

# Sunday Creek – Victorian Goldfields A Significant Global Gold Discovery

19 August 2024



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### Important Notice and Disclaimer

#### **Competent Persons Statement**

Information in this presentation 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.

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.

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

9 August, 2022 SDDSC038, 4 October, 2022 SDDSC046, 20 October, 2022 SDDSC049, 21 November, 2022 SDDSC050, 14 December, 2022 SDDSC050, 28 February, 2023 SDDSC055, 29 August, 2023 SDDSC068, 5 September, 2023 SDDSC077B, 12 October, 2023 SDDSC091, 30 November, 2023 SDDSC091, 30 November, 2023 SDDSC092, 5 March, 2024 SDDSC107, 15 April, 2024 SDDSC110 & 113, 13 June, 2024 SDDSC118.



# Aim to Create the Highest Margin Gold Business Globally



#### **Exceptional Hit Rate**

Sunday Creek compares favorably with global leading hit rates for this stage of the project's development

**44 individual intersections** >100 AuEq g/t x m

128 drill holes for 56 km drilling reported to date

50 vein sets wireframed within main drill area



#### 3 Clear Objectives

Drilling plan has three clear objectives that will have the largest emphasis over the next six months

- Demonstrate Grade
- Demonstrate Volume
- Demonstrate Scale



# 5 diamond drill rigs operating at site

Aim to increase capacity with additional rig per quarter, 60 km drilling planned over the next year



#### **News flow continuous**



#### **Funded with permits**

\$13.4 m (31 May '24)
Fully funded and permitted

**133.3** ha of freehold land, three properties





# Corporate Structure – A Tight Register



#### Capitalization Summary

Share Price (16 Aug 2024)	A\$2.45
Shares Issued	197.7M
Fully Diluted	214.8M
Basic Market Capitalisation	A\$484.5M
Cash (31 May 2024)	A\$13.4M

#### Major Shareholder Summary

Mawson Gold Ltd	49.4%
Institutions & HNW (Franklin Templeton, Schroders, SG Hiscock, Konwave, Springtide Capital, Firelight Investments, Invesco, Lowell, Earth Resource, Serafin, Kaplan, Wincrest)	17.5%
Board and Management (non-look through)	1.5%
TOTAL	68.3%

### (a) o

#### Other Data

Options	Price	No. of Securities
JLM Options (Expiry 16 May 2025)	\$0.30	2.6M
Class A ESOP (Expiry 16 May 2025)	\$0.30	1.4M
Class B ESOP (Expiry 16 May 2026)	\$0.30	2.8M
Class C ESOP (Expiry 16 May 2027)	\$0.30	2.8M
Unlisted ESOP (Expiry 15 August 2026)	\$0.66	1.3M
Broker Options (Expiry 28 November 2025)	\$0.87	1.2M
Consultant Options (Expiry 23 October 2026)	\$1.20	1.5M
Director Options (Expiry 7 November 2026)	\$1.20	3.6M





# SXG Proposed Merger with Mawson and Dual Listing

#### 2 Clear Objectives

- Consolidate Ownership of Sunday Creek
- Dual listing of Sunday Creek





#### **Look through Cap Table\***

<b>HNW</b> (Springtide Capital, Firelight Investments, Swiss private bank clients, others)	31.2%
Institutions (Franklin Templeton, Konwave, Ruffer, Merk, Earthlabs, SG Hiscock, CQS, Ixios, Schroder, Mackenzie, Invesco, Lowell, US Global, Earth Resource, Serafin, Kaplan, Wincrest)	23.7%
Board and Management	3.0% (8.6% FD)
Other	42.1%
TOTAL	100.0%







#### **Summary**

- Simplify capital structure to reflect SXG structure
- Broader access to capital markets
- Institutional support
- Lower cost of capital
- Purchase 1:1 basis
- Tax rollover relief
- Southern Cross Gold Ltd name remains
- Experienced Australian Team remain (management and board)
- > Shareholders to vote
- Mawson before merge only left with SXG shares
- Complete late October 2024



# **Exploration and Mining History**



#### History

- 1850s Alluvial mining
- 1860s Surface mining to 30m
- 1880s Shaft mining to 100m, 1890s to 180m
- Early 1900s cyanide
- WW1 Open by Imperial munitions act antimony
- 1960s Eastern Prospectors few drill holes
- 1980s CRA/BHP
- 1986 mid 1990's, Ausminde 29 RC drill holes totalling 960 metres;
- 2008 Beadell Resources 30 RC holes with 7 diamond drill tails – oxide focus

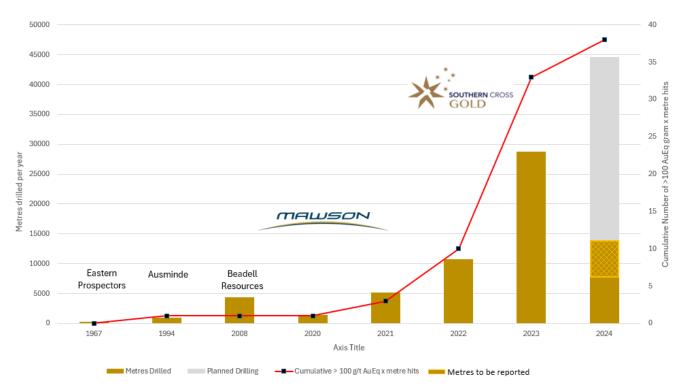


#### Exploration

- Exploration has accelerated year-on-year
- 2021 was the first year with an individual +100 g/t Au assay interval
- 2023 included 28 individual Au assays +100 g/t Au and 6 individual Au assays +1,000 g/t Au.
- 2024 to date has 11 individual Au assays +100 g/t Au from 8 drillholes started in 2024 with an additional 11 drillholes being processed or currently drilling – 60 km drilling planned over next year



