

## **EXCELLENT RECOVERIES FROM METALLURGICAL TEST WORK AT RAVENSWOOD WEST**

Sunshine Gold Limited (ASX:SHN, "Sunshine Gold", "the Company") is pleased to announce the results of preliminary metallurgical test work from Titov Cu-Au-Ag-Mo target, Ravenswood West.

#### **HIGHLIGHTS**

Test work was conducted on a single composite sample sourced from two completed RC holes (21TVRC001 and 21TVRC004). Optimum settings resulted in a peak molybdenum recovery of 91.7% and a copper recovery of 76.5%. Preliminary cleaner flotation test work further reduced the mass pull and returned concentrate grades to 56.8% Mo.



Figure 1. Rougher flotation test work.

Sunshine Gold's Managing Director, Damien Keys commented: "Preliminary metallurgical test work demonstrates excellent recoveries of molybdenum and copper.

The success of this work also allows us to simplify the communication of drilling results to investors. Accordingly, future results will be released on a copper equivalent basis. Due to the similarities in mineralisation style, assay results from the Keans Cu-Au-Ag-Mo target (15km south of Titov) will also be released on a copper equivalent basis. The Keans RC drilling completed in October 2021 was extremely encouraging and follow up work is planned for the broader area.

The emergence of high-grade footwall and hanging wall mineralisation on the eastern end of Titov Main, in conjunction with the strengthening IP anomalism, bodes well for next drilling due to commence in May 2022. The drilling will focus on extensions to the Titov Main system and first tests of Titov South and Titov North. Geophysical crews are due to recommence work on Gagarin and Wilbur's Hill in coming weeks as we look to confirm drill ready targets."

Contact:

# SUNSHINE GOLD LIMITED (ASX:SHN)

Directors:
Mr Alec Pismiris
Dr Damien Keys
Mr Anthony Torresan
Mr Paul Chapman
Mr Les Davis

Queensland Office: 1/23 Mackley Street Garbutt QLD 4814

T | +61 8 6245 9828
E | info@shngold.com.au
W | www.shngold.com.au
ABN 12 063 388 821

Capital:

Ordinary shares: 467,822,730 Unquoted shares: 151,900,000 (24m Esc) Deferred shares: 50,000,000 (24m Esc) Unlisted options: 65,000,000 (24m Esc) Unlisted plan options: 2,700,000

Perf Rights: 8,500,000 (24m Esc)



### FIRST STAGE METALLURGICAL PROGRAM, TITOV

A single composite sample was sourced from RC drilling completed at Titov. (Refer to ASX releases dated 19 October and 6 December 2021).

The study, completed by ALS, sought to determine copper, gold, silver and molybdenum recoveries via rougher flotation. Optical mineralogy results indicated that molybdenite and chalcopyrite are very well liberated in all fractions.

Four rougher tests were conducted to understand recoveries, using different grind and reagent settings and introducing pre-floats. The sample submitted contained a low gold content. Effective gold recoveries will be determined from samples taken from the areas of Titov with higher gold grades such as expected in the Eastern zones.

The optimal test of the six conducted saw feed pass through a pre-float cell to produce a concentrate, with the remaining feed passing to a series of three rougher floatation cells. The process essentially forms two separate concentrates. A low mass pull in the pre-float (6.4%) recovers 85% of the molybdenum and 47.2% of the total copper. The remaining feed passes through a series of three rougher cells where a further 6.7% of the molybdenum and 28.5% of the copper is extracted, resulting in total recoveries of 91.7% for Mo and 76.5% for Cu. The process extracts 66.3% of the silver.

Preliminary test work utilising cleaner flotation (optimised for molybdenum concentrate grade) lowered the mass pull to 0.6% and produced final concentrates grading up to 56.8% Mo. It is anticipated that similar test work optimised for both copper and molybdenum will improve the grade of copper concentrates.

Further metallurgical studies will be completed as drilling progresses through targets along the 15km long Cu-Au-Ag-Mo corridor.

		Sample Head Grade					
Composite	Cu %	Mo %	Ag %	Au %			
Titov	0.37	0.54	2.67	*			

Table 1. Composite sample head grade.

			Recov	veries	
Test	Mass Pull (%)	Cu %	Mo %	Ag %	Au %
Pre-Float	6.4	47.2	85.0	38.3	*
Rougher 1-3	3.5	28.5	6.7	28.0	*
TOTAL	9.9	75.7	91.7	58.3	*
Tail	90.1	24.3	8.3	33.7	*

Table 2. Results from optimal flotation test at Titov. Asterisk denotes below detection gold.

## TITOV DRILLING

Sunshine Gold drilled 8 RC holes at Titov in September 2021. The holes contained disseminated Mo, Cu and Ag. A composite sample was collected for metallurgical test work from the mineralised portions of 21TVRC001 and 21TVRC004. Sunshine Gold diamond core hole 21TVDD001 was completed at 501.5m depth in December 2021. The hole was collared 430m SSE of the outcropping mineralisation at Titov Main and identified additional Cu-bearing zones in the upper levels (Titov South) which contain elevated Mo, Ag and, notably, Au.

Titov Main is now defined over 350m of strike, to depths of 350m and at an average true thickness of 65m.



