8 m
    - Including 0.5 m @ 23.8 g/t Au from 1,010.4 m
- The Apollo area remains open up-dip, down-dip below 1,000 m depth and along strike.

**Southern Cross Gold's Managing Director, Michael Hudson, states,** "With hole SDDSC068 our aim was to demonstrate that the Apollo area had the potential to extend to depth, similar to what we had proven at the Rising Sun area over the last months. The hole delivered on our strategy of demonstrating grade, volume and scale by drilling a 500 m down-dip extension of known high grade mineralisation into virgin territory at Apollo.

"This was a bold step out, with the system now tested, and delivering high grades, to similar or deeper depths of the operating gold mines in the state. High-grade results like this, also being the deepest on the project to date, help to articulate the scale of the mineral system that we are building at Sunday Creek below our current focused drill areas.

"Epizonal gold zonal systems like Sunday Creek telescope to great depths, and importantly we are seeing the transition to gold-rich (no antimony) parts of the system at depth like our neighbouring peers at Fosterville and Costerfield.

"With results from four diamond drill rigs operating at site across the 8 km of strike, with a key focus on the 1 km long core area, the plan is to drill an additional 26,000 m by April 2024. With many holes in the laboratory,



including those reported here, we are excited to see how the industry-leading and high-grade Sunday Creek continues to develop."

#### **Drill Hole Discussion**

SDDSC068 was drilled 500 m down-dip of SDDSC066 (10.5 m @ 5.8 g/t AuEq, 7.8 m @ 5.4 g/t AuEq, and 10.4 m @ 22.4 g/t AuEq) and successfully targeted high-grades including **0.5 m** @ **23.8 g/t Au from 1,010.4** m within a broader zone of mineralisation including **13.3 m** @ **1.6 g/t Au from 1,009.8 m** at Apollo. Visible gold was noted.

SDDSC073 was drilled 260 m above SDDSC068 and drilled a very broad interval of the host to mineralisation with altered sediments and dyke observed from 585 m to 750 m downhole. The hole is considered a nearmiss of the high grade core with lower grade mineralisation was intersected. (Figures 3 to 5).

#### **Pending Results and Update**

With four diamond drill rigs operating at site, the plan is to drill an additional 26,000 m by April 2024, with 17,800 m drilled so far in 2023.

**Demonstrating Volume**: Twelve holes (SDDSC077B, 79-81, 83-90) are currently being geologically processed and chemically analysed, with four holes (SDDSC082, 91-93) in drill progress (Figures 4 and 5). Drill holes SDDSC079 and SDDSC085 were drilled above and around SDDSC073 to target higher grade mineralisation.

**Demonstrating Scale**: Twelve holes (SDDTS001-7, SDDCN001 and SDDLV001-4) for 2,383 m (including two redrilled collars) have now been completed at the Leviathan – Consols – Tonstal regional area between 3,500 m to 7,500 m along strike from the main drill area. Results are expected in the coming weeks (Figure 2).

**Demonstrating Grade**: Preliminary visual geological logs of two pending drill holes (SDDSC077B and SDDSC082), drilled above and below hole SDDSC050 at Rising Sun intersected **multiple zones of mineralisation with visible gold noted in certain restricted zones**. Assays are pending (Figures 4 and 5).

## About Sunday Creek - Scale and Opportunity

At Sunday Creek, gold and antimony form in veins that cut across a steeply dipping zone of intensely altered rocks (the "host"). When looked at from above, in plan view, the host resembles the side rails of a ladder, where the mineralised veins are the rungs. At Apollo and Rising Sun these 'rungs' have been defined over 350 m to 850 m in depth extent, 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 along 1,200 m strike of the host from Christina to Apollo, of which approximately 400 m has been more intensively drill tested (Rising Sun to Apollo). Twenty-two 'rungs' have been discovered to date in the Rising Sun to Apollo zone (Figure 3), defined by high-grade intercepts (20 - 400 g/t Au) and lower grade edges. Ongoing step-out drilling is aiming to uncover the potential extent of this mineralised system. With the host extending 8,000 m in length from the core area to Leviathan/Tonsal prospects, over 900 m deep and 40 m to 150m wide, we are only scratching the surface on the opportunities that await at Sunday Creek.

Sunday Creek compares favourably with globally significant high grade gold discoveries at this stage of the project's development. Cumulatively, 159 drill holes for 37,551 m have been completed at Sunday Creek. In total, 32 individual intersections have ranged between 50 - 100 AuEq g/t x m ("AuEq g/t x width in m") and 16 individual intersections have exceeded 100 AuEq g/t x m.