The Golden Dyke Mine





# Database Analysis: Grade vs Width



# The best intersections on the project have been drilled recently

#### **Top 10 intersections at Sunday Creek**

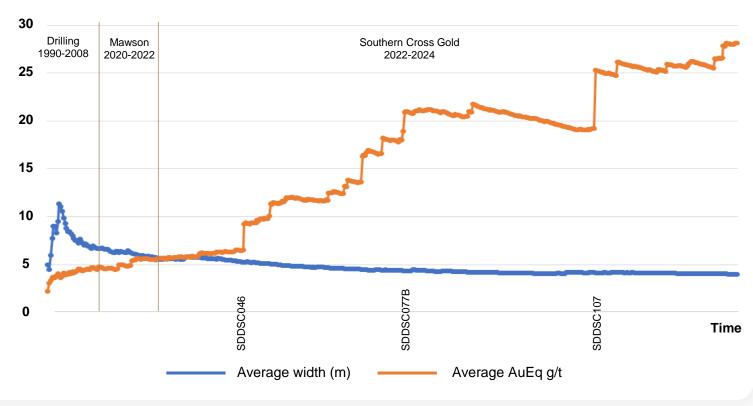
Date`	Hole-ID	From (m)	To (m)	Length (m)	Au g/t	Sb%	AuEq g/t	AuEq g/t * m
5-Mar-24	SDDSC107	684.3	685.4	1.0	2,318.4	0.3	2,318.9	2,389
5-Sep-23	SDDSC77B	737.1	740.7	3.6	391.9	0.8	393.4	1424
9-Nov-23	SDDSC091	430.0	450.0	20.0	62.7	0.5	63.7	1274
14-Dec-23	SDDSC092	681.6	684.9	3.3	267.8	1.8	271.1	889
23-Oct-23	SDDSC082	417.4	419.0	1.6	500.3	0.1	500.5	801
13-Jun-24	SDDSC118	1120.4	1124.0	3.6	124.8	0.0	124.8	449
13-Jun-24	SDDSC118	555.7	556.4	0.7	604.0	0.0	604.0	441
23-Oct-23	SDDSC082	413.6	415.4	1.7	230.6	9.9	249.1	429
5-Mar-24	SDDSC107	566.9	576.0	9.1	39.1	0.6	40.2	368
4-Oct-22	SDDSC046	187.5	201.8	14.3	20.5	2.6	25.4	363



SDDSC107 from 684.7 m within assayed interval 1.0 m @ 2319 g/t AuEq (2318.4 g/t Au, 0.3 % Sb)

#### AuEq g/t & Width (m) (2 m @ 1.0 g/t Au Lower Cut) vs time

Metres/ Au Eq g/t

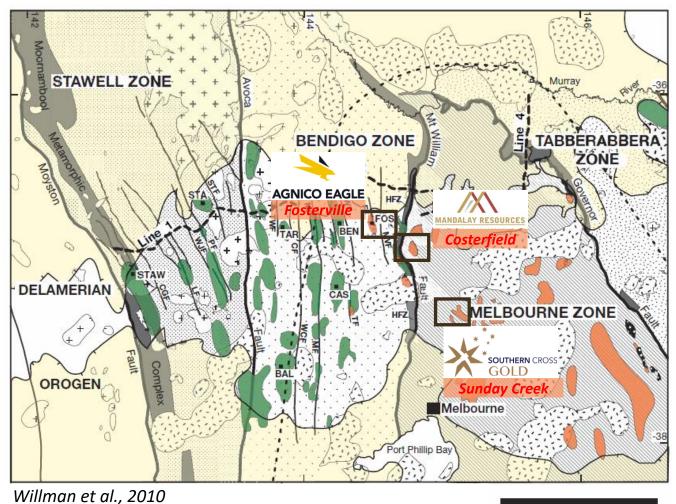


35,456 drill hole assay results
All calculations 2 m @ 1 g/t Au lower cut, > 5g/t\*m AuEq



<sup>\*</sup>AuEqgtm variations due to rounding

### Regional Setting



Mesozonal

character

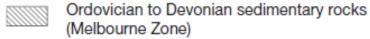
100 km

Sb-As bearing, mainly epizonal character









Ordovician to Silurian sedimentary rocks (Tabberabbera Zone)

Ordovician turbidites (Bendigo Zone)

Cambrian turbidites (Stawell Zone)

Cambrian mafic volcanic rocks

Cambrian calc-alkaline volcanic rocks (upper layer of Selwyn Block)