Assay results from Titov can now be released as a recoverable copper equivalent (CuEq). Best copper equivalent results from Titov include:

21TVRC004 66m @ 2.10 % CuEq from 26m 6m @ 13.35 % CuEq from 70m
 21TVRC008 112m @ 0.70 % CuEq from surface 17m @ 1.36 % CuEq from 50m
 21TVRC007 158m @ 0.61 % CuEq from surface 17m @ 1.16 % CuEq from 128m
 21TVRC006 10m @ 1.09 % CuEq from 115m

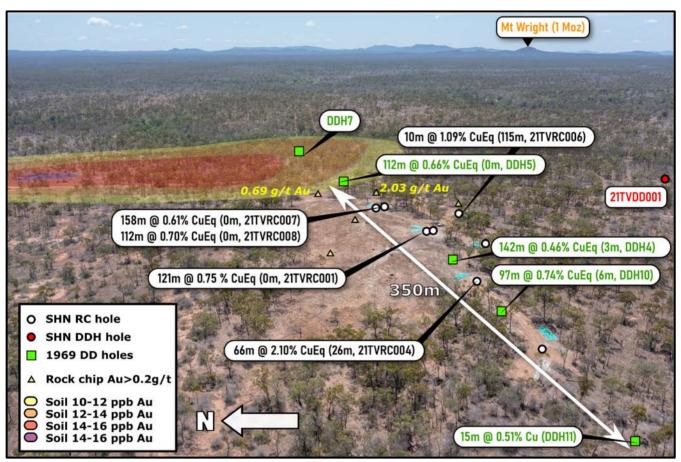


Figure 2. Aerial view looking east of Titov drilling and results in copper equivalents.

In February 2022, the drill core from the 1969 diamond core drilling program at Titov was reviewed. Drill hole DDH5 is located ~85m northeast along strike from Sunshine Gold's easternmost RC drill holes 21TVRC007 & 21TVRC008. Hole DDH5 reported a historic intersection of 112m @ 0.67% CuEq (0.35% Cu and 0.09% Mo), however no assays were taken for Ag and Au amongst others. Select intervals were assayed by Sunshine Gold which confirmed the Cu and Mo tenor, and notably returned elevated Au grades.

DDH5 also contained higher grade mineralisation on the footwall and hanging wall contacts of the Titov Main mineralisation. The higher-grade margins are observed in 21TVRC006, 21TVRC007 and 21TVRC008 and consistently grade > 1% CuEq (and > 0.6% Cu) over 10 - 17m downhole. The eastern end of Titov Main is also coincident with the strongest chargeability response from the recent IP survey (refer ASX release 11<sup>th</sup> April 2022).



Hole ID	HG Zone	From	То	Width	Cu %	Mo %	Ag g/t	Au g/t	CuEq %
21TVRC006	FW	115	125	10	1.32%	0.02%	2.11	0.04	1.09
including	FW	123	125	2	5.93%	0.00%	6.87	0.13	4.61
21TVRC007		0	158	158	0.37%	0.07%	2.25	0.00	0.61
including	HW	38	56	18	0.50%	0.12%	2.89	0.00	0.91
and	FW	128	145	17	0.65%	0.17%	4.00	0.01	1.25
21TVRC008		0	112	112	0.44%	0.08%	2.48	0.01	0.70
including	HW	0	15	15	0.62%	0.02%	2.38	0.00	0.57
and	FW	50	67	17	0.58%	0.21%	3.34	0.00	1.36
DDH5		0	112	112	* 0.35%	* 0.09%	* ?	0.00	0.67
including	HW	40	46	6	0.67%	0.18%	2.80	0.08	1.33
And	FW	94	96	2	1.52%	1.12%	6.30	0.14	6.06
And	FW	97	101	4	1.55%	0.18%	8.28	0.09	2.02
And	FW	110	112	2	0.83%	0.37%	3.70	0.13	2.29

Table 3. Results from Sunshine Gold RC drilling and resampling of historic diamond hole DDH5.

Results from all drilling to date at Titov now converted to a CuEq result can be found in Appendix 1. Significant results > 0.60% CuEq from Titov drilling are listed in Table 4.

Hole ID	M (from)	M (to)	Interval (m)	Cu %	Mo %	Au g/t	Ag g/t	Cu Eq %
DDH5	0.0	110.9	110.9	0.35	0.09			0.66
including	40.0	46.0	6.0	0.67	0.18	0.08	2.80	1.33
including	94.0	96.0	2.0	1.52	1.12	0.14	6.30	6.06
including	97.0	101.0	4.0	1.55	0.18	0.09	8.28	2.02
including	110.0	112.0	2.0	0.83	0.37	0.13	3.70	2.29
DDH10	6.1	103.4	97.3	0.41	0.10			0.74
21TVRC001	1.0	122.0	121.0	0.35	0.11	0.00	1.99	0.75
21TVRC004	26.0	92.0	66.0	0.38	0.42	0.00	2.22	2.10
including	70.0	76.0	6.0	0.42	3.02	0.01	3.94	13.36
21TVRC005	38.0	84.0	46.0	0.23	0.08	0.01	1.34	0.55
including	57.0	71.0	14.0	0.43	0.23	0.01	2.79	1.33
21TVRC006	115.0	125.0	10.0	1.32	0.02	0.04	2.11	1.08
including	123.0	125.0	2.0	5.93	0.01	0.13	6.87	4.61
21TVRC007	0.0	158.0	158.0	0.37	0.07	0.00	2.25	0.61
including	38.0	56.0	18.0	0.50	0.12	0.00	2.89	0.91
including	128.0	145.0	17.0	0.65	0.17	0.01	4.00	1.25
21TVRC008	0.0	112.0	112.0	0.44	0.08	0.01	2.48	0.70
including	0.0	15.0	15.0	0.62	0.02	0.00	2.38	0.57
including	50.0	67.0	17.0	0.58	0.21	0.00	3.34	1.36
21TVDD001	69.0	73.0	4.0	1.31	0.00	0.17	13.3	1.11
including	69.0	72.0	3.0	1.69	0.00	0.22	17.3	1.43
21TVDD001	89.0	90.0	1.0	0.89	0.06	0.21	9.50	1.05
21TVDD001	134.0	139.0	5.0	0.70	0.01	0.03	6.30	0.61
including	134.0	135.0	1.0	2.95	0.04	0.08	26.6	2.55
21TVDD001	149.0	151.0	2.0	0.99	0.49	0.08	3.60	2.91
including	149.0	150.0	1.0	1.69	0.68	0.13	4.60	4.28
21TVDD001	172.0	173.0	1.0	0.75	0.03	0.04	2.00	0.72
21TVDD001	194.0	196.0	2.0	0.90	0.02	0.09	4.80	0.82
21TVDD001	347.0	348.0	1.0	0.93	0.04	0.01	4.60	0.90

Table 4. Significant results > 0.60% CuEq from Titov drilling.