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.

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.

#### Mineralisation, Scale and Comparison to Other Epizonal Deposits

Mineralisation at Sunday Creek is structurally controlled, with increased mineralisation associated with brittle-ductile shear veins that show quartz-stibnite extension veining, stibnite-gold-matrix breccias and disseminated mineralisation in the form of arsenian pyrite, pyrite and arsenopyrite. The host for mineralisation is an east to north-east trending zone of intensely altered 'bleached' sericite-carbonate +/-silica altered siltstones and dyke rocks that ranges from 50 m to 200 m wide. A larger arsenic anomaly is associated with gold mineralisation, mostly represented by arsenian-pyrite but arsenopyrite-bearing zones predominate below 700 m vertical depth with a clear spatial relationship to high-grade gold. A sulphidic (pyritic) halo, predominately in bleached pyrite-sericitic veins rounds out the larger visible alteration footprint.

Mineralised vein sets cross the host structure at on a predominate north-west orientation and are typically 10 m to 40 m wide (cut off dependent), 20 m to 60 m along strike, and 300 m to 830 m down dip. As compared to other deposits, Sunday Creek benefits from the presence of multiple high-grade veins. Mineralised shoots at Sunday Creek can also be formed at the intersection of the sub-vertical to shallower dipping 330 degree (NW) striking mineralised veins sets and the east-west striking, steeply north dipping structure hosting dioritic dykes and related intrusive breccias. Higher grades of mineralisation are often observed to concentrate on the dyke/altered sediment interface within individual vein sets.

At Sunday Creek, and as is typical for epizonal deposits (for example Fosterville and Costerfield, Reefton (NZ)), visible gold becomes increasingly significant at depth below approximately 800 m. This represents the different temperatures and changes in structural regimes of formation of epizonal Au-Sb and Au dominant mineralisation. Gold at Sunday Creek is hosted in quartz and carbonate vein sets, associated with stibnite bearing veins and breccias.

#### **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>

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 60-70% of the sampled thickness. Lower grades were cut at 0.3 g/t Au lower cutoff over a maximum width of 3 m with higher grades cut at 5.0 g/t Au 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.

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 <a href="https://www.southerncrossgold.com.au">www.southerncrossgold.com.au</a>:

30 May, 2022 SDDSC033, 4 October, 2022 SDDSC046, 21 November, 2022 SDDSC050, 14
 December 2022 SDDSC050, 30 March, 2023 SDDSC061, 16 May, 2023 SDDSC064, 1 June, 2023 SDDSC066.

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:

Justin Mouchacca, Company Secretary, <u>im@southerncrossgold.com.au</u>, +61 3 8630 3321 Nicholas Mead, Corporate Development, <u>nm@southerncrossgold.com.au</u>, +61 415 153 122

Figure 1: Location of the Sunday Creek project, along with SXG's other Victoria projects and simplified geology.