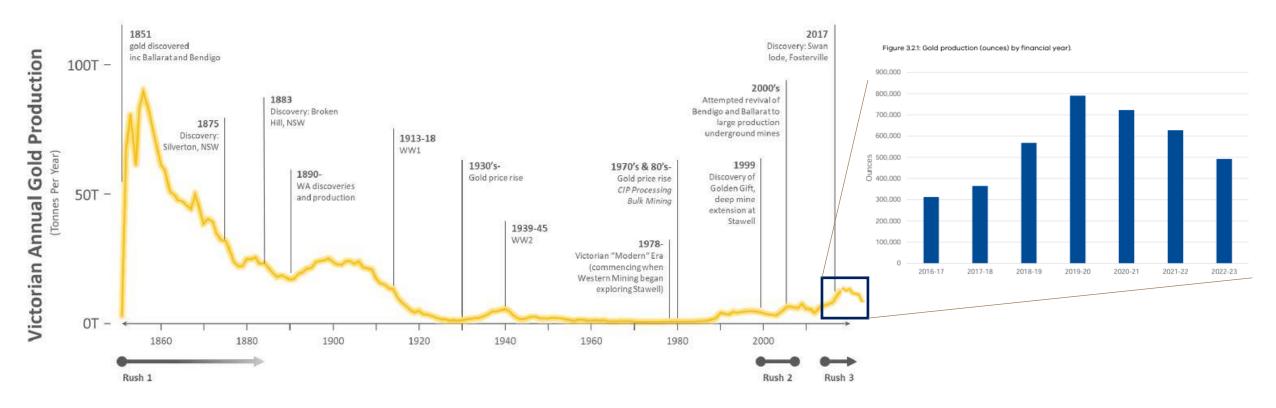
Goldfields formed in 380 - 370 Ma event

Goldfields formed in 440 Ma and 420 - 400 Ma events



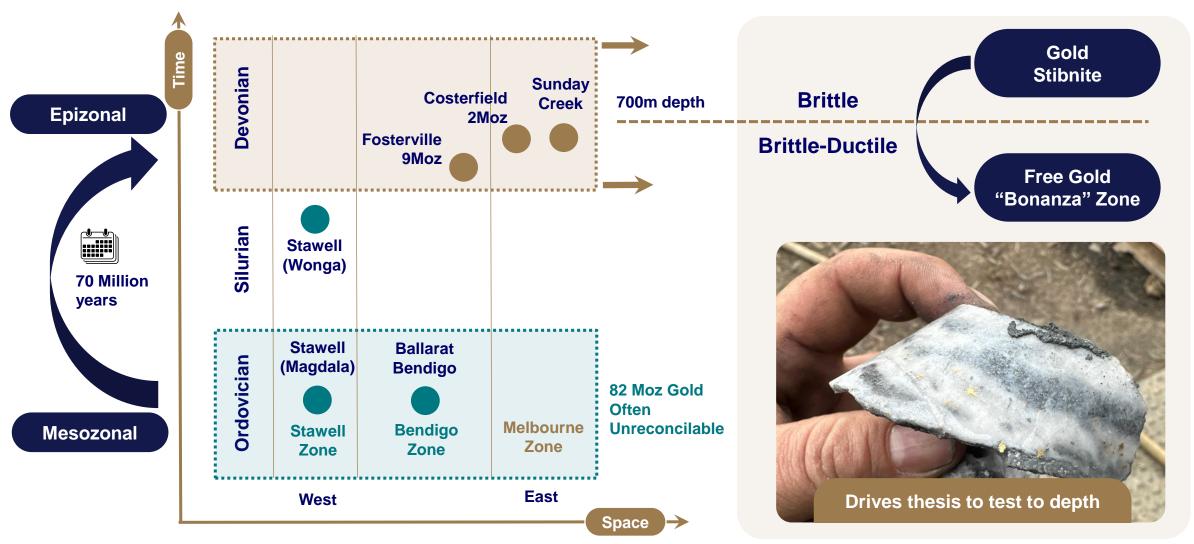
# Victorian Gold Production – Rocking Because of a Change in Geology

- ✓ Today, Victoria is producing more gold than it has for 100 years
- ✓ 5 Gold Mines Operating Today 500Koz/yr