#### **KEANS DRILLING**

A 15 hole (1,830m) reconnaissance program was completed at the Keans during October 2021. The program tested a suite of outcropping quartz—sulphide veins and geophysical targets. The drilling intersected discrete veins with chlorite—sericite alteration haloes. The veins contained abundant sulphide, particularly in holes drilled near the historic gold mines (Shaft A and Heuirs Shaft). The style of the mineralisation, nature of the alteration and relative abundances of associated metals is very similar to that at Titov. As such, metallurgical test work from Titov is regarded as an appropriate proxy for likely Keans metallurgical recovery. Best copper equivalent results from Keans include:

•	21KNRC004	<b>12m @ 1.34 % CuEq</b> from 81m
	Including	5m @ 2.66 % CuEq from 87m
•	21KNRC003	21m @ 0.84 % CuEq from 16m
	Including	2m @ 5.27 % CuEq from 35m
•	21KNRC006	6m @ 1.48 % CuEq from 51m
	Including	2m @ 3.79 % CuEq from 55m

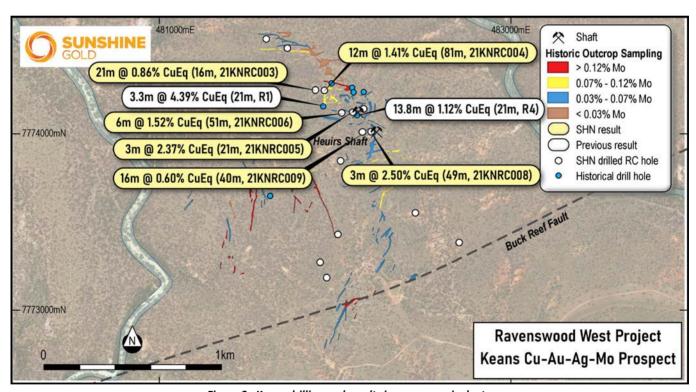


Figure 3. Keans drilling and results in copper equivalents.

Results from all drilling to date at Keans now converted to a CuEq result can be found in Appendix 2. Significant results > 0.60% CuEq from Keans drilling are listed in Table 5.

Hole ID	From	То	Interval (m)	Cu %	Mo %	Au	Ag	Cu Eq %
21KNRC002	33.0	35.0	2.0	0.56	0.03	0.33	17.65	0.77
21KNRC003	16.0	37.0	21.0	0.37	0.13	0.04	1.53	0.86
including	27.0	28.0	1.0	0.19	0.11	0.02	2.48	0.66
and	35.0	37.0	2.0	0.57	1.11	0.07	2.58	5.26
21KNRC003	43.0	45.0	2.0	0.94	0.04	0.04	4.60	0.97
21KNRC004	81.0	93.0	12.0	1.43	0.03	0.05	33.07	1.41
including	81.0	83.0	2.0	1.10	0.02	0.05	7.65	1.00



Hole ID	From	То	Interval (m)	Cu %	Mo %	Au	Ag	Cu Eq %
21KNRC004	87.0	92.0	5.0	2.77	0.06	0.09	74.43	2.79
21KNRC005	21.0	24.0	3.0	0.05	0.54	0.04	6.66	2.37
21KNRC006	41.0	42.0	1.0	0.44	0.10	2.29	5.63	1.63
21KNRC006	44.0	45.0	1.0	0.40	0.04	1.12	14.13	0.95
21KNRC006	51.0	57.0	6.0	0.49	0.09	2.06	4.96	1.52
including	55.0	57.0	2.0	1.03	0.20	6.02	12.59	3.90
21KNRC006	75.0	76.0	1.0	0.13	0.19	0.01	2.43	0.94
21KNRC006	93.0	96.0	3.0	0.18	0.13	0.01	2.14	0.70
21KNRC006	99.0	101.0	2.0	0.27	0.23	0.02	2.62	1.23
21KNRC008	49.0	52.0	3.0	0.19	0.54	0.02	1.72	2.50
21KNRC008	66.0	67.0	1.0	0.52	0.07	0.04	1.47	0.75
21KNRC009	40.0	56.0	16.0	0.27	0.08	0.05	5.04	0.60
including	40.0	51.0	11.0	0.30	0.11	0.05	7.05	0.76
21KNRC012	50.0	52.0	2.0	0.99	0.24	0.04	7.53	1.86

Table 5. Significant results > 0.60% CuEq from Keans drilling.

#### **NEXT STEPS**

Upcoming drilling at Titov is due to commence in May 2022 to test the following:

- Eastern and western strike extension of the Titov Main zone;
- Source of chargeability identified Titov South;
- Source of resistivity low at Titov North, including along strike to the west where high grade rock chips have been previously collected; and
- Locations and relationships of interpreted structures.

The IP survey will be extended to adjoin the Wilbur's Hill IP/MT survey and is also planned to commence in May 2022.

#### **PLANNED ACTIVITIES**

• 3-5 May 2022: RIU Resources Round-up, Sydney.

• May 2022: Shallow RC drilling, Titov East, Ravenswood West.

• May 2022: Metallurgical test work and diamond drill results, Triumph.

May 2022: Mapping Report Investigator.

May 2022: Soil sampling results Ellen Boss, Ravenswood West.
 May 2022: IP/MT Survey Wilburs Hill – Smiths, Ravenswood West.

• May 2022: Gagarin IP results, Ravenswood West.

• June 2022: Soil sampling results Elphinstone Creek, Ravenswood West.

June 2022: RC drilling Triumph Southern Corridor.
 14-15 June 2022: Australian Gold Conference, Sydney.
 23-24 June 2022: RIU Investment Showcase, Gold Coast.