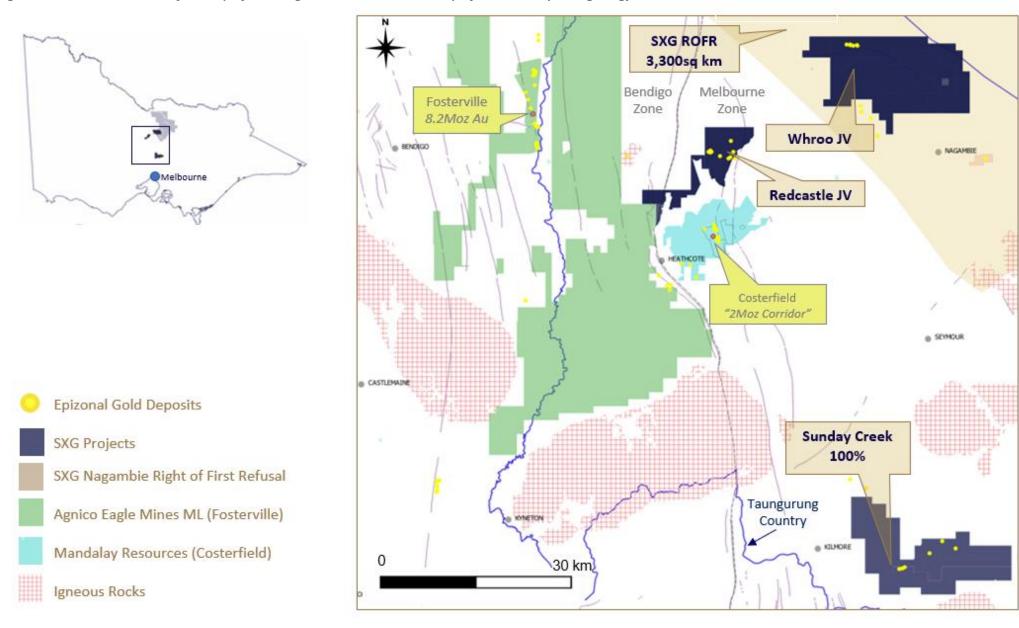


Figure 2: Sunday Creek regional plan view showing LiDAR, soil sampling, structural framework, regional historic epizonal gold mining areas and broad regional areas tested by 12 holes for 2,383 m drill program. The regional drill areas are at Tonstal, Consols and Leviathan located 4,000-7,500 m along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

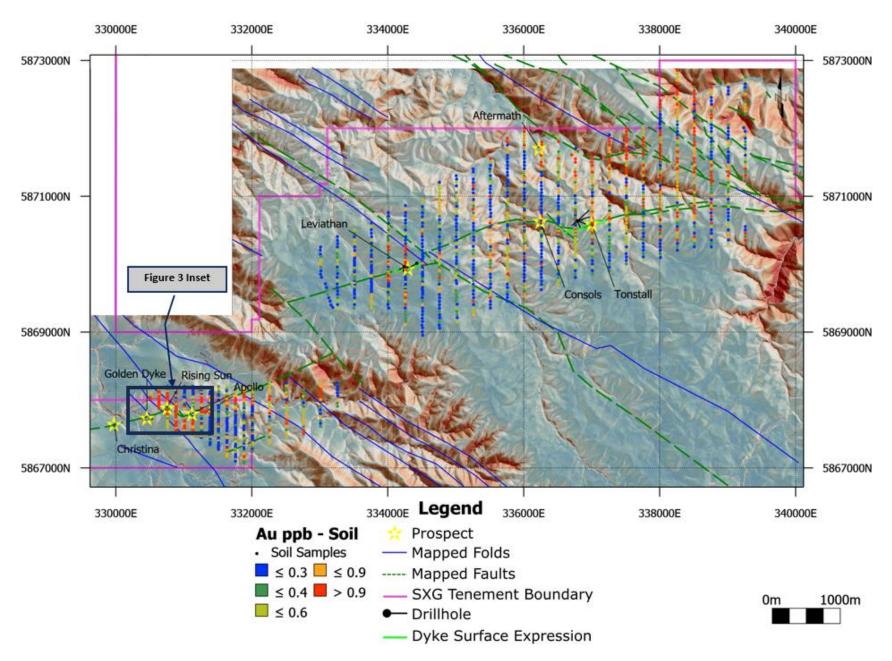


Figure 3: Sunday Creek factual plan view showing the two drillholes (SDDSC086, 73) reported in this press release (grey box), selected prior reported drill holes and pending holes (yellow collar and trace). For location see Figure 2.

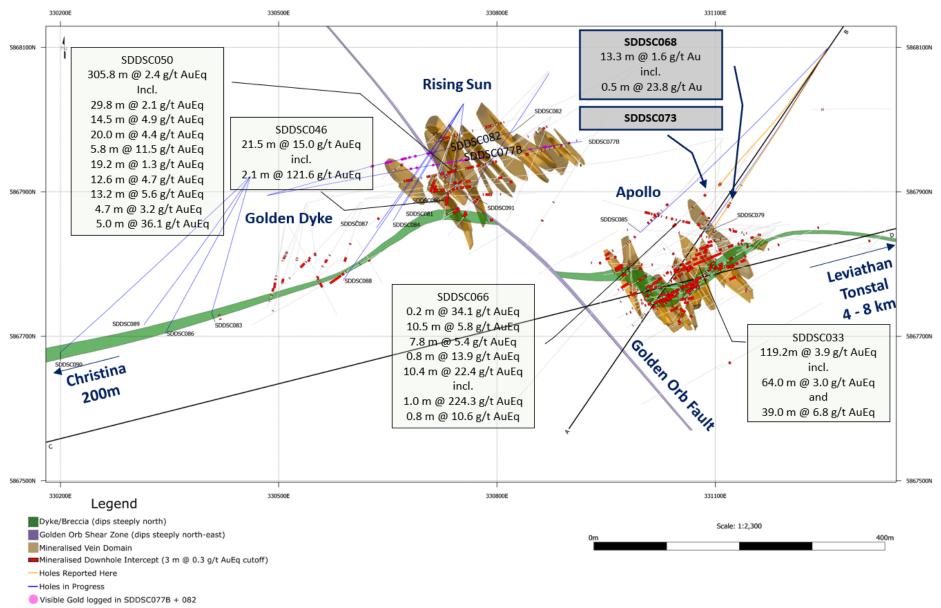


Figure 4: Sunday Creek cropped cross section A-B (20 m influence) across the Apollo area looking towards 330 with mineralised veins sets, holes reported here (SDDSC068, 73) and prior reported drill holes