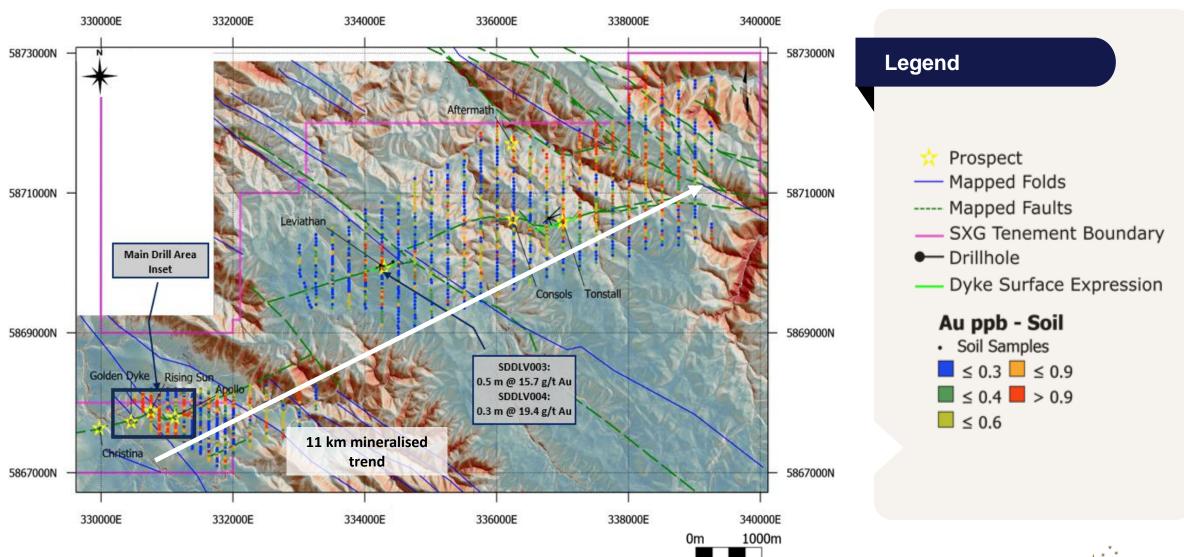




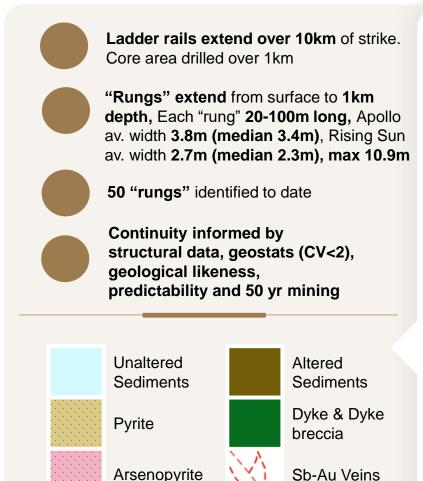
## Victoria a Gift That Keeps on Giving

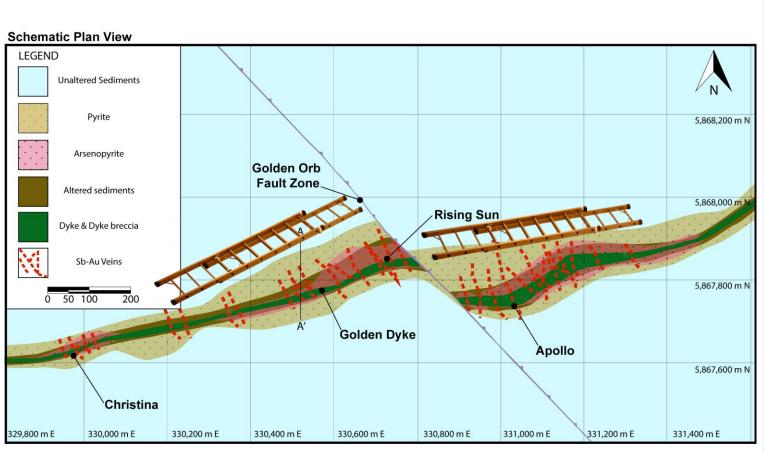


# Regional Scale – Plan View



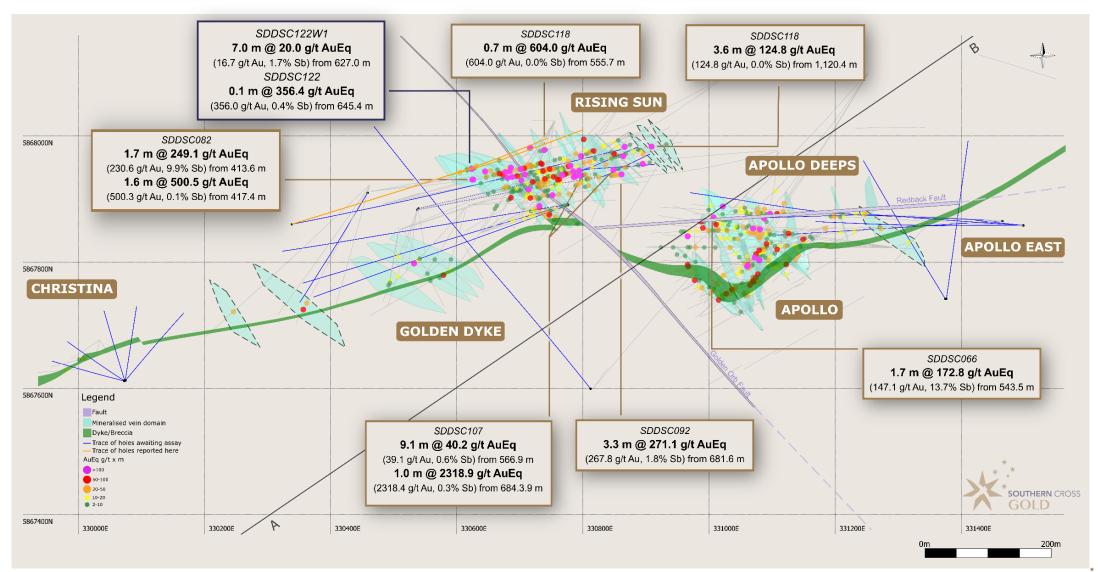
### Schematic Plan View Main Drill Area – The Golden Ladder