### **ENDS**

For further information:

Dr Damien Keys Managing Director Telephone: +61 428 717 466

E-mail: <a href="mailto:dkeys@shngold.com.au">dkeys@shngold.com.au</a>

Mr Alec Pismiris Director & Company Secretary Telephone: +61 402 212 532

E-mail: alec@lexconservices.com.au

This ASX announcement is authorised for market release by the Board of Sunshine Gold.

Competent Person's Statement

The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled by Dr Damien Keys, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG). Dr Keys has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Dr Keys consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



#### **ABOUT SUNSHINE GOLD**

Sunshine Gold is focused on its high-quality gold and copper projects in Queensland comprising a 100% interest in the Triumph, Hodgkinson, Investigator and Ravenswood West projects.

## Ravenswood West Gold-Copper-Rare Earth Project

## (EPM 26041, EPM 26152, EPM 26303, EPM 26304, EPM 27824, EPM 27825: 100%)

Ravenswood West is comprised of a significant holding (447 km2) of highly prospective gold-copper ground within 5 kms of the Ravenswood Mining Centre (6.6 Moz Au produced and in Resource). The Ravenswood Mining Centre was purchased by EMR Capital and Golden Energy & Resources Ltd. (SGX:AUE) in 2020 for up to \$300m and is presently subject to a ~\$450m upgrade. In addition, there are three other gold mills within 100 km, two of which are toll treating.

The Project is highly prospective for intrusion-related and orogenic gold, porphyry gold-copper-molybdenum and rare earth elements. Ravenswood West covers 20-25 km of strike along a major fault that links Pajingo (4 Moz) and Ravenswood (6.6 Moz) and contains numerous historic gold workings.

## Triumph Gold Project (EPM18486, EPM19343: 100%)

Triumph is centred around the historical Norton gold field from which ~20,000 oz of gold was extracted between 1879-1941. The project is located 50km south of the mining hub of Gladstone and comprises tenements covering 138km². Triumph is located within the Wandilla Province of the New England Orogen. Triumph contains 118koz of near surface Resource (March 2022). Nearby large gold deposits include Mt Rawdon (2.8 Moz Au), Mt Morgan (8 Moz Au and 0.4 Mt Cu) and Cracow (2 Moz Au). Triumph is a 15km² intrusion related gold system which has the potential to host both discrete high-grade vein deposits and large-scale, shear hosted gold deposits.

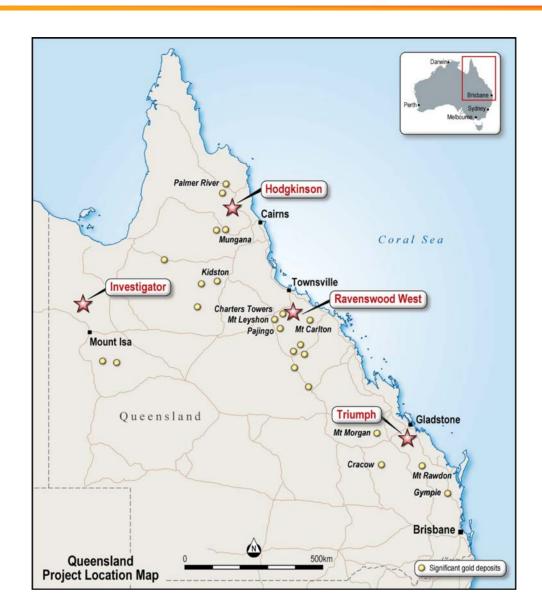
## Hodgkinson Gold Copper Project (EPM18171, EPM19809, EPM25139, EPM27539, EPM27574, EPM27575: 100%)

Hodgkinson is located 100km northwest of Cairns in North Queensland. The project comprises tenements covering 365km². The project is situated between the Palmer River alluvial gold field (1.35 Moz Au) and the historic Hodgkinson gold field (0.3 Moz Au) and incorporates the Elephant Creek Gold, Peninsula Gold-Copper and Campbell Creek Gold prospects. Hodgkinson has been extensively explored for tungsten, owing to its proximity to the Watershed and Mt Carbine tungsten deposits, but underexplored for gold. BHP-Utah International completed stream sediment sampling across the project in the late 1980's and confirmed that the area was anomalous in gold as well as tungsten.

## Investigator Copper Project (EPM27344, EPM27345: 100%)

Investigator comprises tenements covering 115km<sup>2</sup>. It is located 110km north of Mt Isa and 12km south of the Mt Gordon Copper Mine. Investigator has seen no modern exploration and importantly, no holes have been drilled in the most prospective stratigraphic and structural positions.







Appendix 1. Significant intercepts from Titov Cu-Au-Ag-Mo including recoverable copper equivalent value.