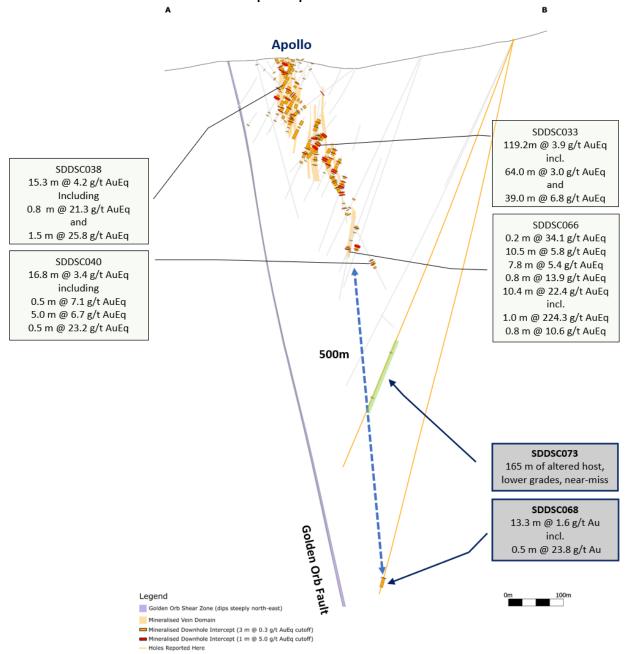


Figure 5: Sunday Creek longitudinal section across C-D the plane of the dyke breccia host looking towards the north showing mineralised veins sets. SDDSC068 and 73 reported here, with restricted visible gold intersections shown in SDDSC077B and SDDSC082 and prior reported drill holes shown.

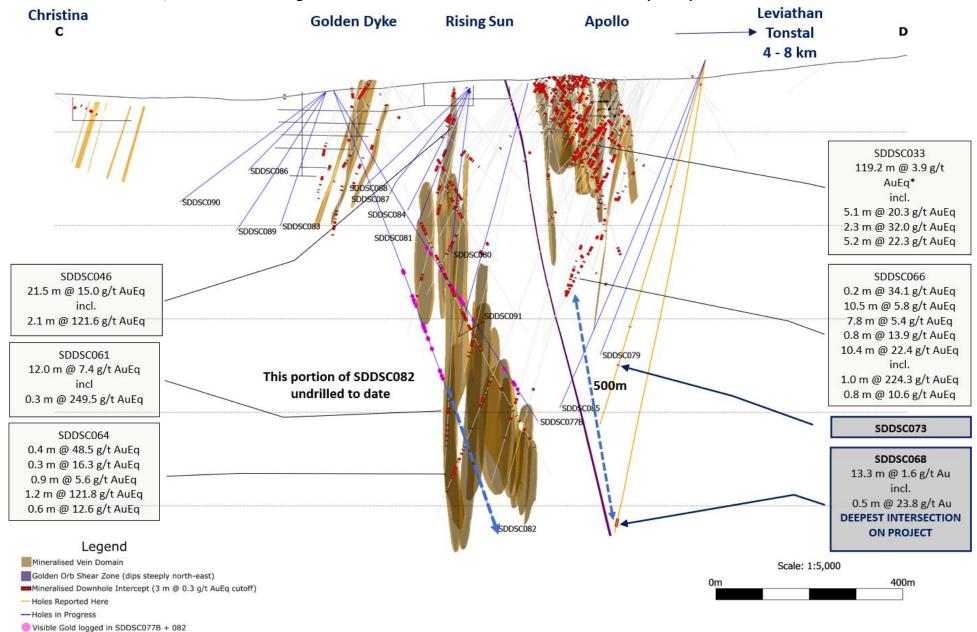


Table 1: Drill collar summary table for recent drill holes in progress.