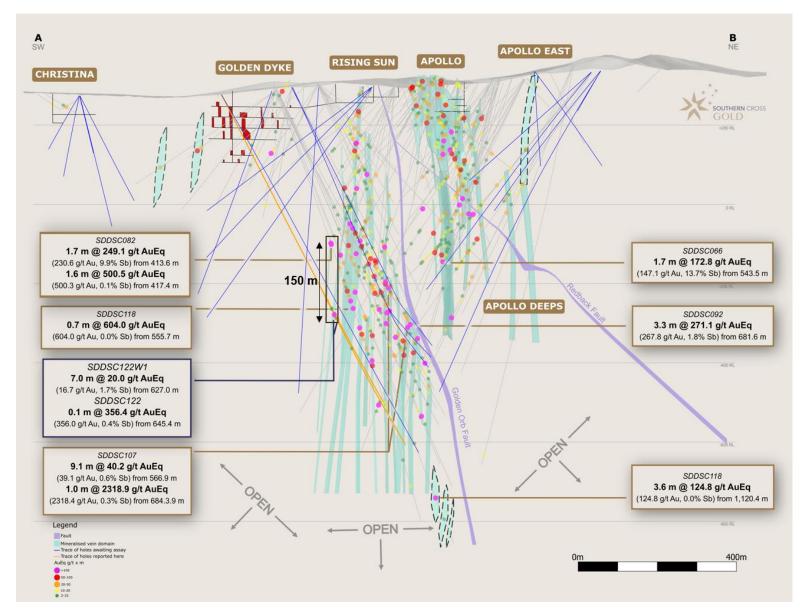




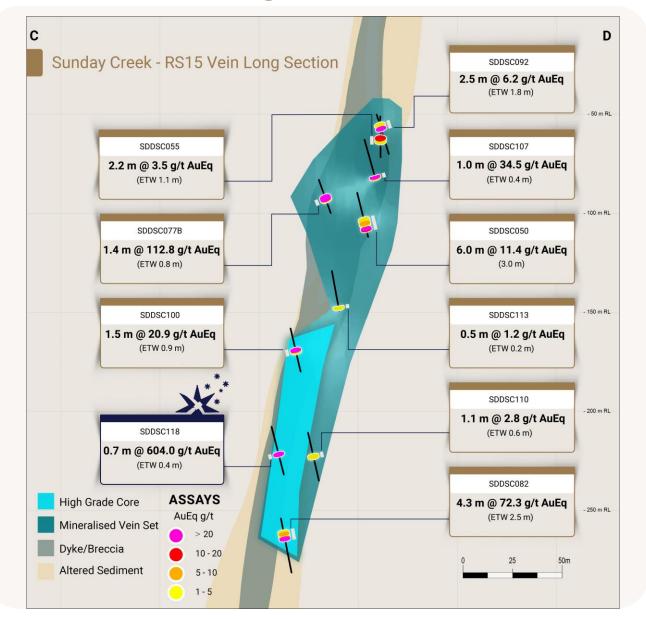
### Plan View Main Drill Area



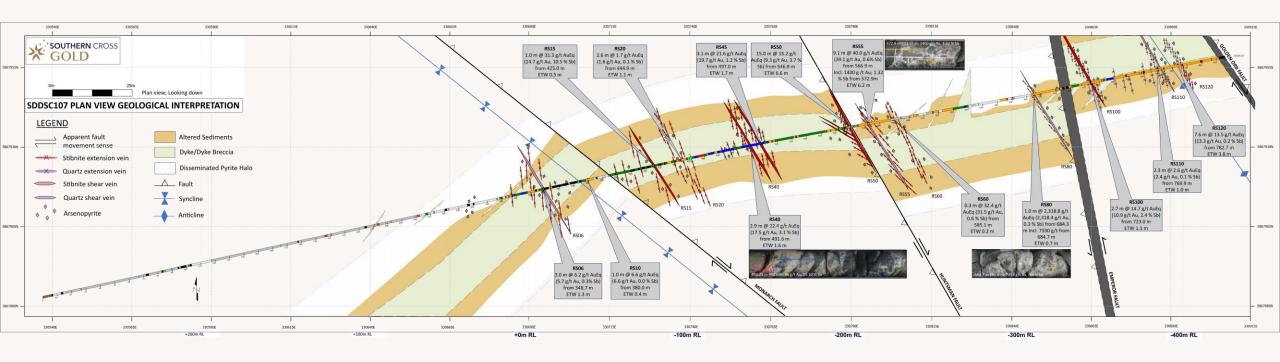
# Long Section View Main Drill Area



# Sunday Creek – RS15 Vein Long Section

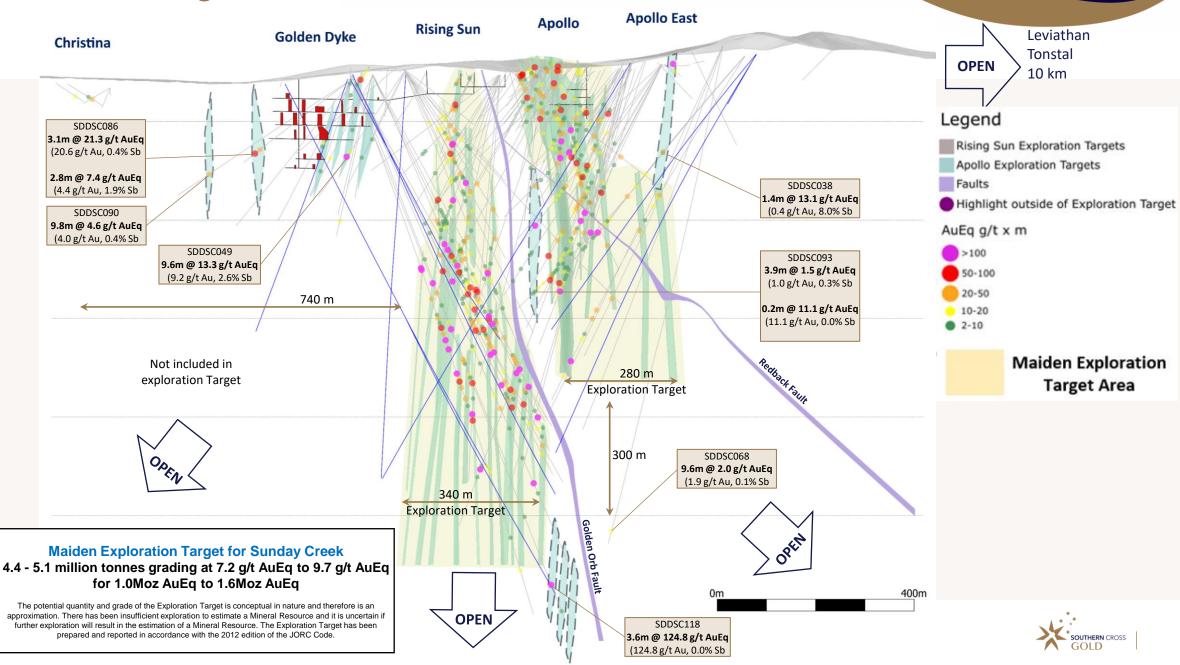


# Sunday Creek – Inclined Plan View of SDDSC107

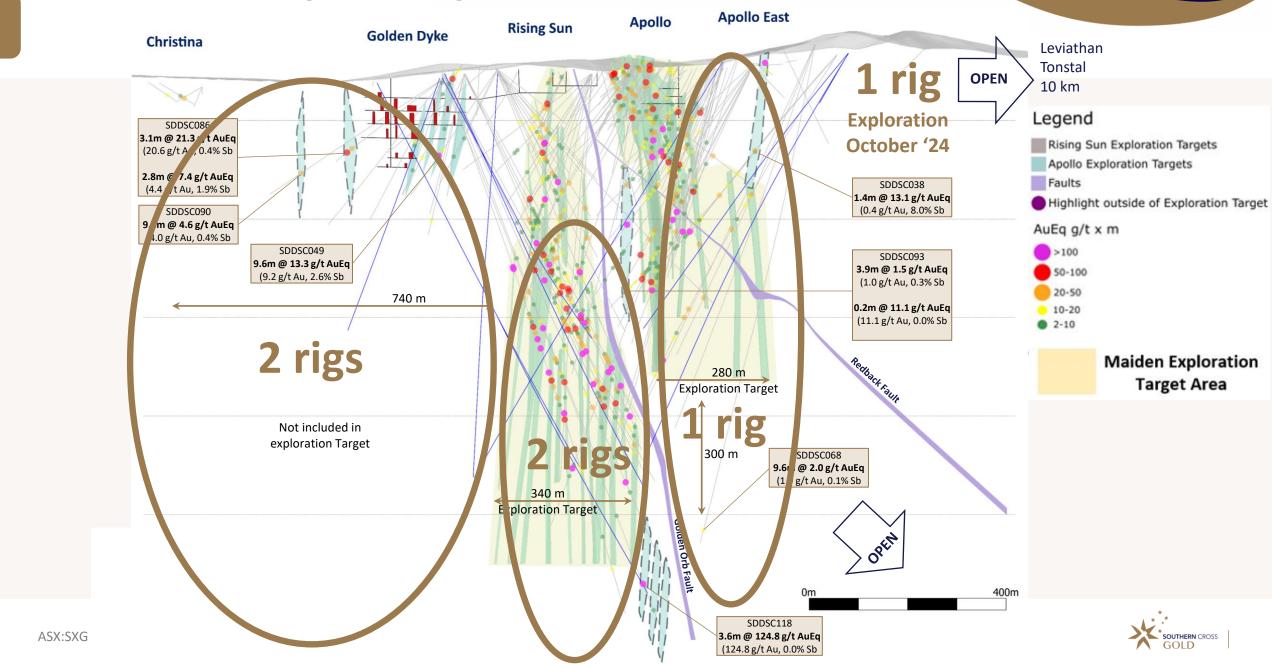


### Exploration Target – Built in One Year

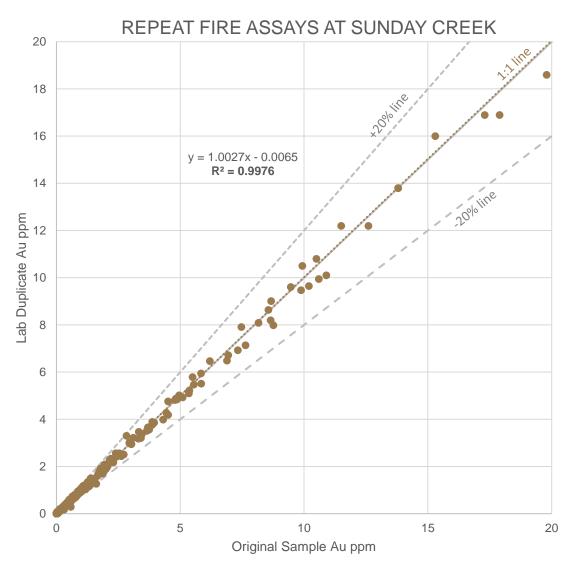
ASX:SXG

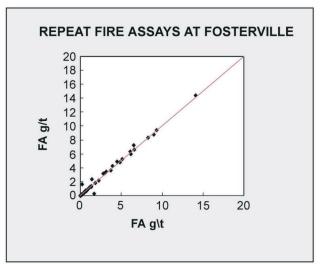


### Drill Plans – 5 rigs moving to 6, 60 km in 1 Year

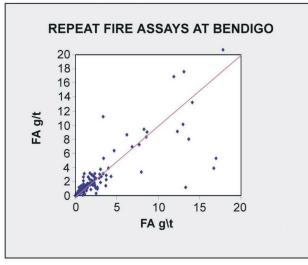


## Lab Duplicates Demonstrate Homogeneity of Samples









Bendigo - GBM gold

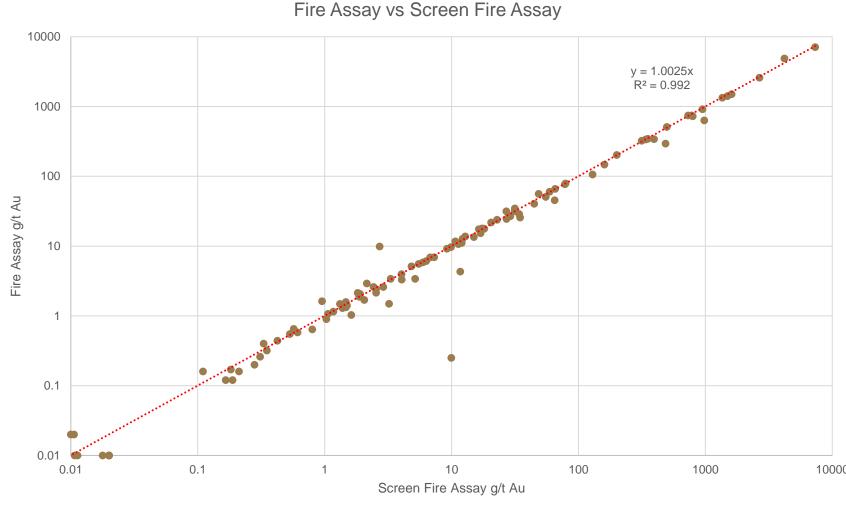
✓ Comparison of repeat fire assay data at Sunday Creek, Bendigo and Fosterville. All samples prepared in an LM5 pulveriser to nominal -75 micron with two samples taken from each pulp



## High Grade is Not Always Nuggetty: SFA and FA Duplicates



SDDSC117: 0.5 m @ 473.1 g/t AuEq (473.0 g/t Au, 0.0% Sb) from 913.6 m



Highly repeatable results between Fire Assay (25g charge) and Screen Fire Assay (entire sample to extinction)



### 50 Vein Sets: Geological Likeness Informs Continuity

Vein array / vein set: 0.5 – 10m wide, Average grade 1.8-12.5 g/t Au & 0.1-5.2 % Sb **High-grade core:** 0.1 – 1.5m Wide, Average Grade +20 - >1,000 g/t Au & +5 % Sb Schematic View – Looking north-west \*Estimated true widths quoted → Increasing pyrite intensity Increasing pyrite intensity -



Shear vein – high-grade core



Vein arrays – extension veins



Disseminated pyrite



9.0 m @ 16.5 g/t AuEq (14.6 g/t Au, 1.0% Sb) from 565.8m (SDDSC082)



### Coefficient of Variation

Understanding grade continuity is crucial for high-grade gold deposits.

Low variability or coefficients of variations (CV, standard deviation over mean) in assay results **lowers geological risk and reduces the cost of capital** (less drilling/more confidence in model).