Hole ID	M (from)	M (to)	Interval (m)	Cu %	Mo %	Au	Ag	Cu Eq %
DDH4	3.0	145.1	142.0	0.32	0.05	0.00	0.00	0.46%
DDH5	0.0	110.9	110.9	0.35	0.09	0.00	0.00	0.66%
including	40.0	46.0	6.0	0.67	0.18	0.08	2.80	1.33%
including	94.0	96.0	2.0	1.52	1.12	0.14	6.30	6.06%
including	97.0	101.0	4.0	1.55	0.18	0.09	8.28	2.02%
including	110.0	112.0	2.0	0.83	0.37	0.13	3.70	2.29%
DDH6	211.4	234.7	23.3	0.27	0.00	0.00	0.00	0.21%
DDH9	0.0	44.4	44.4	0.22	0.01	0.00	0.00	0.21%
DDH10	6.1	103.4	97.3	0.41	0.10	0.00	0.00	0.74%
DDH11	94.5	109.7	15.2	0.51	0.00	0.00	0.00	0.39%
DDH11	181.4	189.0	7.6	0.25	0.00	0.00	0.00	0.19%
DDH12	61.0	91.4	30.5	0.25	0.00	0.00	0.00	0.19%
DDHT1	15.8	91.4	75.6	0.18	0.01	0.00	0.00	0.18%
DDHT2	30.5	73.2	42.7	0.29	0.03	0.00	0.00	0.35%
DDHT2	103.6	119.2	15.5	0.23	0.06	0.00	0.00	0.43%
DDHT3	91.4	117.3	25.9	0.37	0.02	0.00	0.00	0.37%
21TVRC001	1.0	122.0	121.0	0.35	0.11	0.00	1.99	0.75%
21TVRC002	0.0	91.0	91.0	0.25	0.06	0.00	1.37	0.45%
21TVRC003	87.0	173.0	86.0	0.27	0.02	0.01	1.28	0.29%
21TVRC004	26.0	92.0	66.0	0.38	0.42	0.00	2.22	2.10%
including	70.0	76.0	6.0	0.42	3.02	0.01	3.94	13.36%
21TVRC005	38.0	84.0	46.0	0.23	0.08	0.01	1.34	0.55%
including	57.0	71.0	14.0	0.43	0.23	0.01	2.79	1.33%
21TVRC005	166.0	187.0	21.0	0.31	0.02	0.02	1.50	0.32%
21TVRC006	115.0	125.0	10.0	1.32	0.01	0.04	2.11	1.08%
including	123.0	125.0	2.0	5.93	0.00	0.13	6.87	4.61%
21TVRC007	0.0	158.0	158.0	0.37	0.07	0.00	2.25	0.61%
including	38.0	56.0	18.0	0.50	0.12	0.00	2.89	0.91%
including	128.0	145.0	17.0	0.65	0.17	0.01	4.00	1.25%
21TVRC008	0.0	112.0	112.0	0.44	0.08	0.01	2.48	0.70%
including	0.0	15.0	15.0	0.62	0.02	0.00	2.38	0.57%
including	50.0	67.0	17.0	0.58	0.21	0.00	3.34	1.36%
21TVDD001	35.0	54.0	19.0	0.17	0.00	0.01	1.10	0.14%
including	51.0	52.0	1.0	0.67	0.00	0.05	4.10	0.54%
21TVDD001	69.0	73.0	4.0	1.31	0.00	0.17	13.30	1.11%
including	69.0	72.0	3.0	1.69	0.00	0.22	17.30	1.43%
21TVDD001	80.0	81.0	1.0	0.16	0.00	0.01	1.50	0.13%
21TVDD001	84.0	85.0	1.0	0.21	0.00	0.03	1.40	0.18%
21TVDD001	89.0	93.0	4.0	0.36	0.02	0.07	4.30	0.40%
including	89.0	90.0	1.0	0.89	0.06	0.21	9.50	1.05%
21TVDD001	99.0	100.0	1.0	0.24	0.03	0.02	1.90	0.33%
21TVDD001	111.0	112.0	1.0	0.14	0.00	0.01	4.50	0.13%
21TVDD001	126.0	130.0	4.0	0.23	0.11	0.02	3.00	0.67%
21TVDD001	134.0	139.0	5.0	0.70	0.01	0.03	6.30	0.61%
including	134.0	135.0	1.0	2.95	0.04	0.08	26.60	2.55%
21TVDD001	149.0	151.0	2.0	0.99	0.49	0.08	3.60	2.91%
including	149.0	150.0	1.0	1.69	0.43	0.13	4.60	4.28%
21TVDD001	167.0	168.0	1.0	0.30	0.00	0.02	1.40	0.24%
21TVDD001	172.0	173.0	1.0	0.75	0.03	0.02	2.00	0.72%
21TVDD001	192.0	197.0	5.0	0.73	0.03	0.04	2.40	0.39%
including	194.0	196.0	2.0	0.43	0.01	0.04	4.80	0.82%
21TVDD001	236.0	237.0	1.0	0.30	0.02	0.03	0.50	0.82%
21TVDD001 21TVDD001	269.0	270.0	1.0	0.13	0.00	0.02	1.10	0.11%
	288.0	289.0	1.0	0.19	0.00	0.02	0.80	0.16%
21TVDD001								
21TVDD001	295.0	296.0	1.0	0.13	0.00	0.02	0.60	0.11%
21TVDD001	303.0	379.0	76.0	0.16	0.07	0.01	0.70	0.43%



Hole ID	M (from)	M (to)	Interval (m)	Cu %	Mo %	Au	Ag	Cu Eq %
including	303.0	334.0	31.0	0.14	0.09	0.01	0.60	0.50%
and	338.0	379.0	41.0	0.18	0.05	0.01	0.90	0.36%
including	347.0	348.0	1.0	0.93	0.04	0.01	4.60	0.90%
21TVDD001	383.0	384.0	1.0	0.22	0.00	0.01	0.90	0.17%
21TVDD001	389.0	396.0	7.0	0.34	0.00	0.02	1.80	0.27%
including	391.0	393.0	2.0	0.72	0.00	0.03	4.40	0.58%
21TVDD001	400.0	402.1	2.1	0.24	0.00	0.03	0.90	0.20%

Appendix 2. Significant intercepts from Keans Cu-Au-Ag-Mo including recoverable copper equivalent value.