Hole_ID	Depth (m)	Prospect	East GDA94_Z55	North GDA94_Z55	Elevation	Azimuth	Plunge
SDDSC068	1041.2	Apollo	331254	5868098.6	353.9	211.3	-77.7
SDDSC073	818.3	Apollo	331254	5868097	353.9	212.0	-69.0
SDDSC077B	834.2	Rising Sun	330478	5867882	289.0	73.3	-62.2
SDDSC078	439.5	Rising Sun	330617	5867890	300.0	83.6	-58.0
SDDSC079	700.7	Rising Sun	331254	5868098	353.7	210.0	-65.0
SDDSC080	374.6	Rising Sun	330754	5868022	294.3	185.0	-71.0
SDDSC081	338.5	Rising Sun	330754	5868022	294.3	210.0	-60.0
SDDSC082	In progress plan 1000 m	Rising Sun	330484	5867895	289.0	74.0	-68.0
SDDSC083	347.5	Golden Dyke	330461	5867922	285.4	196.0	-54.0
SDDSC084	323.4	Rising Sun	330754	5868022	294.3	210.0	-53.0
SDDSC085	827.4	Apollo	331254	5868099	353.8	222.0	-64.0
SDDSC086	298.8	Golden Dyke	330461	5867922	285.4	208.0	-33.0
SDDSC087	286.7	Rising Sun	330754	5868022	294.3	214.0	-43.0
SDDSC088	360.0	Rising Sun	330754	5868022	294.3	214.0	-33.0
SDDSC089	390.0	Golden Dyke	330461	5867922	285.4	214.0	-48.0
SDDSC090	412.2	Christina	330461	5867922	285.4	226.0	-31.0
SDDSC091	In progress plan 580 m	Gentle Annie	330871	5868064	305.6	210.0	-69.0
SDDSC092	In progress plan 830 m	Rising Sun	330537	5867882	295.5	79.0	-60
SDDSC093	In progress plan 550 m	Rising Sun	331291	5867823	316.8	271	-47.5
SDDTS001	179.8	Tonstal	336788	5870637	525.0	156.0	-50.0
SDDTS002	182.6	Tonstal	336788	5870637	525.0	111.0	-42.0
SDDTS003	197.8	Tonstal	336788	5870637	525.0	111.0	-73.0
SDDTS004	62.6	Tonstal	336788	5870637	525.0	79.0	-60.0
SDDTS004A	170.6	Tonstal	336788	5870637	525.0	79.0	-60.0
SDDTS005A	257.1	Tonstal	336788	5870637	525.0	70.0	-42.0
SDDTS006	368.6	Tonstal	336788	5870637	525.0	48.0	-50.0
SDDTS007	179.6	Tonstal	336788	5870637	525.2	230.0	-50.0
SDDCN001	200.5	Consols	336270	5870700	507.0	220.0	-60.0
SDDLV001	152.6	Leviathan	334240	5869962	552.2	190.0	-60.0
SDDLV002	131.85	Leviathan	334240	5869962	552.2	240.0	-50.0
SDDLV003	140.0	Leviathan	334240	5869962	552.2	90.0	-60.0
SDDLV004	143.4	Leviathan	334428	5870014	553.0	242.5	-40.0
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**Table 2:** Tables of mineralised drill hole intersections reported from SDDSC078/73 using two cut-off criteria. Lower grades cut at 0.3 g/t lower cutoff over a maximum of 3 m with higher grades cut at 5.0 g/t AuEq cutoff over a maximum of 1 m.

Drill Hole	from (m)	to (m)	width (m)	Au g/t	Sb %	AuEq g/t
SDDSC068	987.70	988.00	0.3	1.3	0.0	1.3
SDDSC068	1009.75	1023.00	13.3	1.6	0.0	1.7
including	1010.40	1010.85	0.5	23.8	0.0	23.8
SDDSC068	1026.00	1028.00	2.0	0.7	0.0	0.7
SDDSC073	609.03	613.70	4.7	0.3	0.0	0.3
SDDSC073	700.85	703.00	2.1	0.5	0.0	0.5

Table 3: All individual assays reported from the two drillholes (SDDSC068 73) reported here >0.1g/t AuEq.