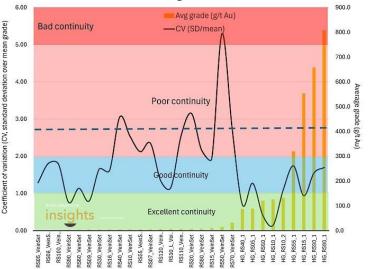
#### **Rising Sun:**

- 636 samples from 29 vein sets
- Average true thickness 2.7m, median 2.3m
- Average 25 g/t gold (up to 808 g/t gold)
- Average CV is 2.7

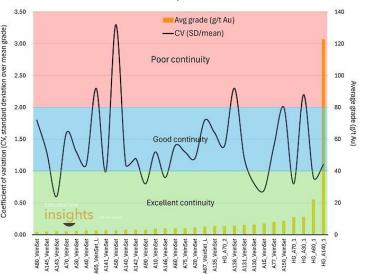
#### Apollo:

- 994 samples in 30 vein sets
- Average true thickness 3.8m, median 3.4m
- Average 3.8 g/t gold.
- Average CV is 1.8
- More data = declining CV

#### Rising Sun



#### Apollo



### Does High-Grade Mean High Nugget? No!

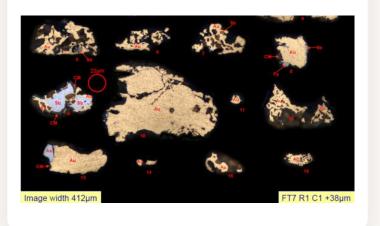
- 1. Victorian epizonal Au-Sb is high-grade and not nuggety
  - = reconcilable, high-margin mines
- 2. Repeatable data in lab and in core (visible gold both sides of core)
  - = confidence
- 3. Understanding and constraining geology leads to low CV (<2)
  - = predictability and continuity





### Metallurgy

# Preliminary Metallurgical Test Work

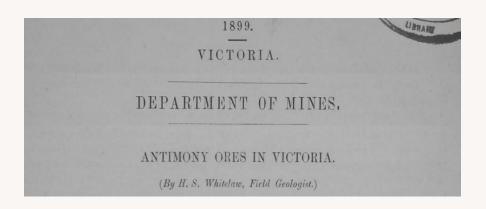


#### Non-refractory, simple gravity-flotation flow sheet

- Utilised Costerfield flow sheet
- Mineralogical investigations demonstrated a high proportion of non-refractory native gold (82% - 84%).
- Gravity (18-33%) with bulk flotation resulted in 93.3% 97.6% recovery of gold.
- Flotation alone resulted in 88.9% 95.0% recovery of gold in an antimony-gold concentrate:
  - grading 32% 52% Sb (87.1% 93.8% recovery)
  - 81.4 g/t 313.6 g/t Au (40% of feed gold) with low to moderate arsenic contents (0.4% and 2.6%)
  - Opportunities to blend or float sulphide concentrate
  - 96% 98% of the contained gold was native gold
- Next Steps:
  - Optimise for gold into gravity and minimising As into Sb-Au con (blending, sequential flotation)



### Antimony – Yesterday's and Today's Critical Metal





Historically and economically, antimony is the second most important metallic commodity in Victoria after gold.