Hole ID	From	То	Interval (m)	Cu %	Mo %	Au	Ag	Cu (equiv) %
21KNRC001	1.0	3.0	2.0	0.22	0.00	0.00	0.34	0.18%
21KNRC001	13.0	17.0	4.0	0.28	0.01	0.01	1.56	0.25%
21KNRC001	30.0	36.0	6.0	0.22	0.00	0.02	0.72	0.18%
21KNRC001	39.0	42.0	3.0	0.24	0.00	0.02	0.79	0.19%
21KNRC001	46.0	47.0	1.0	0.16	0.00	0.01	0.43	0.14%
21KNRC001	94.0	95.0	1.0	0.01	0.11	0.01	0.26	0.48%
21KNRC001	148.0	149.0	1.0	0.02	0.10	0.05	1.14	0.48%
21KNRC002	1.0	3.0	2.0	0.10	0.00	0.01	0.37	0.09%
21KNRC002	10.0	12.0	2.0	0.18	0.00	0.01	0.92	0.15%
21KNRC002	16.0	20.0	4.0	0.17	0.00	0.01	0.96	0.14%
21KNRC002	33.0	35.0	2.0	0.56	0.03	0.33	17.65	0.74%
21KNRC002	45.0	47.0	2.0	0.13	0.00	0.01	1.03	0.11%
21KNRC002	55.0	57.0	2.0	0.15	0.01	0.01	20.22	0.23%
21KNRC002	84.0	85.0	1.0	0.13	0.00	0.01	0.98	0.11%
21KNRC002	89.0	90.0	1.0	0.12	0.01	0.02	0.45	0.16%
21KNRC002	115.0	116.0	1.0	0.02	0.00	0.45	0.98	0.18%
21KNRC002	143.0	144.0	1.0	0.01	0.00	0.11	3.32	0.06%
21KNRC002	148.0	150.0	2.0	0.01	0.00	0.17	2.40	0.08%
21KNRC003	16.0	37.0	21.0	0.37	0.13	0.04	1.53	0.84%
including	27.0	28.0	1.0	0.19	0.11	0.02	2.48	0.65%
and	35.0	37.0	2.0	0.57	1.11	0.07	2.58	5.27%
21KNRC003	43.0	45.0	2.0	0.94	0.04	0.04	4.60	0.93%
21KNRC003	49.0	51.0	2.0	0.45	0.04	0.06	3.05	0.56%
21KNRC003	54.0	55.0	1.0	0.14	0.00	0.02	0.33	0.13%
21KNRC003	85.0	92.0	7.0	0.41	0.00	0.04	3.93	0.35%
21KNRC004	7.0	12.0	5.0	0.46	0.00	0.04	1.10	0.38%
21KNRC004	23.0	28.0	5.0	0.13	0.04	0.02	2.90	0.29%
21KNRC004	31.0	34.0	3.0	0.26	0.01	0.03	1.78	0.24%
21KNRC004	49.0	50.0	1.0	0.36	0.00	0.03	5.26	0.31%
21KNRC004	62.0	63.0	1.0	0.21	0.02	0.01	1.54	0.24%
21KNRC004	67.0	69.0	2.0	0.16	0.00	0.03	0.78	0.16%
21KNRC004	77.0	78.0	1.0	0.14	0.00	0.01	0.44	0.11%
21KNRC004	81.0	93.0	12.0	1.43	0.03	0.05	33.07	1.34%
including	81.0	83.0	2.0	1.10	0.02	0.05	7.65	0.96%
and	87.0	92.0	5.0	2.77	0.06	0.09	74.43	2.66%
21KNRC005	9.0	10.0	1.0	0.18	0.00	0.01	0.86	0.14%
21KNRC005	21.0	24.0	3.0	0.05	0.54	0.04	6.66	2.38%
21KNRC005	74.0	80.0	6.0	0.18	0.09	0.01	1.12	0.54%
21KNRC006	8.0	10.0	2.0	0.20	0.04	0.06	5.03	0.38%
21KNRC006	18.0	21.0	3.0	0.10	0.00	0.02	4.11	0.11%
21KNRC006	41.0	42.0	1.0	0.44	0.10	2.29	5.63	1.59%
21KNRC006	44.0	45.0	1.0	0.40	0.04	1.12	14.13	0.92%
21KNRC006	51.0	57.0	6.0	0.49	0.09	2.06	4.96	1.48%
including	55.0	57.0	2.0	1.03	0.20	6.02	12.59	3.79%
21KNRC006	69.0	70.0	1.0	0.15	0.03	0.02	1.62	0.25%



Hole ID	M (from)	M (to)	Interval (m)	Cu %	Mo %	Au	Ag	Cu Eq %
21KNRC006	75.0	76.0	1.0	0.13	0.19	0.01	2.43	0.94%
21KNRC006	93.0	96.0	3.0	0.18	0.13	0.01	2.14	0.70%
21KNRC006	99.0	101.0	2.0	0.27	0.23	0.02	2.62	1.23%
21KNRC006	111.0	114.0	3.0	0.14	0.04	0.01	0.68	0.27%
21KNRC007	7.0	10.0	3.0	0.26	0.05	0.04	9.97	0.47%
21KNRC007	17.0	28.0	11.0	0.19	0.03	0.01	2.13	0.27%
21KNRC007	38.0	39.0	1.0	0.17	0.00	0.02	1.96	0.15%
21KNRC007	70.0	71.0	1.0	0.14	0.10	0.02	2.85	0.55%
21KNRC008	8.0	24.0	16.0	0.28	0.07	0.02	2.63	0.54%
21KNRC008	49.0	52.0	3.0	0.19	0.54	0.02	1.72	2.51%
21KNRC008	66.0	67.0	1.0	0.52	0.07	0.04	1.47	0.73%
21KNRC009	40.0	56.0	16.0	0.27	0.08	0.05	5.04	0.59%
including	40.0	51.0	11.0	0.30	0.11	0.05	7.05	0.75%
21KNRC009	76.0	77.0	1.0	0.18	0.00	0.02	1.07	0.15%
21KNRC009	107.0	108.0	1.0	0.12	0.03	0.01	1.50	0.21%
21KNRC010	128.0	129.0	1.0	0.13	0.03	0.01	0.86	0.24%
21KNRC011	8.0	10.0	2.0	0.18	0.00	0.02	0.70	0.16%
21KNRC012	26.0	34.0	8.0	0.03	0.03	0.01	0.18	0.16%
21KNRC012	44.0	45.0	1.0	0.13	0.00	0.01	0.65	0.11%
21KNRC012	50.0	52.0	2.0	0.99	0.24	0.04	7.53	1.83%
21KNRC013	6.0	7.0	1.0	0.40	0.00	0.02	56.13	0.51%
21KNRC013	76.0	77.0	1.0	0.11	0.00	0.00	0.47	0.09%
21KNRC014	No significant intercepts							
21KNRC015				No significa	nt intercepts			