Drill Hole	from (m)	to (m)	width (m)	Au g/t	Sb%	AuEq g/t
SDDSC068	982.00	982.35	0.4	0.1	0.0	0.1
SDDSC068	987.70	988.00	0.3	1.3	0.0	1.3
SDDSC068	1009.00	1009.75	0.8	0.2	0.0	0.2
SDDSC068	1009.75	1010.40	0.6	0.7	0.0	0.7
SDDSC068	1010.40	1010.85	0.5	23.8	0.0	23.8
SDDSC068	1010.85	1011.25	0.4	0.3	0.0	0.3
SDDSC068	1011.25	1012.00	0.8	1.0	0.0	1.0
SDDSC068	1012.00	1012.65	0.6	0.5	0.0	0.5
SDDSC068	1012.65	1013.00	0.4	1.5	0.0	1.5
SDDSC068	1013.00	1013.40	0.4	1.0	0.0	1.0
SDDSC068	1013.40	1014.00	0.6	0.8	0.0	0.8
SDDSC068	1014.00	1015.00	1.0	1.3	0.0	1.3
SDDSC068	1015.00	1016.00	1.0	0.6	0.0	0.6
SDDSC068	1016.00	1017.00	1.0	1.1	0.0	1.1
SDDSC068	1017.00	1018.00	1.0	0.9	0.0	1.0
SDDSC068	1018.00	1019.00	1.0	0.7	0.3	1.2
SDDSC068	1019.00	1020.00	1.0	1.0	0.3	1.4
SDDSC068	1020.00	1021.00	1.0	0.7	0.0	0.7
SDDSC068	1021.00	1022.00	1.0	0.5	0.0	0.5
SDDSC068	1022.00	1023.00	1.0	0.5	0.0	0.5
SDDSC068	1023.00	1024.00	1.0	0.1	0.0	0.1
SDDSC068	1024.00	1025.00	1.0	0.1	0.0	0.1
SDDSC068	1025.00	1025.50	0.5	0.1	0.0	0.1
SDDSC068	1025.50	1026.00	0.5	0.3	0.0	0.3
SDDSC068	1026.00	1027.00	1.0	0.8	0.0	0.8
SDDSC068	1027.00	1028.00	1.0	0.5	0.0	0.5
SDDSC068	1028.60	1029.10	0.5	0.2	0.0	0.2
SDDSC068	1029.10	1030.10	1.0	0.1	0.0	0.1
SDDSC073	608.04	609.03	1.0	0.2	0.0	0.2
SDDSC073	609.03	609.80	0.8	0.5	0.0	0.5
SDDSC073	609.80	610.00	0.2	0.4	0.0	0.4
SDDSC073	610.50	611.40	0.9	0.1	0.0	0.1
SDDSC073	611.40	612.15	0.8	0.1	0.0	0.1
SDDSC073	612.15	612.45	0.3	0.4	0.0	0.5
SDDSC073	612.45	613.30	0.8	0.4	0.0	0.5
SDDSC073	613.30	613.70	0.4	0.5	0.0	0.5
SDDSC073	613.70	614.00	0.3	0.2	0.0	0.2
SDDSC073	614.25	614.70	0.5	0.1	0.0	0.1
SDDSC073	700.85	701.60	0.8	0.4	0.0	0.4
SDDSC073	701.60	702.20	0.6	0.6	0.0	0.6
SDDSC073	702.20	703.00	0.8	0.4	0.0	0.4

SDDSC073	722.60	723.05	0.4	0.1	0.0	0.1
SDDSC073	738.25	739.00	0.8	0.2	0.0	0.2
SDDSC073	739.00	739.50	0.5	0.1	0.0	0.2

## **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 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>
Drill sample	Method of recording and assessing core and chip sample recoveries and	Core recoveries were maximised using HQ diamond drill core with careful

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>	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.  • Plots of grade versus recovery and RQD (described below) show no trends relating to loss of drill core, or fines.
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>	Geotechnical logging of the drill core takes place on racks in the the company
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>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</li> <li>½ duplicates – 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 data import into the MX database to fall within 2 standard deviation</li></ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying		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.  • The Independent Geologist has visited Sunday Creek drill sites and inspected drill core held at the Kilmore core shed.  • 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).  • In addition, on receipt of results Company geologists assess the gold, antimony and arsenic results to verify that the intersections returned expected data.  • 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.  • Certified reference materials, ¼ core field duplicates (FDUP), laboratory splits and duplicates and instrument repeats are all recorded in the database.  • Exports of data have the option of including all primary data, or a subset with average field duplicates for some reporting.
		<ul><li>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> </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</li> </ul>
	<ul> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>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.  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 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 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 and Reedy Creek areas. Results were better around the Golden Dyke. 45 dump samples around Golden Dyke old workings 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.  ELs 4460 &amp; 4987 - Beadell Resources Ltd  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>	See reporting of true widths in the body of the press release.
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>