The Victoria gold mining industry practically closed at the onset of WW1. Except antimony, mandated by the Imperial Government under the Munitions Act, 1915 to ship concentrates to the St. Helens Smelting and Refining Company in the UK

#### The Critical Minerals Institute Identifies the 14 Most **Elusive Critical Minerals in the World and Launches New Website**

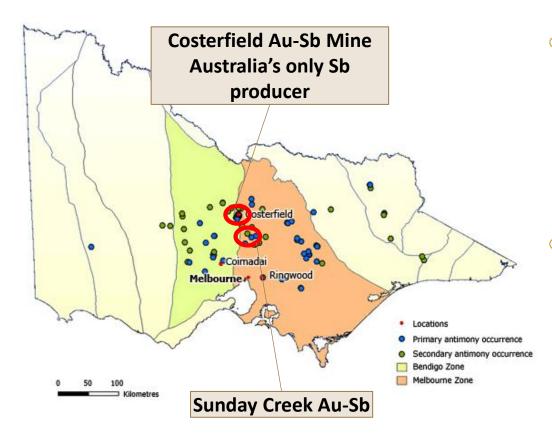
- January 18, 2023(https://criticalmineralsinstitute.com/2023/01/18/)
- News Releases (https://criticalmineralsinstitute.com/category/news-releases/)



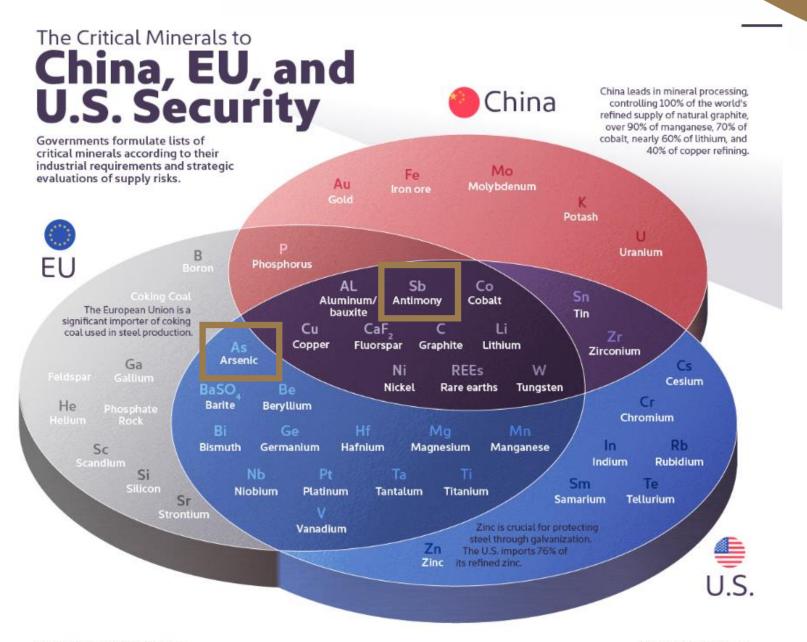
1. Antimony (sb)	6. Indium (In)	11. Rare Earth Elements – of 17
2. Bismuth (Bi)	7. Lithium (Li)	REEs: neodymium, praseodymium, dysprosium, Terbium
3. Cobalt (Co)	8. Magnesium (Mg)	12. Tantalum (Ta)
4. Gallium (Ga)	9. Niobium (Nb)	13. Tungsten (W)
5. Graphite (C)	10. Platinum group of metal	14. Vanadium (V)



## Antimony from Greek "anti" (not) and "monos" (alone)



- Second most important metal in Victoria
  - 1870s: European wars
  - WW1: Imperial Munitions Act to ship concentrates to the UK
- Middle Ages, antimony was used as a "recyclable" laxative. It was swallowed in the form of a pea-sized pill and could be reused after passing through the digestive system





#### Demand

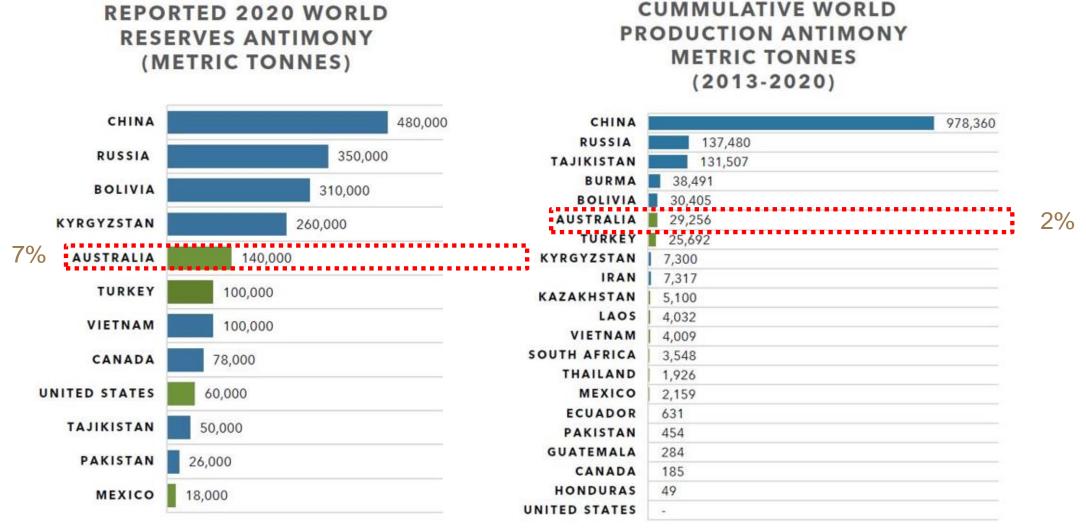


**Critical and Strategic** 

- Defence critical
- Semiconductors
- Solar panels (17% global in 2022)
- Battery metal for its role
   in liquid metal (Sb-Ca Ambri –
   Reliance/Gates)

Source: Blue

### Supply (Russia + China = 82%)



#### **AUKUS**



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# Passage of priority AUKUS submarine and export control exemption legislation by the United States

Adds Australia and the United Kingdom to Title III of the US Defense Production Act.
 This Act allows the US Government to incentivise its industrial base to expand the production and supply of critical materials and goods. Australia's addition will open new opportunities for Australian based industry to directly compete for business with the US Government.