# Section 1 - Sampling Techniques and Data

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

Criteria	Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.  Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	DRILLING  Information pertaining to drilling is provided in previous ASX releases  METALLURGICAL WORK  Samples were sourced from speared "green bag" samples following RC drilling.  21TVRC001 samples were sourced from 30 x 1m intervals between 30m and 60m depth.  21TVRC004 samples were sourced from 25 x 1m intervals between 55m and 80m depth.  The samples were blended into a single composite sample for metallurgical studies.  Samples were screened at 1.18mm and screen oversize stage rolls crushed to 100% passing 1.18mm. The combined crushed ore was rotary split to lots for cold storage.  Samples of fine ore (100% passing 1.18mm) were assessed by batch grinding to establish a curve for discharge p80 versus grind time for the grind conditions required for further testing.  Copper molybdenite rougher and cleaner flotation tests were performed under the following conditions:  Ore was dry jaw and rolls crushed to 100% passing 1.18mm.  Grind at 66% solids in an open mild steel ball mill and charge to P80 of 75μm.  Prefloat and rougher float were performed in a 2.7L Agitair style laboratory cell.  Dilute reagents were added and conditioned for two minutes prior to flotation.  Air rate and time were recorded for each concentrate.  Rougher concentrates was then stirred milled to some 20um.  0.5L cleaner floats were then performed to produce concentrates and tails.  Products were wet weighed, filtered and dried for weight and analysis.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>Samples were collected from two RC holes - 21TVRC001 and 21TVRC004.</li> <li>All holes were collared using an 8" bit to 10m, and then drilled using Reverse Circulation utilising a 5.5" face sampling RC hammer.</li> </ul>



Criteria	Explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  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.	- For RC sample recoveries of less than approximately 80% are noted in the geological/sampling log. No such samples were recorded during this drill program.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged.	<ul> <li>All drill holes are geologically logged in full.</li> <li>Geology logs include lithology, alteration, mineralisation, veining and weathering types, styles and intensities.</li> <li>All RC chip trays are photographed.</li> </ul>
Sub- sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.  Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/secondhalf sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>The 1m primary RC samples were obtained using a cyclone mounted 87.5:12.5 riffle splitter. Compressed air was used to clean the splitter after each drill rod. Duplicate samples were taken routinely using a second split off the main cyclone for the selected interval. Samples are recorded if dry or wet when collected from the cyclone. QAQC samples (Standards, Duplicates, Blanks) were submitted at a frequency of at least 1 in 10.</li> <li>Sample sizes and preparation techniques are considered appropriate. The sample sizes are considered appropriate for the nature of mineralisation within the project area.</li> </ul>
Quality of assay data and Laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  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.	<ul> <li>RC samples were assayed using 50g fire assay with ICP-OES finish for gold which is considered appropriate for this style of mineralisation. Fire assay is considered total assay for gold. Multielement analysis was completed using an 4AD ICP-MS analysis</li> <li>No geophysical tools, spectrometers or handheld XRF instruments have been used to determine assay results for any elements.</li> <li>QAQC data is reviewed for bias prior to inclusion in any subsequent Mineral Resource estimate.</li> <li>Au assays were completed as fire assay analysis and screen fire analysis will be contemplated on a suite of high-grade samples at the end of the drill programme if deemed necessary</li> </ul>



Criteria	Explanation	Commentary
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data	<ul> <li>Significant intersections are routinely monitored through review of drill chip and by site visits by the Exploration Manager.</li> <li>Data is verified and checked in Leapfrog software.</li> <li>No drill holes were twinned.</li> <li>Primary data is collected via hard copy documentation and subsequently entered into spreadsheet format. This is then validated and uploaded to a secure external database, which in turn has further validation checks.</li> <li>No adjustments have been applied to assay data and is loaded directly from the laboratory deliverable.</li> </ul>
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used.  Quality and adequacy of topographic control.	<ul> <li>Drill hole collars from the SHN drilling have been surveyed by handheld GPS using waypoint averaging only.</li> <li>Collar location of historical hole DDH5 is quoted as an approximation.</li> <li>All collar coordinates are in MGA94 Z55.</li> <li>Downhole survey from the SHN drilling has been surveyed using Reflex multi-shot survey tool.</li> <li>A 3D elevation topography or digital terrain model ("DTM") for the Titov area has been compiled by Sunshine Gold collected from in-house drone data and exported in the form of a .msh file.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.  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.  Whether sample compositing has been applied.	<ul> <li>Drillhole spacing is approximately 60m amongst SHN's RC drill holes with the SHN DD hole 21TVDD001 an approximate 180m step off "down dip" of the Titov Main zone.</li> <li>Geological modelling has shown that the Titov Main zone seen in the RC drilling is likely the same zone seen from 303m in 21TVDD001.</li> <li>No sample compositing has been undertaken.</li> </ul>
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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.	<ul> <li>The SHN DD hole was designed to be orientated perpendicular to the interpreted strike of mineralisation.</li> <li>No orientation-based sampling bias has been recognised.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>SHN DD Core trays were delivered from site to the SHN office via SHN personnel.</li> <li>Once all geotechnical work and mark-up was completed, were dispatched from the office via Followmont Transport to ALS Townsville for sample preparation and core photography.</li> </ul>

SUNSHINE GOLD LIMITED (ASX:SHN)



Criteria	Explanation	Commentary
		<ul> <li>The gold fire assays were completed in Townsville and multi-element ICP was analysed at ALS Geochemistry, located in Stafford, Brisbane.</li> <li>The DDH5 core was prepared and assayed at ALS Brisbane, with golds analysed in Townsville.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	- No external audits have been undertaken on sampling pertaining to these results.

# Section 2 - Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Explanation	Commentary
Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>The Ravenswood West Project consists of EPMs 26041, 26152, 26303,26404, 27824 and 27825. The latter two EPMs are operated by XXXX Gold Pty Ltd and the remainder are owned 100% by Ukalunda Pty Ltd, both of which are wholly owned subsidiaries of Sunshine Gold Limited. The tenements are in good standing and no known impediments exist.</li> <li>Two current, third party Mining Leases exist on EPM 26041 - named ML 10243 (Delour) and ML 10315 (Podosky). One further current, third party Mining Lease exists partially on EPM 26152 - named ML 1529 (Waterloo).</li> <li>All of EPM 26303 and part of EPM 26041 are situated within the Burdekin Falls Dam catchment area.</li> </ul>
Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Numerous exploration companies have explored within the Ravenswood West Project area, namely North Broken Hill, New Consolidated Gold Fields, Noranda, Planet Metals, MAT, Nickel Mines Ltd, Minefields, Kennecott, Cormepar Minerals, Geopeko, Esso, Dampier Mining, IMC, CRA, Ravenswood Resources, Dalrymple Resource, BJ Hallt, Poseidon, Haoma Mining, Kitchener Mining, Placer, Goldfields, Carpentaria Gold, MIM, BHP, and Stavely Minerals.</li> <li>No previous metallurgical studies have been completed on the Titov or Keans mineralisation.</li> </ul>
Deposit type, geological setting and style of mineralisation.	<ul> <li>The Ravenswood West Project area is located within open file 100k map sheet area 8257. The project is hosted within the Ravenswood Batholith of the Charters Towers Province, which consists primarily of Ordovician to Silurian granitoids and lesser sedimentary packages. The area is considered by SHN to be prospective for orogenic and intrusion-related gold deposits, as well as granitoid-related copper, molybdenum, silver and rare earth deposits. There also appears to be prospectivity for MVT deposits on the fringes of the tenement area.</li> <li>A review of the geophysics results together with the drilling data indicates that mineralisation at Titov is</li> </ul>
	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.  Acknowledgment and appraisal of exploration by other parties.  Deposit type, geological setting and style of



Criteria	Explanation	Commentary
		and vein- and fracture-hosted copper and molybdenum sulphides within strongly sericitized granodiorite. The potassic alteration is considered likely the earlier phase
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.  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	DRILLING - Information pertaining to drilling is provided in previous ASX releases
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.  Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated	<ul> <li>Historical drilling results are reported as previously reported in open file data.</li> <li>SHN samples are metre intervals only, no weighting calculations have been made.</li> <li>Drillhole 21TVDD001 interval 303 - 379m uses no cut-off grade, due to it comprising two broad intervals using a 0.1% Cu cut-off with a 4m consecutive internal dilution.</li> <li>Cut-off grades for all other significant intercepts are reported at 0.1% Cu, where intervals can include a maximum of 3m consecutive dilution providing grade is carried.</li> <li>Higher grade intervals within the broader 0.1% Cu cut-off intervals use a 0.5% Cu cut-off.</li> <li>No metal equivalents are used in the reporting of intersections.</li> </ul> METAL EQUIVALENT CALCULATION <ul> <li>(%Cu x \$Cu price x Cu Recov) + (%Mo x \$Mo price x Mo Recov) + (Au grade x \$Au price/g x Au Recov) + (Ag grade x \$Ag price/g x Ag Recov)) / \$Cu price</li> </ul>



Criteria	Explanation	Commentary
		- (% Cu x 9920 x 0.765) + (% Mo x 46500 x 0.917) + (Au grade x 61.183 x 0.57) + (Ag grade x 0.764 x 0.445)) / 9920
Relationship between mineralisation widths and intercept length	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	<ul> <li>The geometry of the mineralisation is subject to ongoing interpretation and as such intervals are reported in downhole length only. Initial review of oriented structures indicate the drill hole was successful in intercepting the Titov Main zone at an optimal angle.</li> <li>Intervals reported are downhole length only as true width has not been calculated.</li> <li>Refer JORC Table 1, Section 1.</li> </ul>
Diagrams	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.	- All relevant diagrams are reported in the body of this report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	- All results are presented in figures and tables contained within this report.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Geophysical data referred to in this report was collected for SHN by Australian Geophysical Services (AGS) in February 2022.</li> <li>Data was collected in GDA 94, Zone 55.</li> <li>Data was processed daily and reviewed by third party experts Southern Geoscience Consultants (SGC) to ensure data quality.</li> <li>Inversion modelling of the raw geophysical data was completed by SGC and delivered to SHN as 2D and 3D datasets</li> <li>Subsequent imaging of the geophysical data to what is displayed in this report has been undertaken by SHN</li> </ul>
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	<ul> <li>Upcoming drilling at Titov is in preparation for late April 2022 to test the following:</li> <li>Eastern and western strike extension of the Titov Main zone</li> <li>Source of chargeability identified in at Titov South</li> <li>Source of resistivity low at Titov North, including along strike to the west where high grade rock chips have been previously collected</li> <li>Locations and relationships of interpreted structures</li> <li>The SHN IP survey will be extended to adjoin the Wilburs Hill IP/MT survey and is planned to commence in May 2022.</li> </ul>



Criteria	Explanation	Commentary
		<ul> <li>METALLURGICAL WORK</li> <li>Further metallurgical test work programs will optimise the process as defined by these initial results and incorporate any samples form new areas identified as part of subsequent drilling programs.</li> <li>Test work will include comminution test work, further leaching test work, gravity and flotation test work, with geochemical and geotechnical information collected on tailings characteristics.</li> </ul>

SUNSHINE GOLD LIMITED (ASX:SHN)