**15 DECEMBER 2023** 

Congress



# Not only strategic, also valuable

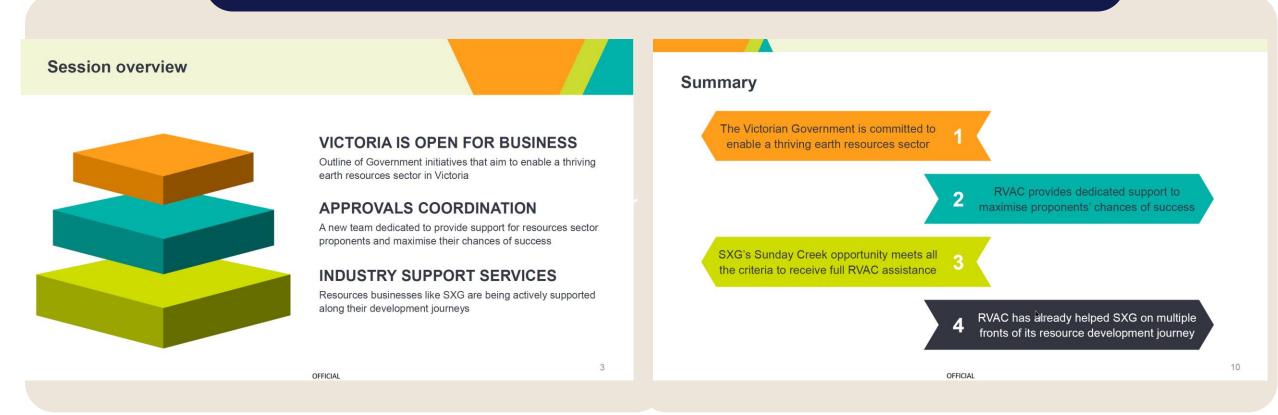




## Positioning For Development with Victoria Open for Business

Our primary focus is to target grade, build volume and demonstrate regional scale, however the company is actively derisking the project through pre-development activities to be in an optimal position for design, feasibility studies and permitting

Daniel Thompson, Director, Resources Victoria Approvals Coordination, July 15, 2024



Victorian Sustained Mine Permitting and Development **VICTORIAN GOVERNMENT INITIATIVES** 5 Gold Mines Operating Today **Approvals Coordination** Development Facilitation "A\$23.3m to drive investment by Program ("DFP") removing uncertainty around resource "Faster decisions for priority projects" approvals" Costerfield Stawell **Fosterville** Tarnagulla Costerfield Bendigo Mining Mining Surface Mining Mining Mining **UG** Mining Fosterville + Sustained 2001 - 2006 1981 - Today 1990 - today 1994 - 2000 1996 - 2005 2005 - today **A1** EES Preparation Costerfield 2021 Mining Au Third Tailings Dam Approval Au Au Au Au **Morning Star** Big Hill Sb Sb. 2009 - Today 2024 - 5 months DFP Sb **EES Rejection** Mining Au **WRP** Goschen Baileston Nagambie 2019 - 2023 Maldon 2014 Au **Ballarat** EES - Public Hearing Underway Fiddlers Mining Mining Mining Mining Mining 2012 - 2015 2024 Permitted 1989 - 1997 1995 - 1998 Au 2001 - 2004 Donald 2005 - Today 2021 **EES Approval** Au Au Ti Τi 2008 Au Au Avonbank Kulwin Benambra Ti Big Hill Douglas Benambra Wemen EES - Public Hearing Complete Mining **EES Approved** Mining **EES Review** Mined Mining 2009 - 2012 2014 2017 2004 - 2012 1992 - 1996 2001 - 2004 **Fingerboards** EES Rejection Ti Τi Cu Ti Ti Au Hamilton Zn 2021 Cu Echo - Iluka Wimmera - Iluka Zn Processing Mining **EES Scoping** 2007 - 2017 2010 - 2013 Ti Ti 2025 1990 2000 2010 2020 **Operating Mines Today Permitting Pathways in Victoria** Gold Labour https://resources.vic.gov.au/about-us/our-role/resources-victoria-approvals-coordination https://wcsecure.weblink.com.au/pdf/SXG/02669418.pdf **Mineral Sands** Liberal Municipal 2

SOUTHERN CROSS

ASX:SXG

**Base Metals** 

# Our People



**Locally based staff –** living in the communities in which we work



Australian based board – focused on creating an ethical, shared value company with strong ESG credentials that employees and investors can be proud of



#### **Strong relationships:**

Community Reference Group, Shire, Taungurung Lands and Waters Council, State and Federal Government



### Directors and Key Management



**Tom Eadie Non- Executive Chairman** 

Explorer, mining executive and company director with many significant mineral discoveries and several successful companies to his name (Pasminco, Syrah, Copper Strike)
Geologist with over 40 years' experience in the resources industry



Michael Hudson Managing Director

Explorationist and entrepreneur, developed and financed mineral exploration properties globally over 30 years (raising +\$200m). Key member behind multiple discoveries Founder and director of Mawson Gold Ltd (TSX:MAW) and Hannan Metals Ltd (TSXV:HAN)



Georgina Carnegie
Non-Executive

Director

Experienced executive within Australian government and global corporate sectors
Advisory roles in public and private mining and insurance sectors, OECD, Asian business councils and Australian university sector



David Henstridge

Non-Executive Director

Geologist with over 50 years' experience in the mining industry including 20 years in managing public-listed companies
Associated with many mineral discoveries worldwide including in Australia, Peru & Finland



Lisa Gibbons General Manager

30+ years' experience as a geologist in exploration & resource development Won the MCA Victoria 2022 Exceptional Woman in Victorian Resources Award for her career achievements, advocacy of women and contribution to social licence and the community



# Aggressive Exploration Program – Staying on the Lassonde Curve

2024 2025 JUL AUG SEP OCT NOV DEC JAN FEB **MAR** APR MAY JUN 60 km drill program to expand volume and focus on grade at Sunday Creek – Apollo Rising Sun Golden Dyke Christina (5 rigs) Regional scale drilling Sunday Creek— east of Apollo and parallel trends (1 rig) **Drilling Redcastle** Advanced Metallurgy 5 Drill Rigs 6 Drill Rigs Baseline Environmental Studies/ Permitting



Drilling plan has 3 clear objectives that will have the largest emphasis over the next six months

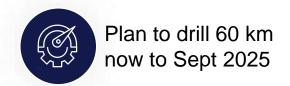
Demonstrate grade, demonstrate volume,

demonstrate scale



#### 5 diamond drill rigs

Aim to increase rigs each quarter, 10km per rig p.a., drill cost A\$200/m incl assays



## Aim to Create the Highest Margin Gold Business Globally



Highest hit rate globally, grade increasing at depth:

- 44 intersections > 100 AuEq g/t x m from 56 km drilling
- 455.3 m @ 7.2 g/t Au including 1.0 m @ 2,318 g/t Au
- 331.5 m @ 6.8 g/t Au including 13.1 m @ 91.7 g/t Au



Free milling gold, 20% antimony by-product (defence critical)



Large exploration upside, only 3% of trend tested



128 drill holes for 56 km reported to date, 60 km over next year



Seasoned discovery team focussed on value creation per share



Supportive shareholders to underpin value creation lifecycle

- Cash \$13.4 m (31 May '24)
- 133.3 ha of freehold land, three properties





### Contact Us



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